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Summary Report of SEIA and HCV Assessments PT Gunajaya Ketapang Sentosa Ketapang District, West Kalimantan Province

1. Executive Summary

PT Gunajaya Ketapang Sentosa (herein after refer to PT GKS) was established by Act No. 62 dated on 13-04-2004, then they revised until the last Act No. 08 dated on 30-01-2008 issued by R. Wiratmoko, SH., and legalized by Ministry of Law Human Right No. AHU-20922.AH.01.02.Tahun 2008 dated on 25-04-2008.

PT GKS, is which is located un the Ketapang District, Kendawangan Regency – West Kalimantan Province, is one of the palm oil 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. As part of a sustainable palm oil management, PT GKS has conducted the Environment Management and Monitoring (DPPL), High Conservation Value (HCV) identification and Social Impact Assessment (SIA). The HCV and SIA assessment were conducted from April 2012 and reported in October 2012 by Faculty of Forestry, Bogor Agricultural Institute (IPB); the key consultants conducting these assessments have been approved by RSPO

The Cultivation Rights Title (SK HGU) was approved on 21-12-2011 by Badan Pertanahan Nasional (BPN) No. 85/HGU/BPN RI/2011; the total area based on Cultivate Permit is \pm 7,665.81 ha. The Environment Monitoring & Management Document (DPPL) was approved by Governor of West Province No. 562/BLHD/2010 dated on 13-12-2010. The Plantation Permit (Izin Usaha Perkebunan, IUP) was approved on 04-12-2009 by the Ketapang Regent decree (Surat Keputusan Bupati) Number : 469 year 2009 ; the total area is \pm 10,500 ha.

The results of the HCV assessment by independent consultants from Faculty of Forestry, Bogor Agricultral Institute who has been accredited and approved by RSPO have shown that there is no primary forest in the Forested Areas (Pelepasan Kawasan Hutan) of PT GKS. The vegetation's cover dominated by the palm oil (94.55%) and shrub (3.05%). Based on The Report of HCV Identification PT GKS 2012 by Faculty of Forestry, Bogor Agricultral Institute, indicated that no peatland was found in the Permitted Area (Izin Lokasi).

As for potential HCV areas, five types of HCV were identified by Faculty of Forestry, Bogor Agricultral Institute; these are HCV 1 (1.1, 1.2 & 1.3), HCV 4 (4.1), and HCV 6. The original HCV area identified was \pm 19.56 ha (1.15 % of the permitted area or 1.59% of the total Land right tittle). The important elements for HCV 1 are the existence of population and tracks of endangered species such as Trenggiling (*Manis Javanica*), Landak (*Hystrix brachyura*), and Aves (*Haliastur indicus*, *Bubulcus ibis*, etc). The important elements for HCV 4 are related to the potential damage from river riparian dan catchments area. The important elements for HCV 6 are related to the scared tree. The HCV areas inside the IUP approved areas will be included in the monitoring and socialization plan with the local communities.

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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. The findings have defined how the company's business management can influence the key issues in the respective component of the social sustainability of the local community. There are described in the three basic components for society's social sustainability that influences the planning of future company's operation; they are: 1) *Natural capital*, 2) *Social capital*, and 3) *Physical capital*.

2. Scope of SEIA and HCV Assessment

2.1 Organizational Information/ Contac Person

General Data of the Company

Company Name	:	PT Gunajaya Ketapang Sentosa
Deed of Establishment	:	Notary Eliwaty Tjitra, SH No : 62 dated on 13-04-2004
End Adjustment Article of	:	Notary R. Wiratmoko, SH., Association No : 08 dated on 30-01-2008
Capital Status	:	Foreign Investment (<i>Penanaman Modal Asing, PMA</i>)
Taxpayer Notification Number	:	02.355.987.5-064.000
Company Address	:	Melawai Raya Street No 10, South Jakarta Jakarta-Indonesia 12160
Type of business	:	Oil Palm Plantation & Mill
Status of concession land	:	Permitted Area (Izin Lokasi) (No. 292 dated 03-10-06 (size ± 12,890 Ha) Permitted Area (Prolonged Permit) / (Perpanjangan Izin Lokasi) (No. 22 year 2010 dated 13-01-10 (size ± 11,310 Ha) DPPL (SEIA) Nomor; 562/BLHD/2010 dated 13-12-10 Plantation Permit (Izin Usaha Perkebunan) No. 469 year 2009 dated 04-12-2009 (size ± 10,500 Ha / 60 MT/Hr) Cultivation Rights Title (HGU) no 85/HGU/BPN RI/2011 dated 21-12-2011 (size ± 7,665.81 Ha)
Contact person	:	Bremen Yong
Geographical Location	:	See Picture 1, Picture 2, and Picture 3

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Surrounding Entities

:

- North : Production Forest, PT. Putra Alam Lestari (Mining), oil palm plantation PT. Andes Sawit Lestari
- South : Membuluh River, community's farm/ lands, settlement
- West : oil palm plantation PT. Andes Sawit Lestari, Kendawangan River, Membuluh River, community's farm/ lands and settlement
- East : Kediuk River, Kendawangan River, community's farm/ lands, oil palm plantation PT. Gunajaya Karya Gemilang

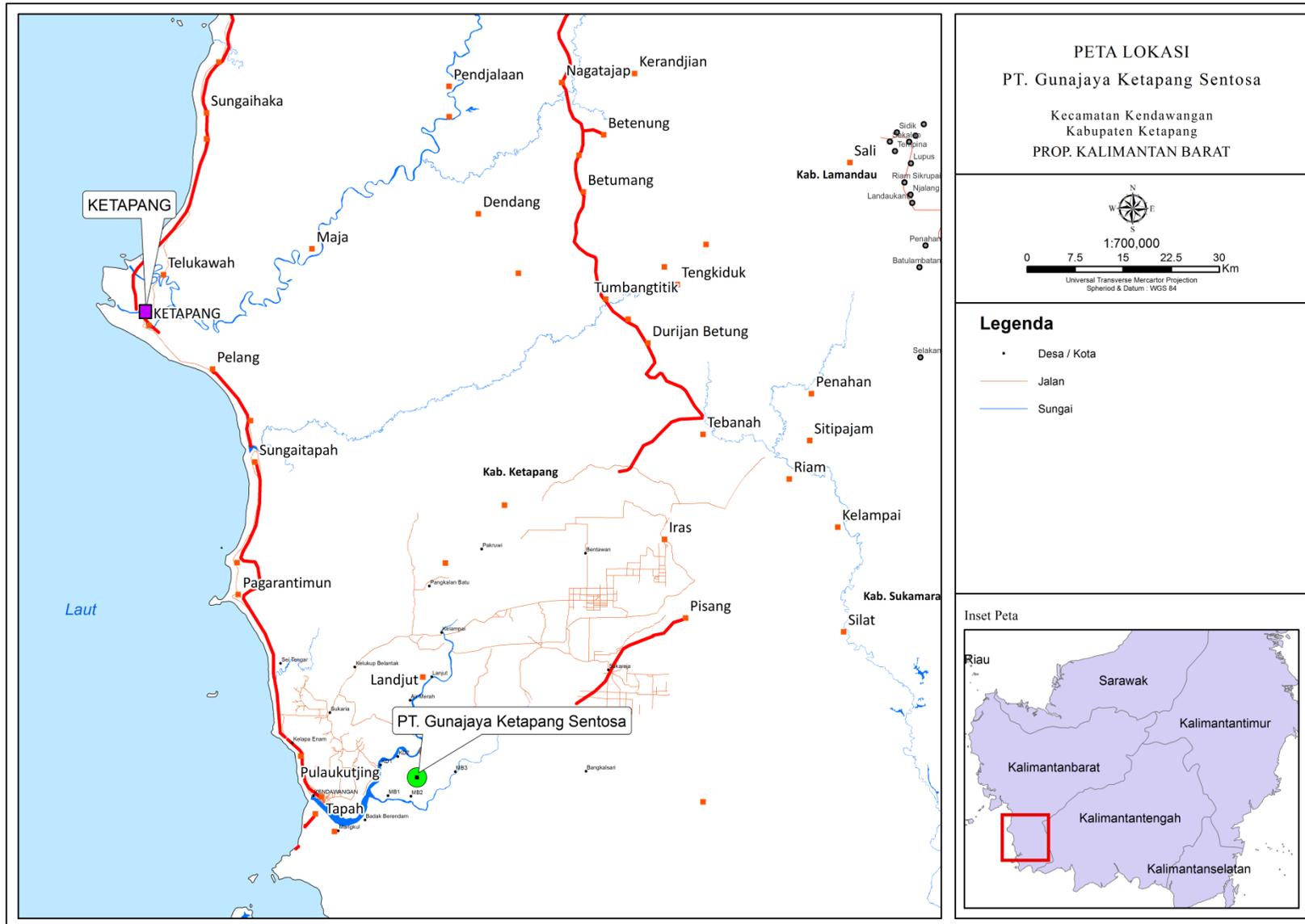
The scope of Social and Environment Impact Assessment of PT GKS the local social entities within the Permitted area. Thus, the High Conservation Value assessment covers the Permitted Area (Izin Lokasi). It is also expanded into villages and other areas which considerably important to the proposed surrounding plantation area.

