

Summary Report of SEIA and HCV Assessments PT Karya Makmur Bahagia Kotawaringin Timur District, Central Kalimantan Province

Executive Summary

PT Karya Makmur Bahagia (herein after refer to PT KMB), is the legal entity of its holding company, PT Bumitama Gunajaya Agro. The holding company got RSPO membership number 1-0043-07-000-00 dated on 25-03-07.

PT KMB was established by Act No. 5 dated on 11-01-94, then they revised until the last Act No. 3 dated on 02-12-2010 issued by M. Hatta, SH., and legalized by Ministry of Law Human Right No. AHU 12182.AH.01.02 dated on 10-03-2011.

PT KMB which is located in Antang Kalang Sub-District, East Kotawaringin District - Central Kalimantan Province, is one of palm oil plantations companies that adopted the sustainable palm oil practices based on RSPO New Planting Procedures which was enforced 01-01-10. As part of a sustainable palm oil management, PT Karya Makmur Bahagia has conducted the Social Environment Impact Assessment (AMDAL), High Conservation Value (HCV) identification and Social Impact Assessment (SIA). The HCV and SIA assessment were conducted for about 3 (three) months from August til October 2010, by Faculty of Forestry, Bogor Agricultural Institute; the key consultants conducting these assessments have been accredited and approved by RSPO.

The first Forested Areas Decree (SK Pelepasan Kawasan Hutan) for PT Karya Makmur Bahagia was approved on 05-08-97 by the Minister of Forestry and Plantation (Menteri Kehutanan dan Perkebunan Republik Indonesia) No. 507/KPTS-II/1997; the total area based on Forested Areas is \pm 12,706 ha. Then the second one was approved on 27-09-99 with total area is 5,192.43 ha. The Cultivation Rights Title (SK HGU) was approved on 10-10-01 by Badan Pertanahan Nasional (BPN) No. 28/HGU/BPN/2001; the total area based on Cultivate Permit is \pm 15,056.31 ha. Then, the Cultivation Rights Title No 19 from BPN Kotawaringin Timur was approved on 22-10-01 with the same total area. The Social Environment Impact Assessment (AMDAL) was approved by AMDAL Commission of Kotawaringin Timur District No.23/Komisi-Kotim/VIII/2002 dated on 09-08-02. The Plantation Permit (Izin Usaha Perkebunan, IUP) was approved on 04-08-06 by the Kotawaringin Timur Regent decree (Surat Keputusan Bupati) Nomor : 525.26/603/VIII/EKBANG/2006; the total area is \pm 15,056.31 ha. PT Karya Makmur Bahagia will not cultivate these areas in accordance to the wishes of the communities and in accordance with the areas allocated in the IUP. Hence, in the development plan, the Company development of oil palm will be within the approved.

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The results of the HCV assessment by independent consultants from Faculty of Forestry, Bogor Agricultural 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 Karya Makmur Bahagia. The vegetation's cover dominated by the cleared land and shrub. Based on The Report of HCV Identification PT Karya Makmur Bahagia 2011 by Faculty of Forestry, Bogor Agricultural 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 Agricultural Institute; these are HCV 1 (1.1, 1.2 & 1.3, HCV 2.3, HCV 4 (4.1 & 4.2), and HCV 6. The original HCV area identified was ± 693.48 ha or ± 3.8 % of the total Forested Area (Pelepasan Kawasan Hutan) in the assessments by Faculty of Forestry, Bogor Agricultural Institute. The important elements for HCV 1 are the existence of population and tracks of endangered species such as Orangutan (*Pongo pygmaeus*), Bornean Agile Gibbon (*Hylobates agilis*), Bornean Agile (*Hylobates muelleri*), Sunda Pangolin (*Manis javanica*). The important elements for HCV 2.3 are habitat for Areas that Contain Representative Populations of Most Naturally Occurring Species. 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 hill and sacred tree. 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. 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*.

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Scope of SIA and HCV Assessment

General Data of the Company

Company Name	: PT Karya Makmur Bahagia
Deed of Establishment	: Notary Leding Mering, SH, No : 6 dated on 02-02-94
End Adjustment Article of	: Notary M. Hatta, SH, Association No : 34 dated on 22-03-12
Capital Status	: Foreign Investment (<i>Penanaman Modal Asing, PMA</i>)
Taxpayer Notification Number	: 01.709.813.8-058.000
Company Address	: Melawai Raya Street No 10, South Jakarta Jakarta-Indonesia 12160
Type of business	: Oil Palm Plantation & Mill
Status of concession land	: Consent License (Izin Prinsip) HK/350/E5.263/04.95 dated 26-04-95) (size ± 12,000 Ha) Permitted Area (Izin Lokasi) (No. 645.460.42 dated 27-06-95 (size ± 12,500 Ha) Permitted Area (Izin Lokasi) (No. 29.460.42 dated 25-09-96 (size ± 5,000 Ha) AMDAL (SEIA) (Nomor : 23/Komisi- Kotim/VIII/2002 dated 09-08-02 Plantation Permit (Izin Usaha Perkebunan) No. 525.26/603/VIII/EKBANG/2006 dated 04-08-06 (size ± 15,056.31 Ha) Cultivation Rights Title (HGU) no 19 BPN Kotawaringin Timur, Central Kalimantan dated 22-10-01 til 22-10-36 (size ± 15,056.31 Ha)
Contact person	: Francisca Tiurma Damanik
Geographical Location	: See Picture 1, Picture 2, Picture 3 and Picture 4
Surrounding Entities	:
North	: Transmigrasi SP.IV-A
South	: Transmigrasi Kuala Kuayan SP.II-D
West	: Sungai Mentaya
East	: Transmigrasi SP.III-A dan II-A

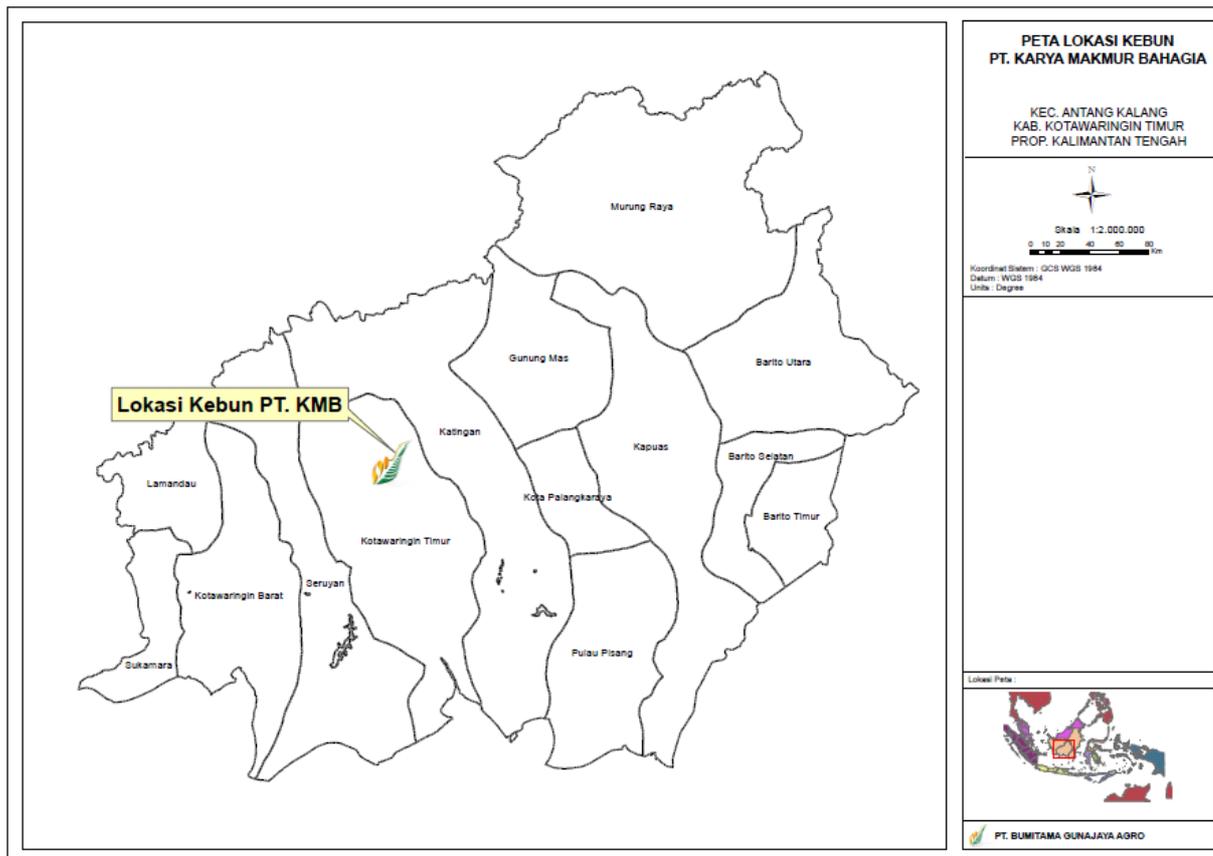
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The scope of Social and Environment Impact Assessment of PT Karya Makmur Bahagia the local social entities within the Permitted area. Thus, the High Conservation Value assessment covers the Permitted Area (Izin Lokasi). It is also expanded into villages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



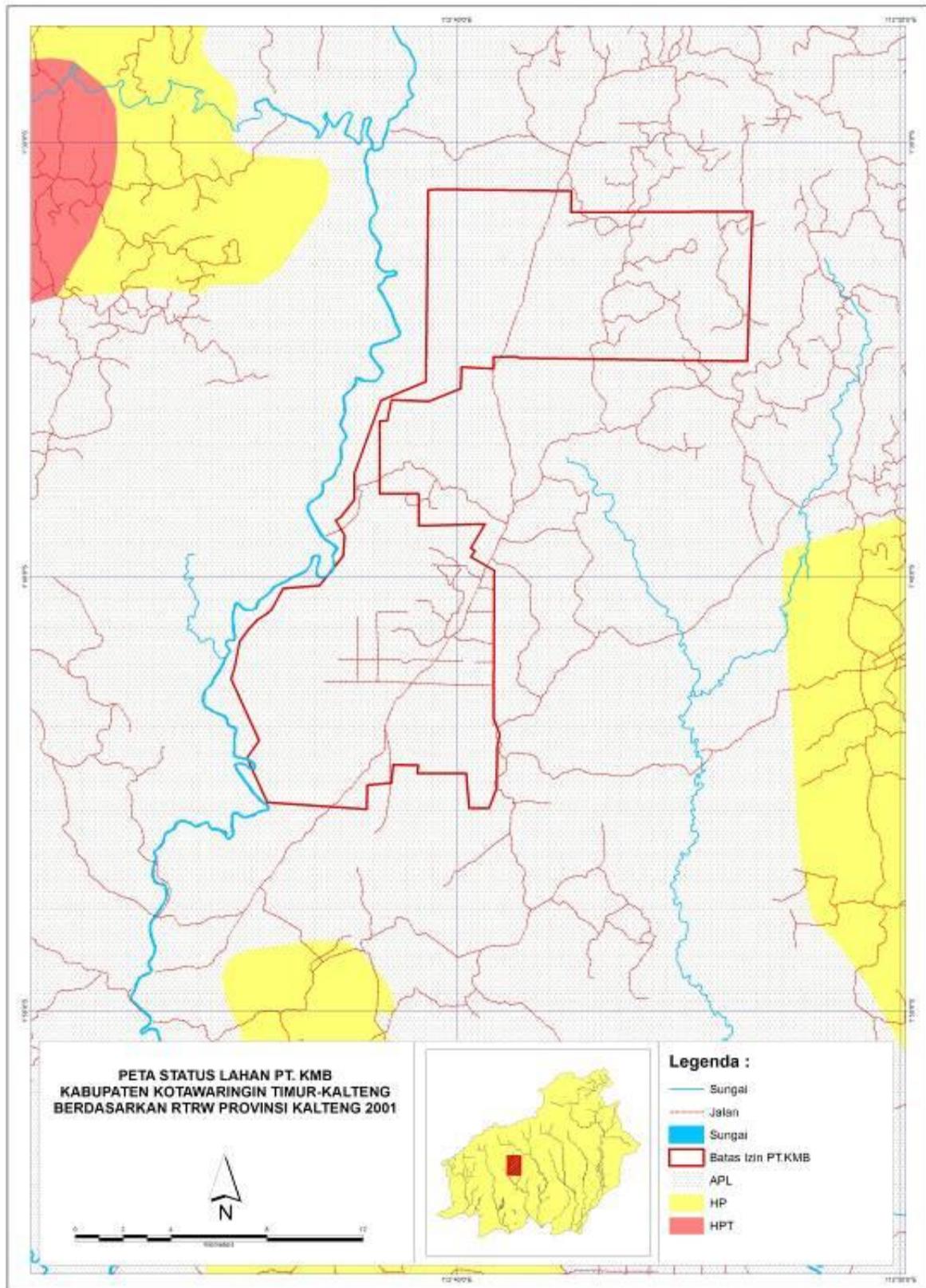
Picture 1 Location of PT Karya Makmur Bahagia in Indonesia

