Summary Report Submitted for HCS Approach Peer Review Process

HCS Study Project Title:

HCS Identification in PT Tekukur Indah Permitted Area

Company/Organisation:

PT Tekukur Indah

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Date:

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1. Project description

1.1 Location and size of study area

High Carbon Stock Identification was conducted in PT Tekukur Indah Permitted Area (117°15'00"EL-117°20'00"EL dan 02°03'00"NL-02°07'30"NL). The area is located in the southern side of Segah River that flows to Tanjung Redeb. Administratively, this area is located in Desa Labanan Jaya, Desa Labanan Makmur and Desa Labanan Makarti, Teluk Bayur District (Kecamatan), Berau Regency (Kabupaten), Kalimantan Timur Province. The Permitted Area of PT Tekukur Indah is 2,890.3 Ha[1] that consists of northern part and southern part of areas that are separated by National Road Jalan Tanjung Redeb-Samarinda. The surrounding features of this area are:

North : Segah River, PT Tekukur Indah Permitted Area is 100-200 m from the river side line

East : Community cultivation land (paddy field and oil palm plantation). Desa Labanan Jaya and Desa Labanan Makmur settlements

South : The National Road Jalan Tanjung Redeb-Samarinda. Open field and abandoned cultivated land due to fire

West : Community cultivation land (dry land farming and paddy field). Desa Labanan Makarti and Dusun Seduung Settlements

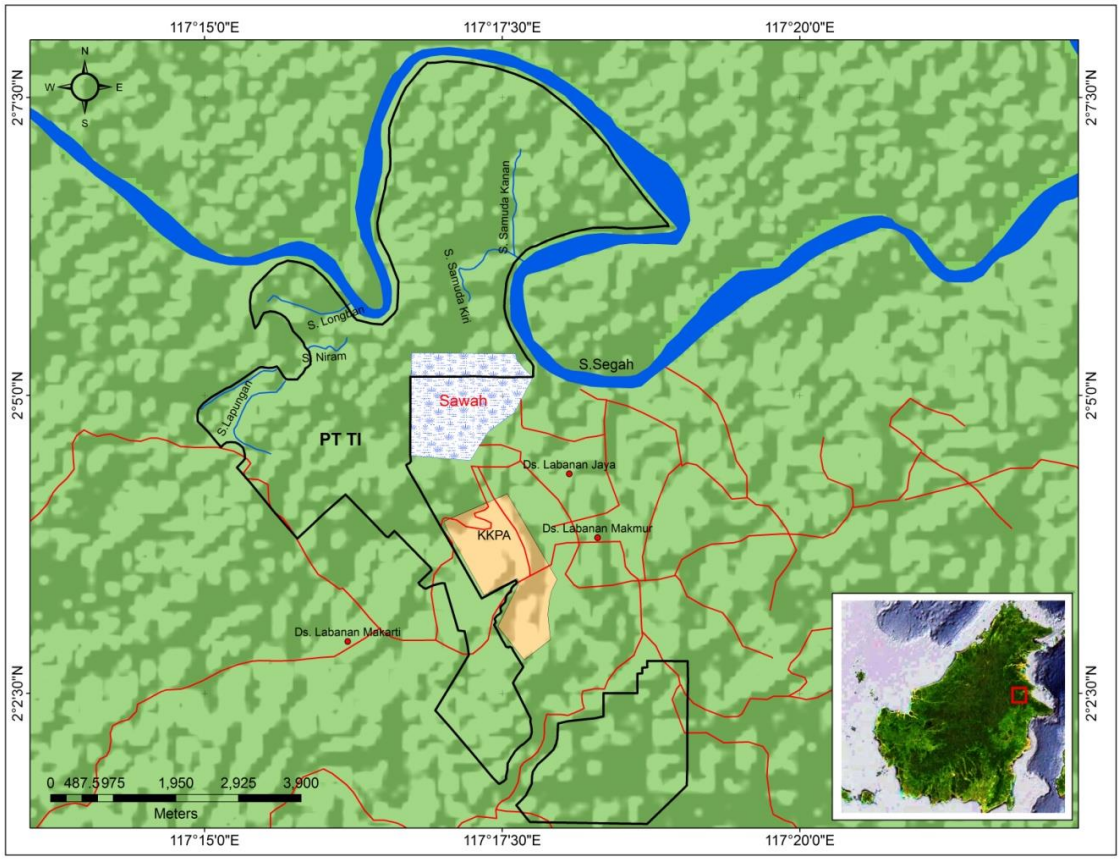


Figure 1. Location of PT Tekukur Indah permitted boundary

[1] The area acreage is obtained by GIS Analysis

1.2 Overview of proposed plantation development

By the time of assessment, none of planting activities have been done. The oil palm plantation of PT Tekukur Indah is proposed to be developed in the Permitted Area that is officially granted by the Regent (Bupati) of Berau Regency in March 2012. The permitted area was granted with the Surat Keputusan Bupati Berau Nomor 108 Tahun 2012. The land development is planned for company's main plantation and partnership scheme plantation (plasma).

The process of PT Tekukur Indah oil palm plantation development is prior to the community consent and dealing process through negotiation. Most of the northern part of the area has been compensated for company acquisition while the other part of the area is in process for compensation. Another part of the area is excluded from the development due to the community consent(enclave).

