Roundtable on Sustainable Palm Oil

New Planting Procedure
Summary Report of Assessments

PT. Windu Nabatindo Lestari

Cempaga Hulu Sub-District,

Kotawaringin Timur District, Kalimantan Tengah Province
Indonesia

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Summary Report of SEIA and HCV Assessments PT WINDU NABATINDO LESTARI

Kotawaringin Timur District, Central Kalimantan Province

1. Executive Summary

PT Windu Nabatindo Lestari (PT WNL) which is located in Cempaga Hulu Sub-District, Kotawaringin Timur 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 1 January 2010. As part of a sustainable palm oil management, PT WNL has conducted the Social Environment Impact Assessment (SEIA/ AMDAL), High Conservation Value (HCV) identification and Social Impact Assessment (SIA). The HCV and SIA assessment were conducted from September - October 2010 by IPB; the key consultants conducting these assessments have been accredited and approved by RSPO.

Formerly this area is the ex PT. Inhutani III. Measuring and Mapping Borders BPN by Director Measuring and Mapping Letter No. BPN. 1710/ST/IX/98 and 1711/ST/IX/98 dated 14 September 1998. The Consent License for PT Windu Nabatindo Lestari Plantation Business Permit (Izin Usaha Perkebunan) (No.525.26/151/V/EKBANG/2004, dated 17 May 2004) area based ± 17,500 Ha and IUP 525.26/356/V/EKBANG/2007, dated 30 May 2007 area based ±3,000 Ha.

The Consent License based Land Rights Title No 24 was approved on 10 March 2004 and valid to 10 March 2039 by BPN Kotawaringin Timur area based on \pm 9,616.28 ha and Land Rights Title No. 50 was approved on 10 May 2008 and valid to 18 February 2043 by BPN Kotawaringin Timur area based on \pm 1,934.58 ha. Total area based on Land Rights Title is 11,550.86 ha.

The Social Environment Impact Assessment (SEIA/ AMDAL / DPPL / UKL-UPL) was approved by AMDAL Commission of Kotawaringin Timur District, Central Kalimantan Province and the Environmental Permit (Izin Kelayakan Lingkungan) was approved by Regent Decree of Kotawaringin Timur District (Surat Keputusan Bupati Kotawaringin Timur) 16/Komisi-Kotim/VI/2008 dated on 28 June 2012, and Environmental Permit (Izin Lingkungan) No: 188.45/297/Huk-BLH/2013.

The results of the HCV assessment by independent consultants from IPB who have been accredited and approved by RSPO have shown that there is no primary forest in the Permitted Area (Izin Lokasi) of PT Windu Nabatindo Lestari. The vegetation cover is dominated by rubber (*Hevea brasiliensis*), agroforestry, scrub and degraded forest. Based on The Report of Semi Detail Soil Survey Assessment by Research Department of PT BGA, indicated that peatland was found in the Permitted Area (Izin Lokasi).

Scope HCV Assessment consists of company that conducted the WNL and WNS. Area WNL based on HGU No. 24 was approved on 10 March 2004 area based on \pm 9,616.28 ha, Land Rights Title No. 50 was approved on 10 May 2008 area based on \pm 1,934.58 ha and Land Rights Title No. 50 was approved on 10 May 2008 area based on \pm 489.47 ha. Total area based on Land Rights Title is 12,040.33 ha and PT WNS area (Windu Nabatindo Sejahtera) based on committee B BPN No. 23/HGU-RPD/IX/42/2007 on 25 September 2007 area 4,998.76 ha or total asssessment 17,039,09 ha. As for potential HCV areas, five types of HCV were identified by IPB; these are HCV 1 (1.1, 1.2 & 1.3), HCV 2.3, HCV 4.1, and HCV 6.

Based on the results of field observation and review of existing maps show that areas of High Conservation Value (HCVA) planned in the area of Oil Palm Plantations in the Area of PT. WNL and WNS, Central Kalimantan Province is 359.75 ha or 2.11% total area assessment. Locations are assessed HCV in PT WNL was \pm 12,040.33 ha and HCV total area identified was \pm 182.71 ha or 1.52 % of the total Area assessment.

