

**Roundtable on Sustainable Palm Oil
New Planting Procedure
Updated Summary Report of Assessments
(English Version)**

**PT. PP London Sumatera Indonesia Tbk
Pahu Makmur and Kedang Makmur Estate**

**Regency of Kutai Barat, East Kalimantan Province
Indonesia**

Prepared by :
Faculty of Forestry –Bogor Agriculture University
In Cooperation With
PT. PP London Sumatera Indonesia Tbk
Pahu Makmur and Kedang Makmur Estate
2014

LIST OF CONTENT

1.	Executive Summary	3
2.	Scope of EIA, SIA and HCV Assessment	5
2.1	Organizational Information / Contact Person	5
2.2	Legal Documents, Government Regulation and Property Deeds Related to The Area Assessed	8
2.3	Location Map – both at Landscape and Site Level	10
2.4	New Planting Areas and Time of Implementation Plans	13
3.	Assessment Process and Procedure	14
3.1.	Assessors	14
3.2.	Assessment Method	18
3.3.	Stakeholder’s Consultation	23
4.	Summary of Assessment Findings	27
4.1.	EIA and SIA Assessment Findings	27
4.2.	HCV’s Assessment Findings	29
5.	Internal Responsibility	37

1 Executive Summary

At the beginning, the area of PT PP London Sumatera Indonesia Tbk - Pahu Makmur Estate and Kedang Makmur Estate was *Logged Over Forest Area* that managed by the Forest Concession Company of PT. Sumber Mas. The area was then managed for oil palm plantation development by the company of PT PT. Gelora Mahapala and then taken over by the company of PT. PP London Sumatera Indonesia Tbk - Pahu Makmur Estate and Kedang Makmur Estate.

The concession of PT PP London Sumatera Indonesia Tbk - Pahu Makmur Estate and Kedang Makmur Estate covers areas of $\pm 16,341.94$ ha consisting of the area of 11,603.48 ha managed as *Pahu Makmur Estate* and the area of 4,738.46 ha managed as *Kedang Makmur Estate*. Administratively, the company area is located in the villages namely : Tanjung Jan, Pulau Lanting, Bekokong Makmur, Tanjung Isuy, Pentat (*Jempang Subdistrict*); and Muara Kedang, Penawai (*Bongan Subdistrict*), Kutai Barat Regency – Province of East Kalimantan. The company's area includes in the *Mahakam Watershed (DAS) - Bongan Tongkok Subwatershed*.

Currently, steps that have been conducted by the company are Land Clearing, Planting, Plantation Maintenance and Harvesting. The plantation company is equipped with a palm oil processing plant with production capacity 60 tons/hour and located within Pahu Makmur Estate .

Due to the company's concern to a sustainable development of oil palm plantation in accordance with P&C RSPO especially Principle 5 and 7 (*New Planting Procedue*), in 2013, the company of PT PP London Sumatera Indonesia Tbk - Pahu Makmur Estate and Kedang Makmur Estate performed Tracing and Identification HCVs in his plantation area with the intention to 1) Verify and intenfify the HCVs presence in the company's area, and 2) Provide recommendation on the Management and Monitoring required on each HCV area determined

Verification and determination of the HCVs was performed using Guide of HCVs Identification Indonesia version 2 of June 2008 and Draft of HCVA Management and Monitoring Guide – Indonesia published by HCV RSPO Indonesian Working Group (*HCV-RIWG*) of August 2009.

High Conservation Value Area is an area that has one or more of the following characteristics 1). Areas containing important level of biodiversity (HCV1); 2). Natural landscape areas that important for natural ecological dynamics (HCV2); (3) Areas containing rare or threatened ecosystems (HCV3); (4) Areas providing natural environmental services (HCV4); (5) Areas containing important functions for meeting local communities's basic needs (HCV5); and (6) Areas containing important functions for local cultural identity (HCV6).

Review on the executive summary of EIA, RKL/RPL and SIA, it is shown that the presence of the oil palm plantation of PT PP London Sumatera Indonesia Tbk - Pahu Makmur Estate and Kedang Makmur Estate has generated impacts, either positive and negative, to the environment and the surrounding communities. The presence of the company has delivered positive impacts to the local communities especially of Tanjung Jan Village, in the forms of : improvement of village land roads, increased village land values, increased employment and business opportunities. Meanwhile, those positive impacts have not been delivered to the local communities of other villages because the CSR Programs was still in the step of planning. Some of the local communities are very optimistic that the company of PT PP London Sumatera Indonesia Tbk - Pahu Makmur Estate and Kedang Makmur Estate will provide positive impacts for development of the village and the surrounding communities.

The presence of the company has also the potentials to generate negative impacts to the environment and the surrounding communities. According to the *Focus Group Discussion (FGD)*, it was revealed that most of the surrounding communities gave negative perceptions towards the company, due to the lack of social programs for local communities by the previous management. People assumed that the presence of the company would prohibit logging by local communities which interrupt source of community's income, displace "limbo" and the ancestral graves. The potential negative impacts in general are degradation of environmental quality, diminishing land availability for farming, timber/wood sources and other non-wood forest products.

The Assessment has identified HCVs within the area of PT. PP London Sumatera Indonesia Tbk - Pahu Makmur Estate and Kedang Makmur Estate containing HCV1 (HCV1.2, and HCV1.3), HCV3, HCV4 (HCV4.1 and HCV4.2), HCV5 and HCV6 which covering areas of 819.36 ha containing River Riparian Areas of 38.10 ha, Swamp Peat Forest Areas of 777.10 ha, Conservation Areas for Ulin (*Eusiderxylon zwagery*) of 1.00 ha, Burial Areas and Sacred Places of 3.162 ha.

The EIA Assessment in the area of PT. PP London Sumatera Indonesia Tbk - Pahu Makmur Estate and Kedang Makmur Estate (*the EIA document on behalf of PT GELORA MAHAPALA*) was held by competent consultant of PT POLIGON KALTIM UTAMA and has been approved by the Head of Mining and Environmental Agency / Chairman of EIA Commission of Kutai Barat Regency according to the Decree No. No 540.660,1/030.3/AMDAL-KBR/X/2005 dated 26 October 2005. Meanwhile, the HCV and SIA assessments were conducted in 2013 by Faculty of Forestry – Bogor Agricultural University which supported by assessor team accredited by RSPO.

The company of PT PT. PP London Sumatera Indonesia Tbk - Pahu Makmur Estate and Kedang Makmur Estate manages the plantation area comprehensively and professionally with reference to the principles, criteria and indicators for New Plantings Procedure of RSPO.

2.1 Organizational Information and Contact Person

- Company's Name : PT. PP London Sumatera Indonesia Tbk
Address : Jalan Ahmad Yani Komplek Ruko Mitra Mas no 27 – 28
Samarinda Kalimantan Timur
- Contact : Muhammad Waras (Email address : muhammad.waras@londonsumatra.com)
- Deed of The Company : Company Deed No 93, dated 18 December 1962;
Deed of Company's Change No.20, dated 9 September 1963
(Notary Raden Kadiman); Ministry of Justice Approval No.
J.A5/121/20, dated 14 September 1963
Deed of Company's Change No. 9, dated 10 May 2012; Ministry of
Justice Approval No.AHU-0044755.AH-61.09/2012, dated 11
May 2012 (Notary Pahala Sutrisno Amijoyo Tampubolon,
SH,M.Kn)
- Investment Type : Foreign Investment (PMA)
Land Status :
- Area permit on behalf of PT. London Sumatera Indonesia which is issued by the Head of National Land Agency of Kutai Barat Regency (SK. No : 07/PKT-BPN-16.3/UM-03/111-1996 dated 8 March 1996 covering area of 15,000 ha and located in Muara Lawa and Muara Pahu Sub-districts, Kutai Regency
- Area permit on behalf of PT. London Sumatera Internasional which is issued by the Head of National Land Agency of Kutai Barat Regency (SK. No : 33/PKT/BPN-16.3/UM-33/XI-1995 dated 21 November 1995) covering area of 18,000 ha and located in Jempang and Muara Pahu Sub-districts, Kutai Regency
- Principle approval on the plantation bussiness license on behalf of PT. London Sumatera Internasional which is issued by the Agriculture Minister (SK No 9 K8.320/458/Mentan/XII/95 dated 4 December 1995)
- Area permit on behalf of PT. Gelora Mahapala which is issued by the Head of National Land Agency of Kutai Barat Regency (SK. No : 03/PKT/BPN-16.8/UM-06/III-1996 dated 8 March 1996 covering area of 15,000 ha and located in Jempang and Bongang Sub-districts, Kutai Regency
- Principle approval on the plantation bussiness license on behalf of PT. PT. Gelora Mahapala which is issued by the Minister of Forestry (SK No HK.350/E5.354/05/96 dated 02 May1996)
- Area permit for oil palm plantation development on behalf of PT. London Sumatera Indonesia which is issued by the Head of National Land Agency of Kutai Barat Regency (SK. No : 06/PRT/BPN.16.3/UM-16/III-1997 dated 26 March 1997) covering area of 11,500 ha and located in Muara Ohong village,

Perigiq village, Mancong village, Tanjung Laung village, Jempang Sub-districts, Kutai Regency

Principle approval on the plantation bussiness license on behalf of PT. London Sumatera Indonesia which is issued by the Director General of Plantation (SK No KB.320/458/Mentan/XII/1995 dated 04 December 1995) and the extended license No HK.530/E5.776/09.9/dated 3 September 1997

Principle approval on the plantation bussiness license on behalf of PT. London Sumatera Internasional which is issued by the Agriculture Minister (HK.300/E5.724/09/96 dated 13 September 1996) covering area of 15,000 ha and located in the villages of Tebisak, Jerang Dayaq, Tanah Mea, Tepian Ulag, Muara Baroh, Muara Pahu, Dasaq, Mendong, Kolik, Jerang Melayu, Sub-district of Muara Pahu, Kutai regency

Extended Area Permit on behalf of PT. London Sumatera Internasional for oil palm plantation development (SK No 10/PKT/BPM-16.3/UM-10/IV-1997)

Principle approval on the plantation bussiness license on the second year on behalf of PT. Gelora Mahapala which is issued by the Director General of Plantation (SK No HK.300/E5.777/09.97 dated 03 September 1997).

Extended Area Permit for Oil Palm Plantation on behalf of PT. Gelora Mahapala which issued by the Head of National Land Agency No 11/PKT/BPN-16.3/UM-II/IV-1997 dated 28 April 1997 covering area of 15,000 ha located in Jempang Subdistrict (Tanjung Isuy village, Tanjung Jan village, Pulau Lanting village, Muara Nayan village, Pentat village, Lembonah village) and Bongan Subdistrict (Penaun village, Muara Kedang village and Resak village), Kutai Regency.

Total Area : 16,341.94 Ha

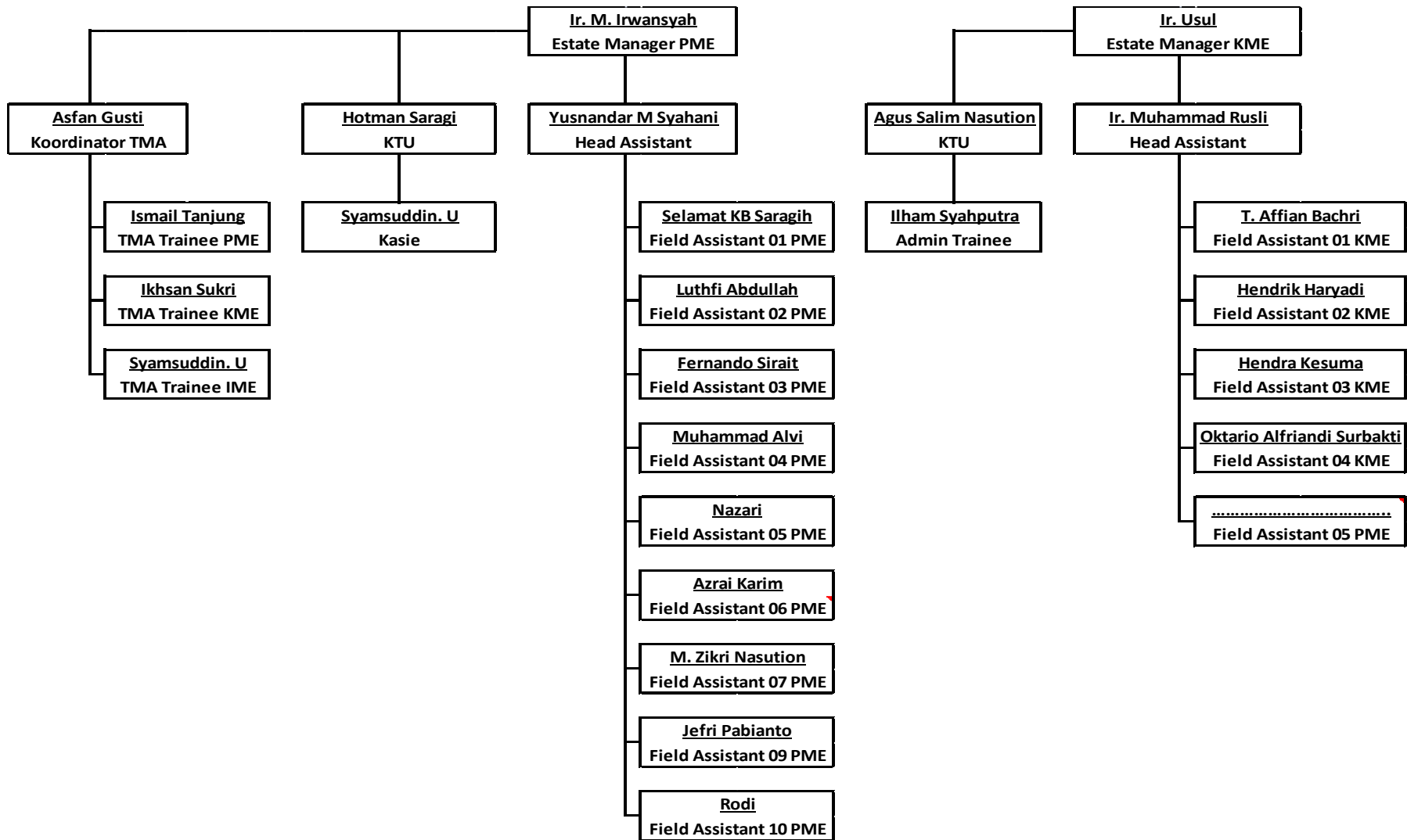


Figure 1. Organizational Structure of PT. PP London Sumatera Indonesia Tbk - Pahu Makmur Estate and Kedang Makmur Estate