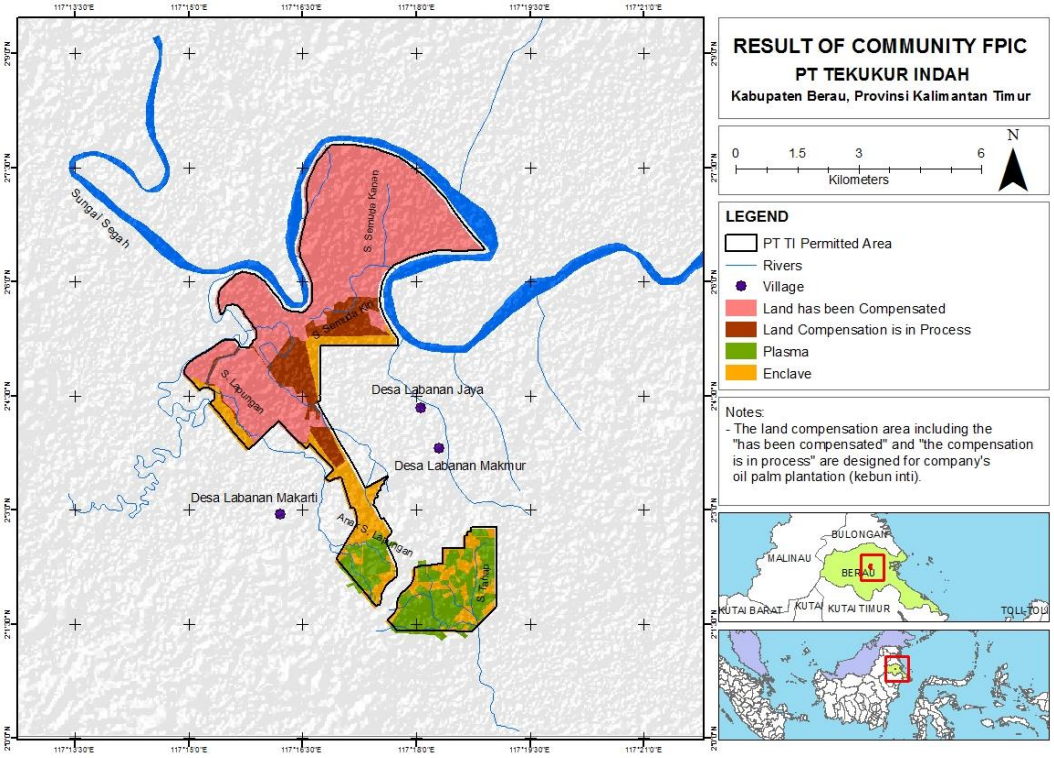


Figure 2. Map of FPIC and participatory activity

1.3 Description of surrounding landscape

According to the government provision of land use designation, the Permitted Area of PT Tekukur Indah is located in the Area Penggunaan Lain (APL)[2] that is adjacent to a Hutan Produksi (HP)[3] area. Although it is forest land use, the area is not forested in reality.

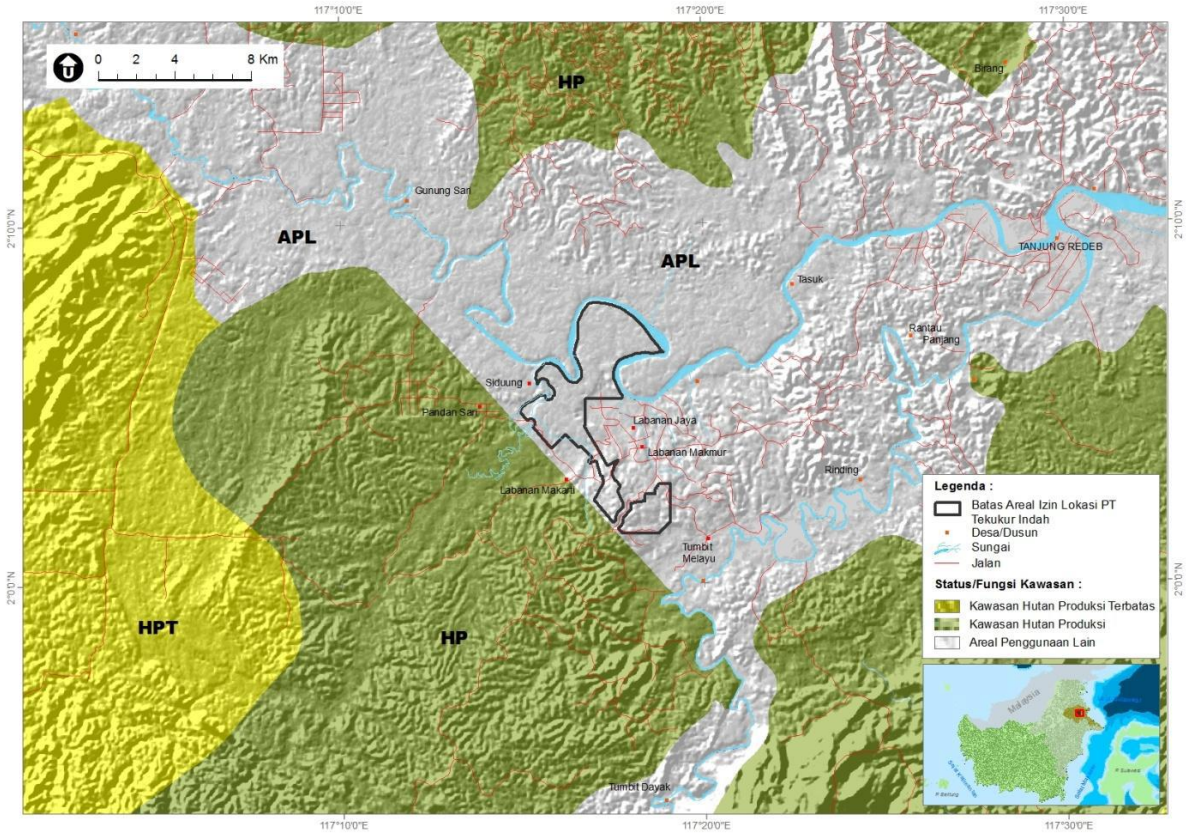


Figure 3. Government provision on land use designation around PT Tekukur Indah Area

High Conservation Value Assessment in PT Tekukur Indah Permitted Area was conducted in June 2013. There were 25 mammal species, 28 bird species and 12 reptile species identified by visual encounter, sign of presence (feces and footprint) and interview during the HCV Assessment. According to the HCV Assessment Report, riparian areas support the existence of the wildlife population as the habitat and home range. These areas were either fully or partially forest covered.

The community settlements near to PT Tekukur Indah Permitted Area are Desa Labanan Jaya, Labanan Makmur and Labanan Makarti. These settlements were formed from government transmigration program known as UPT (Unit Pemukiman Transmigrasi) since 1982.

[2] Area Penggunaan Lain (APL) is the term for the area that is officially reserved for cultivation use by the government.

[3] Hutan Produksi (HP) is the term for the area tjat is officially reserved for timber harvesting use by the government.

Kampung (Settlement)	Area (km^2)	Population	Origin, Ethnicity, Religion	Livelihood
Labanan Jaya	14.38	725 Families 2,244 Individual	Transmigration from West Java, Central Java and East Java Province Dominant ethnicity of Javanese and Sundanese Islam Religion (Moslem)	Farm: paddy field, rubber, cacao, oil palm, farm and cattle Employee: oil palm plantation company and mining company Monthly income range: Rp. 900,000-3,600,000.00
Labanan Makmur	9.52	1,052 Families 2,981 Individual		
Labanan Makarti	14.38	311 Families 1,176 Individual		

Source: Social Impact Assessment Report PT Tekukur Indah (Aksenta, 2013)

The area of PT Tekukur Indah and the surrounding area have been exploited for coal mining and timber harvesting. This historical land use change is also followed by the development of the community settlement around PT Tekukur Indah Permitted Area.