The important elements for HCV 1 are *Shorea smithiana*, *Shorea balangeran* and *Hopea sangal*. The important elements for HCV 3 are Dipterocarp Forest. The important elements for HCV 4 are related to the potential damage from river riparian. The important elements for HCV 6 are related to the sacred graveyard. 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.

2. Scope of SEIA and HCV Assessment

2.1. Organizational information / contact person

General Data of the Company

Company Name : PT Windu Nabatindo Lestari
Deed of Establishment : Notary Neneng Salmiah, SH

No: 73 dated on 22 December 1993

Adjustment Article of Association : Notary Muhamat Hatta, SH, Association No : 38 dated on 22

March 2012

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

Taxpayer Notification Number : 01.657.245.5-712.001

Company Address : BGA Office, Melawai Street No 10, South Jakarta 12160

Type of Business : Oil Palm Plantation & Processing

Status of Concession Land : Permitted Area (Izin Lokasi) (No.1141.460.42 Year 1995 dated

27 October 1995) (size ± 17,500 Ha)

Environmental Permit (Izin Kelayakan Lingkungan) (No.

16/Komisi-Kotim/VI/2008, dated 28 June 2012)

Plantation Business Permit (Izin Usaha Perkebunan) (No. 525.26/151/V/EKBANG/2004, dated 17 May 2004) (size \pm

17,500 Ha)

Land Rights Title (HGU) no 24 BPN Kotawaringin Timur, Central Kalimantan dated 10 March 2004 - 10 March 2039 (size ±

9,616.28 Ha)

Land Rights Title (HGU) no 50 BPN Kotawaringin Timur, Central Kalimantan dated 10 May 2008 - 18 February 2043 (size \pm

1,934.583 Ha)

Land Rights Title (HGU) no 49 BPN Kotawaringin Timur, Central Kalimantan dated 10 May 2008 - 18 February 2043 (size ±

489.47 Ha)

Building Right Title (HGB) no 5 BPN Kotawaringin Timur, Central Kalimantan dated 10 September 2007 - 10 September

2037 (size \pm 149,820 m²)

Contact Person : Francisca Damanik

Geographical Location : See Picture 1, Picture 2, Picture 3 and Picture 4

Surrounding Entities : North : PT Windu Nabatindo Sejahtera, out grower

South : Out grower
West : Out grower
East : Out grower

The scope of SEIA/AMDAL of PT Windu Nabatindo Lestari show the local social entities within the Permitted area. The High Conservation Value assessment covers the Land Rights Title (HGU). It is also expanded into villages and other areas which are considered important to the proposed surrounding plantation area.

Figure 1. Location of PT Windu Nabatindo Lestari in Indonesia

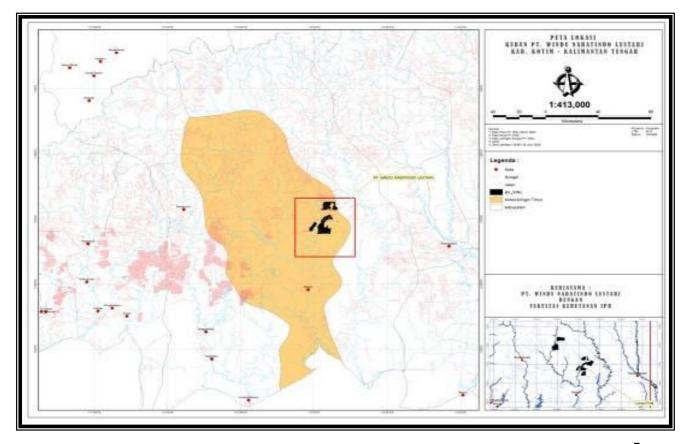


PROVINSI KALIMANTAN TENGAH

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Figure 2. Location of PT Windu Nabatindo Lestari in Central Kalimantan Province