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Picture 2 Location of PT Karya Makmur Bahagia in Central Kalimantan Province

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Picture 3 Location of PT Karya Makmur Bahagia in Forest Planologi

Permits

The permits that have been obtained by the company are inclusive of Consent License (Izin Prinsip), Permitted Area (Izin Lokasi), Forested Area Decree (SK Pelepasan Kawasan Hutan), Cultivation Rights Title (SK Hak Guna Usaha, HGU), Social Environment Impact Assessment (AMDAL), 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 Karya Makmur Bahagia

No	Licenses and recommendations	Issued by	Number and date	Note
1.	Deed of Establishment	Leding Mering, SH	No : 6 dated on 02-02-94	
2.	End Adjustment Article of	M. Hatta, SH, Association	No : 34 dated on 22-03-12	
3.	Tax payer Notification Number	Tax Serve Office	01.709.813.8-058.000	25-02-11
4.	Consent License (Izin Prinsip)	Ministry of Agricultural	HK/350/E5.263/04.95 26-04-95	± 12,000 ha
5.	Permitted Area (Izin Lokasi)	Kotawaringin Timur Regent Decree	645.460.42 27-06-95	± 12,500 ha
6.			029.460.42 25-09-96	± 5,000 ha
7.	Forested Area Decree	Ministry of Forestry and Plantation	507/KPTS-II/1997 05-08-97	12,706 ha
8.	Forested Area Decree	Ministry of Forestry and Plantation	779/KPTS-II/1999 27-09-99	5,192.43 ha
9.	Cultivation Rights Title (SK HGU)	Badan Pertanahan Nasional	28/HGU/BPN/2001 10-10-01	15,056.31 ha
10.	Cultivation Rights Title (sertifikat HGU)	Badan Pertanahan Nasional	HGU No. 19 22-10-01	15,056.31 ha
11.	Social Environment Impact Assessment (AMDAL)	AMDAL Commission of Kotawaringin Timur District	23/Komisi-Kotim/VIII/2002 09-08-02	Approved
12.	Plantation Permit (IUP)	Kotawaringin Timur Regent Decree	525.26/603/VIII/EKBANG/2006 04-08-06	15,056.31 ha

Area and time-plan for new plantings

The proposed new planting area by PT KMB is in the location in the Plantation Permit (Izin Usaha Perkebunan) 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 will begin in 1998 following the procedures of the RSPO New Planting Procedures (NPP) in category on going procces.

Assessment Process and Procedures

a. SEI Assessment

Assessors and their credentials:

The Social Impact Assessment of PT KMB was carried out by Faculty of Forestry, Bogor Agriculture Institute which is located at Kampus IPB Darmaga – Bogor, Kabupaten Bogor - Provinsi Jawa Barat Indonesia 16001 Telp.:62-251-621947, Fax: 62-251-621947 Website: <http://www.fahutan.ipb.ac.id/hcv/index.html> Email: fahutan@ipb.ac.id, hcvteam@yahoo.co.id.

The key consultants conducting these assessments have been accredited and approved by RSPO. The team members are:

Ir. Nyoto Santoso, MS

Born in Banyuwangi, 15-03-62. He is the team leader HCV Faculty of Forestry - Bogor Agricultural Institute. Experts in the management and conservation of biodiversity. Holds a Master of Science in management courses of the natural resources and environment IPB in 1992. Experience as an expert in environment and biodiversity has been started since 1987, with specialist of study Environmental Impact Statement, Management of Mangrove Ecosystems, Flora & Fauna Inventory Mangrove Forest Ecosystems, Forest Peat, Tropical Rain Forest and Biodiversity Management Planning on the Industrial Tree Plantation and Preparation Forest Conservation Management Plan.

Handian Purwawangsa, S.Hut, MS

Born in Cipanas, 01-01-79. As a member of the team HCV Faculty of Forestry, experts in the social and cultural. He obtained his Master's Degree from the Bogor Institute of Agriculture Forestry Sciences study program in 2008. Experience in social studies began in 2002.

Ahmad Faisal Siregar, S.Hut

Born in South Tapanuli, 09-04-75. He is a member of the Faculty of Forestry HCV team with expertise in social and cultural. His Bachelor of Forestry, Bogor Agricultural Institute in 1998. In 2008 continued S-2 in the Major program Conservation of Tropical Biodiversity, Graduate School of Bogor Agricultural Institute. Experience in social studies starting in 1997, in addition, he also works on non-governmental organizations in the LPP Mangrove.

Muhammad Abdul Qirom, S.Hut, M.Si

Born in Banyuwangi, 30-08-80. As freelance workers for social studies in the Faculty of Forestry HCV team - Bogor Agricultural Institute. He continued Master's Degree from the Bogor Institute of Agriculture Forest Science Program Processing. He is currently a researcher at the Research Institute of Forestry Banjarbaru South Kalimantan

Tommy Jafelda, S.Hut

Born in Sigli (Aceh), 24-06-87. As freelance workers for social studies in the Faculty of Forestry HCV team - Bogor Agricultural Institute. Earned a Bachelor's degree in Forestry Faculty of Forestry IPB at the Year 2009

Jimmy Syahrasyid

Born in Surabaya, 19-11-76. as a freelance workers for social studies in the Faculty of Forestry HCV team - Bogor Agricultural University. Education last was in high school.

Dian Purbasari, S.Pi

Born in Banyuwangi, 15-08-85. As a member of the Faculty of Forestry SIA team - IPB, the position in the team as an assistant social experts. Earned a bachelor's degree in Fisheries Technology Program - IPB. Starting SIA studies in particular as an assistant social experts since 2009.

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

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

Method of Executing the Study

Approach framework in this study of Social Impact Assessment was by learning the present existing condition in PT. Karya Makmur Bahagia, 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.

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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. Karya Makmur Bahagia. On the basis of sampling techniques being used and inputs from the company, the villages which became the sample were village of Bhakti Karya, Tumbang Sepayang, Waringin Agung, Agung Mulia, Gunung Makmur, Mulya Agung, Rantau Tampang, Tanjung Jorong dan Tumbang Mangkup village

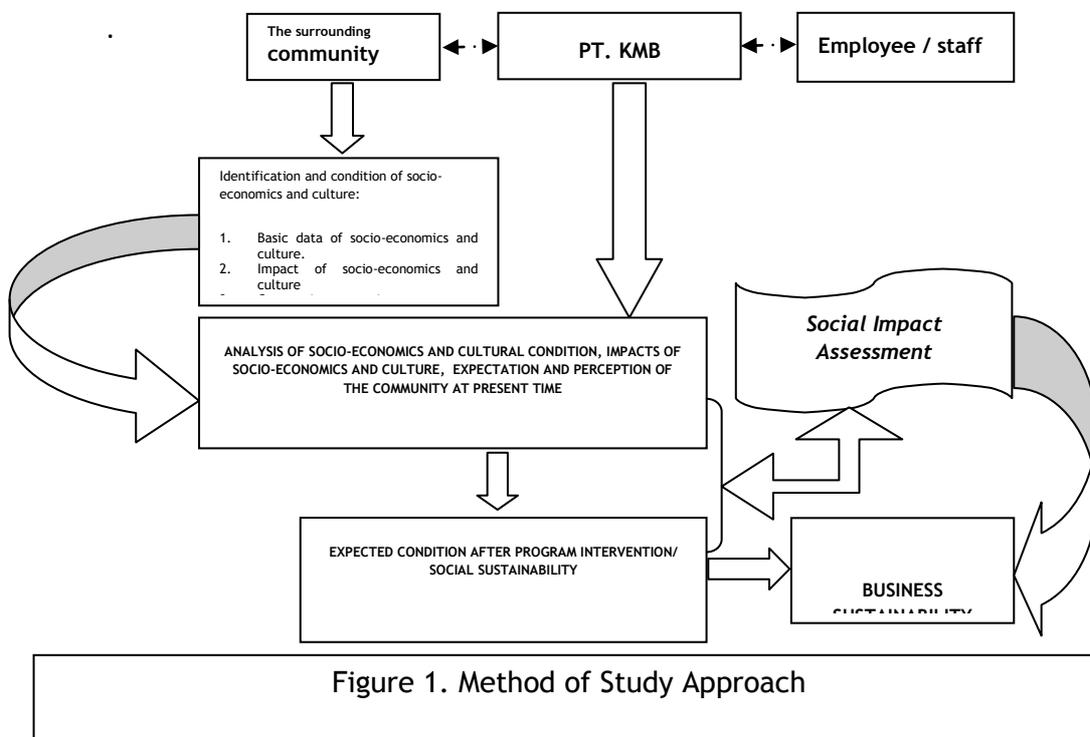


Figure 1. Method of Study Approach

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. Karya Makmur Bahagia.

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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.

b. HCV Assessment

Assessors and their credentials

The HCV assessment conducted for about 2 (Two) months from September til October 2010, in the Permitted Area (Izin Lokasi) of PT Karya Makmur Bahagia 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.

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:

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Ir. Heru B Pulonggono, MSc

Heru B Pulonggono, MSc

Born in Banyuwangi 07-04-63. As a team member of the Faculty of Forestry HCV - IPB area of expertise as hidrologist and soil conservation. He obtained his Master of Agriculture with specific studies are tropical geography from the University of Kyoto - Japan. Experience in soil conservation and hydrology started since 1999. He is also a faculty member in the Department of soil science and land resources - Faculty of Agriculture, IPB

Handian Purwawangsa, SHut, Msi

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Eko Adhiyanto, S.Hu

Eko Adhiyanto, S.Hu

Born in a Batang, 03-06-78, as a member of the team HCV Faculty of Forestry area of expertise is. He obtained his Bachelor of Conservation Forestry Program Forest Resources Department of Forest Resources Conservation and Ecotourism, Faculty of Forestry, Bogor Agricultural University in 2001. To operate as an herbalist since 2003

Sutopo, S.Hut

Sutopo, S.Hut

Born in Purbalingga, 18-07-83, as a member of the team HCV Faculty of Forestry area of expertise is the wildlife. Earned a bachelor's degree in the Department of Forest Resources Conservation and Ecotourism, Fahutan - IPB in 2008. Studying HCV began in 2007, while other studies related to wildlife started in 2006

M. Sayidina Ali, AMd

Born in Brebes, 06-04-83. He is a member of the Faculty of Forestry HCV team with expertise in GIS. Getting a bachelor's degree (D3) on the course Ecotourism, Department of Forest Resources Conservation and Ecotourism, Faculty of Forestry in 2005. Experience in the study of HCV as GIS personnel conducted since 2007. Currently being continued his education at the Faculty of Forestry Strata 1 - Nusa Bangsa University, Bogor

I. INTRODUCTION

Background

Concession area of PT. Karya Makmur Bahagia is located in several villages: Agung Mulya, Gunung Makmur, Waringin Agung, Bhakti Makmur, Tumbang Sepayang, Rantau Tampang, Tumbang Mangkub and Tanjung Jurung, Antang Kalang sub-district, East Kotawaringin District, Central Kalimantan Province. PT. Karya Makmur Bahagia obtained the business Cultivation Rights Title (HGU) through 2 phases: 1). Decree of the Minister of Forestry Number: 507/KPTS-II/1997 with land area of 12,706 hectares 2). Decree of the Minister of Forestry and Plantation Number: 779/KPTS-II/1999 with land area of 5,192.43 Ha. Total land area covers about 17,898.43 hectares. At present, the management unit of PT. Karya Makmur Bahagia has conducted production activities and palm oil development on its area.

PT. Karya Makmur Bahagia physically is located in the watershed areas (DAS). Geographical location of PT. Karya Makmur Bahagia is 112° 30' – 112°45' East Longitude and 01° 30' – 1°45' South latitude. Boundaries of: the north by transmigrasi area of SP.IV-A, south by the transmigrasi area of Kuala Kuayan SP.II-D, west is bordered by the River Mentaya, and the eastern by transmigrasi area of SP.III-A and II-A.

In the concession area of PT. Karya Makmur Bahagia, there are several areas or sites which are still maintained its sustainability in terms of biodiversity conservation, water and soil conservation, and the needs of local community, besides, as an effort to meet the management prerequisites of sustainable palm oil Plantation. PT. Karya Makmur Bahagia attempts to identify High Conservation Value (HCV) and its implementation efforts.

Objectives

The aims of this activity, Identification and Analysis of High Conservation Value (HCV) Existence in The Palm Oil Plantation PT. Karya Makmur Bahagia are as follows:

1. Identifying the existence of High Conservation Value in the Palm Oil Plantation of PT. KMB.
2. Analyzing future threats against High Conservation Value Area (HCVA) which have been identified.
3. Providing recommendations to the company of the potentials of identified HCVA.
4. Developing the management planning and monitoring of HCVA in concession area of PT. KMB.

Outputs

Outputs expected from this activity are:

1. Report Document on the assessment results of the existence of High Conservation Value in the Palm Oil Plantation of PT. Karya Makmur Bahagia (Book I).
2. Document of management planning and monitoring of HCVA in the concession area of PT. KMB (Book II).