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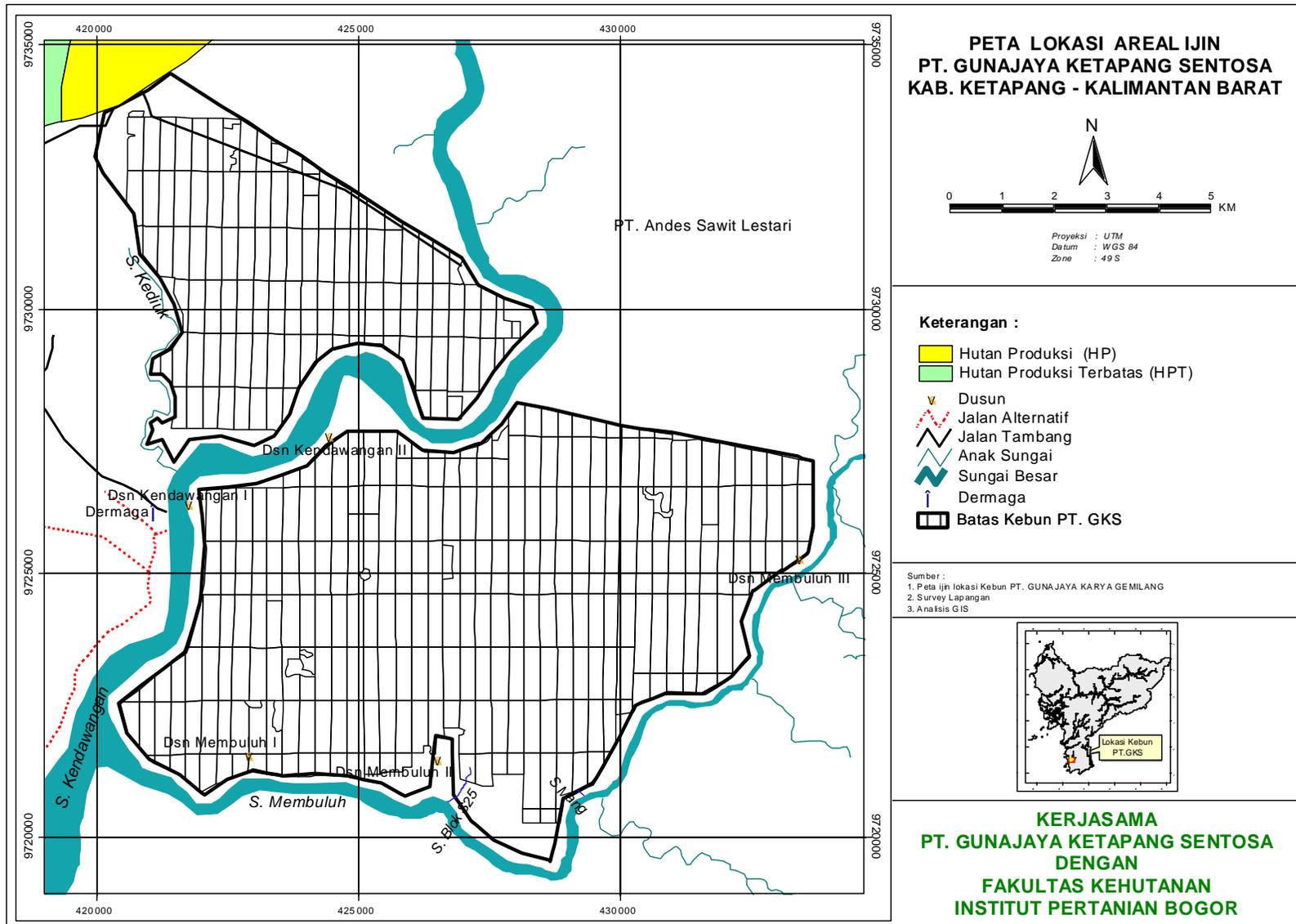
Picture 1 Location of PT GKS in Indonesia

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Picture 2 Location of PT GKS in West Kalimantan Province, Ketapang Regency

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Picture 3 Location of PT GKS in Kendawangan Sub District, Ketapang Regency

2.2 List of Legal, Regulatory Permits and Property Deeds

The permits that have been obtained by the company are inclusive of Consent License (Izin Prinsip), Permitted Area (Izin Lokasi), Cultivation Rights Title (SK Hak Guna Usaha, HGU), Social Environment Impact Assessment (DPPL), and the Plantation Permit (Izin Usaha Perkebunan). The followings are the list of the licenses and recommendations:

Table 1. Types of permits and recommendations PT GKS

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	02.355.987.5-064.000 16-04-2004	
5.	Permitted Area (Izin Lokasi)	Ketapang Regent Decree	<ul style="list-style-type: none"> 292 year 2006 03-10-2006 Changed 369 Year 2008 07-10-2008 Reduction 271 year 2009 30-06-2009 	<ul style="list-style-type: none"> ± 12,890 ha 12,800 ha (-) 1,490 ha
6.	Prolonged Permitted Area (Perpanjangan Izin Lokasi)	Ketapang Regent Decree	22 Tahun 2010 13-01-2010	± 11,310 ha
7.	Plantation Permit (IUP)	Ketapang Regent Decree	469 year 2009 04-12-2009	10,500 ha 60 MT/Hr
8.	Document of Environmental Management & Monitoring (DPPL)	Governor of West Province	562/BLHD/2010 13-12-2010	Area : 10,000 ha Mill : 60 MT/Hr
9.	Cultivation Rights Decree (SK HGU)	National Land Agency	85/HGU/BPN RI/2011 21-12-2011	7,665.81 ha
10.	Plantation Grade Assessment	Ketapang Regent Decree	No. 556/DISBUN-E/2012 27-12- 2012	Grade II

2.3 Area and time-plan for new plantings

The proposed new planting area by PT GKS is in the location in the Lan Right Title (Hak Guna Usaha, HGU) which have been agreed by the owners of the land through the FPIC (free, prior and informed consent). Land development and planting of oil palm has begun in 2008 and done in 2013 following the procedures of the RSPO New Planting Procedures (NPP) in category on going procces.

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Table 2. The summarized of area statements and time-plan for new plantings

Potential Land (ha)	Year Planting (ha)						
	2008	2009	2010	2011	2012	2013	total
7,665.81	3,073	2,751	1,100	84	5	68	7,081

3. Assessment Process and Procedures

3.1 Environment Impac Assessment (EIA)

Assessors and their credentials:

The Environment Impact Assessment (EIA/ DPPL) of PT GKS was carried out by CV. Intergraha Citra Persada which is located at Komplek UNTAN, MH. Thamrin Street P-42, Pontianak, West Kalimantan Telp.:62-561-745286, Fax: 62-561-745286.

Table 3. Person and Expertise EIA Team Assessor in PT Gunajaya Ketapang Sentosa

Team Composition	Name	Specification
Team Leader	Ir. Fahrizal, MP	Bachelor of Forestry Master of Agriculture Amdal A dan B
Physical & chemical	DR. Farah Diba, S.Hut, M.Si	Bachelor of Forestry Master of Sciences Doctoral Amdal B
Biology	Tri Rosdiana, S.Hut.	Bachelor of Forestry
	Dian Purwanto, S.Hut	Bachelor of Forestry
socio-economic and cultural	Ridho Ismail, S.Sos.	Bachelor of Social Sciences
	Uray Ndaru Mustika, SE.	Bachelor of Economics

Assessment Methods (data sources, collection, dates, program, and visited places)

The data collection process was strongly associated with the type of data that collected. In 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 use to analise, measure and observe the environmental components which was predicted would be affected and components of action plan which was predicted to 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).

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- 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 and the palm oil mill is only intended as an attempt to estimate the large and important environmental quality changes that are caused by the plantation development activities and the palm oil mills of PT GKG in Nanga Tayap 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 are 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 that is 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 models, socio-cultural systems.

To simplify estimates of magnitude Impact from changes in quality of the matrix filling, then used the approach of environmental quality assessment scale. Level of environmental quality assessment scale using a scale of 1-5. Based on these figures assessment, environmental quality differentiated as: excellent (5), good (4), fairly good (3), bad (2), and very poor (1).

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 needs 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 Social Impact Assessment (SIA)

The Social Impact Assessment of PT Gunajaya Karya Gemilang was carried by Faculty of Forestry, Bogor Agricultural Institute, Campus Darmaga IPB - Bogor, Bogor - West Java Province Indonesia 160001. Telp: 62-251 - 621 947, Fax: 62-251-621947.

Table 4. Person and Expertise SIA Team Assessor in PT Gunajaya Karya Gemilang

No.	Expert Name	Expertise/Position
1	Dr. Ir. Nyoto Santoso, MS	Management & Biodiversity Conservation
2	Ir. Djoko Arie Sulistianto	Economic Social & Culture
3	Ir. Ahmad Hadjib, MS	forest planning, forest management and forest inventory
4	Udi Kusdinar, S.Hut	Social & Culture
5	Rae Birumbo, S.Pi.	Social & Culture

Assessment Methods (data sources, collection, dates, program, and visited places)

Social Impact Assessment on the ground was carried out as bellows:

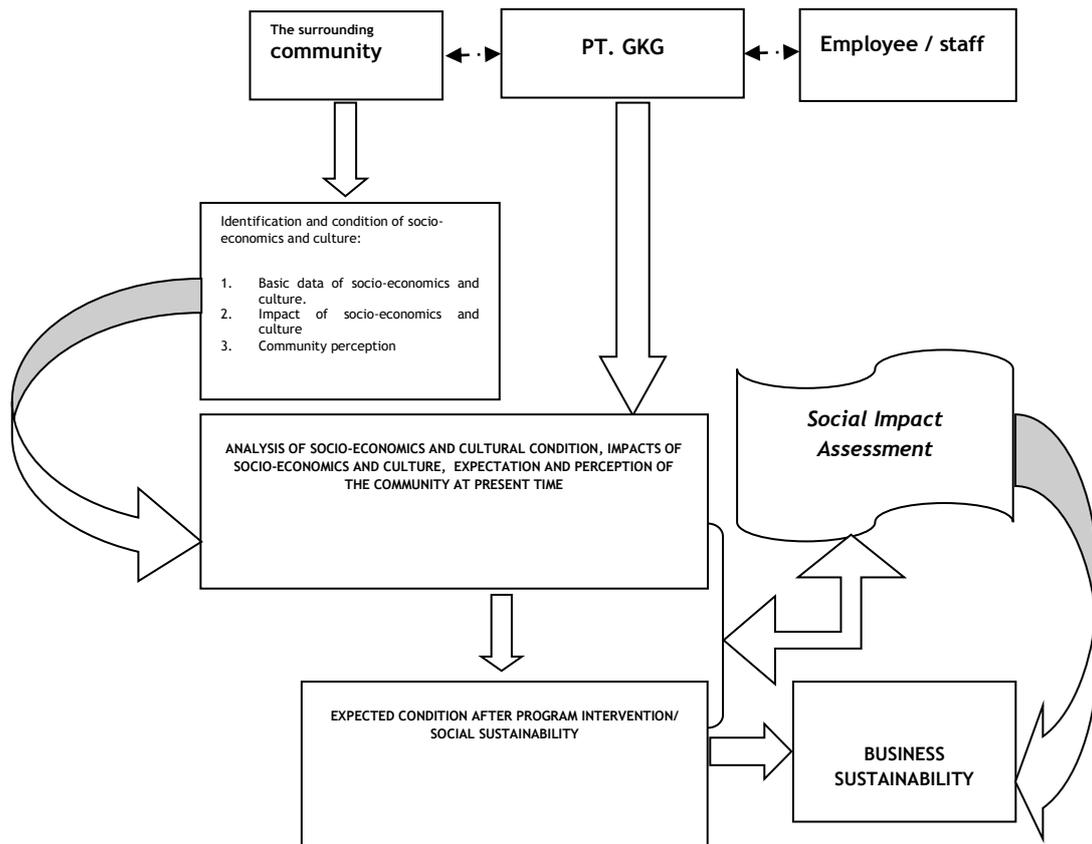
A. Method of Executing the Study

Approach framework in this study of Social Impact Assessment was by learning the present existing condition in PT. Gunajaya Karya Gemilang, 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). In determining the distribution of research samples, representativeness of the samples was considered on the basis of population characteristics.

Purposive sampling was used for determining the sample villages, whereas simple random sampling was used for determining respondents which were taken from villages which became the sample. Sample villages were taken on the basis of typology / characteristics of the community, accessibility, social vulnerability and inputs from PT. Gunajaya Karya Gemilang. On the basis of sampling techniques being used and inputs from the company, the villages which became the sample were village of Banjarsari, Kendawangan Kiri and Mekar Utama village.

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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. Based on description and relation between variables existing in the field, analysis was performed on (1) socio-economic condition of the farmers and community in general, in the region, and in the areas around the company sites, (2) farmer's perception and general community's perception toward the company, and (3) analysis of impacts (positive and negative) of the company existence toward the environment and community socio-economics. Results of those analysis were synthesized in the form of document of Social Impact Assessment of PT. Gunajaya Karya Gemilang.

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.

3.3 HCV Assessment

Assessors and their credentials

The HCV assessment conducted for about 6 (Two) months from April til October 2011, in the Permitted Area (Izin Lokasi) of PT GKS was carried by Faculty of Forestry, Bogor Agricultural Institute,

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Campus Darmaga IPB - Bogor, Bogor - West Java Province Indonesia 160001. Telp: 62-251 - 621 947, Fax: 62-251-621947.

Website: <http://www.fahutan.ipb.ac.id/hcv/index.html>

Email: fahutan@ipb.ac.id, hcvteam@yahoo.co.id

Key consultants from Faculty of Forestry, Bogor Agricultural Institute have been accredited and approved by RSPO. The team members are on Table 5.

Table 5. Key consultants HCV Assessment

No.	Expert Name	Expertise/Position	Status
1	DR. IR. H. Nyoto Santoso, MS.	Team Leader Environment & Conservation Expert	Approved by RSPO
2	Ir. Siswoyo, M.Si.	Biodiversity (Flora) Expert	
3	Aep Hidayat, B.Sc., F	GIS Expert	
4	Rae Birumbo, S.Pi.	Socio Economic and Culture Expet	
5	Udi Kusdinar, S.Hut.	Socio Economic and Culture Expert	
6	Sulfan Ardiansyah, S.Hut	Biodiversity (Flora) Assistant Expert	
7	Husein Mukmin, S.Hut.	Biodiversity (Fauna/wildlife) Expert	

METHODOLOGY

Identification and analysis of the HCV was carried out in the area of PT GKG at Ketapang District, Ketapang Regency and West Kalimantan Province. The identification and analysis was held on April til October 2011.

Materials and Equipments

Materials used in the identification and analysis include are : AMDAL document, digital elevation model map, landsat image map, land system map/RePProt, indonesia topographical map (Rupa Bumi Indonesia map), forest land use map (TGHK), hydrology map, unit management administration map, IUCN red list of threatened species, The CITES Appendices, Government Regulation of Indoneisa Number 7 1999 (PP 7 1999) and materials that used in field survey are Guidance Book on Bird Life in Java, Bali, Sumatera and Kalimantan, a Field Guide to Mammals of Borneo, Payne et al., 1985, published by WWF Malaysia, Kuala Lumpur, Questioners and tally sheet.

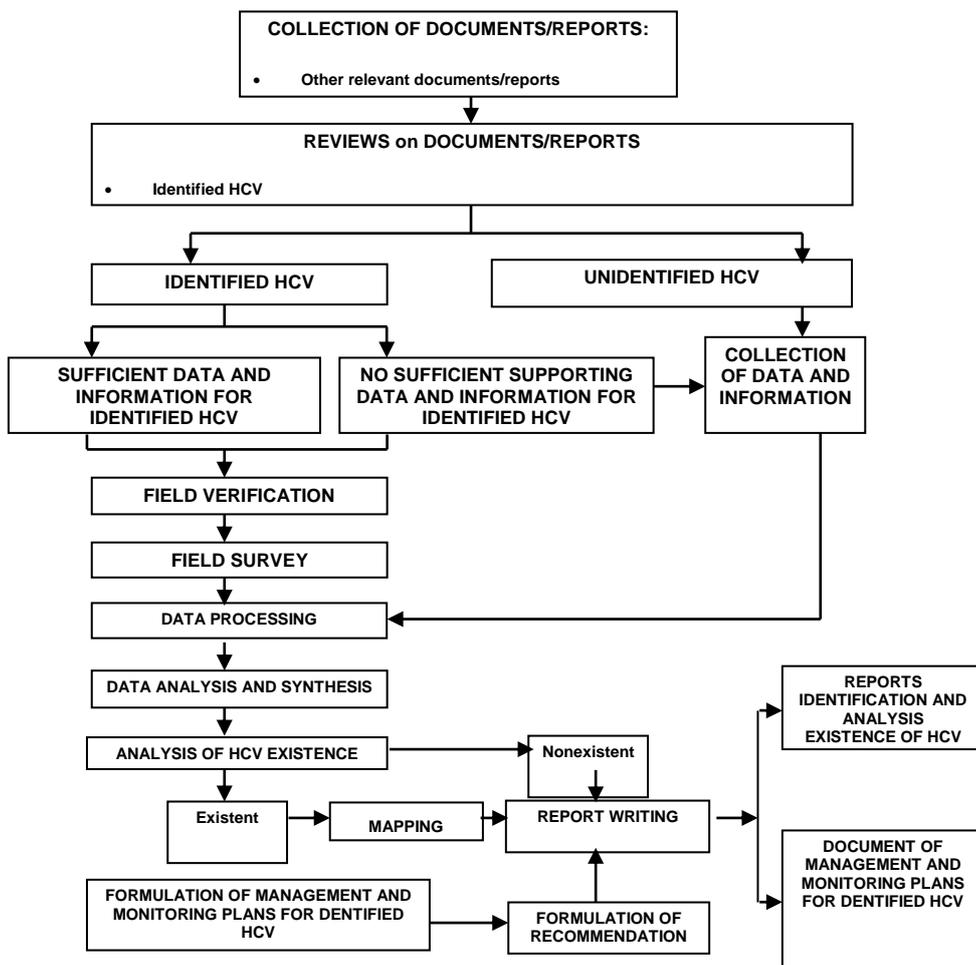
Tools used are GPS, compass, clinometers, camera, and binoculars.

Approach

There are 2 (two) factors that determine the success in maintaining and increasing HCV in the area of PT GKG, namely (1) the availabilities of identification and analysis of documents on the existence of HCV since this will be use as reference in preparing management and monitoring plans, and (2) management documents and monitoring plans for the identified high conservation value area (HCVA) which will be used as a reference in the management and monitoring of HCVA.

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The success in the implementation of identification and analysis activities of HCV existing in the area of PT GKG is determined by 2 (two) factors, namely: (1) the availabilities of adequate data and updated secondary and primary data, and (2) proper and systematic documentation of activities in stages. The availabilities of updated and reasonably sufficient data and information are greatly dependent on the activities of field surveys which were carried out systematically, adequately and well planned. In order to conduct a field survey plan as expected, the reviews on the available documents/reports and maps and initial identification of HCV had to be done. Precise and systematic stages of activities to enhance the success of the identification and analysis of the existing HCV included field surveys, data processing, data analysis and synthesis, identification of HCV, analysis of HCV existence, and mapping.



4. Summary of Assessment Findings

4.1 Environment Impact Assessment

The development of oil palm plantation and palm oil mill of PT GKS in Kendawangan 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 and palm oil mill of PT. GKS, one aspect of which is the main consideration is the preservation of the environment, to ensure sustainable development.