Figure 3. Location of PT Windu Nabatindo Lestari in Kotawaringin Timur District



2.2. List of legal documents, regulatory permits and property deeds

The permits that have been obtained by the company are inclusive of Consent License (Izin Prinsip), Land Rights Title (HGU), Environment Impact Assessment (AMDAL) and Environmental Permit (Izin Kelayakan Lingkungan and Izin Lingkungan) and the Plantation Business Permit (Izin Usaha Perkebunan). The followings are the list of the licenses and recommendations:

Table 1. Types of permits and recommendations PT Windu Nabatindo Lestari

No	Licenses and recommendations	Issue	Number and date	Note
1.	Deed of Establishment	Notaris Neneng Salmiah, SH	No: 73 dated on: 22 December 1993	
2.	Adjustment Article of Association	Notary Muhamat Hatta, SH,	No : 38 dated on: 22 March 2012	
3.	Tax Registration Code Number	Directorate General of Taxes, Ministry of Finance	01.657.245.5-712.001	Registered 7-01-2010
4.	Permitted Area (Izin Lokasi)	Regent of Kotawaringin Timur (Bupati Kotawaringin Timur)	(No.1141.460.42 Year 1995 (size ± 17,500 Ha)	Registered 27-10-1995
5.	Environmental Permit (Izin Kelayakan Lingkungan)	Regent of Kotawaringin Timur (Bupati Kotawaringin Timur)	No. 16/Komisi-Kotim/VI/ 2008 (9,616.28 Ha)	Registered 28-06-2008
6.	Environmental Permit (Izin Lingkungan)	Regent of Kotawaringin Timur (Bupati Kotawaringin Timur)	No 188.45/297/Huk- BLH/2013 (1,934.583 Ha)	Registered 30-05-2013
7.	Environmental Permit (Izin Lingkungan)	Regent of Kotawaringin Timur (Bupati Kotawaringin Timur)	No 188.45/294/Huk- BLH/2013 (Pundu Nabatindo Mill)	Registered 30-05-2013
8.	Environmental Permit (Izin Lingkungan)	Regent of Kotawaringin Timur (Bupati Kotawaringin Timur)	No 188.45/295/Huk- BLH/2013 (489.47 Ha)	Registered 30-05-2013
9.	Plantation Business Permit (Izin Usaha Perkebunan)	Regent of Kotawaringin Timur (Bupati Kotawaringin Timur)	No. 525.26/151/V/ EKBANG /2004, (size ± 17,500 Ha)	Registered 17-05-2004
10.	Land Rights Title (HGU)	BPN Kotawaringin Timur, Central Kalimantan	No 24 BPN Kotawaringin Timur, Central Kalimantan (size ± 9,616.28 Ha)	Dated 10-03 2004 to 10- 03-2039
11.	Land Rights Title (HGU)	BPN Kotawaringin Timur, Central Kalimantan	No. 50 BPN Kotawaringin Timur, Central Kalimantan (size ± 1,934.583 Ha)	Dated 10-05- 2008 to 18- 02- 2043
12.	Land Rights Title (HGU)	BPN Kotawaringin Timur, Central Kalimantan	No. 49 BPN Kotawaringin Timur, Central Kalimantan (size ± 489.47 Ha)	Dated 10-05- 2008 to 18- 02-2043
13.	Building Right Title (HGB)	BPN Kotawaringin Timur, Central Kalimantan	No. 5 BPN Kotawaringin Timur, Central Kalimantan (size ± 149,820 m ²)	Dated 10-09- 2007 to 10- 09-2037

2.3. Area and time-plan for new plantings

The proposed new planting area by PT Windu Nabatindo Lestari is in the location of the Plantation Business Permit (Izin Usaha Perkebunan) which the owners of the land have received the FPIC (free, prior and informed consent). Land development and planting of oil palm begin in 1998 following the procedures of the RSPO New Planting Procedures of ongoing process (NPP).

