

Summary Report of SEIA and HCV Assessments
PT Karya Bakti Agro Sejahtera - 3
Kotawaringin Barat District, Central Kalimantan Province

1. Executive Summary

PT Karya Bakti Agro Sejahtera - 3 (herein after refer to PT KBAS-3) was established by Act No. 13 dated on 22-02-2007 issued by Tintin Surtini, SH. MH. MKn who changed Notary Surjadi, SH, then they revised until the last Act No. 24 dated on 11-06-2014 issued by Muhammad Hatta, SH., and legalized by Ministry of Law Human Right No. W7-05867 HT.01.01-TH.2007 dated on 28-05-2007. The area license of KBAS-3 was issued by Head of Ketapang Regent in 2015 (SK No. No. 567/PEM/2015 dated: 14-08-2015), covering area of 6,680 ha.

PT KBAS-3, is which is located in the Kendawangan and Marau Subdistrict, Ketapang Regency – West Kalimantan Province, is one of the oil palm plantation companies that has adopted the sustainable palm oil practices based on the RSPO New Planting Procedures which came in to force beginning 1 January 2010. Bumitama Agri Ltd (BAL), as a holding of PT KBAS-3, an oil palm plantation company is committed to sustainable palm oil development, not only adhering to the RSPO P&C but also to its own renewed Sustainability Policy of “No Deforestation, No Peat and No Exploitation” in August 2015. For the preparation of NPP of PT KBAS, HCV, SIA, LUCA & HCS assessment and , peat soil delineation test were conducted to ensure areas with regenerative forest (definition in accordance to the HCS Approach Toolkit) and peatland are not planned for land clearing and planting.

As part of a sustainable palm oil management, PT KBAS-3 has conducted the Social Environment Impact Assessment (SEIA/ AMDAL), High Conservation Value (HCV) identification, Social Impact Assessment (SIA) Carbon Stock Assessment and Land Use Change Analysis (LUCA). The assessment were conducted from November 2015 and reported in February 2016 by Gagas Dinamiga Aksenta (Aksenta); the key consultants conducting these assessments have been approved by HCVRN Assessor Licensing Scheme.

The results of the assessment shown that there is no primary forest in the concession of PT KBAS-3. Based on The Report of HCV Identification PT KBAS-3 2016 by Aksenta, the Land cover types dominated by shrubs.

As for potential HCV areas, 4 (four) types of HCV were identified by Aksenta; these are HCV 1 (1.2, 1.3 and 1.4), HCV 4 (4.1 and 4.2), HCV 5 and HCV 6. The original HCV area identified was ±415.4 ha (6.2% of Permitted Area). The important elements for HCV 1 are the habitat for several species of rare, endangered and endemic species such as Owa Ungko (*Hylobates agilis*), Macan Dahan (*Neofelis diardi*), Berang-berang Hidung Berbulu (*Lutra sumatrana*), Babi Jenggot (*Sus b. Barbatus*), and Trenggiling (*Manis javanica*). The important elements for HCV 4 are related to the potential damage from river riparian and water catchments area. The important elements for HCV 6 are related to the sacred areas. The HCV areas inside the IUP approved areas will be included in the monitoring and socialization plan with the local communities.

The results of the Social Impact Assessments (SIA) have shown that the company's development of oil palm plantation and palm oil mill production has significant and positive impacts toward local livelihood and the society's social sustainability. Generally, the communities support the development of oil palm plantation by PT KBAS-3.

2. Scope of SEIA and HCV Assessment

2.1 Organizational Information/ Contac Person

Company Name : PT Karya Bakti Agro Sejahtera - 3

Company Address : Melawai Raya Street No 10, South Jakarta
Jakarta- Indonesia, 12160

Type of business : Oil Palm Plantation

Capital Status : Foreign Investment (*Penanaman Modal Asing, PMA*)

Taxpayer Notification Number : 02.596.773.8-064.000

Geographical Location : 2°09'46.11" - 2°23'0.87" S & 110°25'1.47" - 110°38'1.67" E
See Picture 1, Picture 2, and Picture 3

Surrounding Entities :

North : Plantation area of PT KBAS-1 and Kendawangan River

South : Muara Kendawangan Conservancy Area & Plantation area of PT Andes Agro Investama

West : IUPHHK-HTI, PT HutanKetapang Industri & Kendawangan River

East : Plantation area of PT Budidaya Agro Lestari & Villages (Air Merah, Selimatan Jaya, Pelanjau Jaya & Harapan Jaya)