Year	Land Use Chronology	Community Interaction
Before 1980	Coal Mining	Coal mining in Teluk Bayur plays role on Teluk Bayur Regency socio economic growth (population and economic activity)
1980	Government Provision on the area as HP (Forest Production)	The increase in timber harvesting including company large scale timber harvesting
1982-1984	Government transmigration program	The government transmigration program (UPT) forms the Labanan Jaya, Labanan Makarti and Labanan Makmur Settlements
2001	Government Provision on the area as APL (other land use /cultivation land use)	300 Ha of Labanan Makarti Area was assigned as forest cultivation area
2011		Development of partnership oil palm plantation scheme between PT Malindomas and Laba Sari Cooperation (Cooperation of Labanan Jaya, Labanan Makmur and Labanan Makarti Cooperation)
2012-Present	Berau Regent Provision of Permitted Area for PT Tekukur Indah	Socialization, negotiation and land acquisition process

Source: Social Impact Assessment Report PT Tekukur Indah (Aksenta, 2013)

1.4 Map of the site within the region

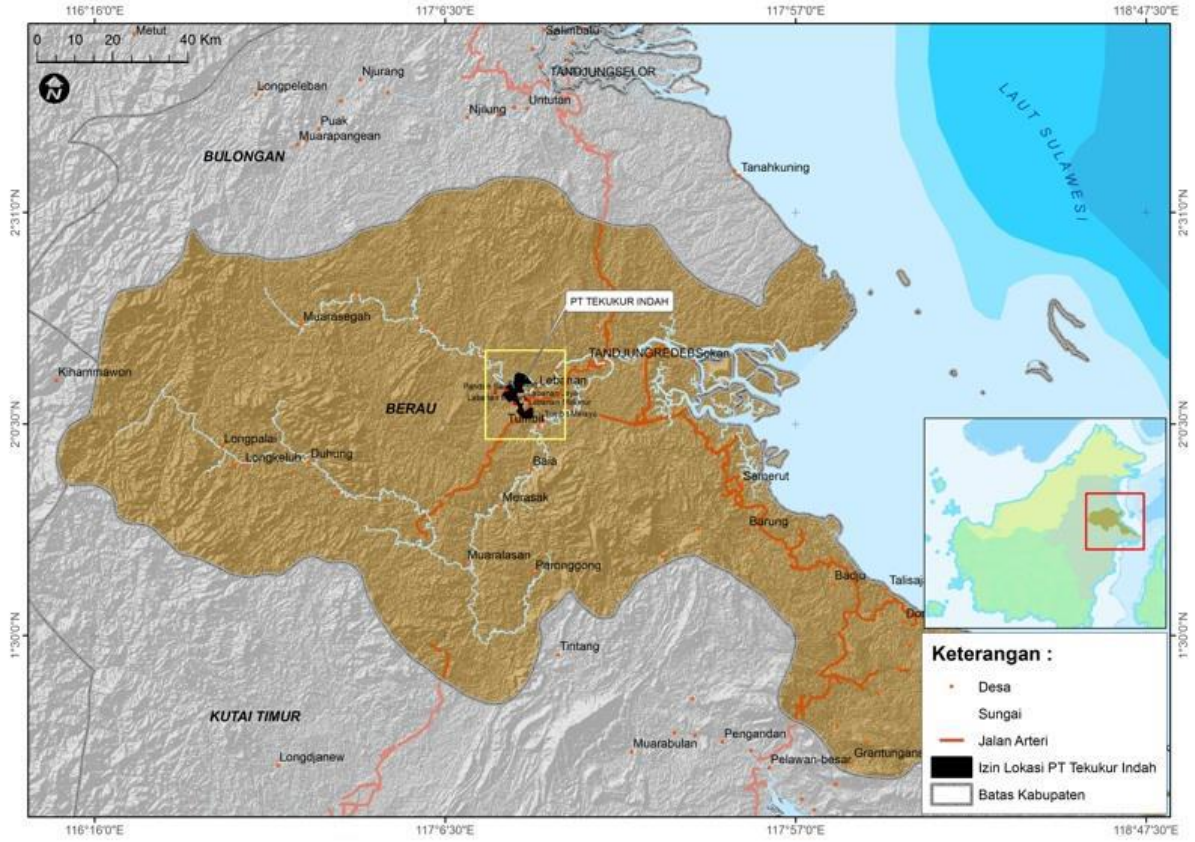


Figure 4. PT Tekukur Indah area within the region

1.5 Relevant data sets available

Relevant data sets used in the assessment are:

- Carbon stock (Carbon Stock Assessment)
- Community consent (FPIC Verification)
- Satellite image acquisition on May 10th, 2016
- HCV area (HCV Assessment)
- Social impact information (Social Impact Assessment)

1.6 List of any reports/assessments used in the HCS assessment

Several relevant studies for HCS Identification in PT Tekukur Indah Permitted Area have been conducted. The studies are High Conservation Value Assessment (Aksenta, 2013), Social Impact Assessment (Aksenta, 2013), Carbon Stock Assessment (Aksenta, 2015) and FPIC verification (Aksenta, 2016). The status of the HCV Assessment Report is now in the process of review by the HCVRN.

2. HCS assessment team and timeline

2.1 Names and qualifications

High Carbon Stock Identification was conducted by three experts specializing in HCS Approach Practice, Carbon Stock Estimation, FPIC, Social Studies, and HCV.

Name	Expertise	Role in Team
Bias Berlio Pradyatma	Certified HCS Approach Practitioner, Carbon Stock Assessment, GIS Analysis and Remote Sensing	Team Leader
Teuku Ade Fahlevi	FPIC, Social Impact Assessment, Social HCV Study, Socio-economic Survey, Social Studies	Team Member
Sujatnika	Forest and Social Management, Social Impact Assessment, Social Management, HCV Study, HCS Identification and FPIC	Project Supervisor

2.2 Time period for major steps in the study

Several relevant studies for HCS Identification in PT Tekukur Indah were conducted by Aksenta.

Assessment	Timeline (Field Visit-Reporting)	Assessor
High Conservation Value	January-June 2013	Aksenta
Social Impact Assessment	January-June 2013	Aksenta
Carbon Stock Assessment	December 2014-April 2015	Aksenta
FPIC Verification	Januay-March 2016	Aksenta
HCS Identification	January-May 2016	Aksenta

3. Community engagement/ FPIC

3.1 Summary of community engagement, FPIC, participatory mapping

Land acquisition process including socialization and negotiation have done since 2012 (after the company get the permitted area through Keputusan Bupati Berau No. 108 Tahun 2012). The lands related to community rights were used for cultivation (gardens and paddy fields).

Meetings in order to community FPIC have been carried out in each Desa related to the proposed project area, namely Desa Labanan Jaya, Labanan Makmur and Labanan Makarti. Discussions in the meetings involve the community representatives, community figure (elders) and village government (Pemerintah Desa). According to the meetings, the communities (Desa Labanan Jaya, Labanan Makmur and Labanan Makarti) have decided their consent on company's proposal. Some areas are decided to not to be included in the development plan (enclave) while the others are decided to be developed for oil palm plantation. The enclave area can be seen in the following map. The deals for the lands that are decided for oil palm development are based on the land compensation

alternatives, including (i) land compensation for company's plantation (nucleus plantation) or (ii) land swap for partnership scheme plantation (plasma).