2.2 Legal Documents, Government Regulation and Property Deeds Related to The Area Assessed

Legal documents provided before operational are as follows:

1. Area permit on behalf of PT. London Sumatera Indonesia which is issued by the Head of National Land Agency of Kutai Barat Regency (SK. No : 07/PKT-BPN-16.3/UM-03/111-1996 dated 8 March 1996 covering area of 15,000 ha and located in Muara Lawa and Muara Pahu Sub-districts, Kutai Regency.
2. Area permit on behalf of PT. London Sumatera Internasional which is issued by the Head of National Land Agency of Kutai Barat Regency (SK. No : 33/PKT/BPN-16.3/UM-33/XI-1995 dated 21 November 1995) covering area of 18,000 ha and located in Jempang and Muara Pahu Sub-districts, Kutai Regency.
3. Principle approval on the plantation bussiness license on behalf of PT. London Sumatera Internasional which is issued by the Agriculture Minister (SK No 9 K8.320/458/Mentan/XII/95 dated 4 December 1995).
4. Area permit on behalf of PT. Gelora Mahapala which is issued by the Head of National Land Agency of Kutai Barat Regency (SK. No : 03/PKT/BPN-16.8/UM-06/III-1996 dated 8 March 1996 covering area of 15,000 ha and located in Jempang and Bongan Sub-districts, Kutai Regency
5. Principle approval on the plantation bussiness license on behalf of PT. PT. Gelora Mahapala which is issued by the Minister of Forestry (SK No HK.350/E5.354/05/96 dated 02 May1996).
6. Area permit for oil palm plantation development on behalf of PT. London Sumatera Indonesia which is issued by the Head of National Land Agency of Kutai Barat Regency (SK. No : 06/PRT/BPN.16.3/UM-16/III-1997 dated 26 March 1997) covering area of 11,500 ha and located in Muara Ohong village, Perigiq village, Mancong village, Tanjung Laung village, Jempang Sub-districts, Kutai Regency.
7. Principle approval on the plantation bussiness license on behalf of PT. London Sumatera Indonesia which is issued by the Director General of Plantation (SK No KB.320/458/Mentan/XII/1995 dated 04 December 1995) and the license renewal No HK.530/E5.776/09.9/dated 3 September 1997.
8. Principle approval on the plantation bussiness license on behalf of PT. London Sumatera Internasional which is issued by the Agriculture Minister (HK.300/E5.724/09/96 dated 13 September 1996) covering area of 15,000 ha and located in the villages of Tebisak, Jerang Dayaq, Tanah Mea, Tepian Ulag, Muara Baroh, Muara Pahu, Dasaq, Mendong, Kolik, Jerang Melayu, Sub-district of Muara Pahu, Kutai regency.
9. Extended Area Permit on behalf of PT. London Sumatera Internasional for oil palm plantation development (SK No 10/PKT/BPM-16.3/UM-10/IV-1997).
10. Principle approval on the plantation bussiness license on the second year on behalf of PT. Gelora Mahapala which is issued by the Director General of Plantation (SK No HK.300/E5.777/09.97 dated 03 September 1997).
11. Extended Area Permit for Oil Palm Plantation on behalf of PT. Gelora Mahapala which issued by the Head of National Land Agency No 11/PKT/BPN-16.3/UM-II/IV-1997 dated 28 April 1997 covering area of 15,000 ha located in Jempang Subdistrict (Tanjung Isuy village, Tanjung Jan village, Pulau Lanting village, Muara Nayan village, Pentat village, Lembonah village) and Bongan Subdistrict (Penaun village, Muara Kedang village and Resak village), Kutai Regency.
12. Law No. 32 of 2009 regarding The Environmental Management and Protection.
13. Government Regulation No 82 of 2001 regarding Water Quality Management and Water Pollution Control
14. Regulation of The Environmental Minister No 11 of 2006 on The List of Bussiness and Activity Plans That Must be Provided with EIA (AMDAL)

15. Regulation of The Environmental Minister No 08 of 2006 on Guidance of The Environmental Impacts Analysis Document Preparation
16. Regulation of The Environmental Minister No 45 of 2005 regarding to Guidance of The Implementation of Environmental Management (RKL) and Monitoring Plans (RPL)..
17. Decree of The Head of Environmental Control Agency No. Kep-015, 1997 regarding to Guidance of The Implementation of Environmental Management and Monitoring Plan (RKL/RPL).

2.3. Map of The Company's Area at The Site and Landscape Levels

1. Map of The Company's Area

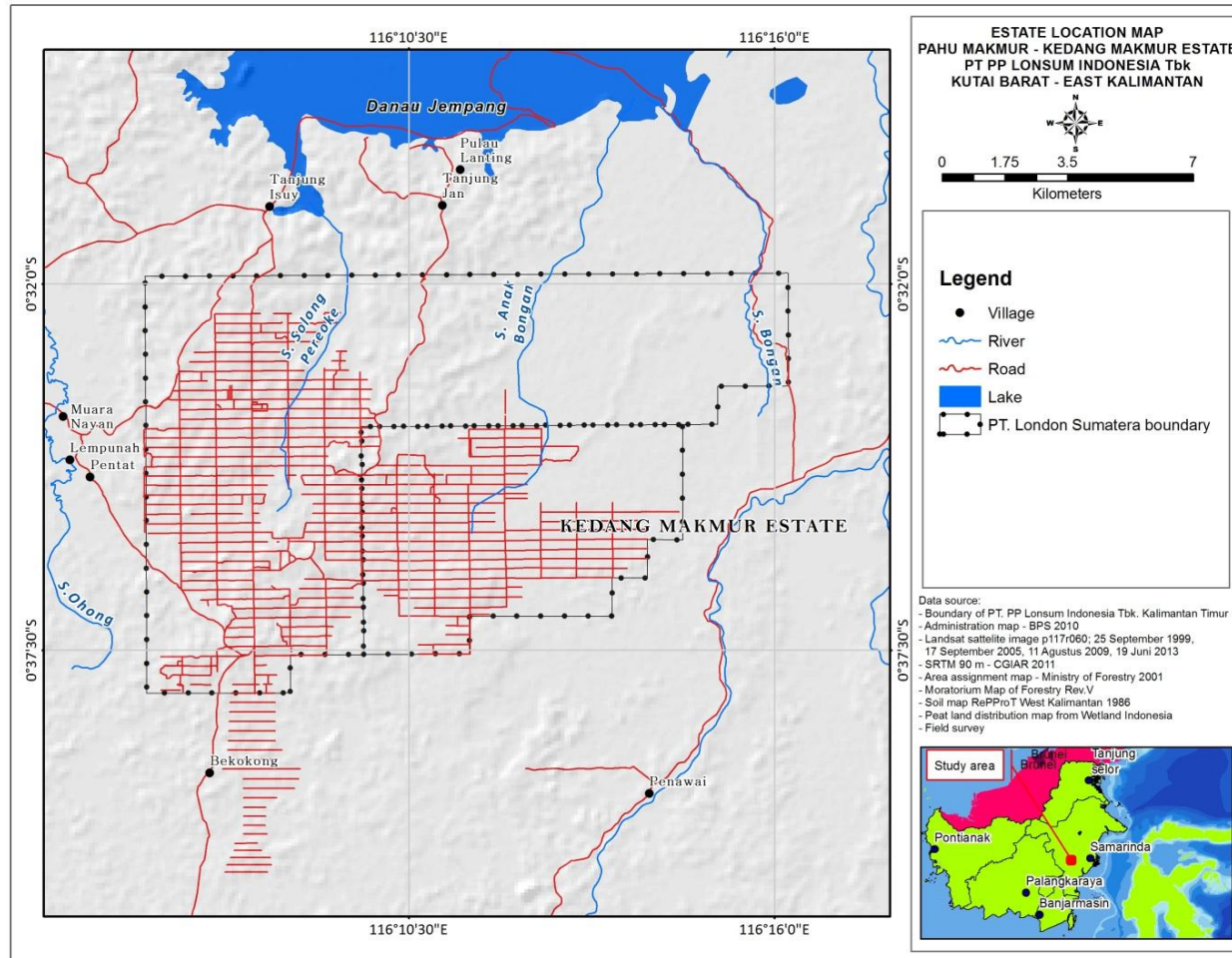


Figure 2. Map of The Area of PT. PP London Sumatera Indonesia Tbk Pahu Makmur Estate and Kedang Makmur Estate.

The concession of PT PP London Sumatera Indonesia Tbk - Pahu Makmur Estate and Kedang Makmur Estate covers areas of $\pm 16,341.94$ ha consisting of the area of 11,603.48 ha managed as *Pahu Makmur Estate* and the area of 4,738.46 ha managed as *Kedang Makmur Estate*. Administratively, the company area is located in the villages namely : Tanjung Jan, Pulau Lanting, Bekokong Makmur, Tanjung Isuy, Pentat (*Jempang Subdistrict*); and Muara Kedang, Penawai (*Bongan Subdistrict*), Kutai Barat Regency – Province of East Kalimantan. The company's area includes in the *Mahakam Watershed (DAS) - Bongan Tongkok Subwatershed*.

2. Map of The Company's Area at Landscape Level

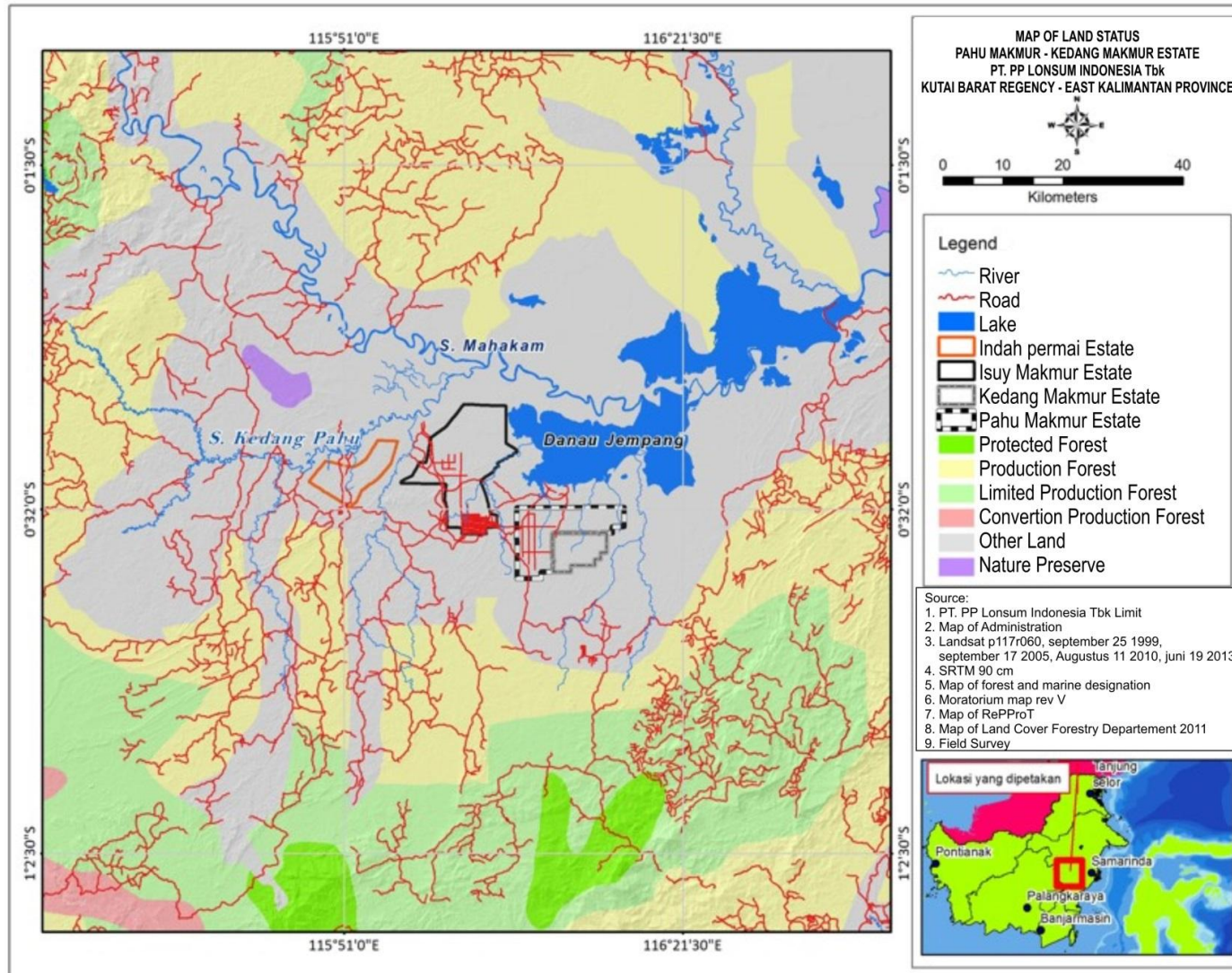
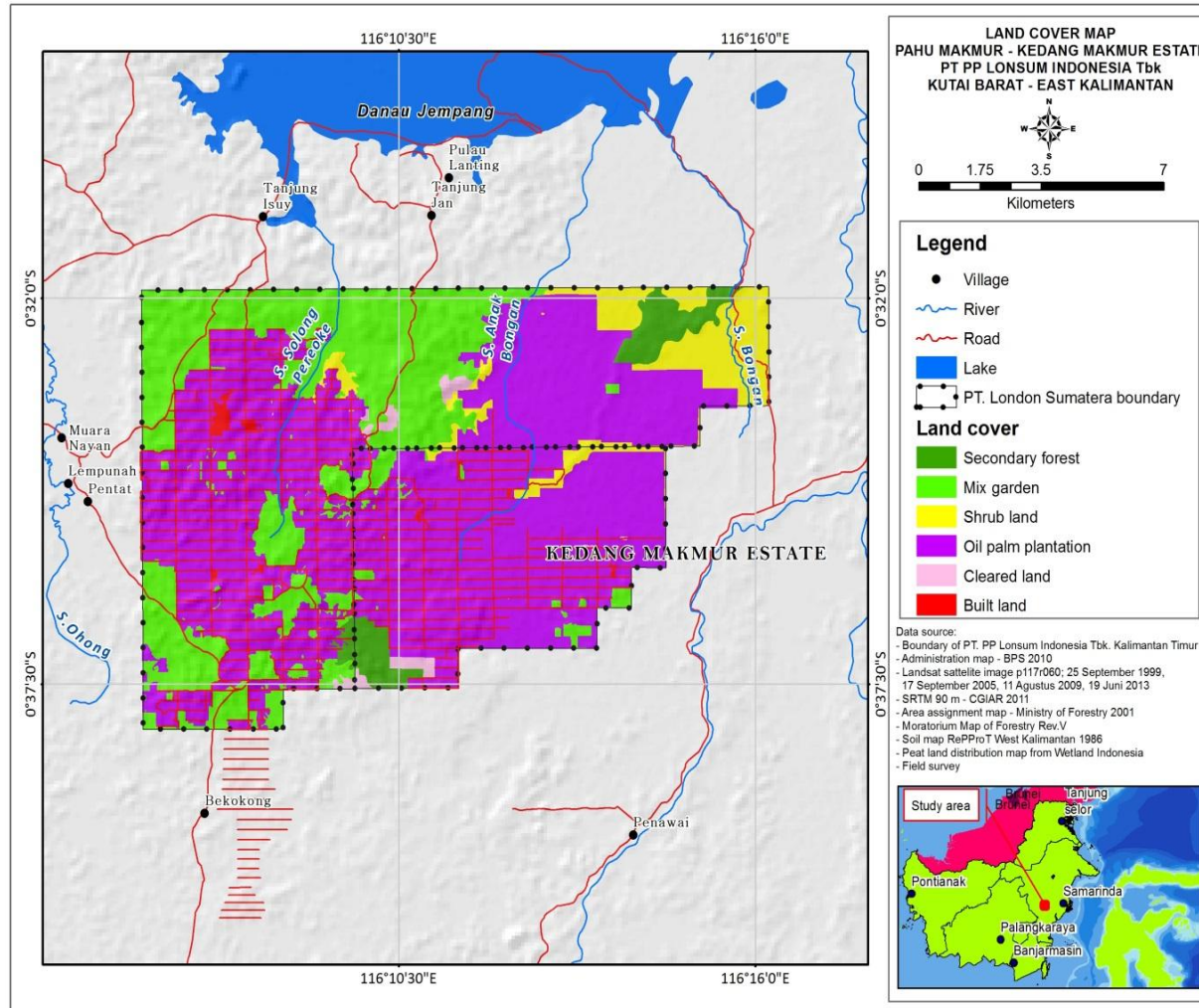