The Assessment Institution

Faculty of Forestry, Bogor Agricultural University
Campus Darmaga IPB - Bogor, Bogor - West Java Province
Indonesia 16001

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

Assessment Team:

Chairman : Ir. Nyoto Santoso, MS

Members :

1. Ir. Heru B Pulonggono, MSc
2. Handian Purwawangsa, S.Hut, MSi
3. Ahmad Faisal Siregar, S.Hut
4. Eko Adhianto, S.hut
5. Sutopo, S.Hut
6. M. Sayidina Ali, AMd

Assessment Methods

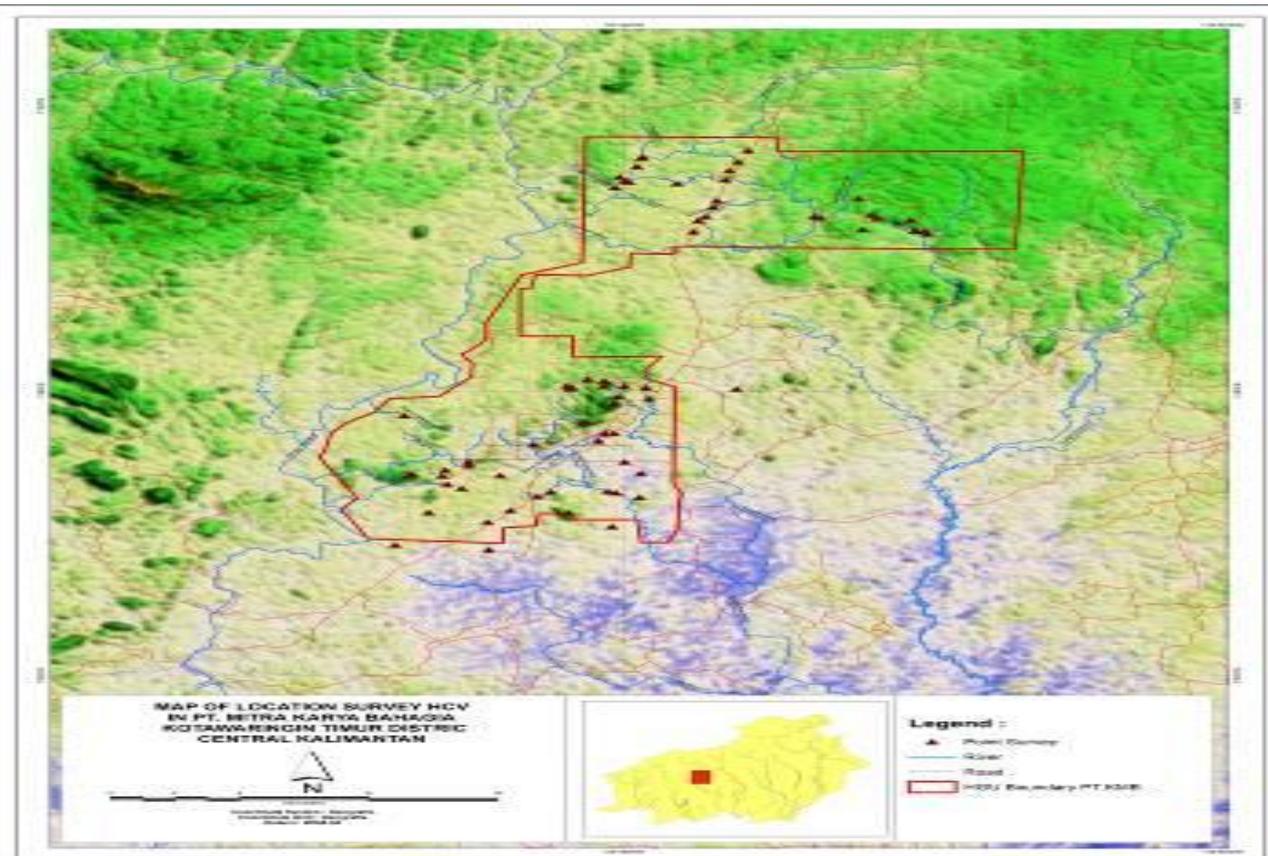


Figure 1. Location of Field Survey in the Concession Area of *PT. Karya Makmur Bahagia*

Assessment Site and Timeframe

The assessments of Identification and Analysis of HCV was conducted in concession area of PT. Karya Makmur Bahagia (PT. KMB), East Kotawaringin district, Central Kalimantan province and surrounding villages, including: Desa Mulya Agung, Gunung Makmur, Waringin Agung, Bhakti Makmur, Tumbang Sepayang, Rantau Tampang, Tumbang Mangkub, and Tanjung Jurung, Kalang Antang sub-district, East Kotawaringin district, Central Kalimantan Province. This assessment conducted for about 3 months, August to October 2010.

Materials and Tools

Materials used in the activity, such as: Map of Concession area of PT Karya Makmur Bahagia; provincial spatial planning map of Central Kalimantan, spatial planning map of East Kotawaringin, landsat image; administrative map; topography/slope class map; map of forest land use by consensus (TGHK); and land system map; and materials for field surveys (alcohol 70%, old newspapers, paper labels (to give code/local name on herbarium specimens), field guide books (Field Guide of birds in Java, Bali, Sumatra and Borneo-Birdlife and A Field Guide for Mammals of Borneo (Payne et al., 1985), published by WWF Malaysia, Kuala Lumpur), social/cultural questionnaires and the tally sheet/book.) Tools used are: GPS, brunton compass, plastic rope 50 meters (which is already marked at 2, 5, 10 and 20 meters), tree diameter tape (to measure circumference/diameter), camera, binoculars, computers, and stationery (bow, rulers, pencils, and pens).

Framework of Assessment Approach

There are two most important factors in realizing success to implement HCV assessment: first, the availability of data and information reasonably sufficient and up to date, both secondary and primary data and, second, precise and systematic way of assessment phases. The availability of data and information reasonably sufficient and up to date were determined by systematic field survey, adequate and well planned. In order to conduct a field survey planning as expected, it is necessary to review of documents/reports and maps that already exist and the initial HCV identification HCV needs to conducted. Stages of precise and systematic assessment to enhance success in the identification and analysis of the presence of HCV, including: field surveys, data processing, analysis and synthesis of data, identification of HCV, the HCV existence analysis and mapping.

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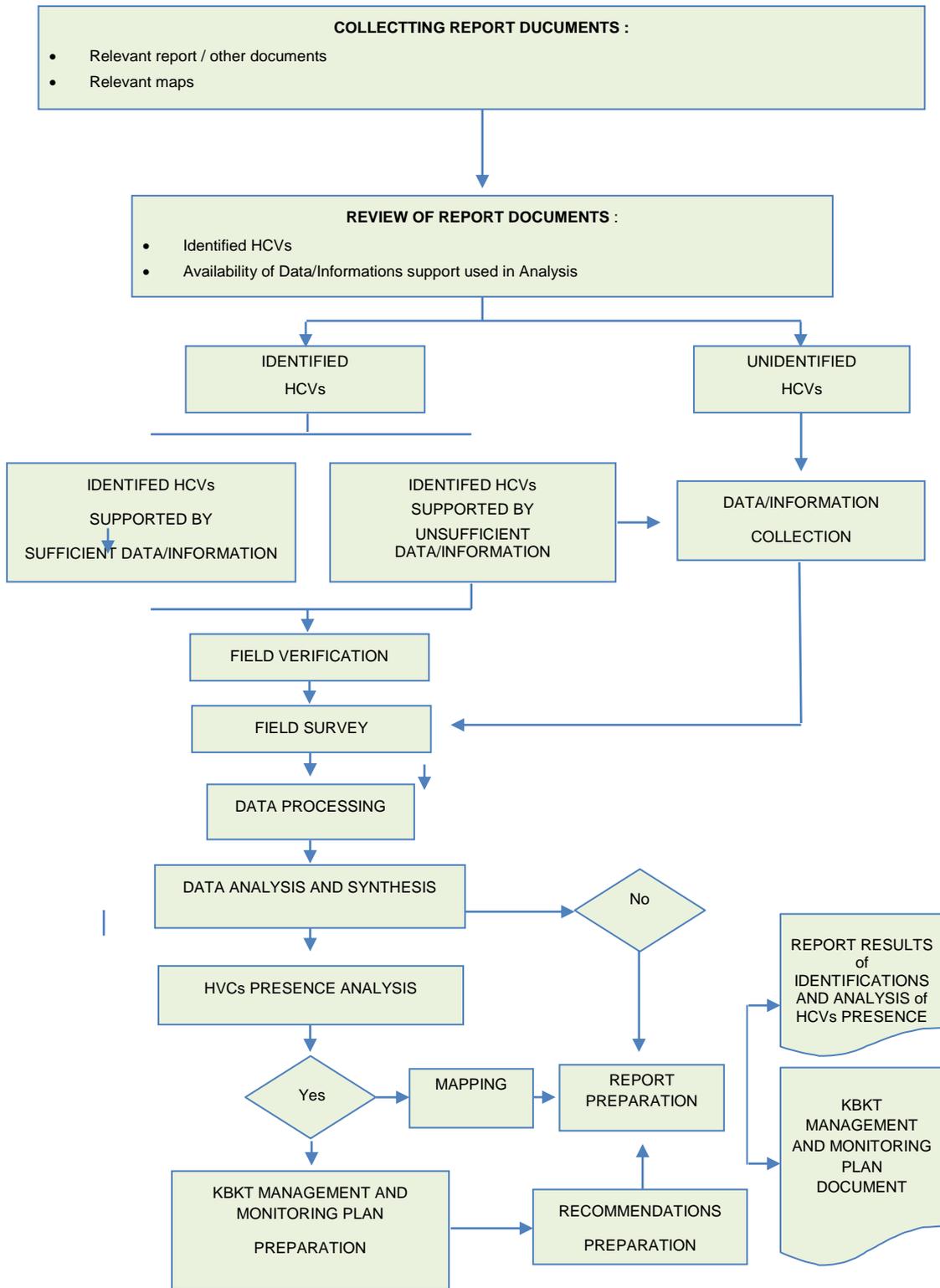


Figure 2. Framework of HCV Assessment Approach

Summary of Assessment Findings

a. SEI Assessment

History of area

PT. Karya Makmur Bahagia is located in Antang Kalang Sub district, Kotawaringin Timur District, Central Kalimantan Province, covering an area of 17,898.43 hectares which covers two wide areas in accordance with the Land Allocation Letter for Plantation, namely (1) Minister of Forestry Decree Number: 507/KPTS-II/1997 dated 8 August 1997, with an area of 12,706 hectares, (2) Minister of Forestry and Plantations Decree Number: 779/KPTS-II/1999 Date 27 August 1999, with an area of 5,192.43 hectares.

Coverage area, Layout and Work Area Boundary

Oil Palm plantation PT. Karya Makmur Bahagia is located in the Village of Mulya Agung, Agung Mulya, Gunung Makmur, Waringin Agung, Bhakti Makmur, Tumbang Sepayang, Rantau Tampang, Tumbang Mangkub and Tanjung jurung, Sub District of Antang Kalang, Kotawaringin Timur District. The total area of PT. KMB is 17,500 ha. As for the company boundary can be seen in the following table (Table III-1).

Tabel 1. The layout of the work area and permit area boundary of PT. Karya Makmur Bahagia

Description	Information
Coverage area	17,500 ha
Geographical	01° 30' – 1°45' S 112° 30' – 112°45' E
Altitude	30 - 40. Mbsl
Government Administration	- District of Kotawaringin Timur (Sub District of Antang Kalang) - Province of Kalimantan Tengah
Wilayah Pemangkuan	- Plantation and Forestry Departmen of Kotawaringin Timur District - Plantation Department of Central Kalimantan Province
Waterheds (Daerah Aliran Sungai)	Hanya river Watersheds
Boundaries:	
- North	Transmigration program IV-A
- East	Transmigration program III-A dan II-A
- South	Transmigration program of Kuala Kuayan II-D
- West	Mentaya river

General conditions of villages around Oil Palm Plantation of PT. Karya Makmur Bahagia

Based on the identification that has been done by the management of PT. KMB there are 9 villages in the two districts of Antang Kalang and Kotawaringin Timur, Province of Central Kalimantan that have high interaction with PT.KMB (Table III-2).

Tabel III-2. High Interaction Villages with PT.Karya Makmur Bahagia

No	Name of Village	Sub District	District
1	Bhakti Karya	Antangkalang	Kotawaringin Timur
2	Tumbang Sepayang	Antangkalang	Kotawaringin Timur
3	Waringin Agung	Antangkalang	Kotawaringin Timur
4	Agung Mulia	Antangkalang	Kotawaringin Timur
5	Gunung Makmur	Antangkalang	Kotawaringin Timur
6	Mulya Agung	Antangkalang	Kotawaringin Timur
7	Rantau Tampang	Antangkalang	Kotawaringin Timur
8	Tanjung Jorong	Parenggean	Kotawaringin Timur
9	Tumbang Mangkup	Antangkalang	Kotawaringin Timur

COMMUNITY CHARACTERISTICS

Plantation operational area and palm oil mill of PT. Karya Makmur Bahagia located in Sub districts of Parenggean and Antang Kalang, Kotawaringin Timur District, Central Kalimantan province. The plantation is implementing a partnership between PT. KMB with local community and transmigration using PIR-KKPA patern on a cooperative. Company also develops oil palm plantations with other local communities as plasma scheme. This partnership is expected to improve economic conditions and welfare of the local community.