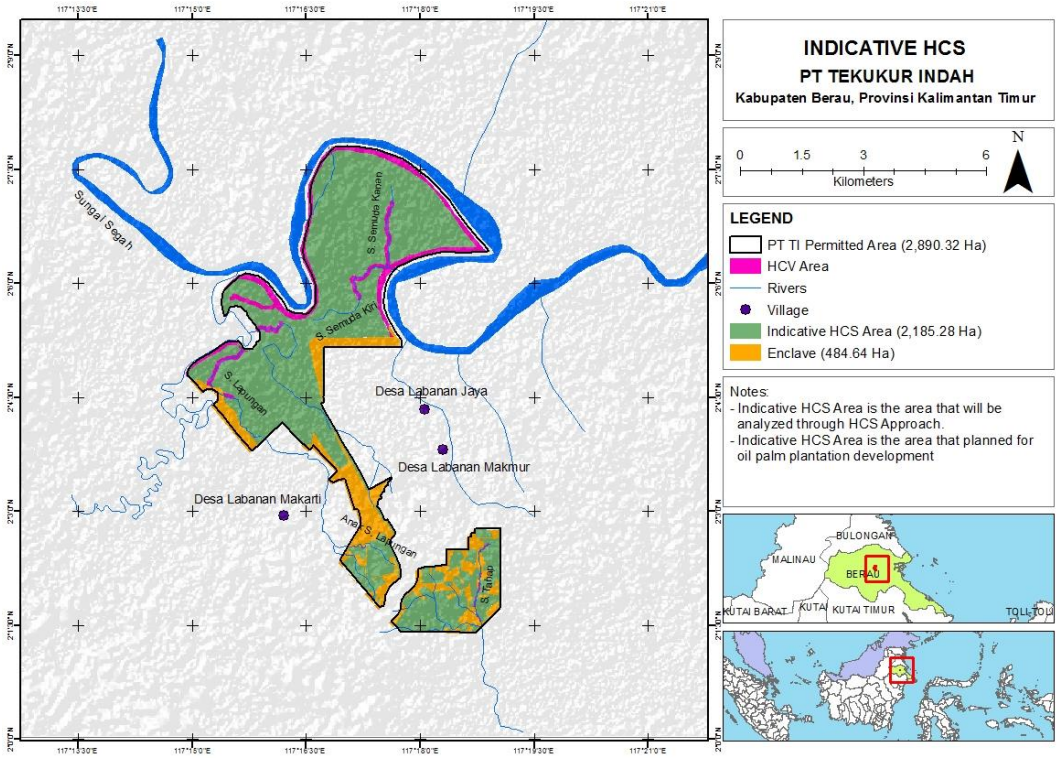


Figure 5. Indicative HCS area based on FPIC and participatory mapping

In the meetings, the communities also have been told that HCSA assessment is in process, that some area in the proposed project area would need to be conserved due to the company no deforestation commitment. Specific information about the exact conservation area will be given to the community in the delineation process on the field and community meetings. Delineation process would involve community representatives.

The community villages were developed from a transmigration settlement. This explains that the community has no customary interactions with the land in the proposed project area. Traditional uses occurred in the proposed project area were paddy field and fruits garden. Existing paddy field that is still operating at the east area of proposed project area is decided not to be included in the development as well as the garden and other use at the thin area of the northern part of the proposed project area. Areas that the community gave their consent on company's proposal have been already mapped and discussed for compensation scheme according to the possible alternatives mentioned above. The community stated that land that is approved to be compensated is under the company management, so that the community will cooperate with the company on the management of the compensated areas, including that is proposed to be developed and as well as the conservation area.

The land acquisition process by the company is verified. The verification was conducted through company's land acquisition Standard Operational Procedures verification with FPIC principles and FPIC Guidance for RSPO Members. Some essential information obtained from community engagement are:

- Socialization process has done since 2012
- Land acquisition process including company proposal socialization, negotiation and compensation is done according to company's land acquisition Standard Operational Procedures
- Community engagements related to land acquisition process have been done 20 times
- The deals obtained from discussion and negotiation process with the community consists of the value for compensation; the area that agreed for company's plantation, partnership scheme plantation (plasma) and the area which is not included in company's plan (enclave)

3.2 Summary of Social Impact Assessment (if any)

Provided in NPP Summary Report

Summary Report-SEIA, SIA & HCV
(http://www.rspo.org/file/Summary%20Report-SEIA,SIA%20&%20HCV-Final.pdf)

Summary of SIA findings:

1. Majority of Labanan community accepts the presence of PT TI as indicated by their willingness to sell their un-utilised land to be converted into productive land.
2. The development of PT TI has the potential to promote economic growth of surrounding villages.
3. PT TI has to ensure that the issue between the community and Cooperative Laba Sari is settled with BPN.
4. Of the four villages, village Dusun Siduung Muara is most susceptible to negative impacts of land clearing.
5. Farmer of Daerah Penjaringan (padi planting using irrigation from surrounding rivers) are concerned that planting of oil palms will affect the water level of River Loangban and Lapungga and thus causing the padi field to dry out.

4. High Conservation Value assessment

4.1 Summary and link to public summary report

Provided in NPP Summary Report

Summary Report-SEIA, SIA & HCV
(http://www.rspo.org/file/Summary%20Report-SEIA,SIA%20&%20HCV-Final.pdf)

5. Environmental Impact Assessment

5.1 Summary

Provided in NPP Summary Report

Summary Report-SEIA, SIA & HCV
(http://www.rspo.org/file/Summary%20Report-SEIA,SIA%20&%20HCV-Final.pdf)

6. Land cover image analysis

6.1 Area of Interest and how it was defined

The Area of Interest (AOI) considered in our analysis was the Izin Lokasi boundary outline in Sample Image 6.3. This AOI does not include a 1 km buffer as recommended by the HCS Toolkit, which may have some impact on areas identified for protection. High carbon stock forest land cover class is defined by the land cover type and the value of carbon stock (tonC/ha) obtained from carbon stock estimation in PT Tekukur Indah Permitted Area. The High Carbon Stock forest in PT Tekukur Indah consists of YRF (Thicket) and LDF (Secondary Forest).

6.2 Description of images used for classification

The classification is based on the latest satellite image available during the assessment and verified with above ground carbon stock estimation from the Carbon Stock Assessment. The image used for the classification is Landsat 8 Satellite Imagery, 30 m resolution, collected on May 10 2016. The image has ~30% cloud cover with substantial cloud shadows, yet no haze within the AOI (Section 6.3). This is substantially greater than the maximum cloud cover allowed under the HCS Toolkit guidelines (<5% cloud cover). However, this was the most recent high resolution image available at the time of analysis, and the areas most affected by clouds to the south of the AOI were already planted with oil palm.