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The EIA study of the plantations activity and palm oil mill of is a single EIA activities / projects. The scoping study of the area boundary for Environmental Impact Assessment (EIA) of Oil Palm Plantation activities consider four (4) factors, namely: limit project / activity, ecological boundaries, social boundaries and administrative boundaries.

Plantation activities and palm oil mill 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.

Magnitude and importance of the impact that needed attention in the study of EIA Plantation and Palm Oil Mill of PT GKS at pre-construction phase, is a change in attitudes and perceptions and containing social unrest. At this phase the identified activities to be explored is the socialization and boundary demarcation and land acquisition.

Magnitude and importance of the impact that needed attention in the construction phase is a decrease in air quality and noise levels, decrease in the quality of surface water, land and forest fire potential, decreased in the diversity of flora and fauna species diversity decreased, increase in jobs and business opportunities, increase in incomes, changes in attitudes and perceptions as well as the decrease in public health. At this stage of identified activities could be the mobilization of heavy equipment, manpower recruitment, land clearing, construction of facilities and infrastructure, seeding and planting, maintenance of immature plants, factory construction and waste water treatment plant, construction of water channels and roads.

Magnitude and importance of the impact that needed attention at the operational phase is the reduction of air quality and increased in noise level, increased job and business opportunities, increase incomes, changing attitudes and perceptions, decreased levels of public health in the study area. At this stage the identified activities could be nursery, FFB harvesting and transport, mobilization of heavy equipment and maintenance of oil palm trees.

Magnitude and importance of the impacts that needed attention at the post operation phase is the reduction of air quality and increased in noise level, decrease of local income, changing attitudes and perceptions, and community unrest. At this phase the identified activities could be labor dismissals, demobilization of heavy equipment, reforestation and revegetation, and also land handover to government and community.

Changes in some aspects of the environment (abiotic, biotic, social, economic, cultural and public health) in District Kendwangan, Ketapang Regency, due to these activities require further tightening in the utilization of available natural resources and optimizing the management and monitoring efforts which needed to be integrated into all components of the integrated business.

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 GKS 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 GKG. 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

Kendawangan Subdistrict

Kendawangan Subdistrict covers an area of 5,859 km² containing 19 villages. In 2010, population of the subdistrict was 32,314 peoples with the population density of 6 peoples/km² containing 16,937 males (51%) and 16,178 females (49%). According to the age groups, the populations of Kendawangan Subdistrict are 41.2% or 13,628 peoples of school-age children (0 – 19 years old), 45.6% or 15,107 peoples of productive-age population (20 – 49 years old) and 13.2% or 4,380 peoples of elderly (50 years old and up).

Most of the Kendawangan population are moslems and catholics. While others are Protestant, Hindu and Buddhist. In agriculture fields, most of the Kendawangan Subdistrict population are rice field farmers (irrigated rice fields and rainfed rice fields). Only a few of them develop “palawija” crops such as corn, sweet potatoes, cassava and peanuts. While estate crops that commonly developed are oil palm and rubber.

Seriam Village

Seriam is a village is expansion from Kendawangan Kanan Village, so it uncertain wide, still a part of Kendawangan Kanan Village. Population of the village is 977 peoples containing 501 males (51%) and 476 females (49%), with sex ration is 105. Consist of 4 hamlets and 9 neighborhood. Most of Seriam Villagers are Dayak (65%), Melayu (20%) and others are migrant communities (15%) who usually came from Jawa, Madura, Bugis, Batak and Thionghoa.

According to their livelihoods, the Seriam villagers are 86% as farmers/rubber taper, 8% as employees, 3% as trader/ entrepreneur, 2% fisheries and 1% as Civil Servant. Most of the community’s basic needs are fulfilled from purchase while others are from their own farm lands, reliefs, other plantations, rivers, forest areas and others.

STRATEGIC ISSUES

Tenurial

- land compensation has not been carried out on public land that is planned to be cleared, due to price compensation that has not been agreed
- land ownership getting cramped due to handed of public land to other plantations or sold to another party and has been passed on to offspring
- double claims due to the limited communities land tenure, increasing the economic value of land and public lands legal evidence is not strong
- follow-up clarity partnership program (Plasma) that have been socialized at the beginning of the company

Environment

The percentage of people who have a perception of the company existence already affecting on environment aspect were quite small. That mean there are almost no negative environmental issues with the company. Issue to be aware is air pollution (dust onset) on the road due to the transport of fertilizers, seeds and other corporate activities of Dramaga to the plantaion area.

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Socio-Economic

Palm oil plantations are expected to provide social security and long-term economic, because the characteristics of the palm oil company, which can give results in the long term.

Communities agree with the PT GKS due to lack of job opportunities, accessibility becomes easier, the village became a bustling and growing with the influx of outside labor from the Seriam Village community, the opportunity to get land Plasma (partnership) and corporate social responsibility (CSR) programs

Socio-Culture

Economic resources of society around the company basically (before the coming of oil palm plantations) derived from rubbering and farming (rice and pulses) and there is also a small community that is gathering (hunting, fishing and taking fruits in the forest). Public expenditure for basic needs are met relative to farm income (rubber).

Economic conditions changed when the natural resources around them converted into oil palm plantations, although not disappear altogether, as not all of public land/ garden are converted into oil palm plantations.

In the short term, one of the alternative income replacement to meet the economic needs of the is being an employee of PT GKS or the company that is around.

In the long run, especially society that has a plasma (partnership) will get a replacement from palm oil produced.

CONCLUSION

1. The level of education and human resource capacity in the villages around the PT. Gunajaya Ketapang Sentosa generally still relatively low. The majority religion is Protestant and Islam. Majority tribe Dayak, the main livelihood of the people is the rubber farmers.
2. enure Problems still occur, as a due to repeated claims, lack of legality of land ownership in the community, and the compensation process has not been completed.
3. The main socio-economic problems is the clarity of the partnership (plasma).
4. The most striking employment problem is still a lack of understanding of the workers' labor regulations, lack of discipline in the use of PPE, PPE facilities still need to be improved, communication and fulfillment of the rights of workers need to be improved, and the union has not been formed.
5. The Company has programmed social activities throughout the year. However, most of the aid still caricature and generosity. The relationship pattern between the company's and the community (stakeholders) is a mutually beneficial relationship.
6. In general, the public supports the development of oil palm plantation by PT. Gunajaya Ketapang Sentosa. The most important public expectations is an increase in employment opportunities for the local community, transparency and clarity of plasma management, the Development and improvement of social facilities / public and increase social aid to increasing the capacity of human resources
7. The Company has a positive impact on the surrounding communities such as the opportunities of jobs, the more open accessibility, seeks opportunities in the services, the village became bustling due to the presence of migrant employment, and social responsibility programs, especially the construction of public facilities and infrastructure in the village . The existence of the company also had a negative impact such as raise of social problems due to land tenure and decrease of land.
8. The pattern of the company's relationship with the community (stakeholders) is a mutually beneficial relationship

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9. Strategic management of the social aspect of PT. Gunajaya Ketapang Sentosa directed to the following four main problems: Settling tenure issues, Settling Plasma development issues, CSR programs and communications with stakeholders issues.

4.3 HCV assessments

Physical Condition

Climate in the assessment area according to Schmidt and Ferguson's classification climate classified as type A (slightly wet, Q = 0%) where the average annual rainfall is 2,728 mm/year and average rain 131 days / year. Wet months occur in all of the months with range > 100 mm/month and the dry months (rainfall <100 mm/month) never happened. The highest rainfall occurs in December with range 595 mm/month taken data from 2008-2010 year. Concession area of PT GKS is at altitude 0-75 m above sea level. Based on the slope map, topography of PT. GKS from flat to steep, most of topography level is on 0-5% with 10,063.10 ha (99.94%). Based on Geological Map, Pontianak's sheet (1613) scale 1: 250,000 (Geological Research and Development Center, 1978), geological formations in the area of PT. GKS, composed of formations marsh sediment, lake sediment and stream sediment.

Concession area of PT. GKS is on Kendawangan river watershed area. The rivers cross through the concession area at about 10 rivers and streams.

Biological Condition

Flora

The number of plants species found in the concession area of PT. GKS an amount of 116 species, can be grouped into 50 families. Based on location, the highest vegetation composition was found in the Riparian of Kanal MB-2 & P-24 and Forested Area an amount of 42 species and 29 families. Based on plants habitus, the composition of vegetation can be dominated by 4 (four) types: trees (35.34%), herbs (36.21%), lianas (12.93%), and shrubs (11.21%). It also found 3 types of vegetation protected under PP. 7 / 1999 and 3 species listed by CITES (appendik II) in the area of PT. GKS. In addition, also in this area are found 8 plants species are included in IUCN Red List, with details: 1 types including VU/Vulnerable and 7 types species in LC/Least Concern; as showed in Table 6.