Generally the fulfillment of the basic needs of the community around PT. KMB such as the need for food, water, clothing, home appliances, firewood, medicines and animal feed is filled by purchase, cultivation, taking in the river / wooded area, and company assistant.

Based on the results of interviews known that the land ownership by the village communities around PT. KMB ranging from 2 ha to 50 ha. The average percentage is 26.08% is the largest public land which has an area of 20-50 ha. While most small pesentase are people who have less than 2 ha of land (12.70%). Based on these data it can be seen, that the majority of smallholders / KKPA own other lands other than that in plasma of land distributed by the government, which contains both oil palm and non-oil palm.

EMPLOYMENT AND COMMUNITY RELATIONS

Workers Union (SP) at PT. KMB has not been established, however, the company does not restrict freedom of assembly and association, including not prohibit the establishment of worker unions. It is more due to the low awareness of the employees and company the importance of worker unions. The company itself already has a plan to unionize participatory by involving employees.

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Workers Union serves as a company critical partner in the fight for the workers rights in accordance with the legislation, as a corporate partner in disseminating the provisions of the company to the workers, and the mediator between the company and the workers if there are labor disputes.

In general, the relationship between the company and workers is well maintained. However, there are some employees who do not understand the work contract, so do not know for certain rights and obligations to be implemented. In addition, most employees also do not know the content of labor regulations issued by the government or by the company.

In terms of facilities, the company still needs to improve clean water facilities in employee housing, especially during the dry season. In addition, it should also be improved of transportation for employees who are working place away from the housing and transport facilities for school children. Other facilities that need to be completed is the aid uniforms for employees, especially to supervisor level. The mechanism of menstruation leave for female employees needs to improve. For overtime payment mechanisms are already well underway.

Based on company data and recognition of workers, fatal accidents are very rare. Work accidents are the most frequent minor accidents, such as falling bunches or scratched thorn in the hands or other areas of body. Sometimes it can also be affected leg spines due to torn boots or shoes because thorns penetrate poor quality shoes.

Accidents that can cause serious injury usually occurs because one part of the body affected workers harvesting knife (sickle/crop tools). Case of accidents that occur due to other heavy enough eyes exposed palm flowers. Most of the accidents occur due to negligent workers use Personal Protection Equipment (PPE) such as helmets and goggles, as well as the lack of attention to operational safety standards such as wearing gloves knife on harvest equipment (sickle).

CORPORATE SOCIAL ACTIVITIES, PERCEPTION AND ANALYSIS OF IMPACT

As a form of social responsibility, PT. Karya Makmur Bahagia (KMB) has also conducted a variety of social activities. PT.KMB social activities are varied and cover a wide range of fields. Based on data from company CSR program, the general social activities of PT. KMB and regions 1 and 2 are generally in the form of: Sinergyc Community Relations activities such as organizing Indonesian independence day celebration, Donations and Development programs such as education, health, social, cultural and sport, religion and the environment. Based on the activities that have been carried out, social activities / CSR is most often done for the community is education program around the company, which is well peogram physical development and human resource development in education. Based on the results of the Focus Group Discussion (FGD) note that each villages requires different programs according to the each circumstances.

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Based on the survey results of public response that a member of both farmers and non-farmers become members quite diverse. In general, the development of oil palm by PT. KMB has gained the support of the majority of people, even support in four villages namely Bhakti Karya village, Mulia Agung, Gunung Agung Muliya Makmur and Achieve 100%. Forms of community support is also closely correlated with benefits that have been felt by the public. Communities in all villages are almost entirely have felt the benefits of palm oil plantations PT. KMB.

In general, the form of interaction between the public / corporate respondents also quite varied, which in almost all villages except Tumbang Sepayang village, there are villagers who interact as an employee or as company daily worker (KHL). The percentage of people who have never interacted with the company also quite low (less than 20%), except in the Tumbang Sepayang village reached 80%. Lack of community interaction is in the Tumbang Sepayang village alleged correlated with lower levels of support for the community.

The presence of PT. KMB felt gave several positive impacts to the surrounding community. Based on the results of the interview can be seen that the majority of people have felt the positive effects or benefits of the presence of PT. KMB, except for the people of the Tumbang Sepayang village, where only 22% of respondents in the village have been impacted by the existence of PT. KMB. Positive impact with the presence of PT. KMB for the community include employment opportunities, business opportunity, the village became crowded and easier accessibility.

Generally the negative impact on the environment is perceived by the public in the form of water pollution, water shortages and soil dust disorders. Based on a survey, known that most of the water pollution perceived by the villagers of Tumbang Sepayang and Bhakti Karya. While the negative impact of the reduction in the form of groundwater supplies most widely perceived by the Agung Mulya, Rantau Tampang and Tumbang Mangkup villagers. However, there are rural communities that do not feel the negative impact in the form of reduced groundwater supplies, which Waringin Agung and Mulya Agung villagers. For a negative impact in the form of dust most widely felt by the Tumbang Sepayang, Gunung Makmur, Rantau Tampang and Tumbang Mangkup villagers. Negative impacts in the form of dust is not felt by the villagers of Tumbang Sepayang, Gunung Makmur, Rantau Tampang and Tumbang Mangkup. Special to the environmental impact of river water contamination needs to be studied in more depth, whether it is caused by oil palm plantation management PT.KMB or company activities or community activities in the headwaters.

CONCLUSIONS AND RECOMMENDATIONS

CONCLUSIONS

1. Level of public education for community around PT. KMB is relatively low where people who have a elementary school education level reached 45.9% and the community with education up to university level only reached 9.8%. Islam is the majority religion, ethnic majority is Javanese and Dayak, the main livelihood of the people are oil palm and rubber farmers.

RSPO

2. Land Tenure problems that occur between the community and company is boundary conflict that not yet clear for land compensation status that had been operates by the company, but its intensity is relatively small. Land tenure issues involving the company only occurred in 3 villages, namely Village Mulya Agung, Waringin Agung and Tumbang Sepayang
3. The most sticking labor problems is still a lack of understanding of the to workers' labor laws, lack of discipline in the use of PPE, PPE facilities still need to be improved, communication and fulfillment of the rights of workers needs to be improved, and the worker union has not been established.
4. Community support for the existence of the company in general good enough, only in the village Tumbang Sepayang, where community support is only 40%, whereas in the other villages, community support above 60%.
5. Generally the positive impact of the existence of PT. KMB is a lively village, access is easy, and there is an increase in employment opportunities and income for the community as well as the program and the construction of public facilities from the company.

RECOMMENDATIONS

The recommendations related to the implementation of the criteria for sustainable palm oil plantation management is carried out by the oil palm plantation PT. Karya Makmur Bahagia

No	Criteria	Fulfillment		RECOMMENDATIONS
		done	done	
1.1	The oil palm producers (growers) provide adequate information for stakeholders in appropriate language and forms, to ensure the effective participation of stakeholders in decision-making.		√	Required Information procedure and needs documentation system improvement.
1.2	Management documents are publicly available, except where this is prevented by commercial confidentiality or where disclosure of information would result in negative environmental or social outcomes.		√	Required Information procedure and needs documentation system improvement and documentation of data that has been provided to the relevant parties
2.1	Compliance with all applicable local, national and ratified international laws and regulations.	√		Required improvement of land conflict resolution and land compensation procedure. Current land conflicts need to be resolved immediately and made the documentation process
2.2	The right to use the land can be demonstrated, and is not legitimately contested by local communities with demonstrable rights		√	Required improvement of land conflict resolution and land compensation procedure. Current land conflicts need to be resolved immediately and made the documentation process
2.3	Use of the land for oil palm does not diminish the legal rights, or customary rights, of other users, without their free, prior and informed consent.		√	Required improvement of land conflict resolution and land compensation procedure. Current land conflicts need to be

RSPO

				resolved immediately and made the documentation process
3.1	Productivity and quality of the optimal long-term yields and the products achieved through 10 agronomic practices, processing and management.	Not included in the discussion	Not included in the discussion	Conduct its own study
3.2	Practices of producers and processing plants are optimal to maintain production of high quality palm oil.	Not included in the discussion	Not included in the discussion	Conduct its own study
4.1	Operating procedures are appropriately documented and consistently implemented and monitored.	Not included in the discussion	Not included in the discussion	Conduct its own study
4.2	Practices maintain soil fertility at, or where possible improve soil fertility to, a level that ensures optimal and sustained yield.	Not included in the discussion	Not included in the discussion	Conduct its own study
4.3	Practices minimize and control erosion and degradation of soils.	Not included in the discussion	Not included in the discussion	Conduct its own study
4.4	Practices maintain the quality and availability of surface and ground water.	Not included in the discussion	Not included in the discussion	Conduct its own study
4.5	Pests, diseases, weeds and invasive introduced species are effectively managed using appropriate Integrated Pest Management (IPM) techniques.	Not included in the discussion	Not included in the discussion	Conduct its own study
4.6	Chemicals (agrochemicals) used in a appropriate manner that does not endanger health or the environment.	Not included in the discussion	Not included in the discussion	Conduct its own study
4.7	Occupational safety and health rules implemented.		√	Need improvement in the fulfillment of the PPE, discipline, and safety and health procedure.
4.8	All staff, workers, smallholders and contractors are properly trained.		√	Training for employees and contractors need to be improved and regularly implemented
5.1	Assessment of environmental impacts of planted oil palm, both positive and negative, and the results incorporated into the management planning and implemented in operational procedures.		√	Impact assessment incorporated into the management planning and carried out in operational procedures
5.2	Build an understanding of the species and habitats of plants and animals that live in and around the plantation area.	Not included in the discussion	Not included in the discussion	Conduct its own study
5.3	Plans are developed, implemented and monitored to address biodiversity in and	Not included	Not included	Conduct its own study

RSPO

	around the plantation area.	in the discussion	in the discussion	
5.4	Waste destroyed, recycled, reused and disposed of in an environmentally and socially friendly.	Not included in the discussion	Not included in the discussion	Conduct its own study
5.5	Maximize the efficient use of energy and use of renewable energy	Not included in the discussion	Not included in the discussion	Conduct its own study
5.6	Avoid burning to destroy waste and preparing land for replanting except in special circumstances.	Not included in the discussion	Not included in the discussion	Conduct its own study
5.7	Develop, implement and monitor a plan to reduce pollution and emissions, including greenhouse gases.	Not included in the discussion	Not included in the discussion	Conduct its own study
6.1	Assessing social impacts, both positive and negative, from palm oil cultivated and processed, and incorporate the results into the management planning and implemented in operational procedures.		√	Positive and negative social impacts assessment need to be incorporated into the management planning and operational procedures implemented in
6.2	There are open and transparent methods for communication and consultation between growers and/or millers, local communities and other affected or interested parties.		√	Required communication and consultation procedure to affected parties, as well as documentation of communication and consultation activities that have been implemented
6.3	There is a mutually agreed and documented system for dealing with complaints and grievances, which is implemented and accepted by all parties.		√	Required a mutually agreed system to accommodate and handle complaints. Documentation necessary for the activity
6.4	Any negotiations concerning compensation for loss of legal or customary rights are dealt with through a documented system that enables indigenous peoples, local communities and other stakeholders to express their views through their own representative institutions.		√	Required procedure and documentation of land compensation and provide system to accommodate the aspirations of affected communities
6.5	The employer ensure payment and conditions for employees and for employees of contractors always meet at least legal or industry minimum standards and are sufficient to provide decent living wages.	√		Wages are in accordance with the regulations of (Minimum wage/UMP), needs to be improved facilities for employees

RSPO

6.6	The employer respects the right of all personnel to form and join trade unions of their choice and to bargain collectively. Where the right to freedom of association and collective bargaining are restricted under law, the employer facilitates parallel means of independent and free association and bargaining for all such personnel.		√	Companies need to facilitate the labor unions formation.
6.7	Prohibited to employ children. The children are not exposed to the working environment at risk. Children are only allowed to work on the family farm, with adult supervision, and does not disrupt the educational program.	√		Not found employees / workers under the age of 15 years
6.8	The employer shall not engage in or support discrimination based on race, caste, national origin, religion, disability, gender, sexual orientation, worker union membership, political affiliation or age.	√		The company continues to maintain a conducive atmosphere on the absence of discrimination
6.9	The producers and millers are well connected and open with smallholders and local businesses .		√	Company accountability with scheme smallholders needs to be improved, especially in the calculation of the SHU (yearly business benefit) value.
6.10	Growers and millers contribute to local sustainable development wherever appropriate.	√		Company contribution to communities such as employment, social programs, etc. need to be improved.
7.1	Conduct environmental and social impact assessments are thorough and involve all parties prior to new plantings or operations, or expanding existing ones, and the results incorporated into the planning, management and operations.		√	Social and environmental impacts for the construction of new plantings should be incorporated into management and operation plan
7.2	Using soil surveys and topographic information are used for site planning in the establishment of new plantings, and the results are incorporated into plans and operations.	Not included in the discussion	Not included in the discussion	Conduct its own study
7.3	New plantings since November 2005, have not replaced primary forest or any area required to maintain or enhance one or more High Conservation Values.	Not included in the discussion	Not included in the discussion	Conduct its own study
7.4	Avoided develop plantations on steep terrain, and/or on marginal and fragile soils	Not included in the discussion	Not included in the discussion	Conduct its own study
7.5	No new plantings are established on local peoples' land without their free, prior and informed consent, dealt with through a		√	Required new procedure of land acquisition and provide institutions to accommodate the