Figure 3. Map of The Area of PT. PP London Sumatera Indonesia Tbk Pahu Makmur Estate and Kedang Makmur Estate at Landscape Level.

According to the land status, the area of PT. PP London Sumatera Indonesia Tbk Tbk - Pahu Makmur Estate and Kedang Makmur Estate is located in *Other Land Use area (APL)*. In the assessment, it was shown that it is found conservation area namely *Padang Luwai Nature Reserve Area* and it is far from the company's area with the distance of about 36 km to the southwest, and there is no interconnection between them.

3. Land Cover of The Company's Area



According to the field survey, and interpretation of satellite imagery 8 Path/Row 126-60 period 14 April 2014, it is shown that land cover in the area of PT. PP London Sumatera Indonesia Tbk Pahu Makmur Estate and Kedang Makmur Estate consists of 1) Bareland (1,534.01 ha), 2) Water Body (13.90 ha), 3) Shrubs (437.93 ha), 4) Dryland/Secondary Forest Area (2,612.57 ha), 5) Mixed Farming Fields (328.34 ha), 6) Oil palm plantation area (10,883) ha, and 7) Bush (441.25 ha).

2.4. New Planting Areas and Time of Implementation Plans

Planting Program for Pahu Makmur and Kedang Makmur Estate

No	Year	Ha
1	2014	484.810
2	2015	1,388.740
3	2016	1,560.460
4	2017	-
	Total Proposed to plant	3,434.010

3. Assessment Process and Procedure

3.1 Assessor

a). HCV (*High Conservation Value*) Assessment

The HCV Assessment was performed by :

Faculty of Forestry – Bogor Agricultural University
 Kampus IPB Darmaga - Bogor, Kabupaten Bogor - Provinsi Jawa Barat
 Indonesia 16001
 Telp.: 62-251- 621947, Fax: 62-251-621947
 Website: <http://www.fahutan.ipb.ac.id/hcv/index.html>
 Email: fahutan@ipb.ac.id, hcvteam@yahoo.co.id

Assessor Team

Dr. Ir. Nyoto Santoso, MS – Team Leader
 (Specialty : Biodiversity Management and Conservation)

He was born in Banyuwangi on 15 March 1962, as a Team Leader of Faculty of Forestry's HCV Team – Bogor Agricultural University, with the specialty : Biodiversity Management and Conservation. Obtained Master at The Environment and Natural Resources Management – Bogor Agricultural University in 1992 and his Phd awarded at The Forest Management Science – Bogor Agricultural University in 2012. His experiences in the Environmental Field started in 1987. He is a lecturer at the Forest Resource and Ecotourism Conservation Department, Faculty of Forestry – Bogor Agricultural University with the subject : Wildlife Ecology and

Management, Environmental and Forestry Policies, conservation of important ecosystems and primates ecology (at the forestry science and primates study program - IPB masters program). He was an Executive Director of Indonesian Mangrove Development and Research Institute, registered as a Member of National Mangrove's Expert Council, as an Expert Council Member of Sustainable Strategic Plantation Development Forum.

Dr. Ir. Burhanuddin Mas'ud, MS - Team Member
(Specialty : Wildlife)

He was born in Flores Timur on 21 November 1958. Obtained Bachelor's Degree at the Faculty of Animal Husbandry - UNDANA, Kupang in 1982. He is a lecturer in the UNDANA University since 1986 and a permanent researcher in the Wildlife Breeding Laboratory, Department of Forest Resource and Ecotourism Conservation, Faculty of Forestry - Bogor Agricultural University. He has experiences in the assessment on both plant and wildlife related to the natural resource utilizations.

Udi Kusdinar, S.Hut - Team Member
(Specialty : Socio-Economic and Cultural)

He was born in Ciamis on 13 May 1983, and registered as a member of Bogor Agricultural University - Faculty of Forestry's HCV Team with the specialty : Socio-Economic and Cultural. Obtained Bachelor's Degree of Forestry at The Forest Resource and Ecotourism Conservation Department - Faculty of Forestry - Bogor Agricultural University in 2009. Experience in the social assessment started in 2009.

Sulfan Ardiansyah, S.Hut - Team Member
(Specialty : Floral Ecology)

He was born in Jember on 27 August 1986, and registered as a member of Bogor Agricultural University - Faculty of Forestry's HCV Team with the specialty : Floral Ecology. Obtained Bachelor's Degree of Forestry at The Forest Resource and Ecotourism Conservation Department - Faculty of Forestry - Bogor Agricultural University in 2008. Experience in the HCV assessment started in 2008

Rae Birumbo, S.Pi - Team Member
(Specialty : Socio-Economic and Cultural)

He was born in Jogjakarta on 24 August 1976 Lahir di Ciamis, 13 Mei 1983, and registered as a member of Faculty of Forestry's HCV Team - Bogor Agricultural University with the specialty : Socio-Economic and Cultural. Obtained Bachelor's Degree in the Gajahmada University in 2002. His experience in the social assessment started in 2002 in the Coastal Community Empowerment Project (PEMP) and HCVs Assessments in Papua, Kalimantan and Sumatera. Joined in the Institute of Mangrove Research and Development 2007-2010,.

Arif Prasetyo, S.Hut - Team Member
(Specialty : G I S and Environmental Services)

He was born in Metro on 6 May 1987, and registered as a member of Bogor Agricultural University - Faculty of Forestry's HCV Team with the specialty : G I S and Environmental Services. Obtained Bachelor's Degree of Forestry at The Forest

Resource and Ecotourism Conservation Department – Faculty of Forestry – Bogor Agricultural University in 2010. Experience in the HCVs assessment started in 2010

b). Environmental Impact Analysis (EIA)

Study of Environment Impacts Analysis (on behalf of *PT GELORA MAHAPALA*) was held by :

PT POLIGON KALTIM UTAMA

Address : Jalan Kapas No 18 Sidomulyo
Samarinda – Kalimantan Timur

Phone: 0541 - 732182

Assessor Team

Dr Ir Risman Situmeang	- Team Leader
Ir Zainal Mutaqin MP	- Team Member (Specialty : Physical - Chemistry)
Ir Syarifudin	- Team Member (Specialty : Physical - Chemistry)
Junser Naibaho Msi	- Team Member (Specialty : Biology)
Ir Sulaiman	- Team Member (Specialty : Biology)
Dra Rahmaniar	- Team Member (Specialty : Socio-economic)
Drs Agus Salim	- Team Member (Specialty : Socio-economic)

c). SIA (Social Impact Assessment)

The SIA Assessment was performed by :

Faculty of Forestry – Bogor Agricultural University
Kampus IPB Darmaga - Bogor, Kabupaten Bogor - Provinsi Jawa Barat
Indonesia 16001
Telp.: 62-251- 621947, Fax: 62-251-621947
Website: <http://www.fahatan.ipb.ac.id/hcv/index.html>
Email: fahatan@ipb.ac.id, hcvteam@yahoo.co.id

Assessor Team

Dr. Ir. Nyoto Santoso, MS – Team Leader
(Specialty : Biodiversity Management and Conservation)

He was born in Banyuwangi on 15 March 1962, as a Team Leader of Faculty of Forestry's HCV Team – Bogor Agricultural University, with the specialty : Biodiversity Management and Conservation. Obtained Master at The Environment and Natural Resources Management – Bogor Agricultural University in 1992 and his Phd awarded at The Forest Management Science – Bogor Agricultural University in 2012. His experiences in the Environmental Field started in 1987. He is a lecturer at the Forest Resource and Ecotourism Conservation Department, Faculty of Forestry – Bogor Agricultural University with the subject : Wildlife Ecology and Management, Environmental and Forestry Policies, conservation of important ecosystems and primates ecology (at the forestry science and primates study program - IPB masters program). He was an Executive Director of Indonesian Mangrove Development and Research Intitute, registered as a Member of National Mangorve's Expert Council, as an Expert Council Member of Sustainable Strategic Plantation Development Forum.

Udi Kusdinar, S.Hut - Team Member
(Specialty : Socio-Economic and Cultural)

He was born in Ciamis on 13 May 1983, and registered as a member of Faculty of Forestry's HCV Team – Bogor Agricultural University with the specialty : Socio-Economic and Cultural. Obtained Bachelor's Degree of Forestry at The Forest Resource and Ecotourism Conservation Department – Faculty of Forestry – Bogor Agricultural University in 2009. Experience in the social assessment started in 2009. His experiences in the social assessment are : Social Impact Assessment in Oil Palm and Sugar Cane Plantation; HCVs Identification in Mangrove Concession Companies, Oil Palm Plantation, Coffee Plantation, and Sugar Cane Plantation; Identification and Economic Valuation Analysis of Socio-Economic Impacts in the Forest Land Use in CA and TWA Papandayan; Identification and Comprehensive Analysis of Community Social Assessment & Framework Community Development Plan PT. Daya Bumindo Karunia; dan *Study On Good Practice Of Social Forestry For Sustainable Forest Management And REDD+ in Province of Nusa Tenggara Barat.*

Dr. Ir. Burhanuddin Mas'ud, MS - Team Member
(Specialty : Wildlife)

He was born in Flores Timur on 21 November 1958. Obtained Bachelor's Degree at the Faculty of Animal Husbandry – UNDANA, Kupang in 1982. He is a lecturer in the UNDANA University since 1986 and a permanent researcher in the Wildlife Breeding Laboratory, Department of Forest Resource and Ecotourism Conservation, Faculty of Forestry – Bogor Agricultural University. He has experiences in the assessment on both plant and wildlife related to the natural resource utilizations

Rae Birumbo, S.Pi - Team Member
(Specialty : Socio-Economic and Cultural)

He was born in Jogjakarta on 24 August 1976 Lahir di Ciamis, 13 Mei 1983, and registered as a member of Faculty of Forestry's HCV Team – Bogor Agricultural University with the specialty : Socio-Economic and Cultural. Obtained Bachelor's Degree in the Gajahmada University in 2002. His experience in the social assessment started in 2002 in the Coastal Community Empowerment Project (PEMP) and HCVs Assessments in Papua, Kalimantan and Sumatera. Joined in the Institute of Mangrove Research and Development 2007-2010.