Table 6. List of Plants Species in the Concession Area of PT. GKS Based on Its Status

No.	Class/Family/Scientific Name	Local Name	Habitus	Status of Flora		
				PP No. 7 Tahun 1999	CITES	IUCN
	PTERYDOPHYTA					
	Adiantaceae					
1	<i>Taenitis blechnoides</i> Sw.	Paku ringan	Herba	TD	TT	TT
	Blechnaceae					
2	<i>Blechnum orientale</i> L.	Paku gajah	Herba	TD	TT	TT
	Gleicheniaceae					
3	<i>Gleichenia microphylla</i> R. Br.	Resam	Herba	TD	TT	TT
	Lycopodiaceae					

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No.	Class/Family/Scientific Name	Local Name	Habitus	Status of Flora		
				PP No. 7 Tahun 1999	CITES	IUCN
4	<i>Lycopodium cernuum</i> L.	Paku hata	Liana	TD	TT	TT
	Neprolepidaceae					
5	<i>Nephrolepis exavata</i>	Pakis	Herba	TD	TT	TT
	Polypodiaceae					
6	<i>Lecanopteris carnosa</i> (Reinw.) Bl.	Kadaka uncal	Epifit	TD	TT	TT
7	<i>Stenoclaena palustris</i> Bedd.	Paku lemidang	Epifit	TD	TT	TT
	Schizaeaceae					
8	<i>Lygodium japonicum</i> (Thunb.) Sw.	Mintu	Herba	TD	TT	TT
9	<i>Schizaea dichotoma</i> (L.) Sm.	Paku rawa	Herba	TD	TT	TT
10	<i>Selaginella doederleinii</i> Hieron.	Cakar ayam	Herba	TD	TT	TT
	MONOCOTYLEDONAE					
	Araceae					
11	<i>Alocasia sp.</i>	Keladi	Herba	Un.	Un.	Un.
12	<i>Alocasia sp.</i>	Keladi hutan	Herba	Un.	Un.	Un.
13	<i>Amorphophallus campanulatus</i> Bl.	Suweg	Herba	TD	TT	TT
	Arecaceae					
14	<i>Calamus caesius</i> Bl.	Rotan cacing	Liana	TD	TT	TT
15	<i>Daemonorops robustus</i> Warb.	Rotan batang	Liana	TD	TT	TT
16	<i>Elaeis guineensis</i> Jacq.	Sawit	Pohon	TD	TT	TT
17	<i>Caryota mitis</i> Lour.	Tukas	Palem	TD	TT	TT
	Cyperaceae					
18	<i>Cyperus brevifolius</i> (Rottb.) Hassk.	Teki rawa coklat	Herba	TD	TT	TT
19	<i>Cyperus rotundus</i> L.	Teki, rumput teki	Herba	TD	TT	TT
20	<i>Lepironia mucronata</i> L.C. Richard	Purun tikus	Herba	TD	TT	TT
21	<i>Scleria laevis</i> Retzius	Rambang, cemparing	Herba	TD	TT	TT
22	<i>Scleria sumatranensis</i>	Selingsing, selinsing	Herba	TD	TT	TT
	Musaceae					
23	<i>Musa sp.</i>	Pisang	Herba	Un.	Un.	Un.
	Orchidaceae					
24	<i>Dendrobium sp.</i>	Yesilara	Liana	Un.	Un.	Un.
	Pandanaceae					
25	<i>Pandanus sp.</i>	Pandan hutan	Herba	Un.	Un.	Un.
26	<i>Pandanus tectorius</i> Soland ex Park.	Pandan mengkuang	Herba	TD	TT	TT
	Poaceae					
27	<i>Axonopus compressus</i> P.B.	Beriwit	Herba	TD	TT	TT
28	<i>Bambusa vulgaris</i> Schard. ex Wendland	Bambu kuning	Bambu	TD	TT	TT
29	<i>Cynodon dactylon</i> Pers.	Grintingan	Herba	TD	TT	TT
30	<i>Digitaria adscendens</i>	Rumput grinting	Herba	TD	TT	TT
31	<i>Imperata cylindrica</i> (L.) Beauv.	Lalang	Herba	TD	TT	TT
32	<i>Pennisetum purpureum</i> Seumach.	Rumput ekor kucing	Herba	TD	TT	TT
33	<i>Pogonatherum paniceum</i> (Lamk.) Hack.	Rumput bambu	Herba	TD	TT	TT
34	<i>Saccharum officinarum</i> L.	Tebu	Herba	TD	TT	TT
35	<i>Saccharum spontaneus</i> Linn.	Kumpai, gelagah	Herba	TD	TT	TT
	Smilacaceae					
36	<i>Smilax zeylanica</i> L.	Akar canar	Liana	TD	TT	TT
	Zingiberaceae					
37	<i>Alpinia sp.</i>	Jahe-jahean	Herba	Un.	Un.	Un.
38	<i>Alpinia sp.</i>	Lelemasan	Herba	Un.	Un.	Un.

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No.	Class/Family/Scientific Name	Local Name	Habitus	Status of Flora		
				PP No. 7 Tahun 1999	CITES	IUCN
39	<i>Costus speciosus</i> (Koen.) J.E. Smith.	Pacing	Herba	TD	TT	TT
40	<i>Hornstedtia</i> sp.	Suli	Herba	Un.	Un.	Un.
41	<i>Amomum coccineum</i> (Bl.) K. Schum.	Tepus, tepus merah	Herba	TD	TT	TT
	DICOTYLEDONAE					
	Acanthaceae					
42	<i>Acrosticum aureum</i> L.	Paku pantai	Herba	TD	TT	TT
	Amaranthaceae					
43	<i>Amaranthus spinosus</i> L.	Bayam duri	Herba	TD	TT	TT
	Anacardiaceae					
44	<i>Campnosperma macrophylla</i> Hk.	Terentang	Pohon	TD	TT	TT
45	<i>Gluta renghas</i> L.	Rengas	Pohon	TD	TT	TT
	Annonaceae					
46	<i>Polyathia subcordata</i> (Bl.) Bl.	Durian datai	Pohon	TD	TT	TT
	Apocynaceae					
47	<i>Alstonia angustifolia</i> Miq.	Pelai pipit	Pohon	TD	TT	LC Ver 2.3 (2010)
48	<i>Alstonia scholaris</i> (L.) R.Br.	Pelai	Pohon	TD	TT	TT
49	<i>Alstonia spathulata</i> Blume	Pelantan	Pohon	TD	TT	LC Ver 2.3 (2010)
50	<i>Cerbera odollum</i> Gaertn.	Bintaro	Pohon	TD	TT	TT
	Asteraceae					
51	<i>Blumea balsamifera</i> (L.) DC.	Sambung	Perdu	TD	TT	TT
52	<i>Emilia sonchifolia</i> (Linn.) DC.	Tempuh wiyang	Herba	TD	TT	TT
53	<i>Eupatorium odoratum</i> L.f.	Kirinyuh	Perdu	TD	TT	TT
54	<i>Pluchea indica</i> (L.) Less.	Beluntas	Perdu	TD	TT	TT
55	<i>Spilanthes acmella</i> (L.) Murr.	Legetan	Herba	TD	TT	TT
	Celastraceae					
56	<i>Lophopetalum wrightienum</i> Arnott.	Nasi-nasi	Pohon	TD	TT	TT
	Clusiaceae					
57	<i>Calophyllum macrocarpum</i> Hook.f.	Mentangur	Pohon	TD	TT	TT
	Combretaceae					
58	<i>Combretocarpus rotundatus</i> Dans.	Perepat, tumih	Pohon	TD	TT	VU (2010)
	Compositae					
59	<i>Vernonia arborea</i> Buch-Ham	Entepung	Pohon	TD	TT	TT
	Convolvulaceae					
60	<i>Ipomoea aquatica</i> Forsk.	Kangkung	Herba	TD	TT	TT
61	<i>Merremia umbellata</i> (L.) H. Hallier	Akar bilaran daun kecil	Liana	TD	TT	TT
	Cucurbitaceae					
62	<i>Lagenaria leucantha</i> (Duch.) Rusby	Labu liar tanah	Herba	TD	TT	TT
	Dilleniaceae					
63	<i>Dillenia excelsa</i> (Jack) Gilg.	Simpur, sempur	Pohon	TD	TT	TT
64	<i>Dillenia grandifolia</i>	Simpur daun lebar	Pohon	TD	TT	TT
65	<i>Tetracera fagifolia</i> Bl.	Akar simpur	Liana	TD	TT	TT
	Euphorbiaceae					
66	<i>Antidesma neurocarpum</i> Miq.	Berunai	Pohon	TD	TT	TT
67	<i>Breynia microphylla</i> Muell. Arg.	Katu hutan	Pohon	TD	TT	TT
68	<i>Homalanthus populneus</i> (Giesel.) Pax	Jati-jatian	Pohon	TD	TT	TT
69	<i>Macaranga gigantea</i> (Reichb.f. & Zoll.) Muell. Arg.	Mengkuwung	Pohon	TD	TT	TT
70	<i>Macaranga pruinosa</i> (Miq.) Muell. Arg.	Purang putih, mahang	Pohon	TD	TT	TT
71	<i>Excoecaria agallocha</i> L.	Buta-buta	Pohon	TD	TT	TT
72	<i>Manihot utilissima</i> Pohl.	Singkong	Herba	TD	TT	TT