6.3 Sample image

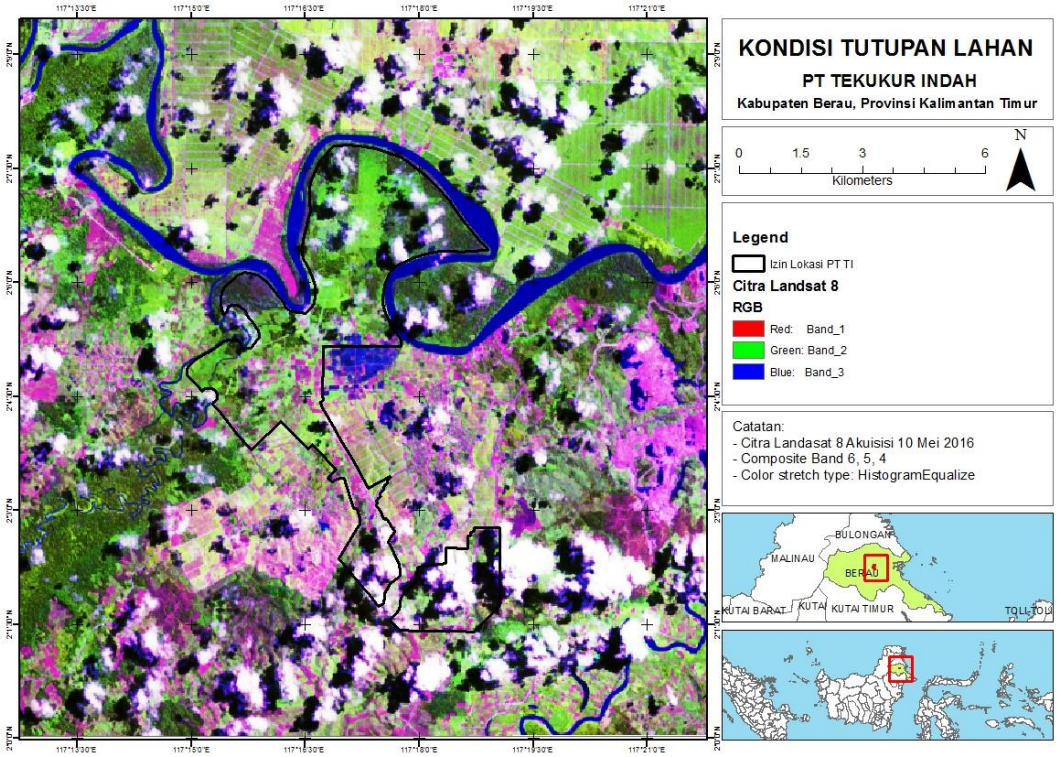


Figure 6. The area of interest and Landsat satellite imagery

Landsat 8 satellite imagery path 117 row 58, acquisition on May 10th, 2016 is used for the analysis. This image has approximately 30% cloud cover within the AOI. This image was considered as the most suitable for analysis because it has the least cloud cover at that time.

6.4 Method of stratification and software used

Land cover classification was conducted with supervised classification and corrected with visual interpretation on the satellite image. The satellite image used in this assessment is Landsat 8 OLI Path 117/ Row 58 image. The image bands combination used is the composite of band 6, 5 and 4; with Histogram Equalize color stretch type used during sample selection. Software used for image classification is ArcGIS 10.1, specifically the image classification toolbar / interactive supervised classification. For initial classification, we visually selected samples from the image for each class as training data. No image correction was applied prior to classification.

The image classification is corrected with ground check, the reclassification has been done according to the ground check data. Thicket area (vegetation dominated by pioneer tree species) is classified as YRF. Forested area as it is mentioned in the toolkit that density as the scale of the classification, we use the density terminology to represent the carbon contained in the area, so the forest (vegetation with more settled tree species like Dipterocarp) with higher carbon stock than thicket (YRF) would be classified as low density forest. As the forested area in the concession once was used by the community for gardening and the carbon stock is around 50-70 ton/ha, we classify them as LDF.

6.5 Map of initial vegetation classes, with legend

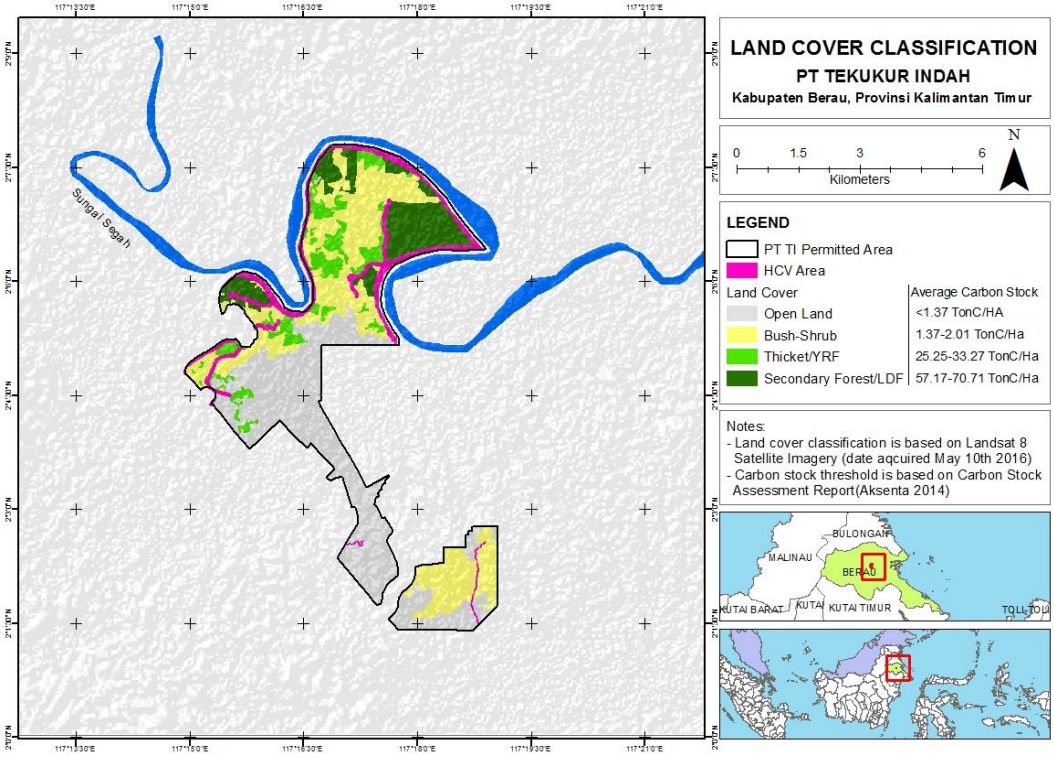


Figure 7. Land cover classification

This image was produced from the interpretation of satellite imagery and corrected with ground check information and carbon stock.

6.6 Table of total hectares per vegetation class

Land cover class	Number of Hectares	% of total concession
Potential HCS classes:		
High Density Forest	-	
Medium Density Forest	-	
Low Density Forest (Secondary Forest)	360.04	13.80
Young Regenerating Forest (Thicket)	253.47	9.71
Sub-total	613.51	23.51
Non-HCS classes, e.g.:		
Bush-shrubs	926.17	35.50
Open Land	1,069.46	40.99
Mines, smallholder agriculture, plantation, etc.	-	
Sub-total	1,995.63	76.49
TOTAL	**2,609.14**	**100.00**

Acreage of the analysis is according to GIS Analysis

6.7 Summary of which areas are potential HCS forest, subject to further analysis

The potential HCS forest area consists of LDF (Secondary Forest) and YRF (Thicket). The LCS/degraded land which is potential for development consists of Bush-shrubs and Open Land.

HCS Class	Land Cover Type	Carbon Stock
LDF	Secondary Forest	57.17-70.71 tonC/ha
YRF	Thicket	25.25-33.27 tonC/ha
LCS/Degraded Land	Bush-shrubs	1.37-2.01 tonC/ha
	Open Land	<1.37 tonC/ha

7. Forest inventory results

7.1 Inventory sample design and plot rational

Number of plots are determined with Taro Yamane Formula, in which the number of pixels in a given land cover class was assumed to be the “population”. The sampling plot numbers were calculated based on the desired coefficient interval and the size of assessment scope of area. Sampling plots are distributed in every land cover type proportionally to the size of the land cover. Sampling took place in 2014, even though the satellite imagery was from 2016, which may slightly bias results if vegetation regrew or was lost from 2014-2016.