3.2 Assessment Method (Data Sources, Data Collection, Time of Implementation, Programs and Observation Sites)

A. High Conservation Value (HCV)

1. Data Collection

- a) Documents/reports collected, consisting of a) Map of The Concession Area, b). Map of Village Around The Concession Area, c) Land Cover Map; d). Land Status Map; e). Landsystem Map; f). Map of Topography and Land Slope; g). River Network Map. h) Subdistricts Data Monograph of 2013.
- b) Types of secondary data collected were general condition of the company's area, (including land management history, area and location, area boundaries, land slope

and topography, soil and geology, climate, hydrology, land cover, and socio-economic-cultural); maps and other relevant documents/reports. Secondary data collection is also performed through the study of literature, which collecting data and information from various reports or documents and maps from the relevant agencies.

- c) *Review* on the documents/reports was conducted on the document/report/relevant maps. The things that reviewed, were availability and adequacy of data / information that required in the analysis. The review results were then used as the basis in the implementation of secondary data collection and field survey (field verifications).

2. Field Observation and Data Analysis

Primary data that have been collected in the field observation consisted of physical aspect of the concession area, environmental services aspect, socio-economic aspect and socio-cultural aspect:

- a) *Mapping and Landscaping*

Mapping and landscaping team collects data to verify data and secondary information such as river network, land road network, area boundary, soil types, topography, and overviewing on the hole area assessed. In addition, the mapping and landscaping team will also support other teams in mapping all finding data and information into the map and to analyze it.

- b) *Wildlife Assessment*

In the field, wildlife data collection is performed using rapid assessment method (qualitative field observation) to get the actual informations on the existing wildlife condition in and around the study area. Output of the wildlife assessment is a list of wildlife species found on each observation sites.

- c) *Plant Assessment*

In the field, plant species data collection is performed using interview and field observation methods. The data collected are then identified the species protection status according to IUCN, CITES and PP No 7 of 1999. Furthermore, the data and information collected are used to verify the initial map of ecosystem distribution (HCV2 and HCV3) in the study area; and also used to identify forest stand structure, species density or species dominance on each ecosystem type.

- d) *Socio - Economic - Cultural Assessment*

In the field, data collection is performed using interview and field observation methods on the selected location. List of structured questions is used as a guidance for interviewer with the informations collected consisting of : the way of fulfilling basic needs for local community, community's custom and culture, inter-relationship between local community and forest area, and inter-relationship between local community and the company. The data / information collected are analysed to identify level of local community's dependency on the forest area and the role of forest area in the local community's everyday lifes and their cultural identity.

3. Location and Time of Implementation

The study was conducted in the area of PT. PP London Sumatera Indonesia Tbk - Pahu Makmur Estate and Kedang Makmur Estate and the surrounding villages namely : Tanjung Jan, Pulau Lanting, Bekokong Makmur, Tanjung Isuy, Pentat (*Jempang Subdistrict*); and Muara Kedang, Penawai (*Bongan Subdistrict*), Kutai Barat Regency -

Province of East Kalimantan. The HCVs Assessment was completed in 2 month from May-June 2014 and the field observation was carried out on 27 May – 1 June 2014. The study have visited 39 observation sites with the following details :

No	Observation Sites	Number
1	Planting Area	4
2	Peat Secondary Forest Area	3
3	Sacred Places	19
4	Sub-district Government Office	2
5	Village Government Office	7
Total		39

4. Analysis and Mapping

Analysis and Mapping is the most crucial and important step in the assessment process. In the analysis, it is performed a deep and comprehensive analysis on the secondary and primary data collected in the field consisting of physical aspect, spatial, flora, wildlife, and socio-cultural aspect. Outputs of the analysis, will be used as the basis in the identification of HCV;s presence in the area assessed and then continued with mapping them using GIS software.

HCV1. Areas Containing Important Level of Biodiversity.

- a) Mapping the company's area, including land cover and ecosystems, at the site and landscape levels.
- b) Mapping the existence of protection forest or conservation areas in the company's area and the surroundings, including conservation area designated by local community.
- c) Identifying the potential roles of company's area in providing support to the biodiversity in protection or conservation areas within or around the company area.
- d) Identifying the areas that have the potential roles in providing support functions to the biodiversity in protection or conservation areas in or around the company area.

HCV2. Landscapes That Important for Natural Ecological Dynamics

- a) Mapping vegetation cover of the company's area at landscape level.
- b) Mapping the mature vegetation cover on each Management Unit at the landscape level with special attention to the area boundaries for example : clear boundary delination on the forest (or natural forested areas) with degraded forest area due to human acitivities.
- c) Identifying the potential presence of core zone and buffer zone required to reduce impacts generated by the activity of each management unit.
- d) Consider the possibility of change scenarios on the core and boundary zones based on the land use plan set by government.

HCV3. Areas Containing Rare or Endangered Ecosystems

- a) The first step is to identify rare or endangered ecosystems in each Management Unit (UP), consisting of Mangrove ecosystem, deep-peat ecosystem (>3m), Karst ecosystem, Heath Forest ecosystem, etc.
- b) Then to analyze the extent, distinctiveness and uniqueness of the rare or threatened ecosystems identified, as well as the threats, functions of those ecosystems in the

biodiversity and environmental sustainability, and area delineation on each rare or endangered ecosystems identified.

HCV4. Areas Providing Natural Environmental Services

- a) Overlap the area boundaries of the company's area with Map of Forest Land Use (TGHK) and Provincial Spatial Planning (RTRWP).
- b) Delineate the watershed and sub-watershed areas in each Management Unit (UP) and the surrounding.
- c) Identify dependency of local community to the existing water sources.
- d) Delineate the left-right area of river flowing in each Management Unit (UP) and determine these areas as riparian with the size specified in the applicable rules.
- e) Identify the presence of important ecosystems in the ecosystem map prepared by HCV3 Team. The identification can also be performed using RePPPProt Data as the indicative map which showing where the important ecosystems usually exist (if the ecosystem map is not available)..
- f) Prepare land cover map based on the field observation combined with the latest satellite imagery interpretation.

HCV5. Areas Containing Important Function in Fulfilling Basic Needs for Local Community

Benchmarking for important category is defined as 50 % or more of one or more subsistence can be fulfilled by utilizing other forests or ecosystems. HCV5 does not apply limit criteria at community level or sub-group of it.

HCV6. Areas That Have Important Functions for Local Community's Cultural Identity

HCV6 will be determined in a Management Unit if in the HCVs Assessment, it meets one or more of the following indicators :

- It is found that local community acknowledges zoning in the village areas according to the the land use purposes such as public burial areas and sacred places.
- It is found dispersion of customary areas at landscape level that acknowledged by local communities, either in the low, medium or high dispersion which will be used as the complementary informations relating to preparing the management treatment required by a Management Unit.
- It is identified level of interest, either in the low, medium and high level, of those areas in providing interests to the local communities.

B. Environmental Impact Analysis (EIA/AMDAL)

Formal Method

Formal method is used to measure or estimate impact parameters using mathematical statistical model.

Informal Method

Informal method is used based on the intuition, analogy and experience, in measuring or estimating environmental parameters using statistical mathematical approach. The common approach used in the informal method are

a). Analogy

In the analogy method, environmental problems that have been arisen in an area due to various human activities, will be used as the basis and consideration in the estimation of impacts that may arise in other places with the same ecosystem type.

b). Environmental Standard

Environmental standard used is the criteria and standard that have been determined by local, regional, sectoral or even national regulations, or using the standards and criteria that have been accepted and recognized by public.

c). Professional Consideration

This method is used only when we meet lack of data and information (unadequate data available) in the field and the lack of understanding to impacts.

Data collected consists of primary and secondary data. While field survey which is supported by structured interview is to collect primary data. Assessor will use questionnaire as the guidance in the interview. While collecting data sourced from regional offices, is conducted using purposive sampling method to identify conditions of demography, public health and education, religion, social, culture and economic in the form of secondary data.

C. SIA (*Social Impact Assessment*)

1. *Data Collection*

Data required in the assessment consists of primary and secondary data which collected from the company's office, relevant government agencies and field verifications.

a) *Secondary Data*

Secondary data that have been collected, namely : Kutai Barat Regency in Figures of 2013, Jempang Sub-district in Figures of 2013, Bongan Sub-district in Figures of 2013, CSR Report Document, Documents of land acquisition by the company of PT. PP London Sumatera Indonesia Tbk - Pahu Makmur Estate and Kedang Makmur Estate and other relevant documents.

b) *Primary Data*

Primary data was collected using Field Observation, *Focus Group Discussion* (FGD) and interview methods, based on the representativeness of the socio-economic aspects, working areas, and the pattern of interaction with the company.

Field Observation

Field observation is performed to identify the existing condition in the field in order to

- make sure that data that have been collected are the same or at least almost the same with the real condition in the field.
- explore deeper information in the field on the condition of community's socio-economic in and around the company's area.

Focus Group Discussion (FGD)

Focus Group Discussion is performed to explore information, problems, hopes and perception of local community related to the company's oil palm development plan. The FGD was conducted in all study villages.

Interview

Interview is performed using two methods, namely : structured and semi-structured interview.

2. Location and Time of Implementation

The study was conducted in the area of PT. PP London Sumatera Indonesia Tbk - Pahu Makmur Estate and Kedang Makmur Estate and the surrounding villages namely : Tanjung Jan, Pulau Lanting, Bekokong Makmur, Tanjung Isuy, Pentat (*Jempang Subdistrict*); and Muara Kedang, Penawai (*Bongan Subdistrict*), Kutai Barat Regency – Province of East Kalimantan. The HCVs Assessment was completed in 2 month from May-June 2014 and the field observation was carried out on 27 May – 1 June 2014.

3.3 Public Consultation

Public consultation was held on 31 May 2014 in the Plantation Office of PT. PP London Sumatera Indonesia Tbk - Pahu Makmur Estate and Kedang Makmur Estate. The public consultation results will be used as inputs in the completion of HCV document report

List of attendance in the public consultation held are as follow



**KEMENTERIAN PENDIDIKAN DAN KEBUDAYAAN
FAKULTAS KEHUTANAN INSTITUT PERTANIAN BOGOR**

Kampus IPB Darmaga Bogor 16001, Alamat Kawat : FAHUTAN Bogor
Telp. (0251) 8621677 Fax. (0251) 8621256 Website : <http://www.fahutan.ipb.ac.id> E-mail : fahutan@ipb.ac.id

**DAFTAR HADIR KONSULTASI PUBLIK
KAJIAN IDENTIFIKASI NILAI KONSERVASI TINGGI (NKT)
PADA AREAL PT.LONDON SUMATERA-KAB KUTAI BARAT**

Hari/Tanggal : Sabtu/31 Mei 2024
Waktu : 11.00 WITA
Tempat : Ruang Meeting Kantor GEM PT PD. Lonsum Indonesia - Kota Kutai Barat

No	Nama	Jabatan Instansi	Alamat	No Tlp/HP	Tanda Tangan
1	M. IRWANGYATI	EM - PMB	LANSUM	08127884211	[Signature]
2	SEKIRIN	PULAU LANTING	SETAPADAT		[Signature]
3	KASRAN	PULAU LANTING	SEKARIS		[Signature]
4	MOSES JEMI	Petinggi	T6 Jan	081253287421	[Signature]
5	ACHMADI	K. PENERBITAN	BERKOMUNG.M	081350745791	[Signature]
6	GAZALI - R	RAKIBINTA	TJ ISUY	08135072942	[Signature]
7	URIP. WODOO	Kopalek	TJ Isuy	08125565240	[Signature]
8	A. Bangin	Kef Adat	TJ Isuy	[Signature]	[Signature]
9	Roe Bicumbe	Tim HCV E.SIA	IPB - Bogor	085692451515	[Signature]
10	Sulfan Ardiansyah	Tim HCV IPB	Bogor	085232224211	[Signature]
11	Udi Kurniawan	Tim HCV IPB	Bogor	081710567214	[Signature]
12	Burhanuddin	Tim HCV IPB	"		[Signature]
13	CHRIS. RUNTU	EM IHE	IHE		[Signature]
14	ADI BASTOMI	ECM - LK	MEDAN	08126593205	[Signature]
15	SEKIRIN	PULAU LANTING	ADAT		[Signature]
16	KASRAN	PULAU LANTING	SAKATAS		[Signature]
17	Zulvendi Sagala	Humas	Lonsum	08195293501	[Signature]




**KEMENTERIAN PENDIDIKAN DAN KEBUDAYAAN
FAKULTAS KEHUTANAN INSTITUT PERTANIAN BOGOR**

Kampus IPB Darmaga Bogor 16001, Alamat Kawat : FAHUTAN Bogor
Telp. (0251) 8621677 Fax. (0251) 8621256 Website : <http://www.fahutan.ipb.ac.id> E-mail : fahutan@ipb.ac.id

**DAFTAR HADIR KONSULTASI PUBLIK
KAJIAN IDENTIFIKASI NILAI KONSERVASI TINGGI (NKT)
PADA AREAL PT.LONDON SUMATERA-KAB KUTAI BARAT**

Hari/Tanggal : Sabtu/ 31 Mei 2014
Waktu : 1000 WITA
Tempat : Ruang Meeting Kantor GM PT-PP. Lonsum, Kab Kutai Barat

No	Nama	Jabatan Instansi	Alamat	No Tlp/HP	Tanda Tangan
18	M. SUFINUR	EX COO Staf	Lonsum	082253557944	
19	Nyoto Santoso	Ketua Tutwaj IPS	Bogor	08111190043	

Below are photo documentation in the public consultation held in the Plantation Office of PT. PP London Sumatera Indonesia Tbk - Pahu Makmur Estate and Kedang Makmur Estate