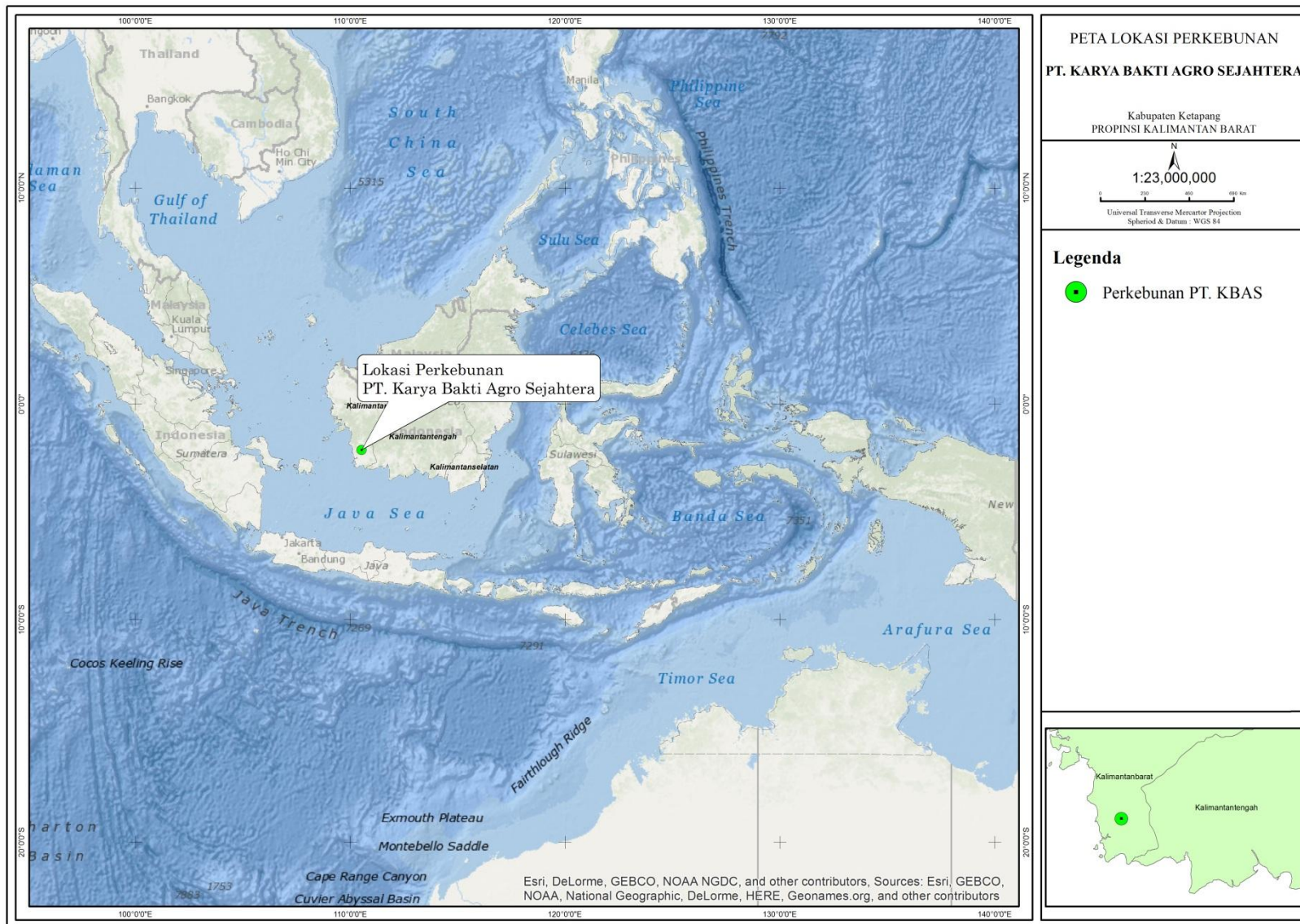
Contact person : Lim Sian Choo

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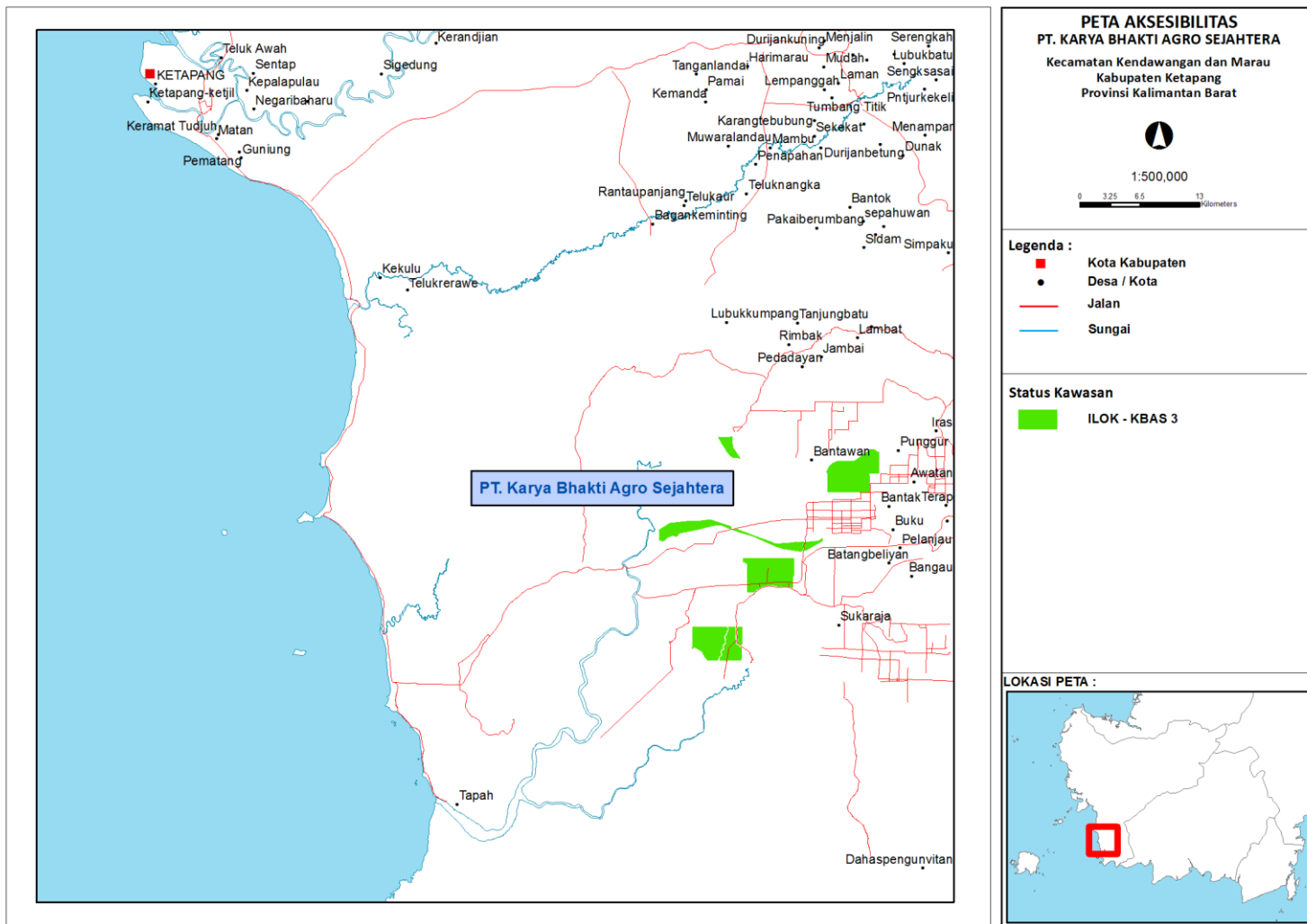
Fax : +62-21-72798665

Email : lim.sian.choo@bumitama.com

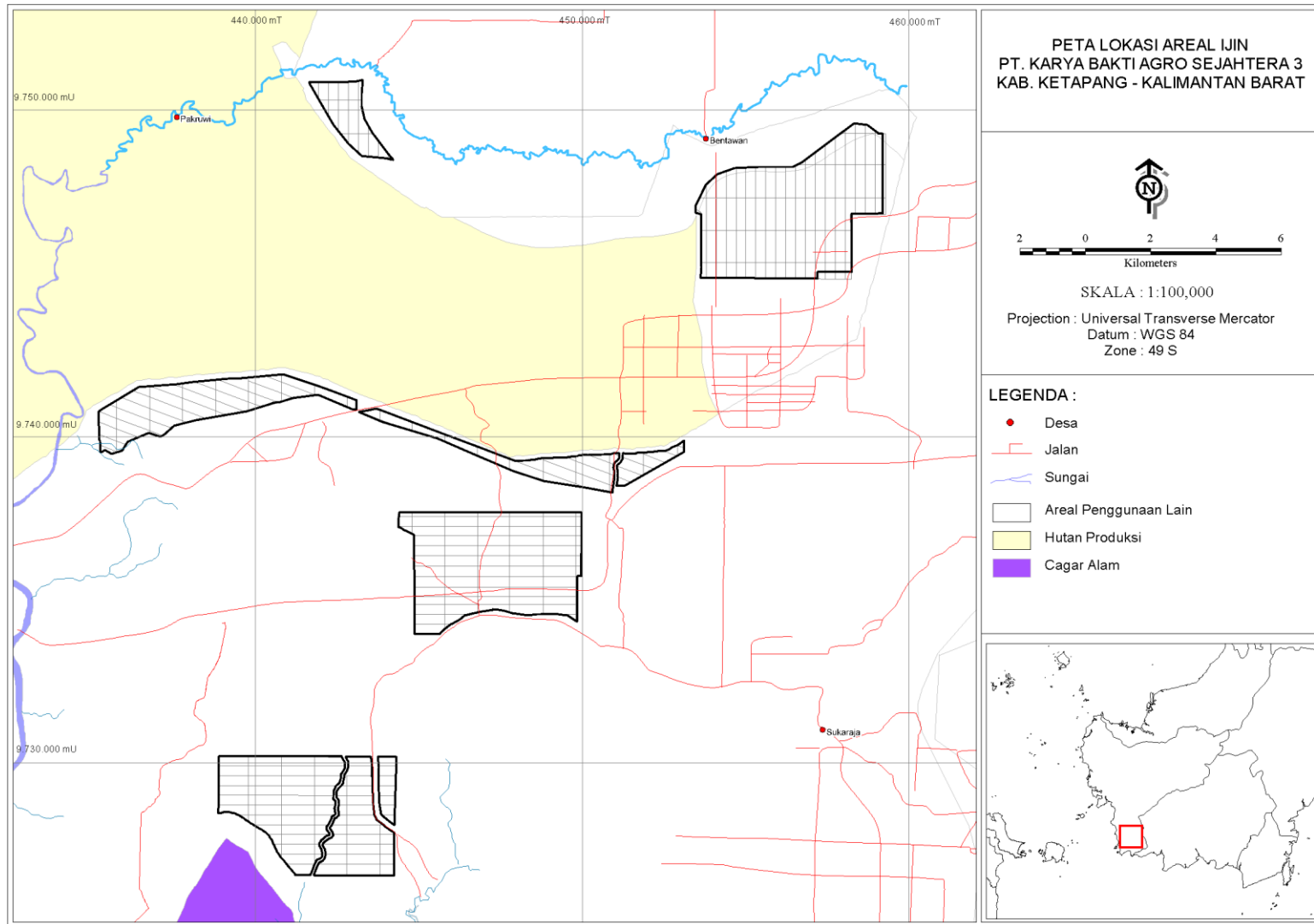
Website : www.bumitama-agri.com



Picture 1 Location of PT KBAS-3 in Indonesia



Picture 2 Location of PT KBAS-3 in Kendawangan & Marau Sub-district, Ketapang Regency, West Kalimantan Province



Picture 3 Concession of PT KBAS-3 in Kendawangan & Marau Sub-district, Ketapang Regency, West Kalimantan Province

2.2 List of Legal, Regulatory Permits and Property Deeds

Table 1. Types of permits and recommendations PT KBAS-3

No	Licenses and recommendations	Issued by	Number and date	Note
1.	Deed of Establishment	<ul style="list-style-type: none"> Eliwaty Tjitra, SH R. Wiratmoko, SH (Last Change) 	<ul style="list-style-type: none"> No : 62 dated on 13-04-2004 No : 8 dated on 30-01-2008 	
2.	Approval the deed of Establishment	Ministry of Justice and Human Rights	C-18465 HT.01.01. Year 2004 dated on 23-07-2004	
3.	Approval the deed of Establishment Changes	Ministry of Justice and Human Rights	AHU-20922.AH.01.02 Year 2008 dated on 25-04-2008	
4.	Tax payer Notification Number	Tax Serve Office	02.596.773.8-064.000	
5.	Permitted Area (Izin Lokasi)	Head of Ketapang Regent	No. 567/PEM/2015 Dated : 14-08-2015	±6,680 ha
6.	Social & Environment Impact Assessment	Head of Ketapang Regent	124/KLH-B/2016 15-02-2016	12,600 ha 75 MT/hr
7.	Plantation Permit (IUP)	Head of Ketapang Regent	125/DISBUN-D/2016 15-02-2016	12,555 ha

3. Assessment Process and Procedures

3.1 Assessor and Their Credentials

3.1.1 Social Environment Impact Assessment (SEIA/ AMDAL)

The SEIA/ AMDAL document of PT KBAS-3 was prepared by consultant from CV Delta Ekotrop Raya Indo, Pontianak, West Kalimantan and have been approved by Head of Ketapang Regent according to the letter number 124/KLH-B/2016, date 15 February 2016.

3.1.2 Social Impact Assessment (SIA)

The Social Impact Assessment of PT Karya Bakti Agro Sejahtera - 3 was carried by Gagah Dinamiga Aksenta (Aksenta), with the composition of team as follows :

Table 3. Person and Expertise SIA Team Assessor in PT Karya Bakti Agro Sejahtera – 3

No.	Expert Name	Expertise/Position
1	Andri Novi Hendrarto	Team Leader. Socio-cultural aspect and social relation
2	Iwan Rosyadi	Community development and Employment aspect
3	Afwan Afwandi	Community development and socio-economic aspect

3.1.3 High Conservation Value Identification (HCV)

The HCV assessment conducted for about 2 months from November – December 2015, in the Permitted Area (Izin Lokasi) of PT KBAS-3 was carried by Gagas Dinamiga Aksenta (Aksenta), which located at Jln. Gandaria VIII/ 10 Kebayoran Baru Jakarta - Indonesia 12130.