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No.	Class/Family/Scientific Name	Local Name	Habitus	Status of Flora		
				PP No. 7 Tahun 1999	CITES	IUCN
	Fabaceae					
73	<i>Acacia auriculiformis</i>	Akasia daun kecil	Pohon	TD	TT	TT
74	<i>Acacia mangium</i>	Akasia daun lebar	Pohon	TD	TT	TT
75	<i>Bauhinia sp.</i>	Akar bunga kupu-kupu	Liana	Un.	Un.	Un.
76	<i>Calopogonium mucunoides</i> Desv.	Akar bilaran daun besar	Liana	TD	TT	TT
77	<i>Mimosa pudica</i> L.	Daun puser, putri malu	Herba	TD	TT	TT
78	<i>Mucuna bracteata</i>	Kacangan	Liana	TD	TT	TT
79	<i>Pithecellobium rosulatum</i> Kosterm.	Kelukup	Pohon	TD	TT	TT
80	<i>Pongamia pinnata</i> (L.) Pierre	Malapari	Pohon	TD	TT	TT
	Hypericaceae					
81	<i>Cratoxylum arborescens</i> (Vahl.) Bl.	Gerunggang	Pohon	TD	TT	LC Ver 2.3 (2010)
	Hypoxidaceae					
82	<i>Curculigo capitulata</i> (L.) O.K.	Lembak	Herba	TD	TT	TT
	Leeaceae					
83	<i>Leea indica</i> (Burm. f.) Merr.	Mali-mali	Perdu	TD	TT	TT
	Malvaceae					
84	<i>Hibiscus macrophyllus</i> Roxburgh ex Hornem	Waru	Pohon	TD	TT	TT
85	<i>Sida rhombifolia</i> L.	Sidaguri	Perdu	TD	TT	TT
86	<i>Urena lobata</i> L.	Jelumpang	Perdu	TD	TT	TT
	Melastomataceae					
87	<i>Melastoma malabathricum</i> Linn.	Kemunting	Perdu	TD	TT	TT
	Moraceae					
88	<i>Artocarpus elasticus</i> Reinw.	Fingan, pilang	Pohon	TD	TT	TT
89	<i>Ficus binnendykii</i> (Miq.) Miq.	Akar ara	Liana	TD	TT	TT
90	<i>Ficus quercifolia</i> Roxb.	Uyah-uyahan	Perdu	TD	TT	TT
	Myrtaceae					
91	<i>Eugenia grandis</i> Wight	Ubar burung, ubar jambu	Pohon	TD	TT	TT
92	<i>Eugenia muellerii</i>	Entemo, gelam tikus	Pohon	TD	TT	TT
93	<i>Eugenia sp.</i>	Jambu hutan	Pohon	Un.	Un.	Un.
94	<i>Melaleuca leucadendron</i> (L.) L.	Gelam	Pohon	TD	TT	TT
95	<i>Rhodamnia cinerea</i> Jack.	Jemai	Pohon	TD	TT	TT
96	<i>Tristania obovata</i> R.Br.	Pelawan merah	Pohon	TD	TT	TT
	Nepenthaceae					
97	<i>Nepenthes alata</i>	Entuyut	Liana	D	App. II	LC Ver 2.3 (2010)
98	<i>Nepenthes ampullaria</i> Jack.	Entuyut	Liana	D	App. II	LC Ver 2.3 (2010)
99	<i>Nepenthes gracilis</i>	Entuyut	Liana	D	App. II	LC Ver 2.3 (2010)
	Nymphaeaceae					
100	<i>Nelumbium nelumbo</i> Druce.	Teratai	Herba	TD	TT	TT
	Oleaceae					
101	<i>Jasminum bifarium</i> Wall.	Melati hutan	Perdu	TD	TT	TT
	Rhizophoraceae					
102	<i>Rhizophora apiculata</i> Blume	Bakau putih	Pohon	TD	TT	LC Ver 3.1 (2010)
	Rubiaceae					
103	<i>Gardenia sp.</i>	Berus	Pohon	Un.	Un.	Un.
104	<i>Nauclea sp.</i>	Bangkal	Pohon	Un.	Un.	Un.
105	<i>Psychotria sarmentosa</i> Blume	Pakar pohon	Epifit	TD	TT	TT
106	<i>Uncaria glabrata</i> (Bl.) DC.	Akar kakait	Liana	TD	TT	TT
	Rutaceae					
107	<i>Evodia sp.</i>	Kayu bangun	Pohon	Un.	Un.	Un.
	Solanaceae					

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No.	Class/Family/Scientific Name	Local Name	Habitus	Status of Flora		
				PP No. 7 Tahun 1999	CITES	IUCN
108	<i>Solanum torvum</i> Swartz.	Pukak	Perdu	TD	TT	TT
109	<i>Physalis peruviana</i> L.	Ciplukan	Herba	TD	TT	TT
	Sterculiaceae					
110	<i>Streblus asper</i> Lour.	Serut	Perdu	TD	TT	TT
	Theaceae					
111	<i>Schima wallichii</i> Korth.	Puspa	Pohon	TD	TT	TT
	Tiliaceae					
112	<i>Muntingia calabura</i> L.	Kersen	Pohon	TD	TT	TT
	Ulmaceae					
113	<i>Trema orientalis</i> (L.) Bl.	Anggrung	Pohon	TD	TT	TT
	Urticaceae					
114	<i>Laportea stimulans</i> Miquel.	Jelatang	Perdu	TD	TT	TT
	Verbenaceae					
115	<i>Lantana camara</i> L.	Tembelekan	Perdu	TD	TT	TT
116	<i>Vitex pubescens</i> Vahl.	Laban	Pohon	TD	TT	TT

Fauna

The number of fauna which found in the concession area of PT. GKS is an amount of 29 species and 26 families with details: a total of 3 mammals species and 3 families, 33 birds species and 21 families, and reptiles were 2 species and 2 families. The highest number of species and families is in the Peat Area Block V with 16 species and 13 families.

Twenty nine species, 5 species of birds, categorized as protected species under PP. 7 / 1999; 3 species of birds listed at the CITES and categorized in Appendix II, while the animals species that are included in the IUCN Red List at amount 29 species, with details: 27 species on LC/Least concern and 2 species on NT/Near Threatened category.

Table 7. Wildlife Species Richness in the Concession Area of PT. GKS Based on Its Status

No.	Scientific Name	Local Name	Indonesian Name	Status		
				PP No. 7 Tahun 1999	CITES	IUCN
A.	Mamals					
1	<i>Tupaia glis</i>	Tupai	Tupai akar	TD	TT	LC ver 3.1 (2010)
B.	Birds					
1	<i>Acrocephalus stentoreus</i>	Kerakbasi	Karakbasi ramai	TD	TT	LC (2010)
2	<i>Amaurornis phoenicurus</i>	Ruak	Kareo padi	TD	TT	LC (2010)
3	<i>Anhinga melanogaster</i>	Burung laki silok	Pecuk ular asia	D	TT	NT (2010)
4	<i>Apus pacificus</i>	Kapinis	Kapinis laut	TD	TT	LC (2010)
5	<i>Artamus leucorhynchus</i>	Kekep babi	Kekep babi	TD	TT	LC (2010)
6	<i>Cacomantis merulinus</i>	Wik-wik	Wiwik kelabu	TD	TT	LC (2010)
7	<i>Centropus bengalensis</i>	Bubut	Bubut alang-alang	TD	TT	LC (2010)
8	<i>Collocalia maxima</i>	Walet	Walet sarang hitam	TD	TT	LC (2010)
9	<i>Copsychus malabaricus</i>	Nendak	Kucica hutan	TD	TT	LC (2010)
10	<i>Corvus macrorhynchos</i>	Gagak, ka	Gagak kampung	TD	TT	LC (2010)
11	<i>Falco cenchroides</i>	Alap-alap	Alap-alap layang	D	App. II	LC (2010)
12	<i>Haliastur indus</i>	Elang	Elang bondol	D	App. II	LC (2010)

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No.	Scientific Name	Local Name	Indonesian Name	Status		
				PP No. 7 Tahun 1999	CITES	IUCN
13	<i>Hirundo tahitica</i>	Layang-layang	Layang-layang batu	TD	TT	LC (2010)
14	<i>Lonchura fuscans</i>	Bondol	Bondol kalimantan	TD	TT	LC (2010)
15	<i>Lonchura malacca</i>	Bondol	Bondol rawa	TD	TT	LC (2010)
16	<i>Macropygia ruficeps</i>	Uncal kouran	Uncal kouran	TD	TT	LC (2010)
17	<i>Megalurus palustris</i>	Cica koreng jawa	Cica koreng jawa	TD	TT	LC (2010)
18	<i>Merops philippinus</i>	Kirik-kirik	Kirik-kirik	TD	TT	LC (2010)
19	<i>Nectarinia jugularis</i>	Kunsit	Madu sriganti	D	TT	LC (2010)
20	<i>Orthotomus atrogularis</i>	Enceririk	Cinenen belukar	TD	TT	NT (2010)
21	<i>Passer montanus</i>	Burung gereja	Burung gereja	TD	TT	LC (2010)
22	<i>Phylloscopus trivirgatus</i>	Cikrak	Cikrak daun	TD	TT	LC (2010)
23	<i>Prinia flaviventris</i>	Jeruit	Prenjak rawa	TD	TT	LC (2010)
24	<i>Pycnonotus aurigaster</i>	Cucak kutilang	Cucak kutilang	TD	TT	LC (2010)
25	<i>Pycnonotus goiavier</i>	Cerokcok	Merbah cerukcuk	TD	TT	LC (2010)
26	<i>Pycnonotus plumosus</i>	Empuru	Merbah belukar	TD	TT	LC (2010)
27	<i>Spilornis cheela</i>	Elang bido	Elang ular bido	D	App. II	LC (2010)
28	<i>Streptopelia chinensis</i>	Tekukur	Tekukur	TD	TT	LC (2010)

Environmental Services Aspects

Areas or Ecosystems Important for the Provision of Water and Prevention of Floods for Downstream Communities

Areas or ecosystem found in the concession area of PT. GKS is the lowland forest, Kerangas, swamp and riparian. While, the cloud forest ecosystems, ridge line forest and karst ecosystems are not found in the areas

Ecosystems that are important and their relationship with various land classes based on RePPPOT

Ecosystems in the concession area of PT. GKS consist of. low-land forest ecosystem, Kerangas, Peat Swamp, and Swamp. Land classes found in the region consist of five types: HJA (Honja), KHY (Kahayan), KJP (Kejapah), KLR (Klaru) and PKU (Pakau).