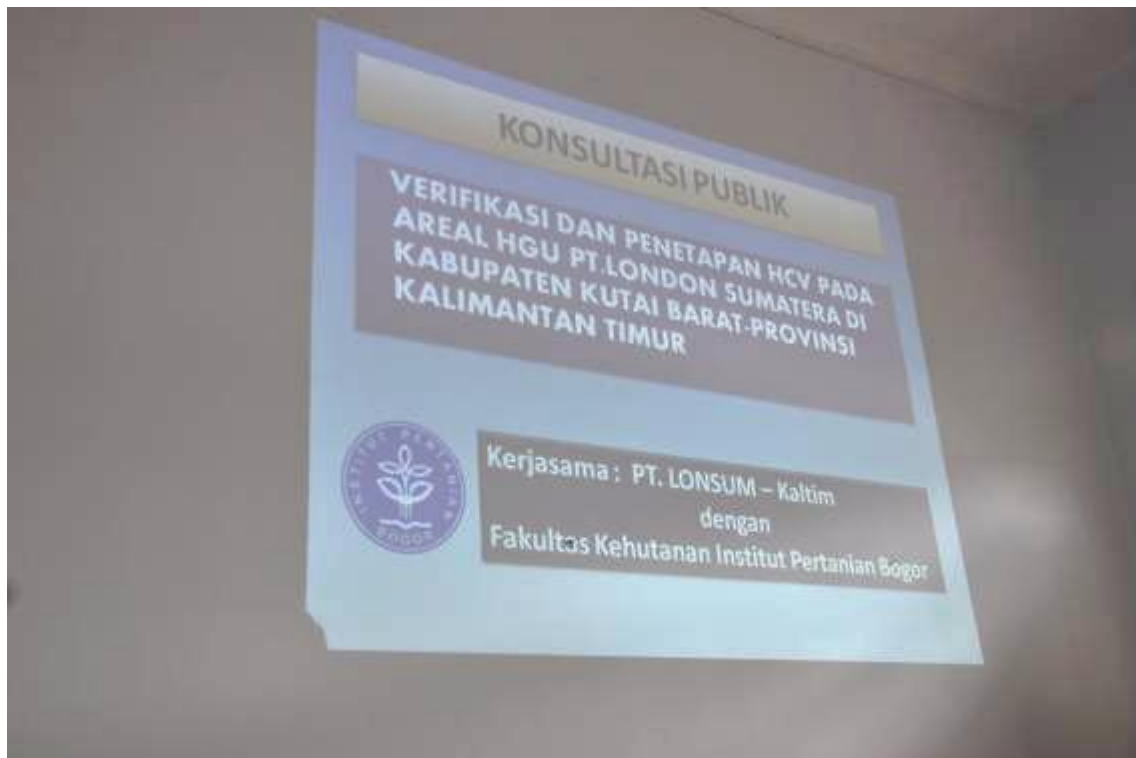


Figure 5. Public Consultation that held in The Plantation Office of PT. PP London Sumatera Indonesia Tbk -Pahu Makmur Estate and Kedang Makmur Estate



Figure 6. Participants in The Public Consultation

4. Summary of Assessment Findings

4.1. EIA and SIA

According to the review on the *EIA*, *RKL/RPL* and *SIA* documents, it is shown that the presence of PT. PP London Sumatera Indonesia Tbk - Pahu Makmur Estate and Kedang Makmur Estate Plantation has generated impacts, both positive and negative, to the environment and the surrounding communities. In order to minimize the negative impacts, the company committed to implement the *Environmental Management Plan (RKL)* and *Social Management Plan* that have been prepared.

Positive Impacts

The presence of the company has delivered positive impacts to the local communities especially of Tanjung Jan Village, in the forms of : improvement of village land roads, increased village land values, increased employment and business opportunities. Meanwhile, those positive impacts have not been delivered to the local communities of other villages because the CSR Programs was still in the step of planning. Some of the local communities are very optimistic that the company will provide positive impacts for development of the village and the surrounding communities.

Negative Impacts

The presence of the company has also the potentials to generate negative impacts to the environment and the surrounding communities. According to the *Focus Group Discussion (FGD)*, it was revealed that most of the surrounding communities gave negative perceptions towards the company, due to the lack of social programs for local communities by the previous management in the past. People assumed that the presence of the company would prohibit logging by local communities which interrupt source of community's income, displacing "limbo" and the ancestral graves.

It was also revealed the potential negative impacts to the surrounding communities, namely : increased social conflict potentials related to the land acquisition mechanism, land accupation, plasma farmers partmership program, social program, indication of overlapping land with a coal mining company (PT BPPC).

The potential negative impacts in general are degradation of environmental quality, diminishing land availability for farming, timber/wood sources and other non-wood forest products.

Community's Hopes

Related to the impacts both, that have been generated and potentially generated, local communities hope the company making efforts to reduce the negative impacts and increase the positive impacts, consisting of :

No	Village		Community's Hopes and Proposals
1.	Tanjung Jan	a.	actualize the Plasma Partnership as planned
		b.	support improvement and maintenance of village land roads
		c.	facilitate settlement of the village area boundaries disputes between Tanjung Jan and Pulau Lanting village

No	Village		Community's Hopes and Proposals
2	Pulau Lanting	a.	actualize the Plasma Partnership as planned
		b.	provide clean water supply facilities in the region of RT VII and RT VIII.
		c.	support improvement and maintenance of village land roads to Tanjung Jan village and company's plantation area. Provide clear informations on the company's legality, partnership scheme and land acquisition mechanism
		d.	facilitate settlement of the village area boundaries disputes between Tanjung Jan and Pulau Lanting village
3	Bekokong Makmur	a.	Completion of actualizing the Plasma Partnership
		b.	Completion of actualizing the Plasma Partnership in legal aspect
		c.	Utilization of CSR funds for local community empowerments
		d.	Provide training on Village Spatial Planning to Village Government Officials
4.	Tanjung isuy	a.	actualize the Plasma Partnership as planned
		b.	better employment opportunities for local community
		c.	Settlement of land conflicts and of nuriat areas
5	Pentat	a.	actualize the Plasma Partnership as planned
		b.	better employment opportunities for local community
		c.	Provide clear informations on the company's plan in supporting the surrounding villages development.
		d.	provide clean water supply facilities
6.	Muara Kedang	a.	actualize the Plasma Partnership as planned
		b.	Immediate settlement of IPK
7.	Penawai	a.	actualize the Plasma Partnership as planned
		b.	Training on Oil Palm Cultivation and other community's skills

4.2. HCV

The Assessment has identified HCVs within the area of PT. PP London Sumatera Indonesia Tbk - Pahu Makmur Estate and Kedang Makmur Estate containing HCV1 (HCV1.2, and HCV1.3), HCV3, HCV4 (HCV4.1 and HCV4.2), HCV5 and HCV6 which covering areas of 819.36 ha containing River Riparian Areas of 38.10 ha, Swamp Peat Forest Areas of 777.10 ha, Conservation Areas for Ulin (*Eusiderxylon zwagery*) of 1.00 ha, Burial Areas and Sacred Places of 3.162 ha with the following details :

No.	Location	Area (Ha)	River Riparian Width (m)	Length of River (km)	Type of HCV
A	River Riparian Areas				
1	RiverBongan Tongkok	18.2	25	3.65	NKT4.1
2	River Anak Bongan	9.9	10	9.07	NKT4.1
3	River Solong Pereoke	10.0	10	9.07	NKT4.1
	Sub Total A	38.10			

No.	Location	Area (Ha)	River Riparian Width (m)	Length of River (km)	Type of HCV
B	Peat Swamp Areas				
1	Peta Swamp areas within Kedang Makmur Estate	214.81			NKT1.2, NKT1.3, NKT3, NKT4.1
2	Peat swamp areas within Pahu Makmur Estate	562.29			NKT1.2, NKT1.3, NKT1.4, NKT3, NKT4.1
	Sub Total B	777.10			
C	Others				
1	Conservation Area for Ulin	1.00			NKT1.2, NKT1.3
	Sub Total C	1.00			
D	Burial and Sacred Places				
1	Burial of Blok 25	2.15			NKT6
2	Burial of Blok 45 (kedang Makmur)	0.0006			NKT6
3	Sacred Bintang Ari	0.5			NKT6
4	Sacred Bunut Jatus	0.0025			NKT6
5	Sacred Lembok Putik Togor	0.0006			NKT6
6	Lamin Pepas	0.5			NKT6
7	Burial of Blok 56 B	0.0006			NKT6
8	Burial of Blok 12	0.0006			NKT6
9	Burial of Blok 15	0.0006			NKT6
10	Burial of Blok 21	0.0006			NKT6
11	Burial of Blok 22	0.0006			NKT6
12	Burial of Blok 23	0.0006			NKT6
13	Burial of Blok 46	0.0006			NKT6
14	Burial of Blok 48 A	0.0006			NKT6
15	Burial of Blok 48 B	0.0006			NKT6
16	Burial of Blok 54	0.0006			NKT6
17	Burial of Blok 55	0.0006			NKT6
18	Burial of Blok 56 A	0.0006			NKT6
19	Burial of Blok 83	0.0008			NKT6
	Sub Total D	3,1617			
Total HCVA (A+B+C+D)		819.36			
Concession Area		16,341.94			
%		5.01			

1) *HCV1. Areas Containing Important Level of Biodiversity*

a. *HCV1.1. Areas Containing or Providing Support Functions to the Biodiversity of Protected or Conservation Areas*

In the assessment, it was shown that it is found Protection / Conservation Areas namely Padang Luwai Nature Reserve Area and it is far from the company's area with the distance of about ± 36 km to the southwest; and there is no interconnection between them. There is another company's concession area located between the area of PT. PP London Sumatera Indonesia Tbk - Pahu Makmur Estate and Kedang Makmur Estate with the Nature Reserve Area.

It was also shown that there are protection areas found within the the area of PT. PP London Sumatera Indonesia Tbk - Pahu Makmur Estate and Kedang Makmur Estate, namely *riparian areas of Lasam* and *Ohong Rivers* which are not connected with the *Padang Luwai Nature Reserve Area*

It indicated that there was no area containing HCV1.1 within the area of PT. PP London Sumatera Indonesia Tbk - Pahu Makmur Estate and Kedang Makmur Estate.

b. HCV1.2. Endangered Species

In the field observation, it was found 114 plant species which identified in 52 families in the area of PT. PP. London Sumatera Tbk - Pahu Makmur Estate and Kedang Makmur Estate. According to the plant species protection status, there were 2 species that identified as the protected plant species under PP No 7 of 1999 namely Kantong Semar (*Nepenthes adnata*) and Ulin (*Eusideroxylon zwageri*). Kantong Semar (*Nepenthes adnata*) is a plant that also identified as the species listed in the Appendix II CITES.

It was also found plant species that identified as the species listed in the Red List of IUCN containing a species listed in the *CR/Critically Endangered* Category namely Belangeran (*Shorea balangeran*), and 2 species that listed in the *VU/Vulnerable* Category namely Tumih/Perepat (*Combretocarpus rotundatus*) and Ulin (*Eusideroxylon zwageri*), and 4 species listed in the *LC/Least Concern* Category.

In the field observation, it was revealed that the remaining forested areas are relatively in good condition. Under optimal management. those remaining forested areas are expected to provide functions as habitat of those rare and endangered plant species found. It shows that there are some plant species that can be considered as HCV1.2 which located in the Swamp Peat Secondary Forest Areas within Kedang Makmur Estate and Pahu Makmur Estate

While in terms of wildlife, it was found 58 species in the area of PT. PP. London Sumatera Tbk - Pahu Makmur Estate and Kedang Makmur Estate containing 9 species of mammals, 46 species of aves and 3 species of reptiles. It was identified a species that can be considered as the HCV1.2 namely Owa ungko (*Hylobates muelleri*), which includes in the *EN/Endangered* species Category of IUCN Red List; listed in the CITES Appendix II and identified as the protected wildlife species under PP No 7 of 1999. Although the Owa ungko (*Hylobates muelleri*) is not found as the *CR/Critically Endangered* as mentioned in the HCV1.2 Criteria, the presence of the species is very important and therefor, the species of Owa ungko (*Hylobates muelleri*) is then determined as HCV. Location of the species are in the Swamp Peat Secondary Forest Areas within Kedang Makmur Estate and Pahu Makmur Estate.

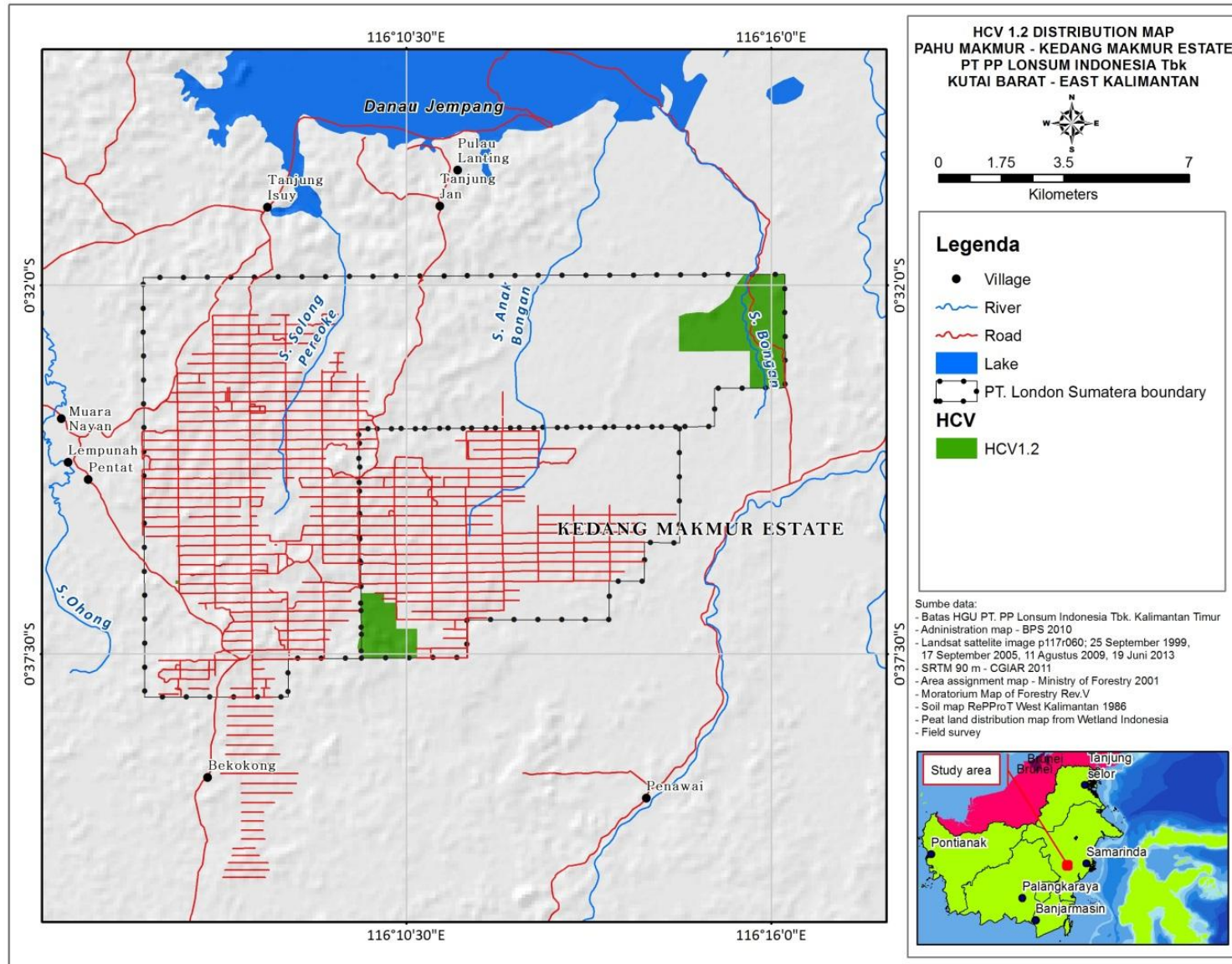


Figure 7. Map of Areas Containing HCV1.2 in The Area of PT. PP. London Sumatera Tbk Pahu Makmur Estate and Kedang Makmur Estate.