Web page aksenta@aksenta.com.

Key consultants from Aksenta have been accredited and approved by HCVRN Assessor Licensing Scheme (ALS). The team members are on Table 4.

Table 4. Key consultants HCV Assessment

Nama	ALS License	Expertise/Position	Experience
Resit Sözer resit@aksenta.com	Provisional (ALS15030RS)	Team Leader Biodiversity Aspect (HCV 1, 2, dan 3)	Research and wildlife surveys, Taxonomy and wildlife ecology, wildlife management, populations and habitats study, and wildlife conflict mitigation
Fersely Getsemani F. getsa@aksenta.com	N/A	Team Member Environmental Services (HCV 4)	Hydrology, soil and water conservation, spatial analysis and remote sensing, also watershed management
Teuku Ade Fachlevi adhe@aksenta.com	N/A	Team Member Socio-cultural (HCV 5 dan 6)	Social, economic, natural resources management and business planning
Reza Abdillah reza@aksenta.com	N/A	Team Member GIS Specialist	Remote sensing, conservation biology and land use issues mapping, and Carbon Stock Assessment

3.2 Assessment Methods

3.2.1 Social Environment Impact Assessment (SEIA/ AMDAL)

The data collection process was strongly associated with the type of data that collected. Generally, studies will be conducted based on primary data and secondary data. Primary data obtained through observation, measurement and field interviews, and secondary data obtained from the literature collected, either from the company, or directly from related institutions in the study of this area. The methods that were used to collect the data adjusted with components that can be studied. The used data must be accurate and reliable so that it could be used to analyzed, measure and observe the environmental components which it predicted would be affected and components of action plan that would give significant impacts to the surrounding environment. The data were collected was as follow:

- Physic – Chemist Components (Climate, Air Quality and Hydrology, and Soil).
- Biological Components (Vegetation, Animals, and Water Biota).
- Socio-Economic Culture Components (Demography/ Population, Social, Economic, Social and Cultural).
- Environmental Health and Public Health Components (Environmental sanitation, public health level, level of public health services).

Methods of Significant Impact Estimation

Determination of the significant impact to the environment caused by the development activities of the plantation is only intended as an attempt to estimate the large and important environmental quality changes that are caused by the plantation development activities of PT KBAS-3 Kendawangan and Marau Sub-district, Ketapang Regency. Method of significant impact estimation is by differentiating the magnitude impact and significant impacts.

A. Estimation on the Magnitude of Impact

Magnitude Impact measured from the environmental quality changes. On estimates of changes in environmental quality are used formal and informal methods.

1. Formal Methods

Formal methods are used to estimate the impact of parameters which the system characteristics can be identified or estimated by using the approach of environmental threshold at national and regional levels.

2. Non Formal Methods

Non-formal method is a method based on the professional judgment of experts, logical frame analysis and analogy. This method is use to estimate the environmental parameters which characteristics system finds difficult to identify or estimated by modeling approach such as socio-cultural systems.

B. Determination of Important Impact Characteristics

Assessment of the important impact characteristics were in accordance to BAPEDAL decision Number: KEP-056 of 1994 on Guidelines Regarding Significant Impacts size. Meanwhile, in relation to the impact evaluation conducted by Important Impact scaling into two categories: important and less important. Characteristics Impact divided into two groups, negative impacts and positive impacts. It will be regarded as negative if the changes/ impact estimated is get adverse towards the environmental, and it is positive if the changes/ impact estimated giving beneficial to the environment.

C. Methods of Important Impact Evaluation

The Important Impact evaluation explore "holistic causative" against expected environmental components that is affected. For this purpose the supporting tools used is such as interactions matrix. Interactions matrix between activity components and environmental component contain magnitude of Impact and Importance of Impact. This Important Impact evaluation will conduct careful and thorough study to the primary impact (positive / negative) and secondary impacts (positive / negative), and also other derivative impacts on the environment component and activities component.

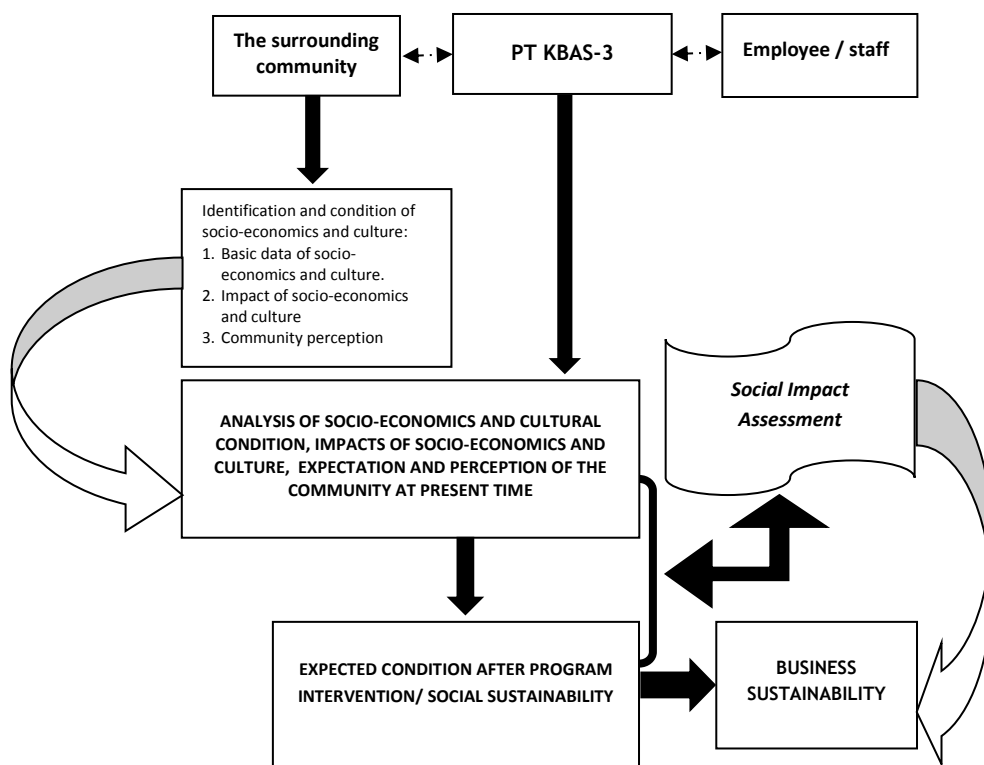
The study of the important source impact and hypothetical impact can identify the key issues that need to be managed. Results of the Important impact evaluation are also expected to assist the decision making process in the selection of a viable alternative plan that takes into consideration of the environmental aspects of the proposed area.

3.2.2 Social Impact Assessment (SIA)

Basically, the development of plantation area would affect the pentagon assets (Human capital, Natural Capital, Financial Capital, Social capital and Physical Cappel) in the surrounding area. Approach framework in this study of Social Impact Assessment was by learning the present existing condition in PT KBAS-3, particularly the condition which was related with socio-economic condition, socio-economic impacts of the company toward the surrounding the community, and the community's perception. Based on the existing condition, compilation and preparation was conducted for making SIA document and social management plan which contain activities that should be conducted to create ideal condition (desirable condition).

Sampling technique being used were purposive sampling (samples were selected on the basis of researcher's judgement which decided that those samples were the most suitable to be selected for the purpose and objectives of the research) and simple random sampling (technique of sample collection which gave the same chance for all population elements to be taken). With a participatory, multiparty, rapid ex-ante, appreciative and social-learning cycle approach.

The scope are restricted to the important impact, that considers the number of people affected, the distribution area of impact, duration of the impact, the intensity of the impact, and the number of Pentagon Assets component affected in the villages around the operational of PT KBAS-3.



Secondary data or primary data being collected, were analyzed by integrating quantitative and qualitative method. Qualitative analysis emphasized more on description and illustration of various facts and relation between variables being found in the field. The findings obtained from the methods above were analyzed. The baseline of the analysis was based on RSPO criteria which relevant to sustainable social aspects. The recommendations also covered other issues which were not entailed in the RSPO criteria, in the form of ideas or aspirations as the result of the field analysis.