RSPO

	documented system that enables indigenous peoples, local communities and other stakeholders to express their views through their own representative institutions.			aspirations of the communities. Several complain that relate to land tenure immediately resolved.
7.6	Local people are compensated for any agreed land acquisitions and relinquishment of rights, subject to their free, prior and informed consent and negotiated agreements.	√		Provide and preparing the process document of the land acquisition. Several complaints related to land tenure immediately resolved.
7.7	Prohibited from burning to prepare new planting except in specific situations	Not included in the discussion	Not included in the discussion	Conduct its own study
8.1	Growers and millers regularly monitor and review their activities and develop and implement action plans that allow demonstrable continuous improvement in key operations.	Not included in the discussion	Not included in the discussion	Conduct its own study

b. HCV assessments

Physical Condition

Climate in the assessment area according to Schmidt and Ferguson's classification climate classified as type B (slightly wet, Q = 16.7) where the average annual rainfall is 2726 mm/year and average rain 133 days / year. Wet months occur in October to July with a range of 102-301 mm/month. While the classification of Oldemand was classified as climate type B1, which the wet months occurs in 8 months continuously (rainfall > 200 mm/month) and dry months (rainfall < 100 mm/month) never happened. The rainy season in the study area is starting in October-November. Concession area of PT Karya Makmur Bahagia is at altitude 20-40 m above sea level. Based on the slope map, topography of PT. Karya Makmur Bahagia from flat to very steep (0 -> 40%), Based on Geological Map, Palangkaraya's sheet (1613) scale 1: 250,000 (Geological Research and Development Center, 1995), geological formations in the area of PT. Karya Makmur Bahagia, composed of formations Alluvium (Qa) and Volcanic Rock (Trv).

Concession area of PT. Karya Makmur Bahagia is on Cempaga river watershed area. The rivers cross through the concession area at about 16 rivers and streams (Table III-3). Drainage patterns in the concession area are no one to dominate. The community is still intensively using the rivers, either for drinking, bathing, washing, transportation etc. In general, the water that flows meet the standards for local consumption needs and labor Plantations and oil palm crop irrigation in the future. Debit Mentaya River in the dry season has decreased, but never dries. Results of stream flow measurements at the time of the study can be seen in Table 1.

Table 1. Debit on Several Rivers in the Concession area of PT.Karya Makmur Bahagia

No	River	Temporary Debit *) (m ³ /second)	Maximum Debit (m ³ /second)
1.	Mentaya River	176,742	232,818
2.	Muhammad River	0,577	1,591
3.	Gambir River	0,693	1,488
4.	Panyahuan River	8,883	14,538
5.	Bawat River	5,681	6,178
6.	Sangsang River	0,588	1,062

Biological Condition

Flora

The number of plants species found in the concession area of PT. Karya Makmur Bahagia an amount of 325 species, in which of 200 species have been identified its scientific name, can be grouped into 70 families, and plant. Based on location, the highest vegetation composition was found in the forest area of Division V-MAE (Orangutan habitat), an amount of 117 species. Based on plants' habitus, the composition of vegetation can be divided into 7 (seven) types: trees, herbs, lianas, shrubs, epiphytes, bamboo, and palm. Based on the distribution, the trees habitus has the highest species richness, 260 species or equal to

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59.50%. It also found 3 types of vegetation protected under PP. 7 / 1999 and 1 species listed by CITES in the area of PT. Karya Makmur Bahagia. In addition, also in this area are found 26 plants species are included in IUCN Red List, with details: 3 types including CR/Critically Endangered ; 5 types including EN/Endangered ; 4 types including VU/Vulnerable and 13 species, including LR/Low Risk and 1 species including DD/ Data Deficient (due to lack of data); as showed in Table 2.

Table 2. List of Plants Species in the Concession Area of PT. Karya Makmur Bahagia Based on Its Status

No.	Scientific Name	Local Name	Location	Plants Status		
				PP No. 7 /1999	CITES	IUCN
1	<i>Shorea seminis</i>	Plepek (Kelepek)	6,7,9,10,11,12,14,19, 23,34,35,51	D	-	CR
2	<i>Shorea smithiana</i>	Mahambung	69	TD	-	CR
3	<i>Dipterocarpus grandiflorus</i>	Tepiling (keruing)	14,50,51	TD	-	CR
4	<i>Shorea stenoptera</i>	Tengkawang Tungkul	14,51	D	-	EN
5	<i>Shorea faquetiana</i>	Meranti Bunyit	6,14,19,23,34,35,36,3 8,50,51	TD	-	EN
6	<i>Shorea pauciflora</i>	Tengkawang Ohong	19,23,34,35	TD	-	EN
7	<i>Shorea bracteolata</i>	Bunyau	6,19,23,34,35,36,50	TD	-	EN
8	<i>Shorea brunescens</i>	Meranti Asam	19,23,34,35	TD	-	EN
9	<i>Durio kutejensis</i>	Paken (Pekawai)	41,43,44,45	TD	-	VU
10	<i>Pterocarpus indicus</i>	Angsana	58,60	TD	-	VU
11	<i>Gonystylus macrophyllus</i>	Ramin Bukit	36,50	TD	App. II	VU
12	<i>Eusideroxylon zwageri</i>	Ulin	6,7,9,10,11,12,14,19, 23,34,35,36,50,51	TD	-	VU
13	<i>Alstonia scholaris</i>	Pulai	1,4,6,13,14,17,18,19, 20,21,22,23,25,33,34, 35,37,38,39,40,41,42, 43,44,45,46,47,48,49, 51	TD	-	LR
14	<i>Calophyllum inophyllum</i>	Entangur	36,50	TD	-	LR
15	<i>Calophyllum soulatri</i>	Entangur	6,14,19,23,34,35,36,5 0,51	TD	-	LR
16	<i>Canarium aperum</i>	Kajunjung	6,7,9,10,11,12,19,23, 34,35,36,50	TD	-	LR
17	<i>Cratoxylum arborescens</i>	Geronggang	22,25	TD	-	LR
18	<i>Dacryodes costata</i>	Pisang Patau	36,50	TD	-	LR
19	<i>Dacryodes rostrata</i>	Kayu Batu	19,23,34,35	TD	-	LR
20	<i>Dyera costulata</i>	Jelutung	62,70	TD	-	LR
21	<i>Knema conferta</i>	Kumpang Merah	6,19,23,34,35,36,50	TD	-	LR
22	<i>Nephelium lappaceum</i>	Rambutan	7,9,10,11,12,22,25	TD	-	LR
23	<i>Octomeles sumatrana</i>	Benuang Kabuk	6,19,22,23,34,35	TD	-	LR
24	<i>Shorea laevis</i>	Bekirai	7,9,10,11,12,36,50	TD	-	LR
25	<i>Mangifera caesia</i>	Asam Kemantan	36,50	TD	-	LR
26	<i>Pentaspadon motleyi</i>	Pelasit	6,7,9,10,11,12,19,22, 23,25,34,35,70	TD	-	DD
27	<i>Shorea gysbertsiana</i>	Meranti Putih	7,9,10,11,12	D	-	-

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Status' Remark:

D	: Protected	LR	: Low Risk
TD	: Unprotected	VU	: Vulnerable
App	: Appendix	EN	: Endangered
DD	: Data Deficient (lack of data)	CR	: Critically Endangered

Location's Remark:

1 =	BKCE - Meraya Stream	36 =	MAE - Divisi V (Lokasi Orangutan)
2 =	BKCE - Divisi V Blok T36-37 River	37 =	MAE - Ketubuk River
3 =	BKCE - Divisi III Blok R26 River	38 =	MAE - Selabutan River
4 =	BKCE - Panyauhan Divisi II Blok R21 River	39 =	MAE - Lake Ipel-1
5 =	BKCE - Divisi II Plasma Blok Q-R 19 River	40 =	MAE - Lake Ipel-2
6 =	BKCE - Hanya Stream	41 =	MAE - Silai River
7 =	BKCE - Gesing River	42 =	MAE - Lake Ipel-3
8 =	BKCE - Luluk River	43 =	MAE - Galek River
9 =	BKCE - Tenggirang River	44 =	MAE - Selabutan Kiri River
10 =	BKCE - Bunut River	45 =	MAE - Harles River
11 =	BKCE - Urak River	46 =	MAE - Saan-1 River
12 =	BKCE - Tebelian River	47 =	MAE - LakeSimpang 5 Gn. Agung
13 =	GME - Konjat Hill	48 =	MAE - Saan-2 River
14 =	GME - Setan Hill	49 =	MAE - Rayon River
15 =	GME - Spring water resources of Bukit Setan	50 =	MAE - Conservation Areal (Bukit Ulin)
16 =	GME - Bingkal Divisi III Blok D-4 River	51 =	MAE - Batu (Div. I Blok A-31) Hill
17 =	GME - San-1 (Divisi III Blok E-2) Stream	52 =	BAE - Div 1 A 3 River
18 =	GME - Sangsang (Divisi II Blok B-9) Stream	53 =	BAE - Div 1 A8 River
19 =	GME - Sangsang Hulu (Divisi II Blok A-18) River	54 =	BAE - Raya (Div 2 E3/F1) River
20 =	GME - Gambir (Divisi II Blok A-18) River	55 =	BAE - Simpang Raya (Div 2 E5/F3)
21 =	GME - Tian Teras (Divisi II Blok A-18) River	56 =	BAE - Div 3 G8 River
22 =	GME - LakeDs Gunung Makmur	57 =	BAE - Div 3 E7 River
23 =	GME - Sangsang Hilir River	58 =	SME - Waste Pool
24 =	GME - Songot River	59 =	SME - Div IV G28/29 River
25 =	GME - Kohor River	60 =	SME - Water Pool
26 =	GME - Kahayan River	61 =	SME - Spring water resources
27 =	GME - Koeng River	62 =	SME - Div 1 A32 River
28 =	GME - Malik River	63 =	SME - Div 3 BC-14 River
29 =	GME - Kehu River	64 =	SME - Div 4 A35 River
30 =	GME - Planduk River	65 =	SME - Div 4 Blok B39 River
31 =	GME - Nuhai River	66 =	SME - Div 4 C14 River
32 =	GME - Nikel River	67 =	SME - Div 4 C50 River
33 =	MAE - Ulin River	68 =	SME - Ubai Kecil River
34 =	MAE - Mahabung River	69 =	BME - Blok F-33 River
35 =	MAE - Meraya River	70 =	BME - Div. II P-23 River

Fauna

The number of fauna which found in the concession area of PT. Karya Makmur Bahagia is an amount of 96 species and 50 families (not including 2 species of birds that have not been identified), with details: a total of 33 mammals species and 16 families, 58 birds species and 31 families, and reptiles were 5 species and 4 families. The highest number of species and families is in the forest area of Division V MAE - Orangutan habitat (59 species), while the lowest was found in the estate GME (Spring water of Bukit Setan, Bingkal River Div. III Block D-4, San-1 Div. III Block E-2stream, Sangsang Div. II stream, Block B-9) and at the estate MAE (Saan 2 river and Rayon river); in this location, animals was not found. Types of animals found in the permit area of PT. Karya Makmur Bahagia are protected species, an amount of 96 species (33 species of mammals, 58 species of birds and 5 species of reptiles).

Thirty six species, 20 species of mammals and 16 species of birds, categorized as protected species under PP. 7 / 1999; 26 species listed at the CITES, with details: Appendix I counted 6 species (5 species of mammals and 1 species of birds, Appendix II: 18 species (7 species of mammals, 9 species of birds and 2 species of reptile) and Appendix III: 2 species (mammals), while the animals species that are included in the IUCN Red List at amount 89

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species, with details: 2 species on DD/Data Deficient (lack of data), 61 species on LC/Least category, 11 species on NT/Near Threatened category, 10 species on VU/Vulnerable category and 5 types on EN/Endangered category.