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

Estate						Planted \	rear (ha)					
201010	1998	1999	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
PAGE	-	-	-	173.55	357.63	415.09	388.82	37.92	ı	-	-	-
KAGE	-	-	111.49	1,340.05	564.50	216.10	57.26	195.05	62.71	110.36	97.19	162.99
PNBE	874.92	591.59	597.07	578.40	110.57	54.78	91.61	215.77	133.13	142.37	142.52	39.28

Table 3 Estimation of new plantings area and time-plan for new planting PT Windu Nabatindo Lestari

Estato	Estate Total Year Planting				Potential	Plan			Not	
Estate	Area	<2010	2011	2012	total	land	2013	2014	2015	Planting
PAGE	1,934.86	1,373.01			1,373.01	561.85	300	150		111.85
KAGE	4,067.00	2,657.52	97.19	162.99	2,917.70	1,149.30	200	300		649.30
PNBE	5,549.00	3,390.21	142.52	39.28	3,572.34	1,976.99	0	0	0	1,976.99
Total	11,550.86	7,420.74	239.71	202.27	7,862.72	3,688.14	500	450	0	2,738.14

3. Assessment Process and Procedures

3.1. Assessors and their credentials

a. SEI Assessment

The Social Impact Assessment of PT Windu Nabatindo Lestari was carried out by Faculty of Forestry, Bogor Agriculture University 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 on 15 March 1962. He is the HCV team leader in the Faculty of Forestry - Bogor Agricultural Institute and an expert in the management and conservation of biodiversity. Holds a Master of Science in management courses of the natural resources and environment from Bogor Agricultural Institute in 1992. His experience as an expert in environment and biodiversity started since 1987 and he is a specialist in the study of 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 of Forest Conservation Management Plan.

Handian Purwawangsa, S.Hut, MS

Born in Cipanas on 1 January 1979. As a member of the HCV team in the Faculty of Forestry, his expertise lies in social and culture. He obtained his Master's Degree from Bogor Institute of Agriculture Forestry Sciences study program in 2008. His experience in social studies began in 2002.

Ahmad Faisal Siregar, S.Hut

Born in South Tapanuli on 9 April 1975. He is a member of the Faculty of Forestry HCV team with expertise in social and culture. His Bachelor of Forestry was obtained from Bogor Agricultural Institute in 1998. In 2008, he continued with his education under the Major program of Conservation of Tropical Biodiversity, Graduated from the Bogor Agricultural Institute. His 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 on August 30 1980. He took social studies in the Faculty of Forestry HCV team - Bogor Agricultural Institute. He continued with his Master's Degree from the Bogor Institute of Agriculture Forest Science Processing Program. He is currently a researcher at the Research Institute of Forestry in Banjarbaru South Kalimantan.

Tommy Jafelda, S.Hut

Born in Sigli (Aceh) on 24 June 1987. He took social studies in the Faculty of Forestry HCV team - Bogor Agricultural Institute. His Bachelor of Forestry was obtained from Forestry Faculty of Forestry at Bogor Agricultural Institute in 2009.

Jimmy Syahrasyid

Born in Surabaya on 19 November 1976. He took social studies in the Faculty of Forestry HCV team - Bogor Agricultural University. Last education was in high school.

Dian Purbasari, S.Pi

Born in Banyuwangi on 15 August 1985. As a member of the Faculty of Forestry SIA team - IPB, the position in the team as an assistant social experts. She obtained her Bachelor degree from Fisheries Technology Program - IPB. She started her SIA studies in particular as an assistant social expert since 2009.

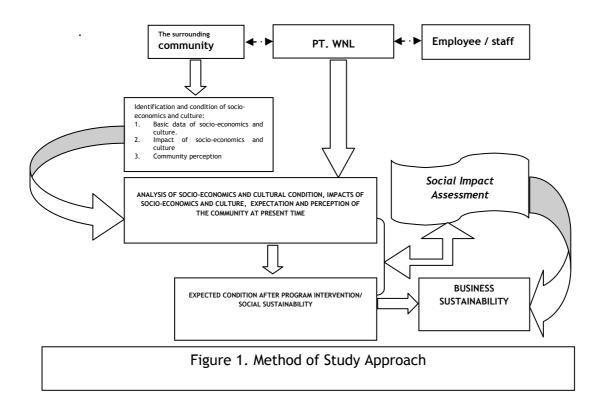
Assessment Methods (data sources, collection, dates, program, and visited places)

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

Method of Executing the Study

Approach framework in the study of Social Impact Assessment was by learning the present existing condition in PT. Windu Nabatindo Lestari, particularly the condition which was related with socio-economic condition, socio-economic impacts of the company toward the surrounding of the community, and the community's perception. Based on the existing condition, compilation and preparation were conducted for making SIA document and social management plan which contain activities that should be conducted to create ideal condition (desirable condition).