3.2.3 HCV Assessment

Toolkit

1. The High Conservation Values Forest Toolkit (ProForest, 2003)
2. The High Conservation Values Toolkit in Indonesia
3. Common Guidance of the Identification of High Conservation Value (HCV Resource Network, 2013)

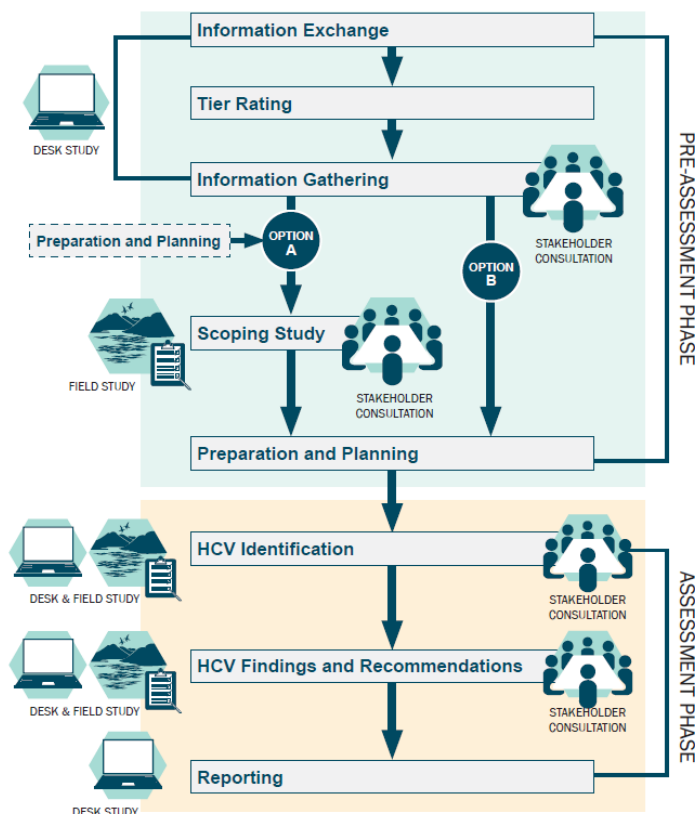
Materials and Equipment

Materials used in the identification and analysis include are : AMDAL document, protected areas master list, IUCN Red List of Threatened Species (www.iucnredlist.org), CITES Appendices I, II and III valid from 12 June 2013 (CITES, 2013), Government Regulation of Indonesia Number 7 1999 (PP 7 1999), A Field Guide to the Birds of Borneo, Sumatra, Java and Bali (MacKinnon & Phillips, 1993), The Mammals of The Indomalayan Region (Corbet & Hill, 1992), A Field Guide to The Snakes of Borneo (Stuebing & Inger, 1999), Panduan Lapangan Mamalia di Kalimantan, Sabah, Sarawak & Brunei Darussalam (Payne et al, 2000), The Ecology of Kalimantan (MacKinnon et al, 1996). Digital elevation model map and data (USGS, 2000), Land cover: Landsat 8 OLI Imagery, land system map (RePProt, 1989), topographical map (Rupa Bumi Indonesia map, BIG 1998)), forest land use map (TGHK) and Map of Jelai-Kendwangan River (KemenPU, 2012).

Approach

The collection of data and field information focused on potential areas of HCV based on the results of the preliminary study. The emphasis of the collection of data and information aimed at the attribute or element of HCV, using a combination of several methods, namely:

- i) The participatory mapping, carried out in an integrated manner to all types of HCV (biodiversity, environmental services and socio-cultural),
- ii) Ground truthing, direct check in the field above the land cover interpretation of satellite imagery that has been done at the pre-assessment,
- iii) The data field collection, to verify the existence of the attributes or elements of HCV in the potential areas, and
- iv) Interview



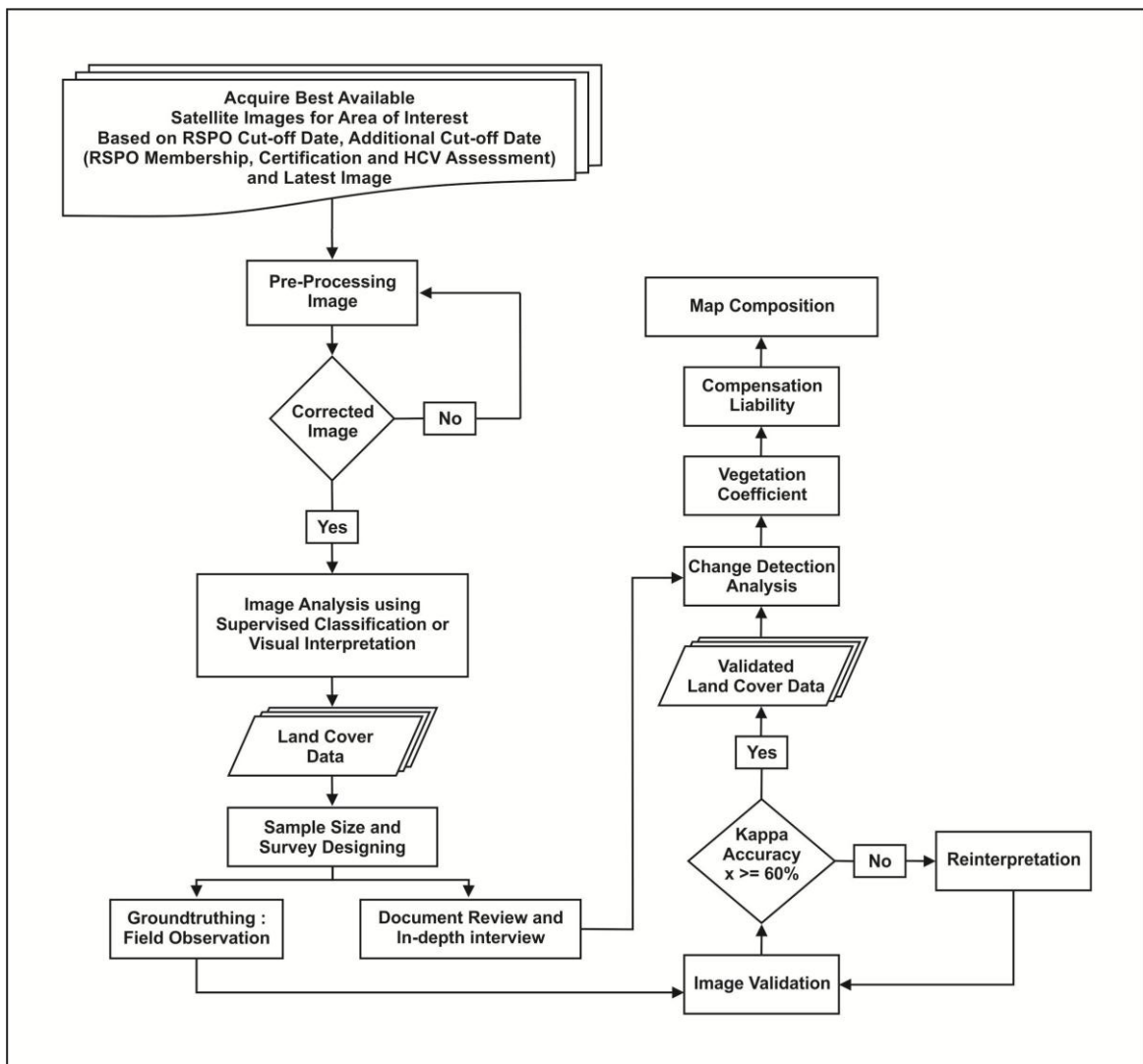
3.2.4 Land Use Chang Analysis

PT KBAS-3 also conducted Land Use Change Analysis (LUCA) to ensure that there is no deforestation due to land development. Conducted concurrently with HCV Assessment in October 2015.

The assessment was conducted on some cut-off period refers to the procedure Remediation and Compensation RSPO:

- (i) November 2005 (Principles & Criteria is first applied),
- (ii) October 2007 (Bumitama Group become a member of RSPO),
- (iii) November 2007 (the deadline for the trial implementation of P&C RSPO),
- (iv) in January 2010 (be in effective of the RSPO New Planting Procedure),
- (v) May 2014 (be in effective of Procedure Remediation and Compensation RSPO), and
- (vi) October 2015 (first time KBAS-3 do the HCV Assessment)

LUC Analysis was performed by four step, namely (1) Image Preprocessing, (2) Image Classification, (3) Field Verification, (4) The Compensation Scheme. Refer to the following flowchart:

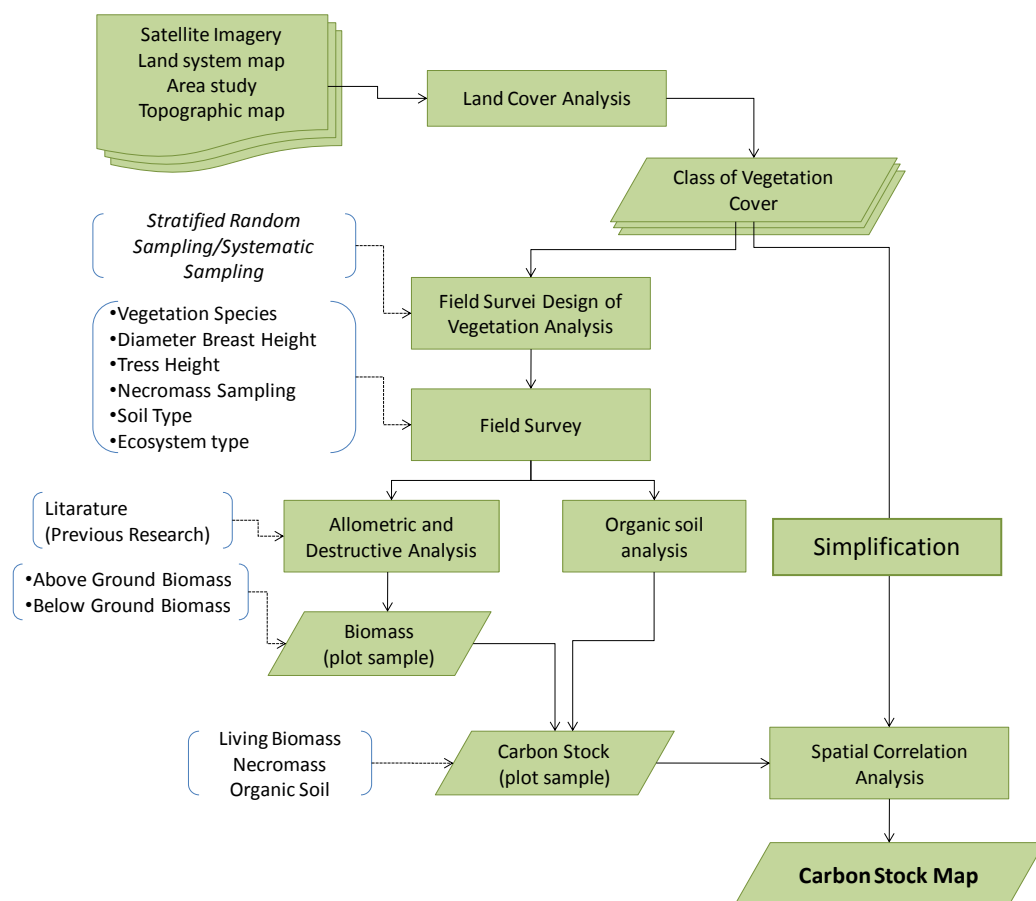


From the result of LUCA, shown that there is no primary forest in the concession of PT KBAS-3. Land cover from November 2005 until January 2010 dominated by shrub and open land. And at the end period of HCV Assessment (October 2015), the land cover is dominated by palm oil and open land.

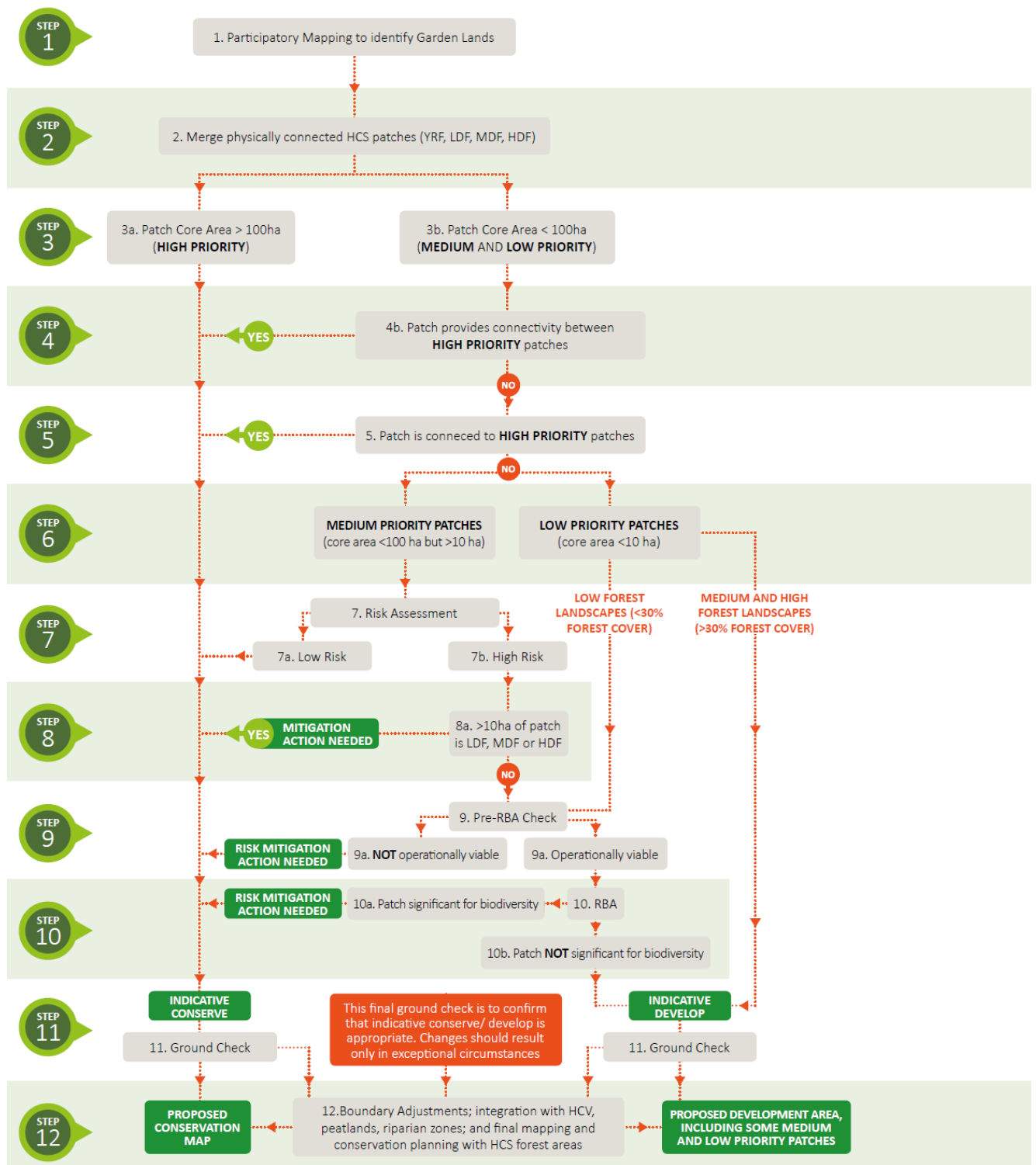
There is potential compensation that should be done by PT KBAS-3. However, there are no indications of disappearances HCV Areas by company, especially in areas that are used by the people as a livelihood (agroforestry) and as a cultural identity.

3.2.5 Carbon Stock Assessment

Before determining the area with High Carbon Stock, it needs to carry out the carbon calculations. It takes several steps including land cover analysis is strengthened with field survey. It is aimed for sampling of biomass and land cover verification the results of satellite image interpretation (ground truthing). Thereafter estimate and mapping carbon stocks. The entire process is shown in the following flowchart:



Using the HCS Approach Toolkit Versio n 1.0: March 2015 (HCS Approach Steering Group, 2015), the assessment consist of land cover classification, carbon stock estimation, local community FPIC (FGD with community’s representatives), and HCS area identification. HCS area identification is occurred according the steps in HCS Patch Analysis Decision Tree.



To determining the High Carbon Stock area we do a few disclaimer, as follows :

- Land covers of PT KBAS-3 area are classified by Carbon Stock information collected by field survey. The land cover classification consist of Open Land (cleared land with mostly grass or crops), Scrub with less than 10 cm diameter of tree (dominated by low scrub with limited canopy closure, include tall grass & fern with scattered pioneer tree species), Young Regeneration Forest with 10-30 cm diameter of tree (highly disturbed forest, higher frequency of pioneer species compared to LDF), Low Density Forest, Mid Density Forest and High Density Forest with more than 30 cm diameter of tree (close canopy natural forest ranging from high to low density forest, dominance of climax species).
- HCS identification of Priority Forest Patch is occurred to 6 step. (i) Risk Assessment (step 7), (ii) YRF with >10 Ha identification (step 8), (iii) Pre-RBA (step 9), and (iv) Rapid Biodiversity Assessment (step 10) are the steps needed to determine either the Patch is HCS or not.
- Low priority forest patches of 77.2 Ha in step 6 are assumed to have no urgencies to be protected (steep slope, riparian andn swamp) approached with HCV Area presence. So that these areas are proposed to Potential Development Area.
- HCV Area and HCV MA acreages used in this assessment is based on GIS acreage (415.4 Ha).
- Area identified as Peat Ecosystem is referred to Serimbang Land System Type (aluvial valley with Peat) with histosol and entisol soil types.

From the assessment and disclaimer as above, the area that have been identified as HCS area on PT KBAS-3 is 409.19 Ha. Aligned with our Sustainability Policy, we would not do clearing in that HCS Area.

4. Summary of Assessment Findings

4.1 Social Environment Impact Assessment

By the SEIA study the development of oil palm plantation of PT KBAS-3 in Kendawangan and Marau Sub district, Ketapang Regency raises awareness of the environmental impact on the physical-chemical, biological, and social, economic, cultural and local public health, both positive and negative impacts. In the implementation of plantations development of PT KBAS-3, one aspect of which is the main consideration is the preservation of the environment, to ensure sustainable development.

Plantation activities was predicted to impact the environment, so it needs to be explored in depth including the four phases of activities: Pre-Construction Phase, Construction Phase, Operational Phase and Post-Operational Phase. Which each has potential environmental impacts as follows:

- b. Change of culture, Social Conflict and community dissatisfaction
- c. Job and business opportunities also increment of community income
- d. Land fires potential
- e. Decreasing water quality and aquatic biota
- f. Soil destruction and increasing rate of erosion and sedimentation
- g. Decreasing number of flora and fauna biodiversity
- h. Community health problem

Magnitude and importance of the impacts that will be managed and monitored in the Environmental Management Plan and Environmental Monitoring Plan based on the results of the impact evaluation are: 1) Physical-chemical environment components include air quality, surface water quality, and forest fires potential; 2) Social culture and public health components including: social unrest, job and business opportunities, perceptions, local revenue and public health level.

Environmental management of the environmental components that are experiencing fundamental changes, both positive and negative as a effect of the Oil Palm Development plan of PT KBAS-3 to be carried out in terms of the three approaches, are: technological, socio-economic-cultural and institutional.