7.2 Map indicating plots

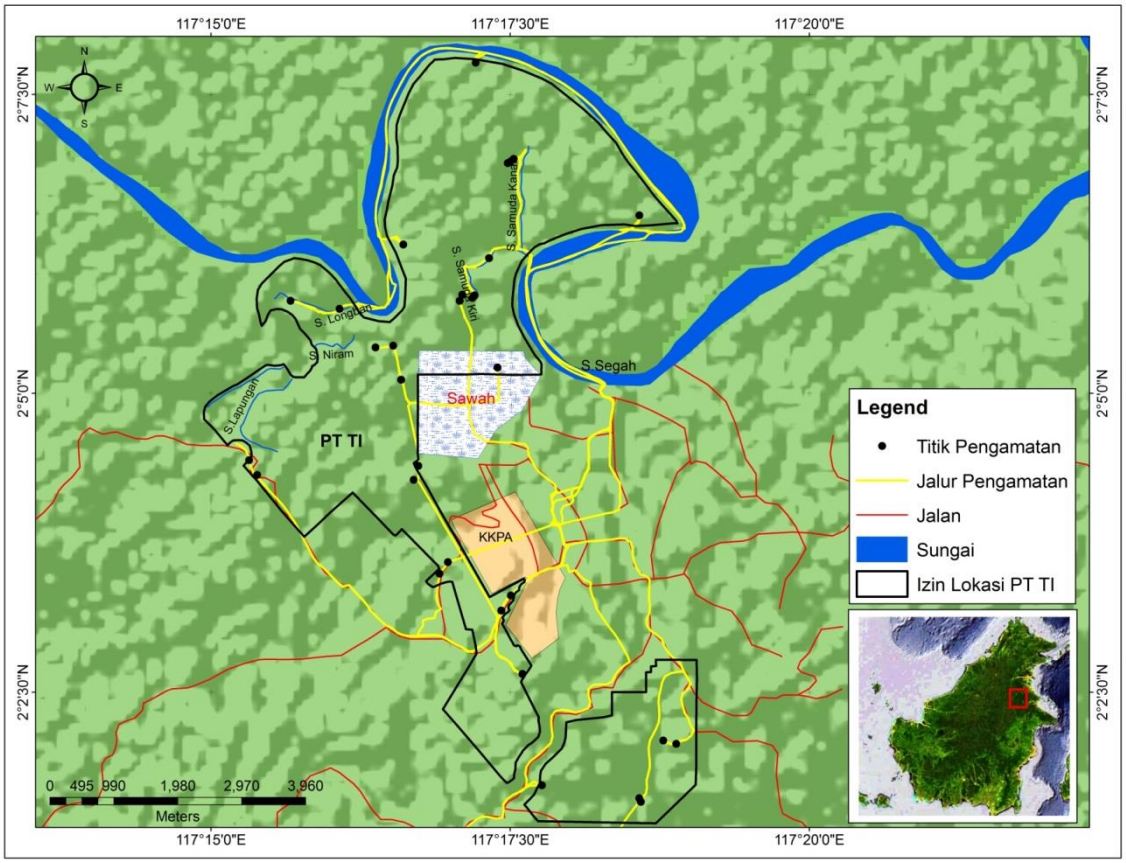


Figure 8. Observation points distribution

7.3 Forest inventory team members and roles

Idung Risdiyanto; MSc in Natural Resource Management Technology in International Program organized by Bogor Agricultural University (BAU). Graduated in the same University in Agrometeorology field of science. Started his career with researches in GHG and water resources studies with UNEP and BAU PPLH in 1997. Continued his career with many researches with well-known Institution in Indonesia (LIPI, LAPAN, BPPT and BMKG). Most of his works is related with GIS, Remote Sensing and Spatial Analysis and Modeling studies of natural resource management (water, land and climate change). Also known as an expert for Indonesian Ministry of Forestry and as lecturer in BAU. He is one of the RSPO Approved HCV Assessors – Discipline Specialist of Environmental Services in Aksenta. Act as team leader in the assessment.

Ikwan Agustian; Bachelor of Forestry from Bogor Agricultural university (BAU). Expert of vegetation analysis and forest inventory. Experienced in many tropical forest surveys in Kalimantan and Papua. Started his career with Carbon Stock Assessment with BAU in Papua. He is now actively involved in the plant taxonomy related study. Act as plant identification expert and forest biomass estimation in the assessment.

Aulia Bahadhori Mukti; Expert of soil studies. Obtain his bachelor degree from Bogor Agricultural university (BAU). Started his career with soil studies and surveys for agricultural suitability with BAU. Experienced in HCV Assessment in ecosystem services and GIS for HCV Assessment since 2010. Act as soil expert in the assessment.

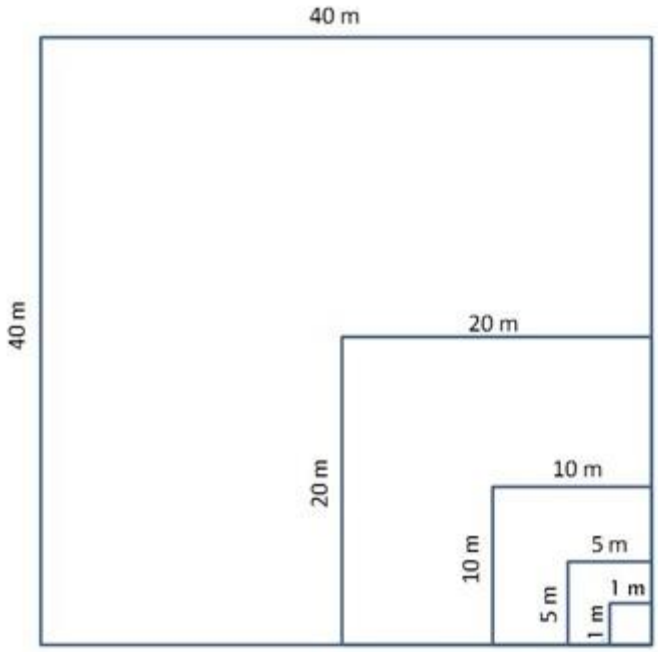
M. Teuku Haikal; Expert of Agroclimatology. Bachelor in Geophysiscs and Meteorology form Bogor Agricultural University (BAU). Experienced in land use change and applied climatology studies, especially in GHG emission. Started his career with carbon stock estimation in peat swamp forest and dry mineral land forest. Act as expert of biomass and necromass data in the assessment.

Ryan Karida Pratama; Expert of GIS and Remote Sensing. Bachelor in Geophysiscs and Meteorology form Bogor Agricultural University (BAU). Experienced in land use change analysis and soil physical properties through remote sensing. Started his career with land humidity in peat swamp forest and dry mineral land forest with satellite imagery data study. Act as GIS and remote sensing expert in the assessment.