Sampling technique that is being used was 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. Windu Nabatindo Lestari. On the basis of sampling techniques being used and inputs from the company, the villages which became the sample were village of Pundu, Pelantaran, Keruing, Bukit Raya, Pantai Harapan, Bukit Batu, Sudan, dan Sei Ubar Mandiri village.

Secondary data or primary data being collected was analyzed by integrating quantitative and qualitative method. Qualitative analysis emphasizing 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. Windu Nabatindo Lestari.

The findings obtained from the methods above were analyzed. The baseline of the analysis was based on RSPO criteria which is 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

The Social Impact Assessment of PT Windu Nabatindo Lestari was carried out by the Faculty of Forestry, Bogor Agriculture University 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:

Dr. Ir. H. Nyoto Santoso, MS - Team Leader

Born in Banyuwangi on 15 March 1962. He is the HCV team leader of the Faculty of Forestry - Bogor Agricultural Institute and an expert in the management and conservation of biodiversity. Holds a Master of Science in management courses of the natural resources and environment from IPB in 1992. His experience as an expert in environment and biodiversity started since 1987 and he is a specialist of the study of 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 of Forest Conservation Management Plan.

Ir. Heru B Pulonggono, MSc

Born in Banyuwangi on 7 April 1963. As a member of the HCV team in the Faculty of Forestry –IPB, his area of expertise are hydrology and soil conservation. He obtained his Master of Agriculture with specific studies of tropical geography from the University of Kyoto - Japan. His 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

Born in Cipanas on 1 January 1979. As a member of the HCV team in the Faculty of Forestry, his expertise lies in social and culture. He obtained his Master's Degree from the Bogor Institute of Agriculture Forestry Sciences study program in 2008. His experience in social studies began in 2002.

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Eko Adhiyanto, S.Hu

Born in Batang on 3 June 1978. As a member of the HCV team in the Faculty of Forestry, he obtained his Bachelor of Conservation Forestry Program of Forest Resources Department of Forest Resources Conservation and Ecotourism, Faculty of Forestry, Bogor Agricultural University in 2001. He worked as a herbalist since 2003

Sutopo, S.Hut

Born in Purbalingga on 18 July 1983. As a member of the HCV team in the Faculty of Forestry, his area of expertise is in the wildlife. He obtainedhis Bachelor's degree in the Department of Forest Resources Conservation and Ecotourism, Faculty of Forestry of IPB in 2008. He studied HCV since 2007and in other studies related to wildlife in 2006.

M. Sayidina Ali, AMd

Born in Brebes on 6 April 1983. He is a member of the Faculty of Forestry HCV team with expertise in GIS. He obtained his Bachelor's degree (D3) on the course of Ecotourism, Department of Forest Resources Conservation and Ecotourism, Faculty of Forestry in 2005. His experience in the study of HCV as GIS personnel started in 2007. He is currently furthering his education at the Faculty of Forestry Strata 1 - Nusa Bangsa University, Bogor.

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

Implementation Method

Date and Location

Identification and analysis of the HCV was carried out in the area of PT. Windu Nabatindo Lestari at Pundu, Pelantaran, Keruing, Bukit Raya, Pantai Harapan, Bukit Batu, Sudan dan Sei Ubar Mandiri Villages, Cempaga Hulu District, East Kotawaringin Regency, and Central Kalimantan Province. The identification and analysis was held on September untill October 2010.