c. HCV1.3. *Areas That Serve as habitat for threatened species with limited dispersion or under protection that is able to survive (Viable Population)*

According to the plant species protection status, there were 2 species that identified as the protected plant species under PP No 7 of 1999 namely Kantong Semar (*Nepenthes adnata*) and Ulin (*Eusideroxylon zwageri*). Kantong Semar (*Nepenthes adnata*) is a plant that also identified as the species listed in the Appendix II CITES. It was also found plant species that identified as the species listed in the Red List of IUCN containing a species listed in the *CR/Critically Endangered* Category namely Belangeran (*Shorea balangeran*), and 2 species that listed in the *VU/Vulnerable* Category namely Tumih/Perepat (*Combretocarpus rotundatus*) and Ulin (*Eusideroxylon zwageri*).

It shows that there were areas that determined containing HCV1.3 which located in the Swamp Peat Secondary Forest Areas within Kedang Makmur Estate and Pahu Makmur Estate, and Conservation Area for Ulin (*Eusideroxylon zwageri*).

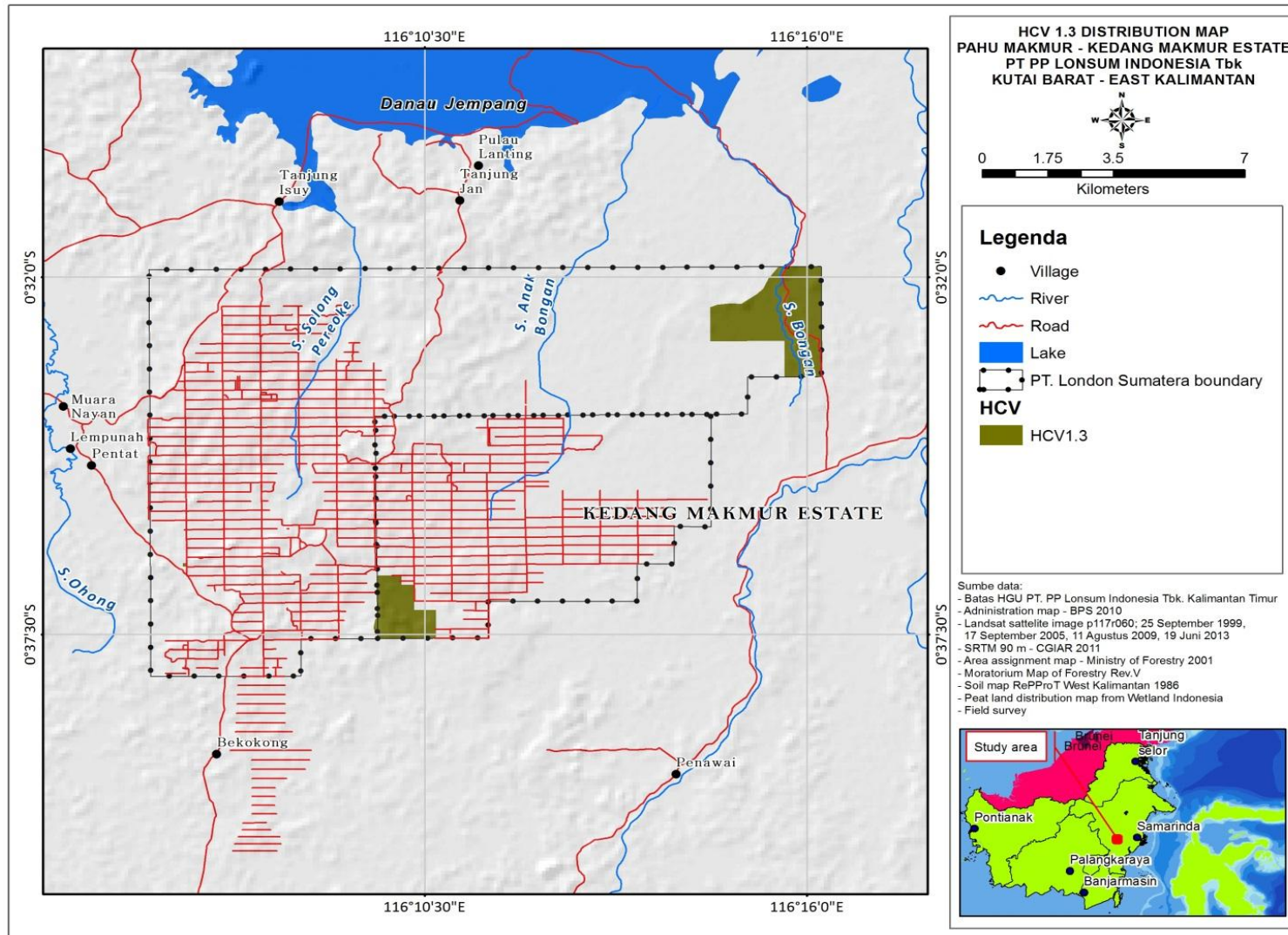


Figure 8. Map of Areas Containing HCV1.3 in The Area of PT. PP. London Sumatera Tbk Pahu Makmur Estate and Kedang Makmur Estate.

In terms of wildlife, there was at least 19 species that meet the HCV1.3 Criteria containing 18 protected wildlife species, 2 *Endangered* species and 2 *Vulnerable* species. But, it is almost impossible to determine areas that meet the HCV1.3 criteria in long term, due to changes in the land use made by the company of PT. PP. London Sumatera Tbk.

However, if the habitat on areas containing HCVs will be managed and more emphasized on flora aspect for at least one replanting period, then it is possible that the forested areas that have the functions integrated as the local conservation area may be considered as HCV1.3

d. HCV1.4 Areas Serving as Habitat for Species or Groups of Species that are Used Temporarily

In the HCVs Assessment, it was not found mangrove, lake, grassland along rivers and licking stone. But it was found riparian areas containing riparian river and riparian swamp areas that provide functions as places for many birds of Bangau Tongtong (*Leptoptilos javanicus*) for perching. It was also shown that it was not identified migratory species, especially raptor species group. This means that it was identified areas containing HCV1.4 within the area of PT. PP. London Sumatera Tbk - Pahu Makmur Estate and Kedang Makmur Estate and located in the Swamp Peat Secondary Forest Areas within Pahu Makmur Estate.

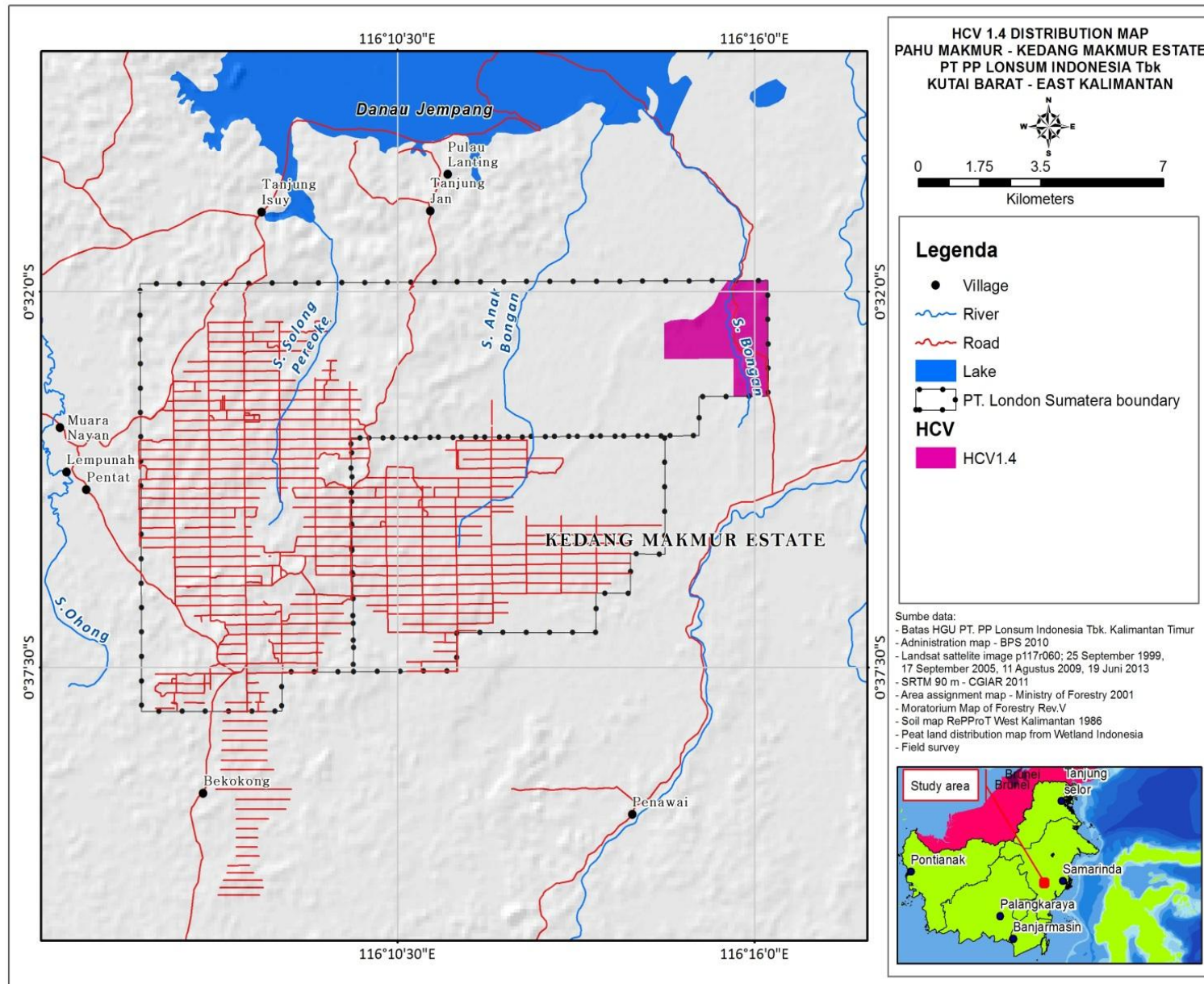


Figure 9. Map of Areas Containing HCV1.4 in The Area of PT. PP. London Sumatera Tbk Pahu Makmur Estate and Kedang Makmur Estate.

2) *HCV2. Landscapes That Important for Natural Ecological Dynamics*

a. HCV2.1. Wide Landscapes Containing Capacity to Maintain Natural Ecological Process and Dynamics

The area of PT. PP. London Sumatera Tbk - Pahu Makmur Estate and Kedang Makmur Estate is approximately 0.012% of forest areas in the East Kalimantan; and it is approximately 0.010% of forested areas in the East Kalimantan. While the forested area in the area of PT. PP. London Sumatera Tbk - Pahu Makmur Estate and Kedang Makmur Estate is approximately 0.016% of the forested areas in the East Kalimantan

It shows that the forested area in the concession of PT. PP. London Sumatera Tbk - Pahu Makmur Estate and Kedang Makmur Estate is less than 20,000 ha and some of the area are in the form of cleared land areas. This means that it was not identified area containing HCV2.1 within the area of PT. PP. London Sumatera Tbk - Pahu Makmur Estate and Kedang Makmur Estate.

b. HCV 2.2. Natural Landscapes Containing Two or More Ecosystems with Continuous (uninterrupted) Borderlines

There are found two types of ecosystems in the area of PT. PP. London Sumatera Tbk - Pahu Makmur Estate and Kedang Makmur Estate namely lowland forest ecosystem and peat ecosystem. According to the land cover analysis, it is shown that the area were mostly in the forms of oil palm plantation area and shrubs. The area was dryland ecosystem and not found transitional ecosystem. This means that it was not identified area containing HCV2.2 within the area of PT. PP. London Sumatera Tbk - Pahu Makmur Estate and Kedang Makmur Estate.

c. HCV2.3 Areas Containing Representative Population of Natural Viable Species

In terms of the representativeness, the natural species found in the area of PT. PP. London Sumatera Tbk - Pahu Makmur Estate and Kedang Makmur Estate are not highly possible to survive due to a) the exact number of those species population at this time are not yet known, b) there is possibilities that it will continue to change, and c) the HCV areas that have been determined may be unable to provide functions in supporting those species population to survive. This means that it was not identified area containing HCV2.3 within the area of PT. PP. London Sumatera Tbk - Pahu Makmur Estate and Kedang Makmur Estate.