7.4 Methodology used for forest sampling

Estimation of carbon stocks on this study was done by the Carbon Stock Assessment results approach conducted by Aksenta in the area of the study in 2015. Placement of the observation point was done with stratified random sampling in each type of land cover. Observation was done in each land cover types, with land cover classification map as guidance in the field. This was done so that the results of field measurements can represent the data diversity in each type of land cover. The weakness of this method is that the proportionality of the samples is slightly imbalance.

Measurement of biomass to obtain the value of carbon stocks was done by measuring the trees DBH (diameter at breast high). The trees measurement was done in plot which was divided into five areas for each specific growth rate. The plots Design of trees measurement are presented below (see section 2.3 Study Method in full report).



Sub-plot Size	Tree DBH to Measure
1 x 1 m^2	Bushes and seedling vegetation stage with 2-5 cm of DBH
5 x 5 m^2	Bushes-Shrub and sapling vegetation stage with 5-10 cm of DBH
10 x 10 m^2	Thicket and pole vegetation stage with 10-20 cm of DBH
20 x 20 m^2	Thicket and tree with 20-35 cm of DBH
40 x 40 m^2	Trees with > 35 cm DBH

7.5 Methodology used for carbon calculations

Vegetation carbon stock is calculated with tree carbon stock-biomass ratio, the carbon stock-biomass ratio is 0.47 (IPCC, 2006). Tree above ground biomass is obtained with tree species biomass allometric using DBH variable according to Krisnawati *et al*. (2012).

7.6 Indicative photos of each vegetation class


(Foto : IR/Aksenta)

Tutupan lahan hutan sekunder (*Secondary forest*)


(Foto : IR/Aksenta)

Tutupan lahan belukar (Thicket)


(Foto : IR/Aksenta)

Tutupan lahan semak-belukar Bush-shrub

7.7 Statistical analysis (allometric used, confidence tests, justification)

Tree biomass allometric used in the assessment is according to Brown (1997) "Biomass estimates for wet tropical forests". Data of tree diameter was converted into a value biomass using allometric equation model of tree biomass. The model used was a specific model based on the tree species, the ecosystem, and the location of its existence. Value of biomass was then converted to carbon values with the 0.47 time factor.

7.8 Summary of statistical analysis of carbon stock results per vegetation class

Table : Summary of statistical analysis of carbon stock results per vegetation class

Land cover class	Number of Plots	Stems per hectare	Basal Area (m^2/ha)	Average Carbon Stocks	Standard error of the mean	Confidence limits (90%)	
						Lower	Upper
Open Land	1	0	0.00	-	-	-	-
Bush-shrub	8	2,500	18.00	1.96	6.77	1.37	2.01
Young Regenerating Forest/Thicket	4	2,414	102.94	29.26	4.01	25.25	33.27
Low Density Forest/Secondary Forest	10	2,422	324.35	63.94	0.32	57.17	70.71

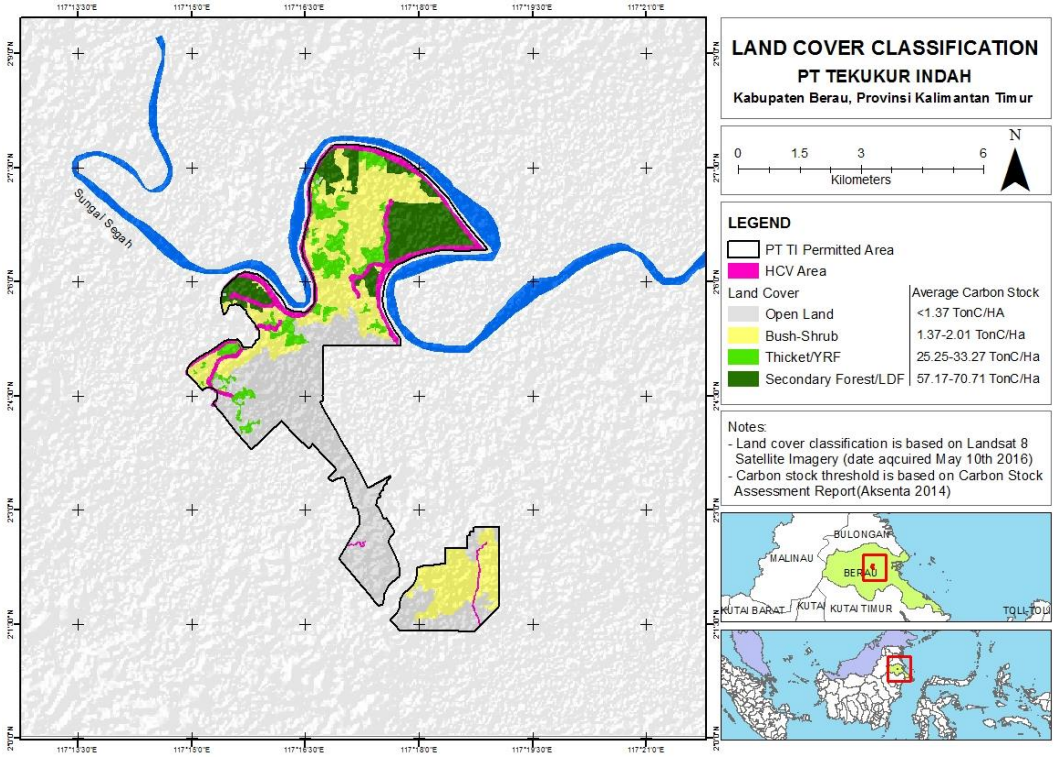
7.9 Forest inventory results

Table: Forest inventory class

Land cover class	Average carbon value	Physical description of the land cover, e.g. species mix, forest type (pioneer, regenerating, primary etc.), diameter distribution, structural indices, maturity indices, etc.
Open Land	0	Area with less vegetation, found as cleared land for cultivation, foot path, roads, and buildings.
Bush-shrub	1.96	Dominated by bushes, herbaceous and/or reeds vegetation. Often found as land that had been cleared and/or burnt once then covered by pioneer vegetation as the early stage of succession process.
Young Regenerating Forest/Thicket	29.26	Dominated by pole vegetation stage with 20-35 cm DBH. Some thicket areas are found as abandoned community cultivation land while the others are the mid stage succession of the land that had been cleared and/or burnt once.
Low Density Forest/Secondary Forest	63.94	Characterized by domination of tree with 20-35 cm and >35 cm DBH. Found as the Segah River floodplain that have been abandoned (not used for cultivation anymore) by the community.

8. Land Cover Classification

8.1 Refined land cover map with title, date, legend and any HCS forest patches identified



This image was produced from the interpretation of satellite imagery and corrected with ground check information and carbon stock.