Based on RePPPOT, five land class above were classified as threatened and/or rare and in which HJA (Mixed or hill dipterocarp forest on metamorphic rock), KHJ (Riparian forest or swamp), KJP (Mangrove forest or salt swamp) and PKU (Kerangas).

Prediction of Erosion Potential

Land clearing activities will give negative impact of increased soil erosion due to loss of canopy closure. Reduced of land cover will increase the soil vulnerability of the surface runoff. The results show that land clearing will increase the amount of soil erosion, but the rate of erosion that will occur is still below the potential rate of erosion which is estimated erosion that will occur after the palm oil plantation development activities undertaken.

The prohibition of land clearing without burning will reduce soil erosion in which the organic materials from timber harvesting and surface leaf litter that will be the hampers factor of erosion rate. Intensity of impact will happen gradually from land clearing activities and legume family planting that can reduce

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erosion. The amount of erosion that occurred after the land planted with oil palm and land cover crops (LCC) is predicted between very low to low with 0.85 to 21.33 tons ha/year.

Areas that Function as Natural Barriers to the Spread of Forest or Ground Fire

Areas that serves as a natural barriers to prevent the spread of forest and ground fires still in good condition, including intact peat swamp forests with intact hydrological system, swamp forest, open wetland/marshes, other wetland ecosystem types, as well as green belts with various species of fire resistant plants.

Social, Economic and Cultural Aspects

Number of Population and Community Composition by Gender

Based on the results of the study found that Seriam Village is 4,769 population which sex ratio is 105.

Community Composition Based on Age

Based on the demografi data, the number of resident in Kendawangan Sub-district in the age group of 0 – 15 year is 10.193 peoples, The productive age group of 15 – 65 year is 21.763 peoples, and while in the age group > 65 year is 1.159 peoples. It is mean that dependency ratio of Kendawangan sub-district is 52%, it is mean that every 100 (productive people) people age to bear 52 non-productive people.

Based on field observation and review on existing maps show that vast area of High Conservation Value Area (HCVA) which to be planned in the area of palm oil plantation PT. GKS is 19.56 hectares, with details in Table 8.

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Table 8. Identification and Analysis Results of HCVA 1 to HCVA 6 in the Concession Area of

PT. GKS, West Kalimantan Province

HCV/Components	HCV Existence (Yes/No)	Location	Land Area (Ha)
HCV 1. Areas with Important Levels of Biodiversity			
1.1. Areas that Contain or Provide Biodiversity Support Function to Protection or Conservation Areas	Yes	Canal restricted area MB-2	9.90
		Canal restricted area MB-3	6.37
		Canal restricted area MB-2	*)
1.2. Critically Endangered Species	Yes	Canal restricted area MB-3	*)
		Forest area of Block H15	3.19
1.3. Areas that Contain Habitat for Viable Populations of Endangered, Restricted Range or Protected Species	Yes	Canal restricted area MB-2	*)
		Canal restricted area MB-3	*)
1.4. Areas that Contain Habitat of Temporary Use by Species or Congregations of Species	No	-	-
HCV 2. Natural Landscapes & Dynamics			
2.1. Large Natural Landscapes with Capacity to Maintain Natural Ecological Processes and Dynamics	No	-	-
2.2. Areas that Contain Two or More Contiguous Ecosystems	No	-	-
2.3. Areas that Contain Representative Populations of Most Naturally Occurring Species	No	-	-
HCV 3. Rare or Endangered Ecosystems	No	-	-
HCV 4. Environmental Services			
4.1. Areas or Ecosystems Important for the Provision of Water and Prevention of Floods for Downstream Communities	Yes	Canal restricted area MB-2	*)
		Canal restricted area MB-3	*)
4.2. Areas Important for the Prevention of Erosion and Sedimentation	No	-	-
4.3. Areas that Function as Natural Barriers to the Spread of Forest or Ground Fire	No	-	-
HCV 5. Natural Areas Critical for Meeting the Basic Needs of Local People	No	-	-
HCV 6. Areas Critical for Maintaining the Cultural Identity of Local Communities	Yes	Moslem Cemetary 1	0.05
		Moslem Cemetary 2	0.05
HCVA Total			19.56

Note: *) the area size same as mentioned before

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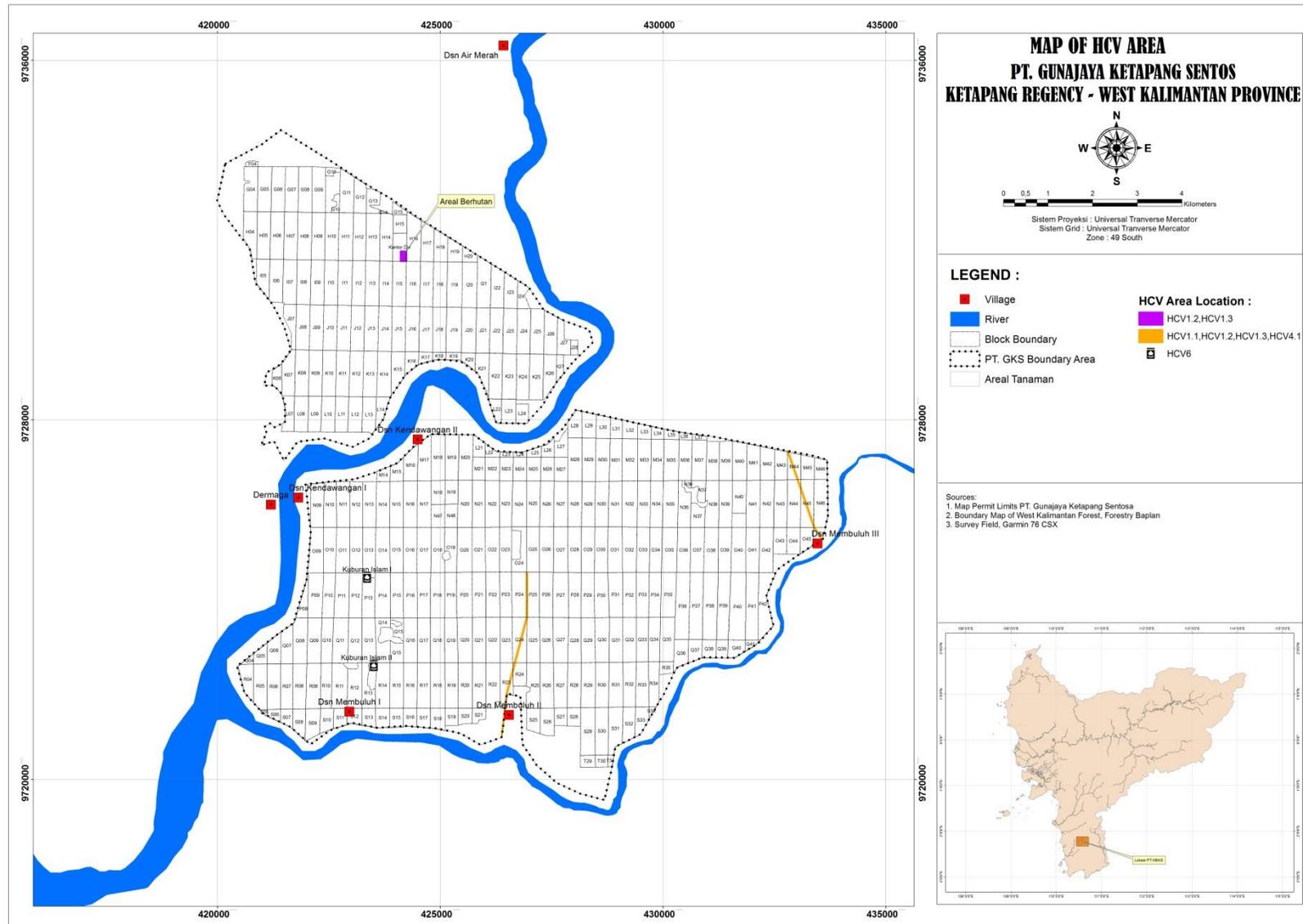


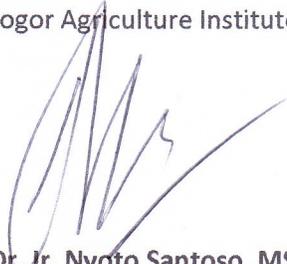
Figure 4. HCV Map in the Concession of PT GKS, West Kalimantan Province

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 GKS – Ketapang Regency, West Kalimantan Province and has been approved by the Management of PT GKS

Bogor Agriculture Institute



Dr. Ir. Nyoto Santoso, MS
Team Leader HCV & SIA
Date: 18 December 2014

Management
PT GKS,



Sri Indranto
General Manager of PT GKS
Date: 18 December 2014

Statement of acceptance of responsibility for assessment

Assessment result document on High Conservation Value (HCV) of PT GKS by Faculty of Forestry, Bogor Agriculture Institute, will be applied as one of the guidelines in managing palm oil plantation in PT GKS

Management
PT GKS,



Sri Indranto
General Manager of PT GKS
Date: 18 December 2014

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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 /	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.