3) *HCV3. Areas Containing Rare or Endangered Ecosystems*

According to the analysis of *RePPPProT* Data, it was shown that it was found rare or endangered landsystem, within the area of PT. PP. London Sumatera Tbk - Pahu Makmur Estate and Kedang Makmur Estate. This means there were areas containing HCV3 within the Pahu Makmur Estate and Kedang Makmur Estate.

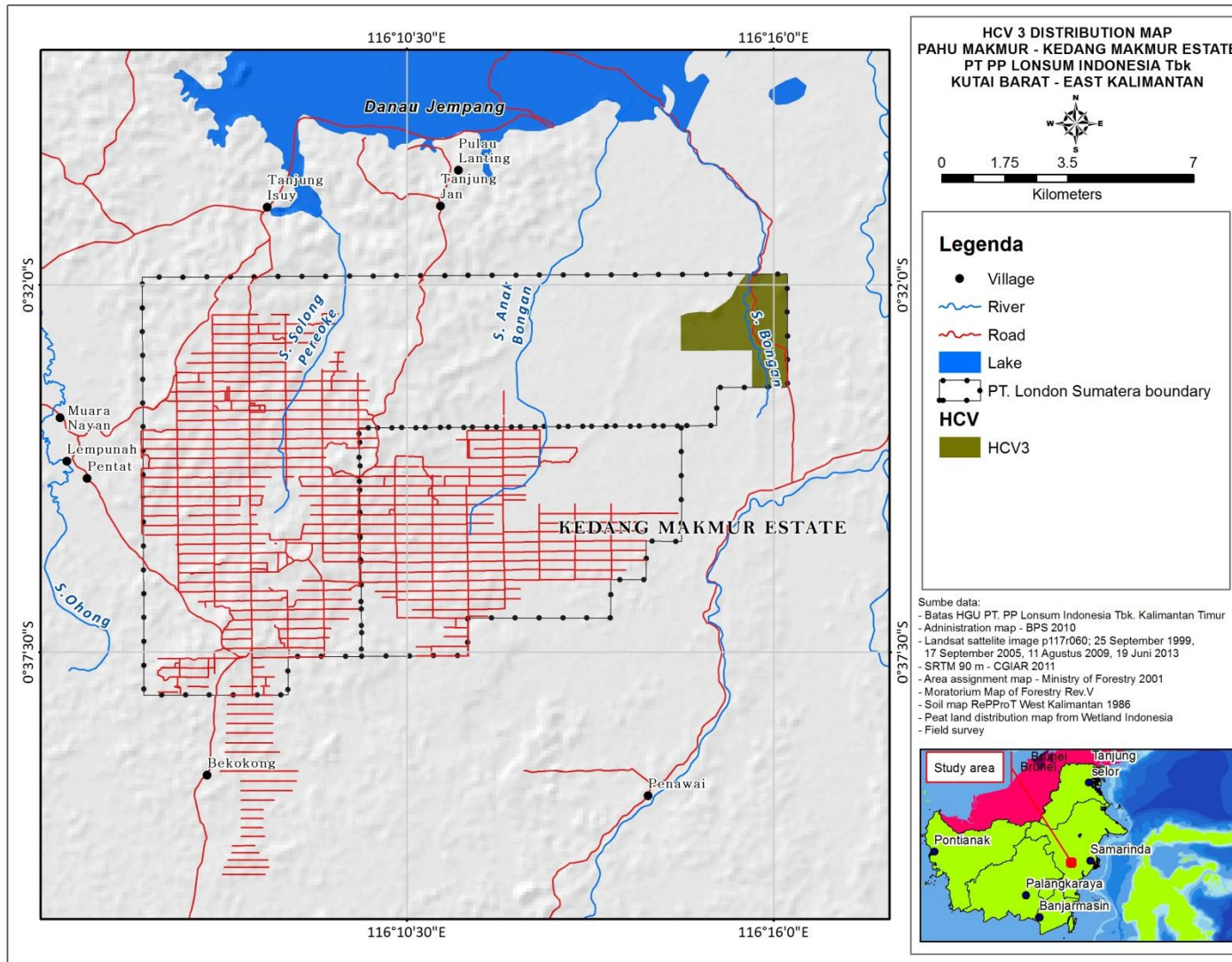


Figure 10. Map of Areas Containing HCV3 in The Area of PT. PP. London Sumatera Tbk Pahu Makmur Estate and Kedang Makmur Estate

4) *HCV4. Areas Providing Natural Environmental Services*

a. *HCV4.1. Areas or Ecosystems That Important for Water Supply and Flood Control for Downstream Community*

In the HCVs assessment, it was shown that it was not found cloudy forest and karst ecosystem within the area of PT. PP. London Sumatera Tbk - Pahu Makmur and Kedang Makmur Estate. But it was identified wetland ecosystems and river riparian ecosystems which means there were areas containing HCV4.1. which located in the riparian area of the following rivers : Bongan Tongkok, Anak Bongan, Solong Pereoke; and Swamp Peat Areas within Pahu Makmur Estate and Kedang Makmur Estate.

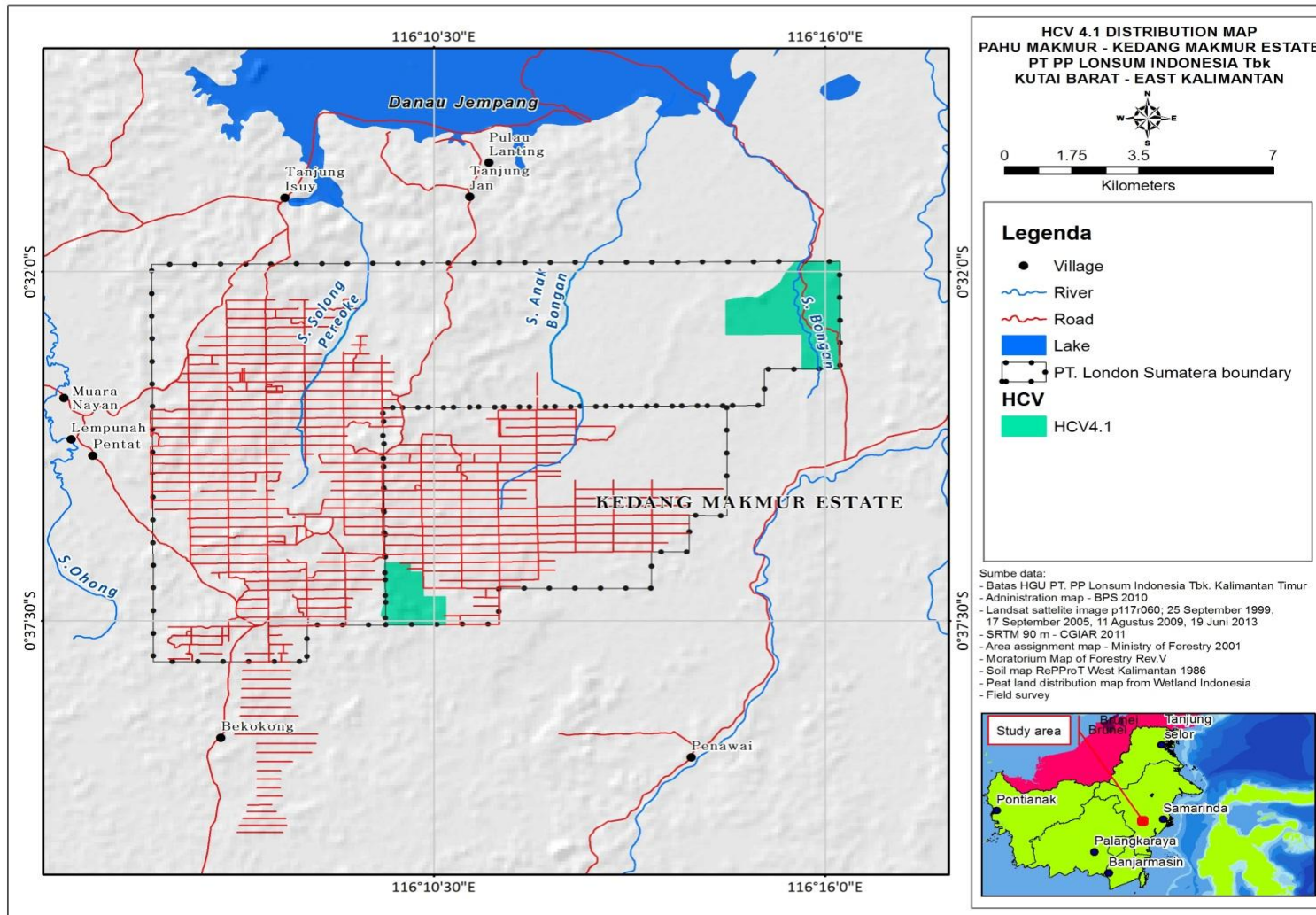


Figure 11. Map of Areas Containing HCV4.1 in The Area of PT. PP. London Sumatera Tbk Pahu Makmur and Kedang Makmur Estate.

b. HCV4.2. Areas That Important for Erosion and Sedimentation Prevention

In the HCVs assessment, it was revealed that the *Erosion Hazard Level* Potential in the area of PT. PP. London Sumatera Tbk - Pahu Makmur and Kedang Makmur Estate includes moderate. The erosion hazard level will be kept in low level in the oil palm plantation areas under the implementation of proper water and soil conservation management. This means that there was not area containing HCV4.2 within the area of PT. PP. London Sumatera Tbk - Pahu Makmur and Kedang Makmur Estate.

c. HCV4.3 Areas That Serve as Natural Buffer for Preventing from Widespread Forest and Land Fires

The remaining forested areas, especially the lowland forest area, in the concession of PT. PP. London Sumatera Tbk - Pahu Makmur and Kedang Makmur Estate do not provide important functions in the prevention of forest and land fires.

In case of forest or land fires in this area, the presence of rivers will be important to provide functions as the *natural firebreaks* and therefor, it cannot be avoided that the company should make efforts to maintain and protect the functions of those rivers. This means that there was not area containing HCV4.3 within the area of PT. PP. London Sumatera Tbk - Pahu Makmur and Kedang Makmur Estate.

5) HCV5. Areas Containing Important Function in Fulfilling Basic Needs for Local Community

Relating to the HCV5, it was not identified utilization of natural ecosystem that includes in the *Important* Category in the fulfillment of village community's basic need. This means that it was not found areas containing HCV5 in the area of PT. PP London Sumatera Tbk - Pahu Makmur and Kedang Makmur Estate.

6) HCV6. Areas That Have Important Functions for Local Community's Cultural Identity

According to the HCVs analysis, it was identified areas containing HCV6 namely burial and scared places, in the area of PT. PP London Sumatera Tbk - Pahu Makmur and Kedang Makmur Estate.