Table 3. Wildlife Species Richness in the Concession Area of PT. Karya Makmur Bahagia Based on Its Status

No.	Scientific Name	Local Name	Location	Wildlife Status		
				PP No. 7/ 1999	CITES	IUCN
A. MAMALIA						
1	<i>Tragulus javanicus/ Cervus javanicus*</i>	Kancil	7,9,69,70	D	TT	DD
2	<i>Hylobates agilis/Hylobates albo, Hylobates raffle, Hylobates unko*</i>	Owa-owa	7,9,12,14,51,70	D	App. I	EN
3	<i>Hylobates muelleri</i>	Kelempiau	70	D	App. I	EN
4	<i>Pongo pygmaeus</i>	Orang utan	36	D	App. I	EN
5	<i>Manis javanica</i>	Trenggiling	7,9,12,14,36,51,69, 70	D	App. II	EN
6	<i>Presbytis rubicunda</i>	Lutung merah	14,51	D	App. II	LC
7	<i>Muntiacus atherodes</i>	Kijang kuning	14,36,51	D	TT	LC
8	<i>Muntiacus muntjak</i>	Kijang muncak	7,9,12,14,31,36,51, 69,70	D	TT	LC
9	<i>Galeopterus variegates/Cynocephal us variegates*</i>	Kubung malaya	24,36,55,67	D	TT	LC
10	<i>Hystrix brachyura</i>	Landak raya	14,36,51	D	TT	LC
11	<i>Mydaus javanensis</i>	Sigung	24,55,67	D	TT	LC
12	<i>Tragulus napu</i>	Planduk	7,9,12,28,36,69,70	D	TT	LC
13	<i>Presbytis frontata/Presbytis nudifrons*</i>	Lutung	7,9,12,36,70	D	App. II	VU
14	<i>Nycticebus coucang/ Nycticebus brachycephalus*</i>	Kukang bukat	14,36,51	D	TT	VU
15	<i>Tarsius bancanus/ Tarsius natunensis</i>	Krabuku Ingkat	14,36,51	D	TT	VU
16	<i>Helarctos malayanus</i>	Beruang madu	36	D	App. I	VU
17	<i>Rusa unicolor/Cervus unicolor*</i>	Rusa sambar	14,36,51	D	TT	VU
18	<i>Neofelis nebulosa</i>	Macan dahan	7,9,12,31,70	D	App. I	VU
19	<i>Prionailurus bengalensis/Felis bengalensis*</i>	Kucing akar	1,2,3,4,5,6,7,9,12,3 1,36	D	App. II	VU
20	<i>Dendrogale melanura</i>	Tupai	7,8,9,10,11,12,24,2 6,28,31,54,55,56,57 ,61,63,64,66,67,68, 69,70	TD	App. II	DD
21	<i>Macaca fascicularis</i>	Kera ekor panjang	7,9,12,14,36,51,70	TD	App. II	LC
22	<i>Paguma larvata</i>	Musang galing	14,51	TD	App. III	LC
23	<i>Paradoxurus hermaphroditus</i>	Musang luwak	1,3	TD	App. III	LC
24	<i>Hystrix crassispinis</i>	Landak butun	14,36,51	TD	TT	LC
25	<i>Trichys fasciculata</i>	Angkis ekor-	14,51	TD	TT	LC

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No.	Scientific Name	Local Name	Location	Wildlife Status		
				PP No. 7/ 1999	CITES	IUCN
		panjang				
26	<i>Collosciurus notatus</i>	Bajing kelapa	1,2,3,4,5,6	TD	TT	LC
27	<i>Nannosciurus melanotis</i>	Bajing-kerdil Telinga-hitam	36	TD	TT	LC
28	<i>Sus scrofa/ Sus andamanensis Sus aruensis*</i>	Babi hutan	7,8,9,10,11,12,28,3 1,61,62,64,68	TD	TT	LC
29	<i>Arctogalidia trivirgata</i>	Musang akar	14,51	TD	TT	LC
30	<i>Viverra zangalla</i>	Tenggalung malaya	3,14,36,51	TD	TT	LC
31	<i>Macaca nemestrina</i>	Beruk	14,36,51	TD	App. II	VU
32	<i>Sus barbatus</i>	Babi jenggot	14,51	TD	TT	VU
B. BURUNG						
1	<i>Microhierax fringillarius</i>	Alap-alap capung	14,51	D	App. II	LC
2	<i>Elanus caeruleus</i>	Elang tikus	1,12,14,51	D	TT	LC
3	<i>Haliastur indus</i>	Elang bondol	36	D	TT	LC
4	<i>Ictinaetus malayensis</i>	Elang hitam	12,22,30,36,50	D	TT	LC
5	<i>Spilornis cheela</i>	Elang ular bido	36,50,	D	TT	LC
6	<i>Alcedo meninting</i>	Raja-udang meninting	12,14,19,21,22,36,5 0,51	D	TT	LC
7	<i>Ceyx rufidorsa</i>	Udang punggung- merah	36,50,	D	TT	LC
8	<i>Halcyon smyrnensis</i>	Cekakak Belukar	7,9,12,25,56,58,59, 60,65,69,70	D	TT	LC
9	<i>Anthreptes singalensis</i>	Burung madu belukar	6,14,19,20,21,22,23 ,36,50,51	D	TT	LC
10	<i>Arachnothera longirostra</i>	Pijantung kecil	6,14,19,20,21,22,23 ,36,50,51	D	TT	LC
11	<i>Nectarinia jugularis</i>	Kuncit	57	D	TT	LC
12	<i>Gracula religiosa robusta</i>	Tiong emas	7,9,11,12,14,20,25, 27,28,29,30,32,36,5 0,52,53,56,57,61,62 ,63,64,65,66,68,69	D	TT	LC
13	<i>Rhinoplax vigil/ Buceros vigil*</i>	Rangkong gading	36,50,	D	App. I	NT
14	<i>Anthracoceros malayanus</i>	Kangkareng hitam	36,50,	D	App. II	NT
15	<i>Buceros rhinoceros</i>	Rangkong badak	7,9,12,36,50	D	App. II	NT
16	<i>Argusianus argus</i>	Kuau raja	36,50,	D	App. II	NT
17	<i>Ciconia stormi</i>	Bangau storm	36	TD	TT	EN
18	<i>Loriculus galgulus</i>	Serindit melayu	36,50,	TD	App. II	LC
19	<i>Ninox scutulata</i>	Pungguk coklat	36,50,	TD	App. II	LC
20	<i>Strix leptogrammica leptogrammica</i>	Kukuk beluk	36,50,	TD	App. II	LC
21	<i>Artamus leucorhynchus</i>	Kekep babi	2,13,14,21,36,50,51	TD	TT	LC
22	<i>Streptopelia chinensis</i>	Tekukur biasa	1,2,3,4,5,6,13	TD	TT	LC
23	<i>Corvus enca</i>	Gagak hutan	6,19,20,36,43,50	TD	TT	LC
24	<i>Cacomantis sonneratii</i>	Wiwik lurik	9,11,12,22,25,27,29 ,32,36,50,52,53,55, 63,65,69,70	TD	TT	LC
25	<i>Centropus bengalensis</i>	Bubut alang-alang	2,9,12,14,21,27,28, 29,36,50,51,52,53,5 5,62,63,64,65,68,70	TD	TT	LC
26	<i>Eudynamis</i>	Tuwur asia	14,36,50,51	TD	TT	LC

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No.	Scientific Name	Local Name	Location	Wildlife Status		
				PP No. 7/ 1999	CITES	IUCN
	<i>scolopaceus/Eudynamis scolopacea*</i>					
27	<i>Dicrurus annectans</i>	Srigunting gagak	36,50,	TD	TT	LC
28	<i>Dicrurus paradiseus</i>	Srigunting batu	36,50,	TD	TT	LC
29	<i>Hemiprocne comata</i>	Tepekong rangkang	1,20,36,50	TD	TT	LC
30	<i>Hirundo tahitica</i>	Layang-layang batu	2,3,4,14,21,22,36,50,51	TD	TT	LC
31	<i>Lanius schach</i>	Bentet kelabu	1,2,3,4,5,6,14,20,21,22,23,51	TD	TT	LC
32	<i>Anthus novaeseelandiae</i>	Apung tanah	1,2,3,4,5,6,14,20,21,22,23,51	TD	TT	LC
33	<i>Terpsiphone paradisi</i>	Seriwang asia	36,50,	TD	TT	LC
34	<i>Meiglyptes tristis</i>	Caladi batu	14,20,21,36,50,51	TD	TT	LC
35	<i>Lonchura fuscans</i>	Bondol kalimantan	1,2,3,4,5,6,20,36,50	TD	TT	LC
36	<i>Pycnonotus atriceps</i>	Cucak kuricang	6	TD	TT	LC
37	<i>Pycnonotus goivaier</i>	Merbah cerukcuk	2,14,21,51	TD	TT	LC
38	<i>Pycnonotus plumosus</i>	Empulu	9,12,27,52,56,58,59,60,61,62,63,64,65,66,68,70	TD	TT	LC
39	<i>Pycnonotus simplex perplexus</i>	Merbah corok-corok	7,8,9,10,11,12,14,19,20,21,25,26,27,29,30,32,36,50,51,53,61,62,63,64,66,68,69	TD	TT	LC
40	<i>Amaurornis phoenicurus</i>	Kareo padi	2,14,21,51	TD	TT	LC
41	<i>Orthotomus ruficeps</i>	Cinene kelabu	1,2,3,4,5,6,14,19,20,21,22,33,34,35,36,37,38,39,40,41,42,43,44,45,46,48,50,51	TD	TT	LC
42	<i>Orthotomus sericeus</i>	Cinene merah	22	TD	TT	LC
43	<i>Prinia flaviventris</i>	Jeruwit	1,9,11,12,25,32,52,56,60,63,65,69,70	TD	TT	LC
44	<i>Abroscopus superciliosus</i>	kerenjak	7,8,9,10,11,12,25,26,27,29,30,31,32,53,54,58,59,60,61,62,63,64,65,66,68,69	TD	TT	LC
45	<i>Macronous gularis bornensis</i>	Ciung-air coreng	14,21,22,36,50,51	TD	TT	LC
46	<i>Stachyris erythroptera</i>	Tepus merbah-sampah	20	TD	TT	LC
47	<i>Copsychus malabaricus</i>	Murai batu	7,8,9,10,11,12,25,14,19,20,21,22,23,26,32,36,43,50,51,59,69	TD	TT	LC
48	<i>Copsychus saularis</i>	Kucica kampung	20,36,50,58,59,60	TD	TT	LC
49	<i>Psittacula longicauda</i>	Betet ekor-panjang	7,9,12,30,36,50,61,63,64,66	TD	App. II	NT
50	<i>Psittinus cyanurus</i>	Nuri tanau	36,50,	TD	App. II	NT
51	<i>Megalaima rafflesii</i>	Takur tutut	20,36,50,	TD	TT	NT
52	<i>Eurylaimus ochromalus</i>	Sempur hujan-darat	6,19,20,36,43,50	TD	TT	NT

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No.	Scientific Name	Local Name	Location	Wildlife Status		
				PP No. 7/ 1999	CITES	IUCN
53	<i>Rollulus rouloul</i>	Puyuh sengayan	36,50,	TD	TT	NT
54	<i>Meiglyptes tukki</i>	Caladi badok	36,50,	TD	TT	NT
55	<i>Stachyris maculata</i>	Tepus tunggir merah	22,36,50,	TD	TT	NT
56	<i>Ducula pickeringii</i>	Peregam	7,9,11,12,25,27,29, 32,52,61,62,64,66,6 9,70	TD	TT	VU
C. REPTILIA						
1	<i>Naja sumatrana</i>	Ular Kobra	2,7,9,10,11,12,54	TD	App. II	TT
2	<i>Varanus salvator</i>	Biawak	7,9,10,11,12,24,25, 26,28,30,31,54,56,5 7,61,67	TD	App. II	TT

Status' Remark:

D	: Protected	LC	: Least Concern
TD	: Unprotected	VU	: Vulnerable
App	: Appendix	EN	: Endangered
DD	: Data Deficient	NT	: Near Threatened

Locations' Remark:

1 = BKCE - Meraya Stream	36 = MAE - Divisi V (Lokasi Orangutan)
2 = BKCE - Divisi V Blok T36-37 River	37 = MAE - Ketubuk River
3 = BKCE - Divisi III Blok R26 River	38 = MAE - Selabutan River
4 = BKCE - Panyauhan Divisi II Blok R21 River	39 = MAE - Lake Ipel-1
5 = BKCE - Divisi II Plasma Blok Q-R 19 River	40 = MAE - Lake Ipel-2
6 = BKCE - Hanya Stream	41 = MAE - Silai River
7 = BKCE - Gesing River	42 = MAE - Lake Ipel-3
8 = BKCE - Luluk River	43 = MAE - Galek River
9 = BKCE - Tenggir River	44 = MAE - Selabutan Kiri River
10 = BKCE - Bunut River	45 = MAE - Harles River
11 = BKCE - Urak River	46 = MAE - Saan-1 River
12 = BKCE - Tebelian River	47 = MAE - LakeSimpang 5 Gn. Agung
13 = GME - Konjat Hill	48 = MAE - Saan-2 River
14 = GME - Setan Hill	49 = MAE - Rayon River
15 = GME - Spring water resources of Bukit Setan	50 = MAE - Conservation Areal (Bukit Ulin)
16 = GME - Bingkal Divisi III Blok D-4 River	51 = MAE - Batu (Div. I Blok A-31) Hill
17 = GME - San-1 (Divisi III Blok E-2) Stream	52 = BAE - Div 1 A 3 River
18 = GME - Sangsang (Divisi II Blok B-9) Stream	53 = BAE - Div 1 A8 River
19 = GME - Sangsang Hulu (Divisi II Blok A-18) River	54 = BAE - Raya (Div 2 E3/F1) River
20 = GME - Gambir (Divisi II Blok A-18) River	55 = BAE - Simpang Raya (Div 2 E5/F3)
21 = GME - Tian Teras (Divisi II Blok A-18) River	56 = BAE - Div 3 G8 River
22 = GME - Lake Gunung Makmur	57 = BAE - Div 3 E7 River
23 = GME - Sangsang Hilir River	58 = SME - Waste Pool
24 = GME - Songot River	59 = SME - Div IV G28/29 River
25 = GME - Kohor River	60 = SME - Water Pool
26 = GME - Kahayan River	61 = SME - Spring water resources
27 = GME - Koeng River	62 = SME - Div 1 A32 River
28 = GME - Malik River	63 = SME - Div 3 BC-14 River
29 = GME - Kehu River	64 = SME - Div 4 A35 River
30 = GME - Planduk River	65 = SME - Div 4 Blok B39 River
31 = GME - Nuhai River	66 = SME - Div 4 C14 River
32 = GME - Nikel River	67 = SME - Div 4 C50 River
33 = MAE - Ulin River	68 = SME - Ubai Kecil River
34 = MAE - Mahabung River	69 = BME - Blok F-33 River
35 = MAE - Meraya River	70 = BME - Div. II P-23 River

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. Karya Makmur Bahagia is the riparian ecosystem and lowland forest. While, the cloud forest ecosystems, ridge line forest and karst ecosystems are not found in the areas

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

Ecosystems in the concession area of PT. Karya Makmur Bahagia consist of two types, i.e. low-land forest ecosystem and montane forest. Land classes found in the region consist of five types: HJA (Honja), JLH (Juloh), BWN (Bawon), PLN (Pakalunai), and RGK (Rangankau).