Materials and Equipments

Materials used in the identification and analysis included: Area Map of PT. Windu Nabatindo Lestari, Spatial Planning Map of Central Kalimantan, Spatial Planning of East Kotawaringin, Landsat Image, Map of Administration, Slope Map, Forest Land Use Map (TGHK), Map of Land System, and materials that were used in field survey (alcohol 70%, used paper, label, 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 (Brunton), plastic rope 50 m (marked at 2, 5, 10 and 20 m), circular/diameter gauge, camera, length gauge, binoculars, and stationeries.

Approach

There are 2 (two) factors that determine the success in maintaining and increasing HCV in the area of PT. Windu Nabatindo Lestari, namely (1) the availabilities of identification and analysis of documents on the existence of HCV in the area of PT Windu Nabatindo Lestari 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) in the area of PT. Windu Nabatindo Lestari, and this will be used as a reference in the management and monitoring of HCVA.

The success in the implementation of identification and analysis activities of HCV existing in the area of PT. Windu Nabatindo Lestari 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 are 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 have 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.

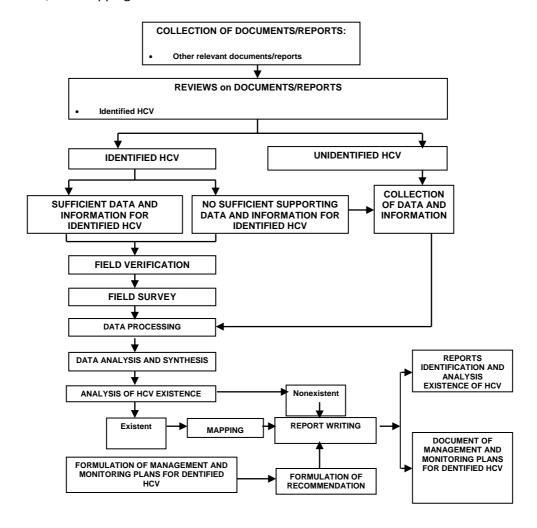


Figure 2. Approach in The Identification and Analysis of HCVs

HCV Identifying Methods

The assessment covers the Permitted Area (Izin Lokasi) which has been approved as the company's project area. Assessments also expanded into villages and other areas which was to be considerably of relevance of importance to the proposed plantation area. The field survey was conducted on September - October 2010.

In the process, each observation team was accompanied by the field staff from the company and local representatives who are familiar with the site. Besides field activities, the team also collected information from the local people through individualistic interviews, Focus Group Discussion (FGD), as well as public consultations (the list of stakeholders in the participative process is included in **Appendix** 1). At the same time, confirmation and cross checking of the findings were carried out with the local people using the technique of purposive sampling – which included the socialites, the enclaves' owners (if existed), and the related interest parties.

The understanding and scope of HCV for the oil palm plantation sector refers to the HCVF definitions which apply to the forestry sector. The Identification of High Conservation Value in Indonesia was developed by the *Konsorsium Revisi HCV Toolkit Indonesia* (2008) - the toolkit for the revision HCV consortium. Other references are such as IUCN, CITES, and other guidelines as well as the relevant laws of Indonesia were also subjects of consideration (See **Appendix 2**).

4. Summary of Assessment Findings

4.1. SEI Assessment

For developing the palm oil plantation and mill, PT Windu Nabatindo Lestari has Forest Relinquishment Areas Decree (SK Pelepasan Kawasan Hutan) with total areas of 11,550 ha. For the construction and development of oil palm plantations and processing industry, PT. Windu Nabatindo Lestari has an area of 11,550 ha that got location permits of the Forest relinquishment by the Forestry minister Letter no 213/KPTS-II/1998 on 27 February 1998.