The implementation of environmental monitoring carried out by PT KBAS-3. The environmental monitoring reports will be submitted annually to the technical adviser of the government agencies.

4.2 Social Impact Assessment

CHARACTERISTICS OF THE SURROUNDING COMMUNITIES

For KBAS-3's Social Impact Assessment, Akesenta takes samples in all of villages around IUP of PT KBAS-3, which are 6 (six) villages over Kendawangan and Marau Sub-district.

In 2013, population both of Kendawangan and Marau Subdistrict were shown in the following table.

Table 5. Distribution of Villager Around PT KBAS-3

No.	Village	Width (km ²)	Number of Peoples	Density (/km ²)
	Kecamatan Kendawangan			
1	Bangkal Serai	311.62	1,042	3
2	Selamatan Jaya	183.52	1,120	6
3	Kedondong	180.00	633	4

4	Sungai Jelayan	98.62	582	6
	Kecamatan Marau			
5	Pelanjau Jaya	148.81	807	5
6	Rangkung	53.54	619	12

Social, Economic and Cultural Aspects

Ethnics and Culture

Local peoples were living around the area PT KBAS-3 is heterogenous, with native ethnic are Dayak Menggaling and Dayak Jelai Kendawangan, who adopts the animism. Javanese and Melayu came as a migrant, and brought in the religion of Islam, Christians and Catholics.

The local Dayak community is currently conducting traditional rituals, like pray for rice seedlings before its plant. Customary law and fines are still applied among the Dayak community.

Livelihood

The local community has totally depends on natural resources, before mining, forestry and plantation operations in this area. The activities such as farming and gardening (rubber), fishing, and harvesting of timber forest products are the people's livelihood.

Economic Infrastructure

The infrastructure of roads that connects the villages in the study area sub-district have been built since mining, forestry and plantation had operated. However, access to the river by boat is still used.

Kendondong Village already has a traditional weekly market which makes it easy for hamlet people to obtain the basic needs without having travel to the town center.

Community Intercation with Company

An assessment of the community's interaction with the company from the aspect of land use, employment, Corporate Social Responsibility (CSR) programs, and administration, is shown in the following table.

Table 6. The Interaction between Company adn The Hamlets around

Type of Interaction	Air Merah Hamlet, Bangkal Serai Village	Selamatan Hamlet, Selamatan Jaya Village	Teluk Bayur Hamlet, Sei. Jelayan Village	Kelampai and Sei. Nanas Hamlet, Kedondong Village	Bentawan Hamlet, Rangkung Village
Land Use	++	+	++	++	++
Employment	+	+	++	+	+
CSR Programs	-	-	+	++	++
Administration	(+)	(+)	(+)	(+)	(+)

Note: ++ : strong, + : middle, (+) : potential, and - : no/ less interaction

STRATEGIC ISSUES

COMPANY'S ACTIVITY	ISSUES	
	NOW	POTENTIAL
Communication, Social Relation and Partnership	Members of the Cooperative Partnership are unassigned	Smallholdings (Plasma plant) sales to external parties by cooperative members
Land Acquisition (Tenurial)	<ul style="list-style-type: none"> - Carved up area to be cleared and the land burning. - Land ownership disputes 	Land acquisition will be hampered due to land ownership disputes
Land Clearing	-	Competition due to used of local contractors
Planting	Local workers & community involvement	-
Plant Maintenance	-	Harvester that come from outside the region, would trigger the gap against local workers
FFB Delivery	Local residents, especially from rural migrants involved as a FFB transporter (at KBAS-1&2)	The use of public roads for the FFB transportation will raise issues due to dust pollution and road damage

CONCLUSION

1. The Characteristics of villages around PT KBAS-3 area is homogeneous, except Kumai Hulu village who already be a semi-town. These villages have a similar and equal pentagon asset. In general, the level of welfare migrants is quite well by supported from the business sector oil palm and rubber.
2. The social conditions around the PT KBAS-3 is very conducive. Communities that depend on the oil palm are tolerant and open with an adequate level of education, which is a good factor for impartial communication and partnership.
3. There are no social risks faced by the Company from the public side. The risks only come from the technical aspect, namely the low land for acquisition so it is difficult to develop the plantation.
4. Based on the phases of palm oil plantation management and social conditions, there are four parties of key stakeholders, namely: the owner of a large area, Heads of the local village where land acquisition will be done, villagers where the palm oil mill will be built and the villages which will be in partnership.
5. The existence and operation of PT KBAS-3 potentially have a positive impact for the local community, especially to financial capital. There are two potential positive impacts, the direct impact on increasing the economic value of society's palm oil plantation and indirectly impact is increasing of business opportunities.
6. Strategic management of the social aspect of PT KBAS-3 directed to the following main problems: Settling Plasma development issues, CSR programs and communications with stakeholders issues.

4.3 HCV assessments

Physical Condition

Concession area of PT KBAS-3 is on Kendawangan river watershed area and part of Jelai-Kendawangan River basin (KepmenPU No. 92 year 2012). The rivers cross through the concession area at about 5 rivers and streams, which is a periodic stream of small water discharge, or even none on the dry season.

Based on Schmidt and Ferguson's classification climate, the area of assessment is classified as type B (wet areas with tropical rain forest vegetation) with the average annual rainfall (2010 – 2015) is 2,895 mm/year. Concession area of PT KBAS-3 is at altitude < 100 meters above sea level. Based on the slope map, topography of PT KBAS-3 is flat on level 0-8%, except for Bukit Temiang which location is at 174 meters above sea level and slope at 40%. Physiographic forms of land at the location of study divided into three: (i) sandy terrace (Segintung land system; 43%), (ii) peat alluvial valleys (Serimbang; 28%), and (iii) undulating terrain (Ranganbakau: 29%), based on RePPPOT 1990. Soil types are Placaquods (spodosol), Tropopsanument (entisol), Tropohemist (histosol). Tropaquents (entisol), Tropodults & Paleodults (ultisol) and Tropaquepts (inceptisol).

Biological Condition

Flora

Seven unique plant species found in PT KBAS 3, but there are not found species under IUCN Red List status of Vulnerable, Endangered, or Critically Endangered. Two species including CITES Appendix II, and 4 species are protected by Undang-undang No. 5 year 1990, the Government Regulation (Peraturan Pemerintah) No. 9 year 1999, or the Minister of Agriculture Decree No. 54/Kpts/Um/2/1972; as showed in Table 5.

Table 5. List of Plants Species in the Concession Area of PT KBAS-3 Based on Its Status

No.	Scientific Name	Local Name	Status			
			Endemic	IUCN	CITES	Indonesian Regulation
1	<i>Nepenthes ampullaria</i>	Kantong Semar Periuk	-	-	App. II	AB
2	<i>Nepenthes gracilis</i>	Kantong Semar	-	-	App. II	AB
3	<i>Palaquium leiocarpum</i>	Nyatoh	-	-	-	D ¹
4	<i>Eusideroxylon zwageri</i>	Ulin	-	-	-	D ²
5	<i>Cratoxylon arborescens</i>	Garunggang	-	-	-	-
6	<i>Alstonia scholaris</i>	Pulai	-	-	-	-

Note :

- CITES: App. I = CITES Appendix I, App. II = CITES Appendix II;
- Indonesian Regulation: A = Undang-undang No. 5 year 1990; B = Peraturan Pemerintah No. 9 tahun 1999; D = Protected by Minister of Agriculture Decree No. 54/Kpts/Um/2/1972; D¹ = Protected until diameter 30 cm; D² = Protected until diameter 60 cm.

Fauna

The number of fauna which found in the concession area of PT. KBAS-3 is an amount of 93 species with details: a total of 23 mammals, 60 birds/ Aves, 11 reptiles and 2 amphibians.

Three species of mammals and 1 species of bird are an endemic species of Kalimantan. The animals species that included in the IUCN Red List at amount 11 species; 8 species on VU/ Vulnerable, 2 species on EN/

Endangered and 1 on CE/ Critical Endangered. 13 Species of mammals, 4 of reptiles and 7 on birds listed at the CITES, while 13 species of mammals, 1 reptiles and 12 of birds categorized as protected species under Indonesian Regulation (UU No. 5/1990 and PP. 7/ 1999). As showed in Table 6.