Based on RePPPProT, five land class above were classified as threatened and/or rare and in which HJA (Mixed or hill dipterocarp forest on metamorphic rock), JLH (Mixed or hill dipterocarp forest on metamorphic rock or granite), BWN (Forest on ultrabasic rocks), PLN (Mixed or hill dipterocarp forest on metamorphic rock or granite or volcanic), RGK (Mixed or hill dipterocarp forest on metamorphic rock or granite or volcanic or basalt). In terms of this information, also there are classes in the area of land which include on rare and/or threatened category.

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 erosion. The amount of erosion that occurred after the land planted with oil palm and land cover crops (LCC) is predicted between 0.0341 to 0.1533 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 Mulya Agung Village area is 1669 hectares with a population of 1536 inhabitants, which consists of 801 male, 735 female, and consists of 477 households. Mulya Agung Village has a total population at about 987 inhabitants (532 male and 455 female). Gunung Makmur Village is a trans-village with 10,000

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Ha. The total number of households is 650 families, consisting of 525 transmigration-households and 125 households.

Waringin Agung village population is 1595 inhabitants which consist of 897 male and 698 female. Tumbang Sepayang Village is an elongated village which located on the edge of Mentaya River which has an area of 15,000 ha, with 210 households. While, the household in Rantau Tampang village is 153 households.

Community Composition Based on Religion

The religion embraced by residents in seven villages of study is Islam, Hinduism Kaharingan, Protestan, and the rest of them are Catholic Christian. Religion majority in each village is different.

Community Composition Based on Tribes

The majority tribes group in the village of Agung Mulya is Javanese (92.9%). In addition, there are also from Dayak tribe (5.3%), Sundanese (0.7%) and the rest is Batak tribe. While the majority of ethnic groups living in the Village Mulya Agung are the Javanese (90%) and the rest (10%) are the Dayak tribe. It is caused of Mulya Agung Village is one of the village which is a transmigration area, so the majority of the population comes from Java.

Ethic majority in Gunung Makmur Village is Javanese, followed native tribes of Dayak and a small number of Chinese, Banjar and Lombok. The majority tribe in Waringin Agung Village is Javanese, followed by Dayak and Sundanese. Then the tribes lived in the village of Fall Sepayang such as Dayak (majority), Javanese and Madura. As for the Randau Tampang Village majority is Dayak tribe. Customary leader and Head of Village are the influential figure in the village.

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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. Karya Makmur Bahagia is 693.48 hectares, with details in Table 4.

Table 4. Identification and Analysis Results of HCVA 1 to HCVA 6 in the Concession Area of PT. Karya Makmur Bahagia, Central Kalimantan Province

HCV/Components	HCV Existence (Yes/No)	Location	Land Area (Ha)
HCVA 1. Areas with Important Levels of Biodiversity			
1.1. Areas that Contain or Provide Biodiversity Support Function to Protection or Conservation Areas	Yes	SS. Anak Sangsang-1	4.00
		SS. Anak S. Only-1	7.76
		SS. Anak S. Only-2	4.87
		SS. Anak S. Merayak-1	6.58
		SS. Anak S. Penyahuan	14.32
		SS. Hanya	73.45
		SS. Kuwa	3.21
		SS. Merayak	83.,75
		SS. Nuhai	9.82
		SS. Penyahuan	14.32
		SS. Sangsang	90.02
		SS. Tian Teras	11.81
		SS. Anak Penyahuan-1	17.86
		SS.Tenggiran	3.11
		Bukit Konjat (GME)	6.29
		Bukit Setan (GME)	18.00
		Mata Air Bukit Setan (GME)	25.60
		Danau Ds Gunung Makmur (GME)	3.13
		1.2. Critically Endangered Species	Yes
SS. Anak S. Only-1	*)		
SS. Anak S. Only-2	*)		
SS. Anak S. Merayak-1	*)		
SS. Anak S. Penyahuan	*)		
SS. Hanya	*)		
SS. Merayak	*)		
SS. Anak Penyahuan-1	*)		
SS. Tenggiran	*)		
Bukit Setan (GME)	*)		
Bukit Batu (MAE)	7.90		
1.3. Areas that Contain Habitat for Viable Populations of Endangered, Restricted Range or Protected Species	Yes	SS. Anak Sangsang-1	*)
		SS. Anak S. Only-1	*)
		SS. Anak S. Only-2	*)
		SS. Anak S. Merayak-1	*)
		SS. Anak S. Penyahuan	*)
		SS. Hanya	*)
		SS. Kuwa	*)
		SS. Merayak	*)
		SS. Nuhai	*)
		SS. Penyahuan	*)
		SS. Tian Teras	*)
		SS. Anak Penyahuan-1	*)
		SS.Tenggiran	*)
		Bukit Setan (GME)	*)
Danau Ds Gunung Makmur (GME)	*)		

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HCV/Components	HCV Existence (Yes/No)	Location	Land Area (Ha)
		SS.Tenggiran	*)
		Mata Air Bukit Setan (GME)	*)
		Danau Ds Gunung Makmur (GME)	*)
		Sumber Mata Air (SME)	*)
4.2. Areas Important for the Prevention of Erosion and Sedimentation	Yes	Bukit Kala	32.86
		Bukit Konjat	*)
		Bukit Batu	*)
		Bukit Ehang	*)
4.3. Areas that Function as Natural Barriers to the Spread of Forest or Ground Fire	No	-	-
HCV5. Natural Areas Critical for Meeting the Basic Needs of Local People	No	-	-
HCV6. Areas Critical for Maintaining the Cultural Identity of Local Communities	Yes	- Keramat Bukit Ehang (GME)	*)
		- Pohon Keramat (SME)	0.03
HCVA Total			693.48

Note: *) the area size same as mentioned before

HCVA Management Planning and Monitoring

HCVA Management

HCVA management activities in the concession area of PT. Karya Makmur Bahagia in terms of maintaining and enhancing the HCV, are as follows:

- Marking of boundaries area of riverine environments, hills, wildlife corridors and buffer zones of protected forest.
- Maintenance of boundary sign.
- Protection of areas, flora and fauna.
- Rehabilitation and vegetation enrichment in the riverine environments.
- Training for Community and Staff/Officers.
- Development/Improvement SOP of HCV management
- Improving organizational management
- Coordination with relevant stakeholders

HCVA Monitoring

HCVA Monitoring refers to monitoring of HCV that resulted from HCVA management activities. As the area of HCV, its area is protected and cannot be exploited as a production area, so its function can be maintained and guaranteed. To ensure the integrity of this area, there should be monitored periodically as an input to the improvement of management techniques. Indicators that to be monitored on each HCV area in the concession area of PT. Karya Makmur Bahagia showed in Table 5 and Figure 3. While the planned area of High

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Conservation Value (HCV) in the area of palm oil plantation of Kebun Bukit Raja PT. Karya Makmur Bahagia is 693.48 hectares, with details as in Table 5.

Table 5. Indicator to be monitorin of HCV area in PT. Karya Makmur Bahagia, Central Kalimantan Province

HCVA	Location	Indicators to be monitored
1.1 Areas that Contain or Provide Biodiversity Support Function to Protection or Conservation Areas	SS. Anak Sangsang-1 SS. Anak S. Hanya-1 SS. Anak S. Hanya-2 SS. Anak S.Merayak-1 SS. Anak S. Penyahuan SS. Hanya SS. Kuwa SS. Merayak SS. Nuhai SS. Penyahuan SS. Sangsang SS. Tian Teras SS. Anak Penyahuan-1 SS.Tenggiran Bukit Konjat (GME) Bukit Setan (GME) Mata Air Bukit Setan (GME) Danau Ds Gunung Makmur (GME)	<ul style="list-style-type: none"> Disturbance Intensity against watershed area and hill, including Species diversity and density condition of Flora Species diversity and abundance of Fauna Realisation activity implementations and life percentage of plants which planted on the rehabilitation activity. Changes on river's width
1.2. Critically Endangered Species	SS. Anak Sangsang-1 SS. Anak S. Hanya-1 SS. Anak S. Hanya-2 SS. Anak S.Merayak-1 SS. Anak S. Penyahuan SS. Hanya SS. Merayak SS. Anak Penyahuan-1 SS. Tenggiran Bukit Setan (GME) Bukit Batu (MAE)	<ul style="list-style-type: none"> Species density condition of flora which critically endangered
1.3 Areas that Contain Habitat for Viable Populations of Endangered, Restricted Range or Protected Species	SS. Anak Sangsang-1 SS. Anak S. Hanya-1 SS. Anak S. Hanya-2 SS. Anak S.Merayak-1 SS. Anak S. Penyahuan SS. Hanya SS. Kuwa SS. Merayak SS. Nuhai SS. Penyahuan SS. Tian Teras SS. Anak Penyahuan-1 SS.Tenggiran Bukit Setan (GME) Danau Ds Gunung Makmur (GME) Bukit Batu (MAE) Sumber Mata Air (SME)	
2.3. Areas that Contain Representative Populations of Most Naturally Occurring Species	SS. Anak Sangsang-1 SS. Anak S. Hanya-1 SS. Anak S. Hanya-2 SS. Anak S.Merayak-1 SS. Anak S. Penyahuan SS. Hanya SS. Kuwa SS. Merayak SS. Nuhai SS. Penyahuan	

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HCVA	Location	Indicators to be monitored
<p>4.1. Areas or Ecosystems Important for the Provision of Water and Prevention of Floods for Downstream Communities</p>	<p>SS. Tian Teras SS. Anak Penyahuan-1 SS. Tenggiran Bukit Setan (GME) Danau Ds Gunung Makmur (GME) Bukit Batu (MAE) SS. Anak S. Tualan SS. Anak S. Mentaya1 SS. Anak Sangsang-1 SS. Anak S. Hanya-1 SS. Anak S. Hanya-2 SS. Anak S. Mentaya2 SS. Anak S. Merayak-1 SS. Anak S. Penyahuan SS. Anak S. Sangsang SS. Hanya SS. Kehu SS. Kuwa SS. Linuk SS. Merayak SS. Nuhai SS. Penyahoan SS. Sangsang SS. Tangkara SS. Tian Teras SS. Tualan SS. Anak Penyahuan-1 SS. Tenggiran Mata Air Bukit Setan (GME) Danau Ds Gunung Makmur (GME) Sumber Mata Air (SME)</p>	<ul style="list-style-type: none"> Disturbance Intensity against watershed area and hill, including Species diversity and density condition of Flora Species diversity and abundance of Fauna Realisation activity implementations and life percentage of plants which planted on the rehabilitation activity. Changes on river's width
<p>4.2 Areas Important for the Prevention of Erosion and Sedimentation</p>	<p>Bukit Kala Bukit Konjat Bukit Batu Bukit Ehang</p>	
<p>HCV6. Areas Critical for Maintaining the Cultural Identity of Local Communities</p>	<p>- Keramat Bukit Ehang (GME) - Pohon Keramat (SME)</p>	<ul style="list-style-type: none"> Disturbance Intensity against HCV 6 areas