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Appendix 2 List of respondents and/or informal Focus Group Discussion (FGD) participants on site during the implementation process of social impact and HCV assessment in the area of study

No	Nama Responden	Umur	Jenis Kelamin	Agama	Pendidikan	Pekerjaan Utama
A. Desa Mekar Utama						
1	Yadi Warsono	53	Laki-Laki	Islam	SLTA	Wiraswasta
2	Jumalasik	45	Laki-Laki	Islam	Tidak Sekolah	Karyawan
3	Darmadi Suharno	32	Laki-Laki	Islam	SLTA	Pedagang
4	Rochmadin	35	Laki-Laki	Islam	SLTA	Wiraswasta
5	Munif	41	Laki-Laki	Islam	SLTP	Pedagang
6	Ismanto	41	Laki-Laki	Islam	SD	Wiraswasta
7	Asri	46	Laki-Laki	Islam	SD	PNS
8	Heri Fitriadi	37	Laki-Laki	Islam	PT	Wiraswasta
9	Kabul Budianto	45	Laki-Laki	Islam	SD	Petani
10	M Yusren	34	Laki-Laki	Islam	SLTA	Pedagang
11	Muhafarudin	27	Laki-Laki	Islam	SLTP	Wiraswasta
B. Desa Kendawangan Kiri						
1	Al Imran Olliana	35	Laki-Laki	Islam	PT	Karyawan
2	Samsul Anwar	37	Laki-Laki	Islam	PT	Buruh Tani
3	Sianto	32	Laki-Laki	Islam	SD	Petani
4	Safarumi	42	Laki-Laki	Islam	SLTP	Petani
5	Sahawi	45	Laki-Laki	Islam	SD	
6	Mustapa	54	Laki-Laki	Islam	SD	Karyawan
7	Islam	62	Laki-Laki	Islam	SLTP	Pedagang
8	Sukari	61	Laki-Laki	Islam	SD	Petani
9	Susai	33	Laki-Laki	Islam	SD	Wiraswasta
10	Marjin	31	Laki-Laki	Islam	SD	Wiraswasta
C. Desa Banjarsari						
1	A Rozak	43	Laki-Laki	Islam	PT	PNS
2	Madras	61	Laki-Laki	Islam	SD	Petani
3	Poniji M	54	Laki-Laki	Islam	SD	Wiraswasta
4	Usman	33	Laki-Laki	Islam	SLTA	PNS
5	Usai S.	61	Laki-Laki	Islam	SD	Petani
6	Ibrahim	61	Laki-Laki	Islam	SD	Petani
7	Ocing	64	Laki-Laki	Islam	SD	Petani
8	Ujang Haibat	54	Laki-Laki	Islam	SD	Petani
9	Wahi	43	Laki-Laki	Islam	SD	Petani

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No	Nama Responden	Umur	Jenis Kelamin	Agama	Pendidikan	Pekerjaan Utama
10	Alian	41	Laki-Laki	Islam	SLTA	PNS
11	Syamsul A.	37	Laki-Laki	Islam	SLTP	Karyawan
D. Ketenagakerjaan						
1	Indra L Hakim	35	Laki-Laki	Islam	PT	Staf
2	Wakyadi	38	Laki-Laki	Islam	SLTA	Karyawan
3	Bambang Budhi Utomo	36	Laki-Laki	Islam	SLTA	Karyawan
4	Armat	26	Laki-Laki	Islam	SLTA	Karyawan
5	Prionimus Bintoro	37	Laki-Laki	Katolik	SLTA	Security
6	Efendy Andreans	25	Laki-Laki	Islam	SLTA	KNDE
7	Hendri	25	Laki-Laki	Islam	SD	KDE
8	Barsiah	29	Perempuan	Islam	SD	Karyawan
9	Tarwiyati	27	Perempuan	Islam	SLTP	Karyawan
10	Guntur Triadi	28	Laki-Laki	Islam	PT	Agronomi
11	Dudi Yashicano	45	Laki-Laki	Islam	PT	Agronomi
12	Vian	27	Laki-Laki	Islam	SLTP	Pengawas
13	Dianita Rahayu	24	Perempuan	Islam	PT	Human Capital
14	Mashud	26	Laki-Laki	Islam	SLTP	Pengawas
15	M. Nur	29	Laki-Laki	Islam	SLTP	GKG
16	Abdul Manan	43	Laki-Laki	Islam	SLTP	MUE
17	Narodon.P Damanik	26	Laki-Laki	Protestan	PT	CSR
18	Wahyu Harnandi	23	Laki-Laki	Islam	PT	Poliklinik (CSR)
19	Suhannadi	28	Laki-Laki	Islam	SLTA	PAD
20	Jimmy.L	34	Laki-Laki	Protestan	PT	PAD Wilayah
21	Feki Yanti Mapikasari	24	Perempuan	Islam	SLTA	Kemitraan (CSR)
22	Ricke Christina	27	Perempuan	Islam	PT	PAD
23	Emi Triyani	26	Perempuan	Islam	SLTA	PKS
24	Uti Dedy Iskandar	29	Laki-Laki	Islam	SLTA	KNDE

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Appendix 3 Notes of Important Results of Focus Group Discussion (FGD)

DAFTAR ABSENSI FGD KETENAGAKERJAAN

Hari/Tanggal : Sabtu /16-09-2011
 Waktu : 14.00 WIB
 Tempat : Kantor Membuduh Segitern Estate
 Nama Kebun : PT. GKS.

No	Nama	Alamat	Jabatan	No tlp/HP	Tanda Tangan
1	Akufin S	REM. PT. GKS	MANDOR TRAKSI	085022503813	[Signature]
2	Irwanto	PT. GKS	teknisi	085650832911	[Signature]
3	Novi. B	"	Rem. ban	08720701671	[Signature]
4	Budiarto	PT. GKS/MSJE	Mandor I	081245308413	[Signature]
5	Obi. Domo	GKS/MSJE Divisi	Mandor.	-	[Signature]
6	Arti. Suardi	GKS/MSJE kom	Korupsi	08565089911	[Signature]
7	Paby	GKS/MSJE	MANDOR CE	085825193693	[Signature]
8	Waryono	GKS/MSJE	Securitas	-	[Signature]
9	Sumedi	GKS/MSJE	Mandor	-	[Signature]
10	Obi. R.	GKS/MSJE	Mandor.	-	[Signature]
11	Anda. Irawan	GKS/MSJE	Kranidivisi	-	[Signature]
12	Tamu	GKS/MSJE	Pengawasan	-	[Signature]
13	Muji Rahayu	GKS/MSJE	Semprot	-	[Signature]
14	GURANTI	GKS/MSJE	Semprot	-	[Signature]
15	ROYAN	GKS/MSJE	teknisi	-	[Signature]
16					
17					
18					
19					
20					

DAFTAR ABSENSI FGD DESA

Hari/Tanggal : Sabtu /16-9-2011
 Waktu : 10.00 WIB
 Tempat : Dsn MD II
 Nama Kebun : PT. GKS.

No	Nama	Alamat	Jabatan	No tlp/HP	Tanda Tangan
1	Mardani	MD II			[Signature]
2	Sodil	MD II			[Signature]
3	Istiana	MD II			[Signature]
4	Jaenal abidin	MD II			[Signature]
5	M. Nur salim	KOWG	Ket. RW 1009	081256850083	[Signature]
6	BANGKONG	MD II			[Signature]
7	BENY	MD II			[Signature]
8	DEDY	MD II		08565454326	[Signature]
9	GATIS				[Signature]
10	INYOU SUPARTO	MD II	RT. 09	0812568881409	[Signature]
11	CIMPOT	MD II	RT. 08		[Signature]
12	MENDAYANG	MD II	KADUS	085752959018	[Signature]
13					
14					
15					
16					
17					
18					
19					
20					

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Appendix 4 List Stakeholders of PT. GKS

No	Stakeholder Institution	Designation	Person in Charge and Contact Number	Address	Group	Mandatory Y/N	Relevance to Industry (H/M/L)	Type	Interest	Issue/ Concern	Dialogue
1	Kantor Kecamatan Kendawangan	Camat	Boy Hasan, S.sos, M.M	Kendawangan	1 Gov	Y	H	2	H 6. Com	Local License, Communication	Y
2	Kantor Desa Seriam	Kades	Kasoi	Seriam	1 Gov	Y	H	2	H 6. Com	Local License, Communication	Y
3	Kantor Badan Permusyawaratan Desa Seriam	Ketua		Seriam	1 Gov	Y	M	2	H 6. Com	Communication	Y
4	Kantor. Polsek Kendawangan	Kepala	Dhani Cakra Nugraha	Kendawangan	1 Gov	Y	H	2	H 6. Com	,Communication, Land dispute	Y
5	Kantor. Koramil Kendawangan	Komandan	Jaenal Abidin	Kendawangan	1 Gov	Y	H	2	H 6. Com	,Communication, Land dispute	Y
6	Kantor Lembaga Adat Kendawangan	Ketua Adat		Kendawangan	2 Soc	N	M	2	H 5. Soc	Socio cultural	Y
7	Kelembagaan Adat Desa Seriam	Ketua Adat		Seriam	2 Soc	N	M	2	H 5. Soc	Socio cultural	Y
8	Kantor Cabang Dinas Kehutanan Kc. Kendawangan	Kepala	Maskur	Kendawangan	1 Gov	Y	H	2	H 7. Env	Environmental	Y
9	Kantor Cabang Dinas Pertanian dan Peternakan Kc. Kendawangan	Kepala	Ucup Supriatna	Kendawangan	1 Gov	Y	M	2	H 7. Env	Environmental	Y
10	Puskesmas Kecamatan Kendawangan	Dr. Eni Marlina		Kendawangan	1. Gov	Y	M	2	H 4. CD	CD Project, social welfare, employment	N
11	Kantor Cabang Dinas Perkebunan, Kec. Kendawangan	Kepala	Badri S. ST	kendawangan	1 Gov	Y	H	2	H 7. Env	Environmental	Y
12	Tokoh Masyarakat Dusun Membuluh II	Kepala Dusun		Dusun Membuluh, Desa Seriam	1 Gov	Y	H	2	H 6. Com	Local License, Communication, Socio cultural, CD Project	Y

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Appendix 5 HCV Map PT GKS over lay with Land Right Title (HGU) and planting area