9. Patch Analysis Result

9.1 Results of Decision Tree

Patch Number	Total Area (Ha)	of which core (ha)	Priority	Description of Decision Tree Result
1	19.55	<10	Low	Indicative Develop because not significant for biodiversity
2	34.53	<10	Low	Indicative Develop because not significant for biodiversity
3	25.52	<10	Low	Indicative Develop because not significant for biodiversity
4	4.77	<10	Low	Indicative Develop because not significant for biodiversity
5	4.90	<10	Low	Indicative Develop because not significant for biodiversity
6	28.09	<10	Low	Indicative Develop because not significant for biodiversity
7	1.51	<10	Low	Indicative Develop because not significant for biodiversity
8	1.53	<10	Low	Indicative Develop because not significant for biodiversity
9	6.76	<10	Low	Indicative Develop because not significant for biodiversity
10	6.62	<10	Low	Indicative Develop because not significant for biodiversity
11	2.54	<10	Low	Indicative Develop because not significant for biodiversity

12	4.97	<10	Low	Indicative Develop because not significant for biodiversity
13	14.63	<10	Low	Indicative Develop because not significant for biodiversity
14	6.67	<10	Low	Indicative Develop because not significant for biodiversity
15	1.04	<10	Low	Indicative Develop because not significant for biodiversity
16	2.77	<10	Low	Indicative Develop because not significant for biodiversity
17	13.47	<10	Low	Indicative Develop because not significant for biodiversity
18	1.37	<10	Low	Indicative Develop because not significant for biodiversity
19	0.54	<10	Low	Indicative Develop because not significant for biodiversity
20	3.34	<10	Low	Indicative Develop because not significant for biodiversity
21	7.87	<10	Low	Indicative Develop because not significant for biodiversity
22	0.76	<10	Low	Indicative Develop because not significant for biodiversity
23	57.17	<10	Low	Conserve because connected to HCV
24	1.28	<10	Low	Conserve because outside risk area
25	4.13	<10	Low	Conserve because outside risk area
26	28.40	<10	Low	Conserve because connected to HP
27	2.63	<10	Low	Conserve because connected to HP
28	9.58	<10	Low	Conserve because connected to HP
29	50.72	10-100	Med	Conserve because HP
30	62.82	10-100	Med	Conserve because connected to HCV
31	198.84	>100	High	Conserve because HP

9.2 Comments on Decision Tree outcome

Detailed explanation on patch analysis is provided in the full report. Pre-RBA and RBA check was approached with the result of HCV Assessment due to identical issues of study. Conservation area including the HCV and HCS areas have both environmental services and ecological function. The most of the conservation areas (forest covered) are located along the river and water stream. These areas were identified as river floodplain that play role to hold the river overflow to avoid flood in plantation areas. These areas are also adjacent to the HCV area that is also reserved as wildlife habitat. Therefore, overall conservation area will provide environmental services and ecological functions.

10. Indicative Land Use Plan

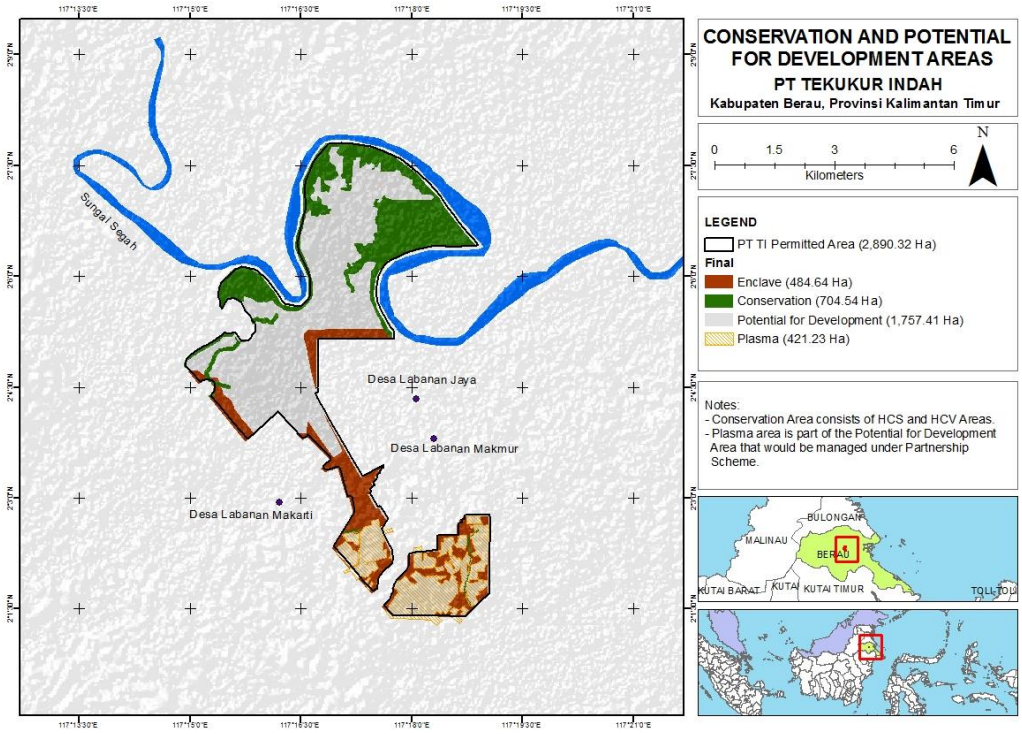
10.1 Summary of results of final ground verification (if any)

Integrated conservation area consists of HCV, HCS and area recommended to be conserved. Integrated conservation area was designed to compacting forest patch to provide and enhance forest corridor for wildlife and Segah River Floodplain Area. In order to compact conservation area, some non-forest areas are recommended to also be conserved.

Final ground verification and field delineation have not been done yet. However, these activity including community and local government socialization would be carried out to reconfirm that the land use plan of the conservation area and development area are appropriate with the company

management plan and community FPIC and local government land use planning. This process would be undertaken with GPS guidance to reconfirming the land use plan (conservation area) and also to mark the conservation area boundary on the field.

10.2 Final HCS map



10.3 Overview of forest conservation management and monitoring activities to be included in the Conservation and Development (land use) Plan

Land acquisition by the company have includes the potential for development area and also the conservation area according to the FPIC process. Company have full authority of managing the area. Conservation area management plan as well as the potential involvement of the community would be created in the further discussion after land compensation process is finished. Conservation area is obviously a company responsibility. Further discussion with community and local government would be undertaken to identify potential collaboration on managing the conservation area. The plan would be directed to assure that the ecological function and environmental services goes well. Restricted use of natural resources in conservation area would also be possible.

RBA to identify important wildlife species would also be undertaken through the integration with conservation area management and monitoring by the company and the community. The HCS Approach Toolkit RBA would be effectively and efficiently fit for the further integrated conservation area management and monitoring.

10.4 List of activities still to be carried out before Conservation and Development Plan can be finalised

i. Conservation area field delineation to obtain accurate area hectarage. This process also takes part as the conservation area land cover and boundary ground verification and further socialization to the community on the company land use plan.
ii. Conservation area security improvement with conservation area field boundary to avoid pollution from plantation management.
iii. Discussion with the community and local government to identify the potential collaboration and integration on managing conservation area (Participatory Conservation Planning). Restricted use of natural resource in conservation area by the community is possible. This kind of collaboration is very effective and efficient to implement conservation area management and monitoring.
iv. Periodically monitoring of the HCV and HCS area. This should be done as an integrated part of environmental management and monitoring to ensure the conservation area security and also intended to conduct further RBA.
v. The company should promote the participation of communities in managing the conservation area (Participatory Conservation Planning).