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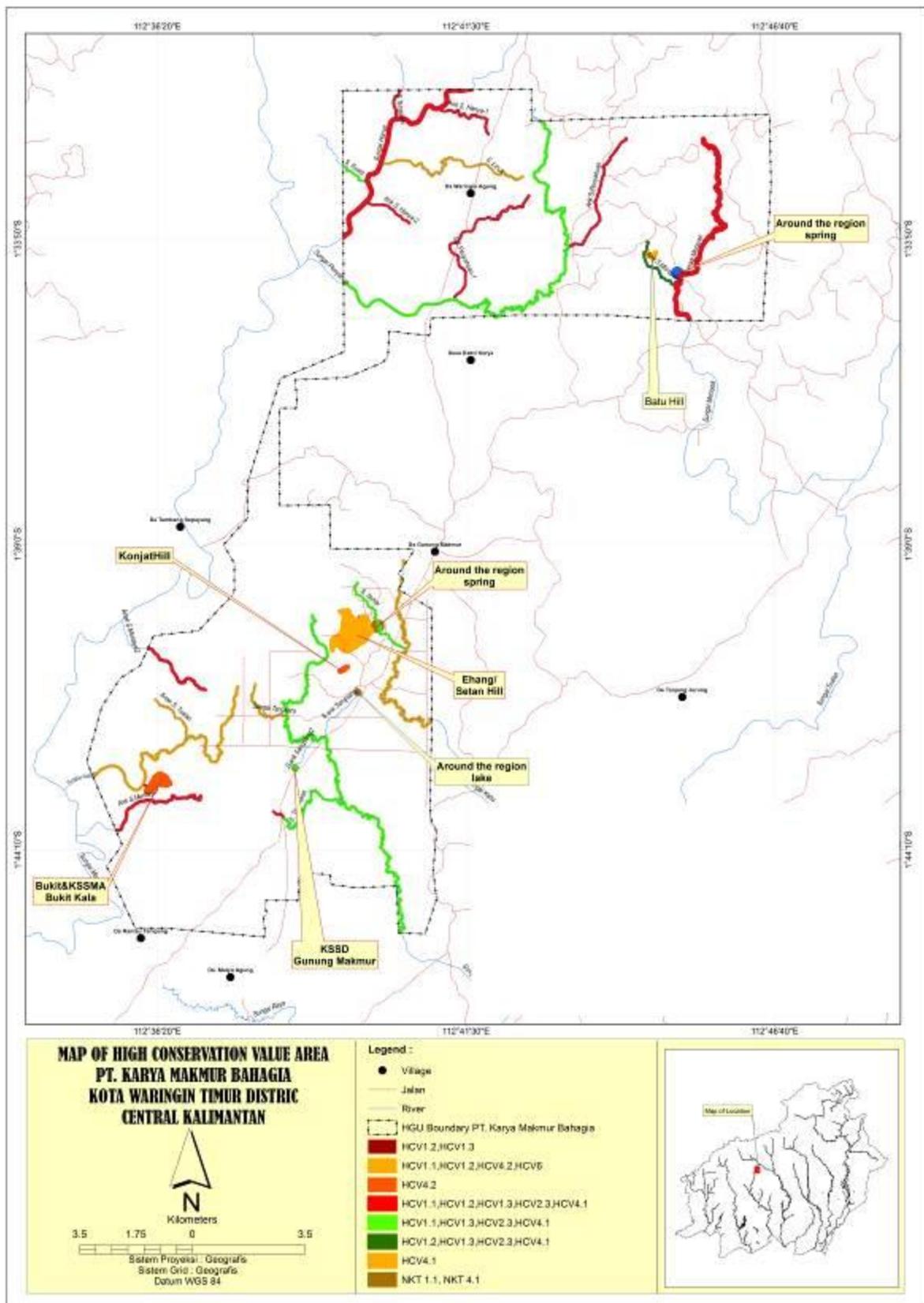
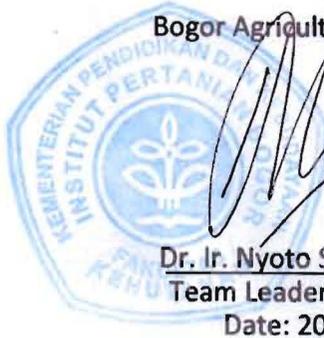


Figure 3. HCVA Map in the Concession Area of Palm Oil Plantation of PT. Karya Makmur Bahagia, Central Kalimantan Province

Internal Responsibility

Formal signing off by
assessors and
company

This document is the summary of assessment result on High Conservation Value (HCV) in PT Karya Makmur Bahagia– Kotawaringin Distric Central Kalimantan Province and has been approved by the Management of PT Karya Makmur Bahagia


Bogor Agriculture Institute

Dr. Ir. Nyoto Santoso, MS
Team Leader HCV & SIA
Date: 20-11-13

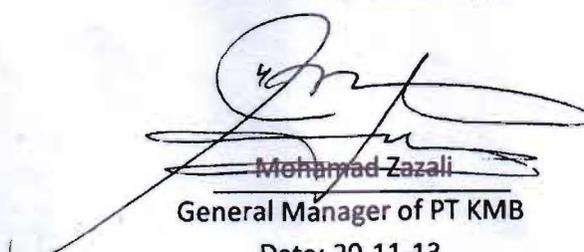
Management
PT Karya Makmur Bahagia,


Mohamad Zazali
General Manager of PT KMB
Date: 20-11-13

Statement of acceptance of responsibility for assessment

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

Management
PT Karya Makmur Bahagia,


Mohamad Zazali
General Manager of PT KMB
Date: 20-11-13

Internal Responsibility

Formal signing off
by assessors and
company

This document is the summary of assessment result on Social Impact Assessment (SIA) in PT Karya Makmur Bahagia – Kotawaringin Distric Central Kalimantan Province and has been approved by the Management of PT Karya Makmur Bahagia.

Bogor Agriculture Institute



Dr. Ir. Myoto Santoso, MS
Team Leader HCV & SIA
Date: 20-11-13



Management
PT Karya Makmur Bahagia,

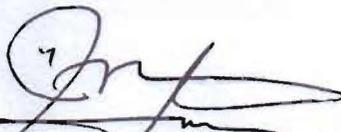


Mohamad Zazali
General Manager PT KMB
Date: 20-11-13

Statement of acceptance of responsibility for assessment

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Management
PT Karya Makmur Bahagia,



Mohamad Zazali
General Manager of PT KMB
Date: 20-11-13

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Appendix 1 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.	Name	Gender	Age	Ras	Religion	qualification	Job
A	Desa Bakti Karya						
1	Eko Prasetyo	Male	21	Jawa	Muslim	Junior High	Farmer
2	Jamin	Male	35	Jawa	Muslim	Non	Farm worker
3	Haryono	Male	60	Jawa	Muslim	Primary	Businesses
4	Suwarno	Male	40	Jawa	Muslim	Primary	Sopir
5	Sutrisno dan Siti Nuryanti	Male	30	Jawa	Muslim	Primary	Farm worker
6	Wahmin	Male	50	Jawa	Muslim	Senior High	Civil servants
7	Sarwono	Male	52	Jawa	Muslim	Primary	Farmer
8	Sutanto	Male	44	Jawa	Muslim	Primary	Farmer
9	Surohmat	Male	46	Jawa	Muslim	Senior High	Civil servants
10	Saryanto	Male	44	Jawa	Muslim	Bachelor's	Civil servants
11	Eko Supraapto	Male	38	Jawa	Muslim	Senior High	Businesses
12	Abdul Qodir	Male	52	Sunda	Muslim	Primary	Farm worker
13	Kamyanto	Male	37	Jawa	Muslim	Non	Farmer
14	Rasidin	Male	57	Jawa	Muslim	Non	Farm worker
B	Desa Tumbang Sepayang						
1	Ato	Male	37	Dayak	Protestant	Junior High	Farmer
2	Lawen D. Mambai	Male	57	Dayak	Protestant	Senior High	Farmer
3	Irwan	Male	34	Dayak	Muslim	Junior High	Farmer
4	Hariadi	Male	32	Dayak	Kaharingan	Junior High	Farmer
5	Ena	Male	41	Dayak	Kaharingan	Junior High	Farmer
6	Radis	Male	25	Dayak	Protestant	Senior High	Farmer
7	Diana	Male	50	Dayak	Muslim	Primary	Farmer
8	Handia	Male	62	Dayak	Kaharingan	Primary	Farmer
9	Pemilu	Male	38	Dayak	Protestan	Senior High	Civil servants
C	Desa Waringin Agung						
1	Tasripan	Male	50	Jawa	Muslim	Junior High	Driver
2	Nur Singgih	Male	38	Jawa	Muslim	Bachelor's	Civil servants
3	Darmadi	Male	32	Jawa	Muslim	Junior High	Civil servants
4	R. Berkah Sugianto	Male	36	Jawa	Muslim	Senior High	Farmer
5	Inawati	Female	25	Jawa	Muslim	Junior High	Civil servants
6	Lasmi	Female	26	Jawa	Muslim	Junior High	Civil servants
7	Wakidun	Male	35	Jawa	Muslim	Primary	Employee
8	Harsono	Male	44	Jawa	Muslim	Senior High	Farmer
9	Muhadi	Male	34	Jawa	Muslim	Junior High	Civil servants
D	Desa Agung Mulya						
1	Uup Carsuki	Male	39	Jawa	Muslim	Primary	Employee
2	Dasimin	Male	40	Jawa	Muslim	Tidak sekolah	Farmer
3	Sunaryo	Male	57	Jawa	Muslim	Senior High	Employee
4	Pujiono	Male	56	Jawa	Muslim	Primary	Farmer

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5	Suyitno	Male	45	Jawa	Muslim	Primary	Employee
6	Dalmuji	Male	47	Jawa	Muslim	Primary	Businesses
7	Yamukdi	Male	43	Jawa	Muslim	Bachelor's	Civil servants
8	Suyatno	Male	33	Jawa	Muslim	Primary	Farm worker
9	Sugeng Budiono	Male	30	Jawa	Muslim	Junior High	Farmer
10	Kaleanu/Sunarti	Male	52	Jawa	Muslim	Primary	Farmer
E	Desa Gunung Makmur						
1	Partono	Male	48	Jawa	Muslim	Primary	Farmer
2	Edi Jawawi	Male	36	Jawa	Muslim	Senior High	Businesses
3	Lasio	Male	56	Jawa	catholic	Bachelor's	Civil servants
4	Parman	Male	45	Jawa	Protestan	Bachelor's	Civil servants
5	Sukadi	Male	34	Jawa	Muslim	Primary	Employee
6	Wito	Male	33	Jawa	Muslim	Junior High	Businesses
7	Solihin	Male	35	Jawa	Muslim	Primary	Farmer
8	Supadi	Male	70	Jawa	Muslim	Junior High	Farmer
9	Iyet	Male	35	Dayak	Protestant	Primary	Farmer
10	Samprah	Male	51	Jawa	Muslim	Junior High	Businesses
11	Sugiati	Female	38	Jawa	Muslim	Junior High	Businesses
12	Turmadi	Male	60	Jawa	Muslim	Senior High	Civil servants
13	Surini	Female	41	Jawa	Muslim	SD	Businesses
F	Desa Mulya Agung						
1	Lamiyo	Male	54	Jawa	Muslim	Primary	Farmer
2	Juhariyono	Male	50	Jawa	Muslim	Bachelor's	Civil servants
3	Jumirah	Female	50	Jawa	Muslim	Primary	Trader
4	Sujito	Male	51	Jawa	Muslim	Primary	Farmer
5	Hari Sumawan	Male	30	Jawa	Muslim	Primary	Farmer
6	Khaerul Amin	Male	37	Jawa	Muslim	Senior High	Employee
7	Warno	Male	60	Jawa	Muslim	Primary	Farmer
8	Slamet	Male	45	Jawa	Muslim	Primary	Farmer
9	Sriyono	Male	45	Jawa	Muslim	Primary	Driver
10	Sulardi	Male	59	Jawa	Muslim	Tidak sekolah	Farmer
11	Nariyo	Male	42	Jawa	Muslim	Primary	Farmer
G	Desa Rantau Tampang						
1	Meok	Male	30	Dayak	Kaharingan	Primary	Employee
2	Radian	Male	23	Dayak	Kaharingan	Junior High	Employee

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Appendix 2 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 (Wild Animals Protection Ordinance) / 1931</i>	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.

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

Daftar hadir pembentukan AUD Desa Tanjung Jerong
Kecamatan Perandean Kabupaten Kepulauan Riau

No.	Nama	Pekerjaan	Tanda tangan
1.	SAMSUDIN.	Swasta	
2	JINOJO	Karyawan BPD	
3	Keja	Swasta	
4	UJANG	SEKDES TJ	
5	U. V. Tarsam.	Jh. agama.	
6	EMBANG.	Swasta	
7.	Sambukul	Swasta	
8	Jhm	SWASTA	
9.	Lamri	Swasta.	
10.	BOGOL	Swasta	
11.	ANUS	Ketatal BPD	
12	Tindan.	Kaur Pemerintahan	
13	GEMBIE	Swasta	
14	ENUN.	Korson. Tanjung-jerong.	
15.	gumel.	Ket. BPD - tj-jerong.	
16	SILAT		
17	Nadas	Swasta	
18	ANSEL	Ibu rumah tangga	
19	Delta	- " -	
20	ROBERTA	- " -	