Table 6. Wildlife Species in the Concession Area of PT. KBAS-3 Based on It Status

No.	Scientific Name	Indonesian Name	Status			
			Endemic	IUCN	CITES	Indonesian Regulation
A Mammals						
1	<i>Hylobates agilis</i>	Owa Ungko	E	EN	I	AB
2	<i>Presbytis rubicunda</i>	Lutung Merah	-	-	II	AB
3	<i>Trachypithecus cristatus</i>	Lutung	-	-	II	-
4	<i>Macaca nemestrina</i>	Beruk	-	VU	II	-
5	<i>Macaca fascicularis</i>	Kera Ekor-panjang	-	-	II	-
6	<i>Tarsius bancanus</i>	Krabuku Inggat	-	VU	II	AB
7	<i>Helarctos malayanus</i>	Beruang	-	VU	I	AB
8	<i>Neofelis diardi</i>	Macan Dahan	E	VU	I	AB
9	<i>Prionailurus bengalensis</i>	Kucing Hutan	-	-	II	AB
10	<i>Aonyx cinereus</i>	Sero Ambrang	-	VU	II	-
11	<i>Lutra sumatrana</i>	Berang-berang Hidung-berbulu	-	EN	II	AB
12	<i>Sus b. barbatus</i>	Babi Jenggot	E	VU	-	-
13	<i>Rusa unicolor</i>	Rusa Sambar	-	VU	-	AB
14	<i>Muntiacus muntjak</i>	Muncak	-	-	-	AB
15	<i>Tragulus napu</i>	Pelanduk	-	-	-	AB
16	<i>Tragulus javanicus</i>	Kancil	-	-	-	AB
17	<i>Tupaia glis</i>	Tupaia Akar	-	-	II	-
18	<i>Hystrix brachyura</i>	Landak Raya	-	-	-	AB
19	<i>Manis javanica</i>	Trenggiling	-	CR	II	AB
B Aves						
1	<i>Egretta sacra</i>	Kuntul Karang	-	-	-	AB
2	<i>Egretta garzetta</i>	Kuntul Kecil	-	-	-	AB
3	<i>Bubulcus ibis</i>	Kuntul Kerbau	-	-	-	AB
4	<i>Elanus caeruleus</i>	Alap-alap Tikus	-	-	II	AB
5	<i>Nisaetus cirrhatus</i>	Elang Brontok	-	-	II	AB
6	<i>Spilornis cheela</i>	Elang-ular Bido	-	-	II	AB
7	<i>Loriculus galgulus</i>	Serindit Melayu	-	-	II	-
8	<i>Psittacula longicauda</i>	Betet Ekor-panjang	-	-	II	-
9	<i>Anthracoceros malayanus</i>	Kangkareng Hitam (Tingang)	-	-	II	AB
10	<i>Buceros rhinoceros</i>	Rangkong Badak (Ruwik)	-	-	II	AB
11	<i>Rhipidura javanica</i>	Kipasan Belang	-	-	-	AB
12	<i>Anthreptes simplex</i>	Burungmadu Polos	-	-	-	AB
13	<i>Arachnothera longirostra</i>	Pijantung Kecil	-	-	-	AB
14	<i>Arachnothera robusta</i>	Pijantung Besar	-	-	-	AB
15	<i>Lonchura fuscans</i>	Bondol Kalimantan	E	-	-	-
C Reptiles						
1	<i>Crocodylus porosus</i>	Buaya Muara (Buaya Badas)	-	-	II	AB
2	<i>Varanus salvator</i>	Biawak Air	-	-	II	-

No.	Scientific Name	Indonesian Name	Status			
			Endemic	IUCN	CITES	Indonesian Regulation
3	<i>Ophiophagus hannah</i>	King Cobra	-	-	II	-
4	<i>Cuora amboinensis</i>	Kura-kura Ambon	-	VU	II	-

Note :

- IUCN (2015): CR = Critically Endangered (kritis, mendekati kepunahan), EN = Endangered (terancam punah), VU = Vulnerable (rentan);
- CITES: App. I = CITES Appendix I, App. II = CITES Appendix II;
- Indonesian Regulation: A = Undang-undang No. 5 year 1990; B = Peraturan Pemerintah No. 9 tahun 1999

Environmental Services Aspects

In concession of PT KBAS-3 was found that secondary forests including Peat Swamp Forest ecosystem. This area is contiguous with the area of Peat Swamp Forest in Production Forest (area of PT Hutan Ketapang Industri). This area has a function as a habitat for several species of rare, endangered and endemic. Moreover, this area also serves as a flood control area through infiltration and water storage function. A threat to this area is the manufacture of drainage will decrease the water level in the peat and forest fires and land.

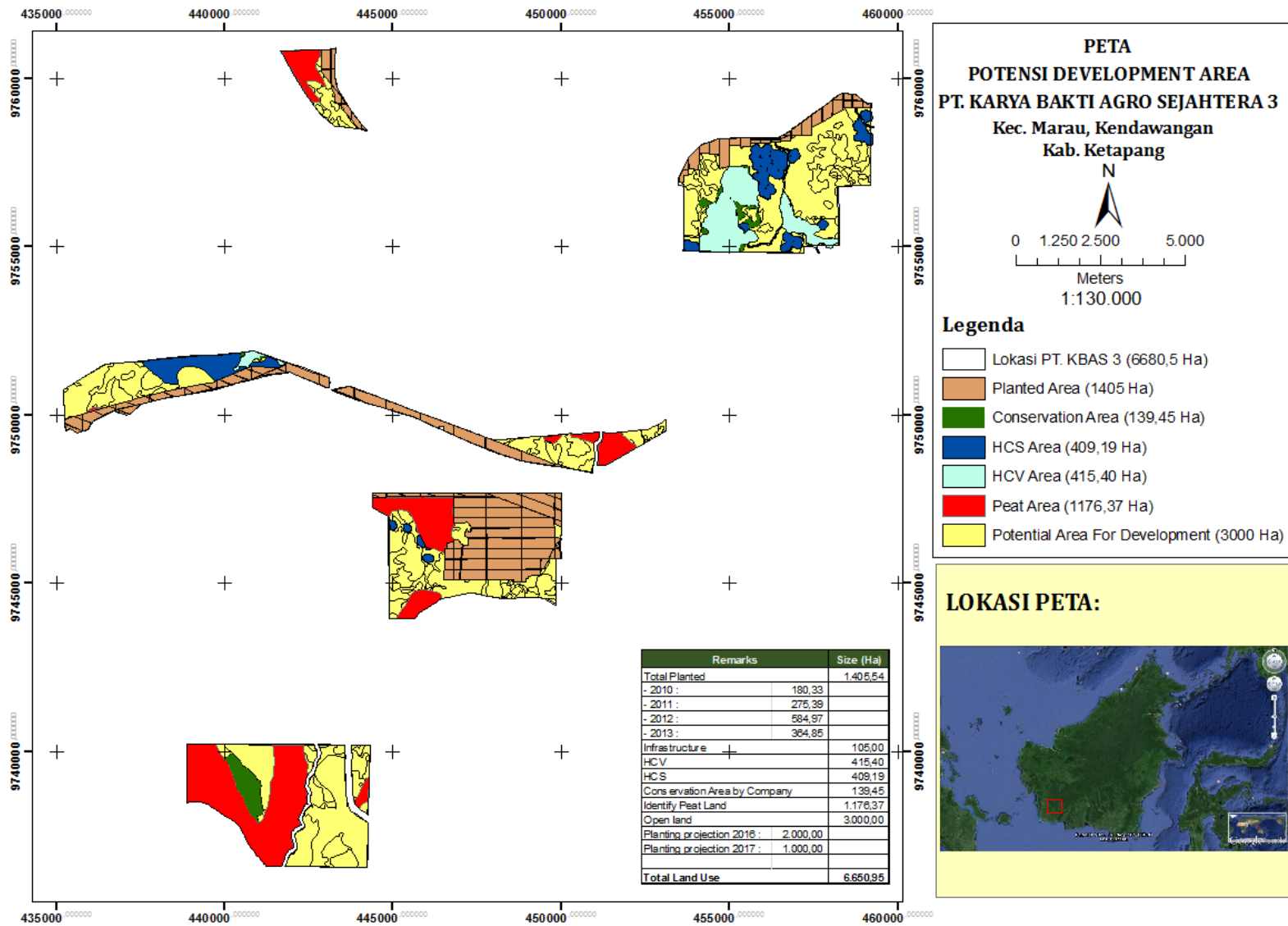
Practically, the existence of HCV 4 area related to the hydrological functions of the region that have significant value as: (i) the catchment area and flood control; (ii) area of erosion control and sedimentation; and (iii) an area that provides a barrier against destructive fires. From three of that, only function of natural firebreaks (barriers) elements are not found in the area of PT KBAS-3.

Based on field observation and review on existing maps show that area of High Conservation Value Area (HCVA) which to be planned in the area of palm oil plantation PT KBAS-3 is 349.9 hectares, with details in Table 8.

Table 8. Identification and Analysis Results of HCVA 1 to HCVA 6 in the Concession Area of PT KBAS-3, Central Kalimantan Province

No Indeks	Description	Type of HCV	Width (ha)
1	Jambu River (wide: 3-4 m), fluctuating debit (dried during dry season). Land cover in Riparian area is shrubs and scrub, except in the lower part which has been planted with oil palm. The river serves as part of the flood control and natural vegetation serves as erosion control and sedimentation.	4.1 4.2	5.3
2A	The area covers with old grove / secondary forest. Serves as a habitat for several species of rare, endangered and endemic.	1.2 1.3	69.5
2B	Located between the Sepaik river and the Pedukuhan area (#2A). Land cover: shrubs. This area is required for support the management of both areas HCV 1 next to it. This area needs to be revegetated, so there will becomes HCV area	HCVMA	4.5
3	Sepaik River (width: 2-3 m), fluctuating debit (dired during dry season). Land cover in Riparian area is shrubs and scrub, except in the lower part which has been planted with oil palm. The river serves as part of the flood control and natural vegetation serves as erosion control and sedimentation.	4.1 4.2	17.2
4	Mengkuram River (width: 2-3m), upstream is in Bukit Temiang and downstream on the Sepaik River. A periodic rivers. Sungai ini merupakan sungai periodik dengan lebar sungai 2 sampai 3 m. Land cover on the	4.1 4.2	15.7