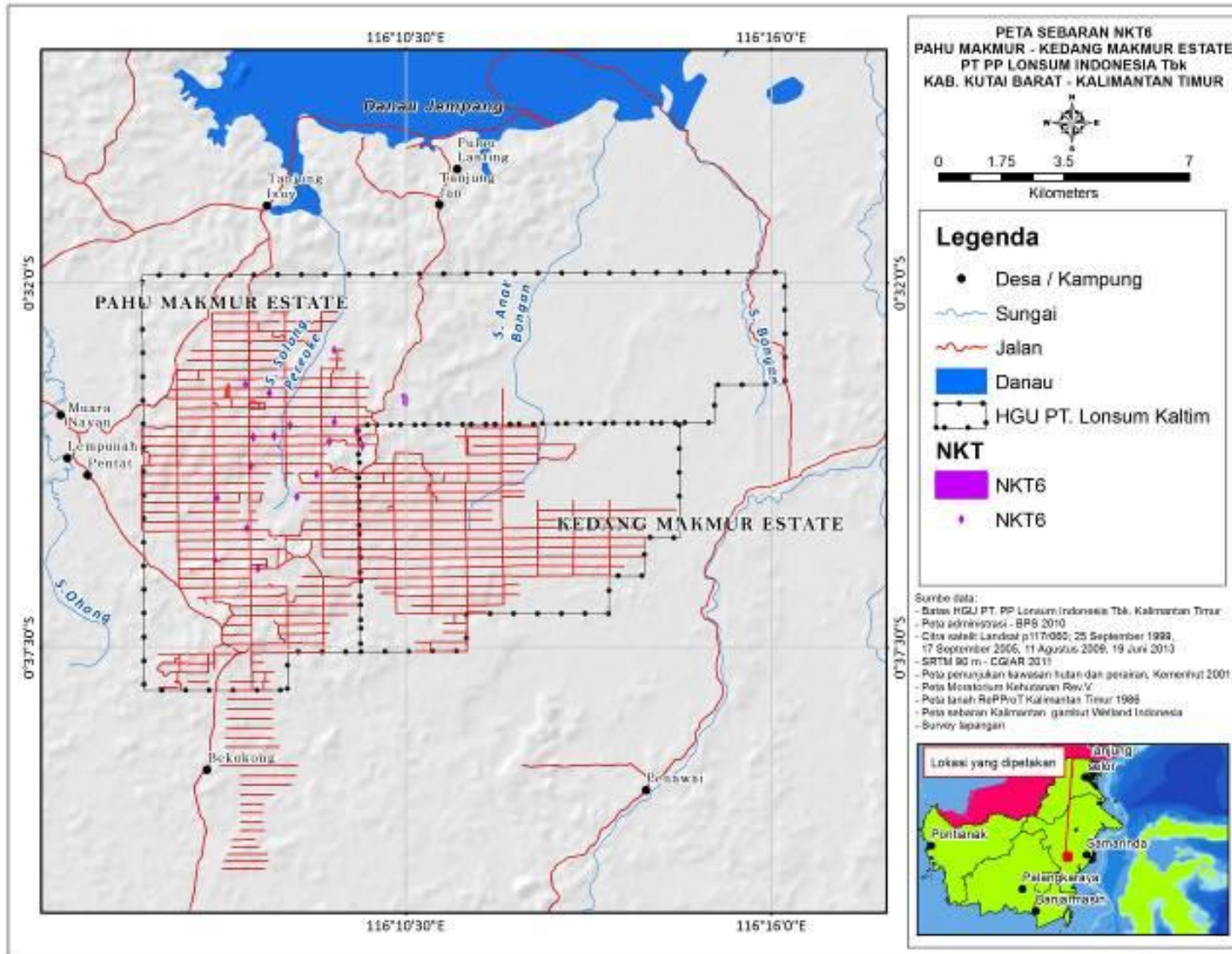
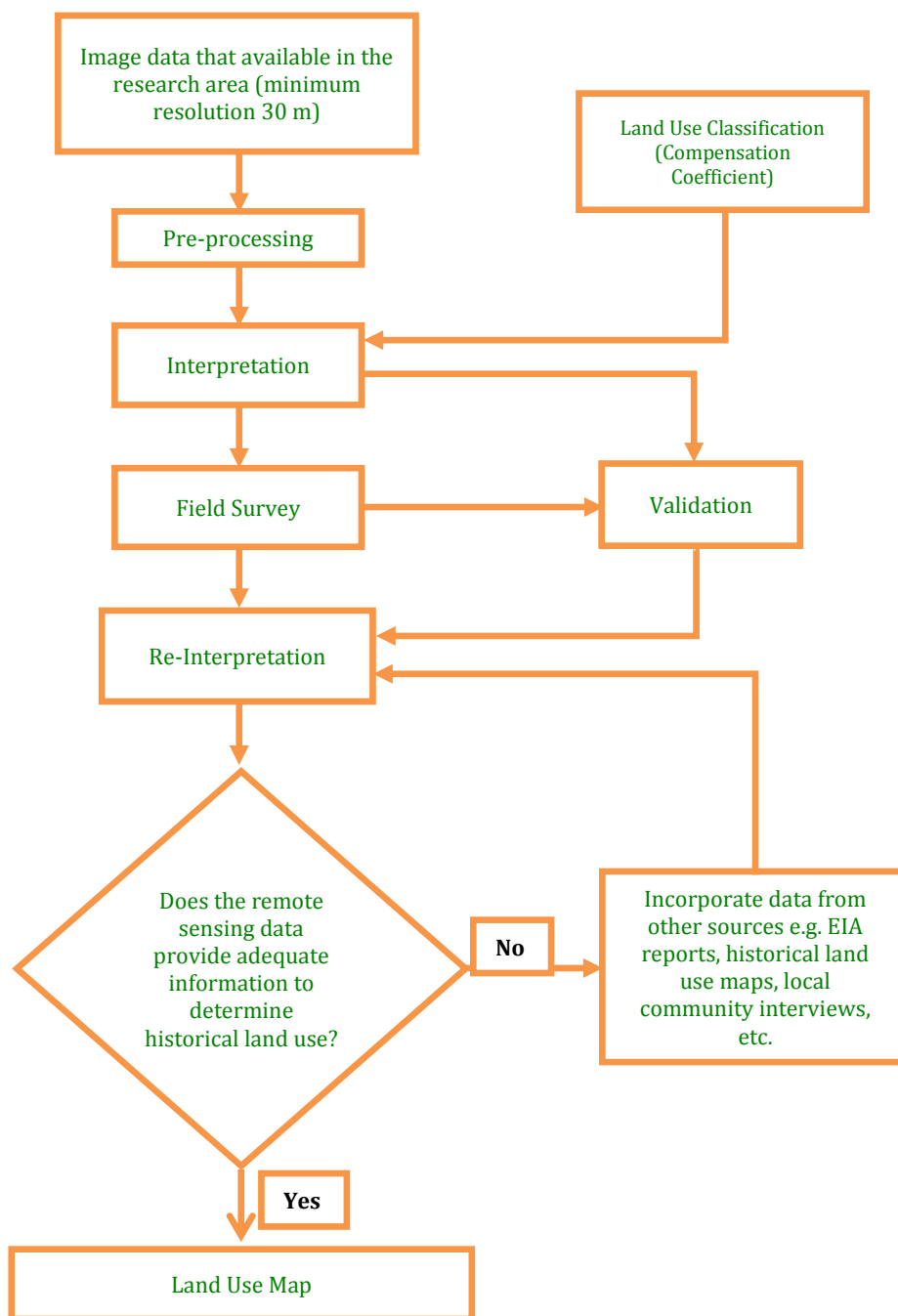


Figure 12. Map of Areas Containing HCV6 in The Area of PT. PP. London Sumatera Tbk Pahu Makmur and Kedang Makmur Estate.

Summary of Land Use Change Analysis (LUCA)

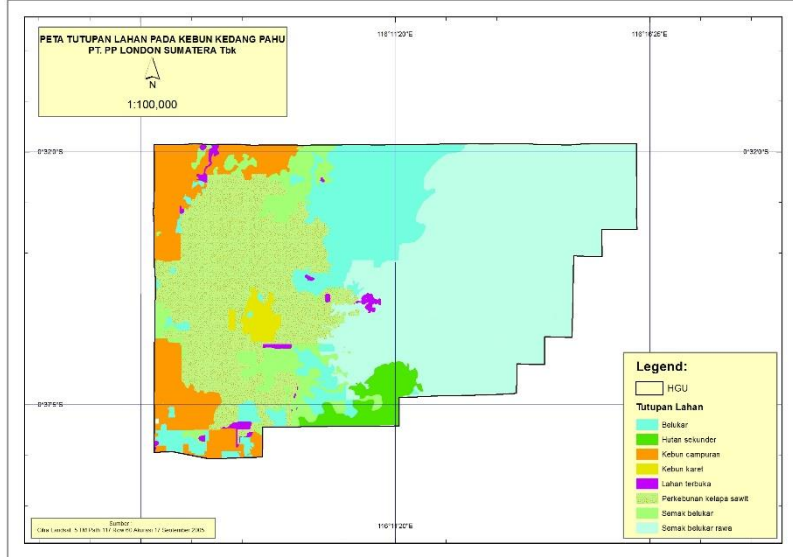
PT. PP. London Sumatera Tbk- Pahu Makmur dan Kedang Makmur Estate also conducted Land Use Cover Change (LUCC) analysis to ensure that there is no deforestation due to land development. PT. PP. London Sumatera Tbk- Pahu Makmur dan Kedang Makmur Estate conducted assessment with collaboration with IPB (Bogor Agriculture University through combination of analysis of satellite imagery from landsat and ikonos and ground check. Stages and process LUCC analysis are as follows:

- Collecting Primary and Secondary data follows by document review (i.e: PT. PP. London Sumatera Tbk-Pahu Makmur dan Kedang Makmur Estate Permits/licenses, HCV assessment report and Social Impact Assessment report, Landsat Imagery, Planted area map, etc.)
- Data processing of Landsat Imagery and image classification/interpretation
- Land Use Cover Change Analysis
- Field Verification

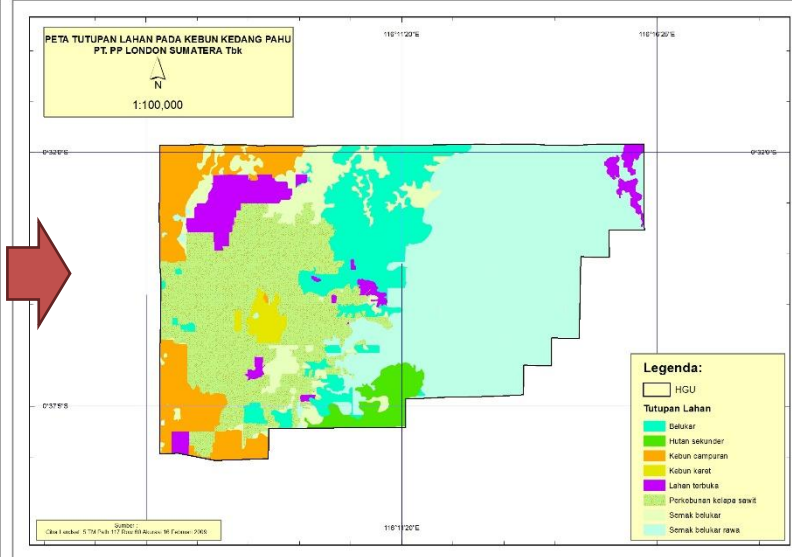


PT. PP. London Sumatera Tbk - Pahu Makmur dan Kedang Makmur Estate had been identified its potential liability of HCV loss area through a land use change analysis study. This study was conducted by IPB, the team consisted of Ir. Nyoto Santoso, MS as team leader and M. Sayidina Ali. A.Md, Ardhianto Muhammad, S. Hut and Ayu Pradhista Diza, S. Hut as team member. The LUC Analysis will be submitted to the RSPO in the same time RSPO NPP Summary Report. The result of LUC Analysis with liability disclosure is 0 hectare. The time period scope of PT. PP. London Sumatera Tbk - Pahu Makmur dan Kedang Makmur Estate Land Use Change Analysis study is period: November 2005 – November 2007, December 2007 – Desember 2009, 1 January 2010 – 9 May 2014 and after 1 May 2014.

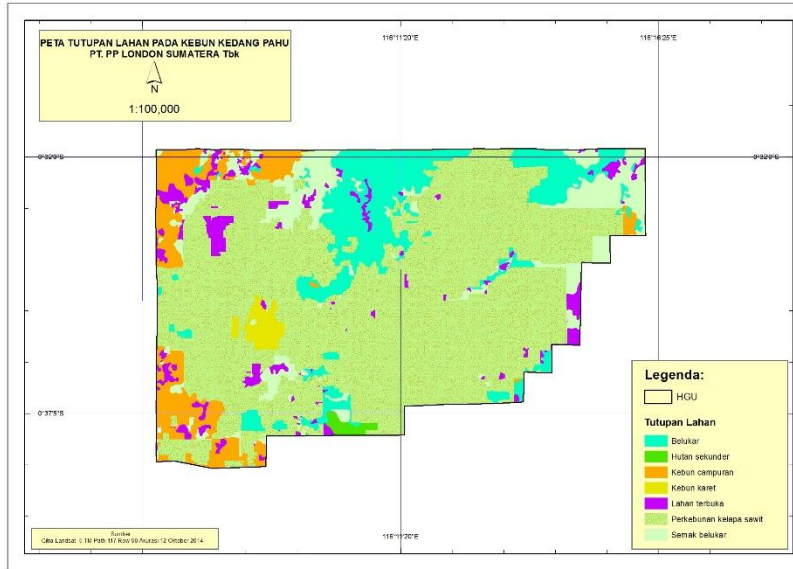
Land Cover Map Pahu and Kedang Makmur Estate, September 2005



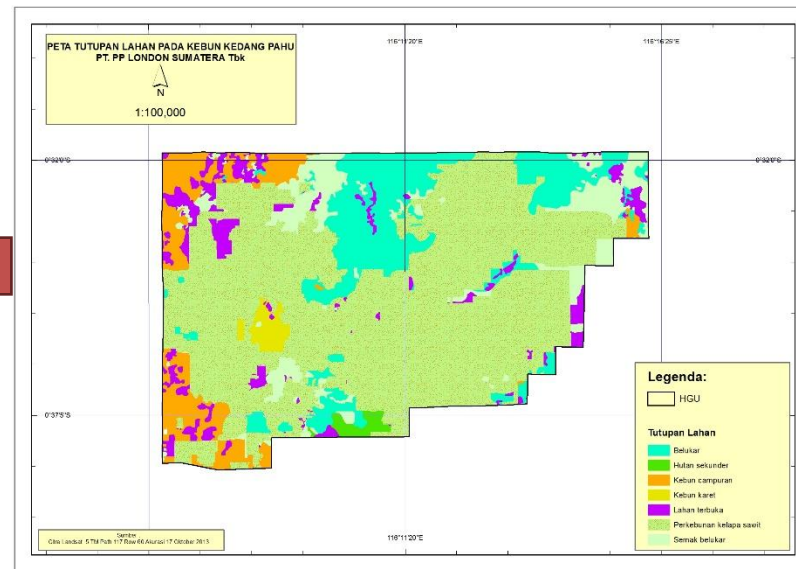
Land Cover Map Pahu and Kedang Makmur Estate, 16 Febuari 2009



Land Cover Map Pahu and Kedang Makmur Estate, 12 Oktober 2014



Land Cover Map Pahu and Kedang Makmur Estate, 17 Oktober 2013



INTERNAL RESPONSIBILITY
Formal Signing Off by Assessors and Company

This document is the updated summary of HCV (High Conservation Value); EIA (Environmental Impact Assessment) and SIA (Social Impact Assessment) in the area of PT. PP. London Sumatera Tbk - Pahu Makmur and Kedang Makmur Estate and has been approved by Management of PT. PP. London Sumatera Tbk - Pahu Makmur and Kedang Makmur Estate.


Bogor Agricultural University,

Dr. Ir. Nyoto Santoso, MS
Team Leader of HCV and SIA Assessment
Tanggal : 28 Agustus 2014

Statement of acceptance of responsibility for assessments

Assessment result document on High Conservation Value (HCV); Environmental Impact Assessment (EIA) and Social Impact Assessment (SIA) of PT. PP. London Sumatera Tbk - Pahu Makmur Estate and Kedang Makmur Estate by Faculty of Forestry - Bogor Agricultural University (IPB) will be applied as one of the guidelines in managing palm oil plantation in the area of PT. PP. London Sumatera Tbk - Pahu Makmur and Kedang Makmur Estate.

Management of PT. PP. London Sumatera Tbk - Pahu Makmur and Kedang Makmur Estate



Win Alamsyah
Agronomy Area Manager Kaltim
Tanggal : 28 Agustus 2014