No Indeks	Description	Type of HCV	Width (ha)
	river flows and riparian are forest, serves as a regional flood control, erosion and sedimentation		
5	Bukit Temiang (slope > 40%), natural vegetation. Serves as a habitat for several species of rare, endangered and endemic. Also serves as a water catchment and flood control, erosion control and sedimentation. There is a sacred area, called Batu Opoy, which has spiritual value and was used as a place of local communities (Dayak Kendawangan) to do hermitage and petition.	1.2 1.3 1.4 4.1 4.2 6	102.8
6A	Pedukuhan Area, Land cover: agroforestry (rubber and fruit plants) mixed with secondary forest. This area is an alternative livelihood for communities. This area is also the last place of refuge (Refugium) for many species of wildlife in this area.	1.2 1.3 1.4 5	159.1
6B	Located in the northeast of the HCV area with index # 6, with land cover shrubs. Mengkuram river flows through this area. HCV Management Area is required to support the management of HCV-1 area next to it, and riverbank of Mengkuram. This area needs to be revegetated, so there will becomes HCV area.	HCVMA	14.1
7	Kedondong River (width: 1-2m). Land cover in Riparian area is shrubs and mixed garden, serve as natural drainage and erosion & sedimentation control area.	4.1 4.2	1.7
8	Tributary of Pelanjau, upstream on Simpang Karad Hamlet and downstream at Membuluh River (outside the area of PT KBAS-3). Land cover of riparian are shrubs and community's palm oil. Partly area of natural vegetation serves as erosion control and sedimentation.	4.1 4.2	0.9
9	Secondary forests including Peat Swamp Forest ecosystem. This area is contiguous with the area of Peat Swamp Forest in Production Forest (area of PT Hutan Ketapang Industri). This area has a function as a habitat for several species of rare, endangered and endemic. Moreover, this area also serves as a flood control area through infiltration and water storage function. A threat to this area is the manufacture of drainage will decrease the water level in the peat and forest fires and land	1.2 1.3 1.4 4.1	24.2
Total Indicative Area of HCV (ha)			415.4
Concession of PT KBAS-3 (ha)			6,680.0
Percentage HACV Area to Concession of PT KBAS-3 (%)			6.2



Picture 4. HCV & HCS Map in the Concession of PT KBAS-3, Central Kalimantan Province

Internal Responsibility

Formal signing off by assessors
and company

This document is the summary of assessment result on Environment Impact Assessment (EIA), Social Impact Assessment (SIA) and High Conservation Value (HCV) in PT KBAS-3 – Ketapang Regency, West Kalimantan Province and has been approved by the Management of PT KBAS-3

Gagas Dinamiga Aksenta



Resit Sözer

Team Leader HCV & SIA
Date: 13 Mei 2016

Management
PT KBAS-3,

Sri Indranto

Regional Head
Date: 13 Mei 2016

Statement of acceptance of responsibility for assessment

Assessment result document on High Conservation Value (HCV) of PT KBAS-3 by Gagas Dinamiga Aksenta (Aksenta) will be applied as one of the guidelines in managing palm oil plantation in PT KBAS-3

Management
PT KBAS-3,

Sri Indranto

Regional Head
Date: 13 Mei 2016

Appendix 1 List of prevailing applicable regulations and some supporting guidelines which used as references in the identification process of HCV and SIA study.

No	List / Type of Reference	Details
1.	Status of vulnerability according to the World Conservation Union (IUCN), 2009	CR : Critically Endagerd EN : Endangered VU : Vulnerable NT : Near threatened
2.	Status in terms of trade of world's wild fauna and flora (CITES), 2009	App. I : list of all plants species and animals which are prohibited to be internationally traded by any means. App. II : list of species that trading required rules to diminish the threats of extinction.
3.	RI State Legislation (Acts):	
	1931 <i>Dierenbeschermings Ordinance</i> (Wild Animals)	Wildlife protection
	1970 Decree of Minister of Agriculture, No. 421/Kpts/Um/8/1970	Wildlife protection
	1973 Decree of Minister of Agriculture, no 66/Kpts/Um / 2 / 1973	Wildlife protection
	1977 Decree of Minister of Agriculture, No. 90/Kpts/Um/2/1977	Wildlife protection
	1978 Decree of Minister of Agriculture, No. 327 / Kpts / Um/5/1978	Wildlife protection
	1979 Decree of Minister of Agriculture No. 247 / Kpts/Um/4/1979	Wildlife protection
	1980 Decree of Minister of Agriculture, No. 716 / Kpts/Um/10/1980	Wildlife protection
	1999 Government Regulation No. 7 of 1999	Wildlife protection
	Government Regulation, PU 63/1993 PU	Determination width of the river riparian
4.	Map of TGHK (Forest Land Use Agreement) and government's official documents concerning the appointment status of forest areas.	To determine the status of an area whether or not in the protected areas.

Appendix 2 List of Stakeholders Involved

No	Name	Information	Ethnicity / Origin
1	Amir Hamzah	Staf BGA	-
2	Putra Malau	Staf BGA	Batak
3	Dipa	Staf PT KBAS (GIS)	-
4	Ujang	Security PT KBAS	Dayak
5	Ade Irawan	Staf PT KBAS (GIS)	Sunda
6	Agus	Staf PT KBAS (Humas)	Melayu
7	Reza	Mandor PT KBAS	-
8	Acuh	Masyarakat Bentawan	Dayak Kendawangan
9	Taslim	Masyarakat	Jawa
10	Melisum	Ketua Adat Bentawan	Dayak Kendawangan
11	Rajiun	Masyarakat Bentawan	Melayu
12	Siun	Masyarakat Bentawan	Dayak Kendawangan
13	Jono	Masyarakat Bentawan	Dayak Kendawangan
14	Melinyar	Penangkap Ikan	Dayak Kendawangan
15	Wadah	Masyarakat Bentawan	Dayak Kendawangan
16	Kadri	Mantan Demung Bentawan	Dayak Kendawangan
17	Menep	Masyarakat Bentawan	Dayak Kendawangan
18	Cancan	Masyarakat Bentawan	Dayak Kendawangan
19	Ibu Sikinong	Masyarakat Bentawan	Dayak Kendawangan
20	Saiful	Masyarakat Bentawan	Melayu
21	Miut	Masyarakat Bentawan	Dayak Kendawangan
22	Suhardi	Masyarakat Teluk Bayur	Dayak Kendawangan
23	Sudarmono	Masyarakat Teluk Bayur	Dayak Kendawangan
24	Buang	Masyarakat Teluk Bayur	Dayak Kendawangan
25	Alias	Masyarakat Teluk Bayur	Dayak Kendawangan
26	Canai	Petani Sekitar Bukit Temiang	Dayak Kendawangan
27	Irma	Pedagang di Karad	Jawa
28	Ani	Pedagang di Karad	Jawa
29	Juli	Demung Karad	Dayak Kendawangan
30	Musimin	Karyawan PT KBAS	Jawa
31	Dayam	Kepala Adat Air Merah	Dayak Kendawangan

Appendix 3 Stakeholder Consultation on HCV Assessment

DAFTAR HADIR
PUBLIC CONSULTATION

accentuate life

Nama PT : PT KARYA BAKTI AGRO SEJAHTERA 3
 Lokasi : Sungai Resaw Estate
 Asesmen : HCV

Tanggal : 22 Oktober 2015
 Waktu : 11.00 -

No	Nama	Bagian/Jabatan	Alamat dan Nomor Kontak	Tanda Tangan	
1	MUNTUN JAMET	damping adat	Sahimatajaya		
2	MILU	SATLAK	BENTAYAN		
3	KABRI	SATAK	BENTAYAN		
4	DEES	UMAS DESA	BENTAYAN		
5	SIUN	SATLAK	BENTAYAN		
6	Amir Hamzah Ritonga	SSDM-HO (BGA)	Jakarta / 0852 6110 1284		
7	T. Ade Fachleri	Aksenta/HCV	Jakarta		
8	F. Getsemani F.	Aksenta / HCV	Jakarta / 0812 9966 535		
9	M. Akha Agung A.	Aksenta / CSA	Bogor / 0852 8222 0225		
10	Afwan Rifwandi	Aksenta/SIA	Jakarta		
11	Risa Desara Syarif	Aksenta / LUCA	Jakarta		
12	Ryan Kp	Aksenta/LUCA	Jakarta		

DAFTAR HADIR
PUBLIC CONSULTATION

accentuate life

No	Nama	Bagian/Jabatan	Alamat dan Nomor Kontak	Tanda Tangan	
13	Reza Abdillah	Aksenta / HCV	Jakarta		
14	Bias Bertro P.	AKSENTA/CSA	JAKARTA		
15	MENSIDIN	Kelampayan			
16	M Rani	KABUS	Selamatan		
17	ANDRIE Rizki		Kelampayan		
18	Sri Windaryati	Disban Kabid	Disban		
19	SUGITO	KASIS KONSERVASI	OSKUT LTP		
20	HAMID		BTN GN. PALUNG		
21	Abdul Rahims	Staf Lingkungan Hidup			
22	Gabriel	CSR	MEKIP		
23	Putra Wibowo Malan	SSDM	Kantor BGA HO		
24	Sanjung	Rengasvab K.	DSM AIR MERAH		
25	mukip	ketua II Kopra	rumah air merah		
26	sekinu	ketua TPK	rumah air merah		
27	Iwan Rosyadi	Aksenta / SIA	JAKARTA		
28	Resit Sizer	Aksenta / IZ	JKT		