PT WNL located between $112^\circ57'23'' - 113^\circ7'39''$ BT dan $1^\circ57'54'' - 2^\circ07'02''$ LS. PTWNL border with about among other:

North: PT Windu Nabatindo Sejahtera, out grower

South : Out grower
West : Out grower
East : Out grower

COMMUNITY CHARACTERISTIC

To meet the needs of carbohydrates (rice), the majority of the Pundu villagers purchase their reuirements (71.19%) and others comes from government aid program or from private companies (28.81%). This village is a center of the government and the economy. People prefer economic activities and plantations (rubber and palm oil) to meet the needs of cash to buy carbohydrate needs. Hill paddy was deemed unprofitable to work today. Animal protein (meat and fish) is largely secured from purchases (90.00%), the area of the river outside the company (8.57%), and other garden / forest (1.41%). The villagers meet the needs of most fruits and vegetables from purchases (87.38%) and own private cultivation (12.62%).

Carbohydrate needs of Pelantaran villagers is mostly fulfilled from purchases (89.10%), and support from the employees of the company, especially for private companies (10.00%). Only about 0.90% of villagers carbohydrate needs is fulfilled from their own gardens or fields. Its is perceived farming is less profitable, most villagers prefer rubber plantations and buying carbohydrate for their needs. For protein, most of the fulfillment comes from purchases (93.25%), the rest from river around the settlement (2.25%), own cattle (2.25%) and fishing from the company ditches. Similarly to the needs of vegetables and fruit, it is mostly supplied from purchases (89.00%), others from own cultivation (9.00%) and for such vegetables like kale comes from the companies ditches (2.00%). Wood is getting hard to find around the settlement and most of this needs is fulfilled by purchase (90.25%). Several communities still utilize waste wood from planted oil palm plantation area (4.50%), assistance from the companies (3.00%) and around the garden / forest (2.25%).

Most of the carbohydrate supply of Keruing villagers is from purchases (90.01%) and private cultivation (9.01%). Most of the protein supply comes from purchases (77.95%), fishing in the rivers around the settlement (13.18%), private cattle (7.95%) and the trenches of the company (0.91%). Most vegetable / fruit is mostly from purchases (90.00%) and own private cultivation (10.00%). There is still a demand for wood which are sourced from PT. Windu Nabatindo Lestari area, however a relatively small requirement (4.09%) comes from the forested area (especially riparian areas) and 5.68% of nonforested areas (the rest of the land clearing timber). Others is fullfilled from purchases (71.36%), community garden area (10.00%), forest area in other companies (6.59%), and from the company

program (2.27%). Still found the villagers who use traditional medicines such as *Pasak Bumi*, yellow roots (*Akar Kuning*) which are still sourced from the plantation area of PT. Windu Nabatindo Lestari, but only a relatively small of 0.45% and the forest area / other plantation yield 4.55%. Medication needs are largely met from purchases (80.00%) and government / companies assistance (9.09%).

Generally, land ownership in the village of Bukit Raya is 1-2 ha. Legality and the existing land tenure are mostly in form of land ownership certificates and SKT (Land Information Letter), while others still do not have a strong legal ownership. Land ownership boundaries are marked with a boundary pole of ironwood (ulin) and natural barriers (trees / bamboo).

Resources used by the Pantai Harapan villagers are sourced from forested areas or other natural ecosystems in PT. Windu Nabatindo Lestari (which is wood) but only a relatively small percentage of 0.54%. Other resources utilized by villagers are sourced from non-forested areas, which is wood (13.23%) and animal protein (fish) taken from the trenches of the company (0.17%). Other needs are met from outside the plantation. Carbohydrate needs are largely supplied from purchases (76.38%), support from the companies, especially for plantation companies employees (23.62%). Villagers who work in the plantation companies and employees are provided with rice assistance from the company. For protein, most of the fulfillment comes from purchases (88.33%), from the river around the settlement (8.71%), own livestock (2.79%) and fishes from the company trenches (0.17%). Similarly the needs of vegetables and fruit comes mostly through purchase (82.59%). Others comes from own cultivation (17.07%) and garden / other forests (0.34%).

Resources used by the Pantai Harapan villagers are sourced from forested areas or other natural ecosystems in PT. Windu Nabatindo Lestari although wood is however relatively small (0.54%). Other resources comes from non-forested areas, namely wood (13.23%) and animal protein were taken from in the company trenches (0.17%). Other needs are met from outside the plantation.

Carbohydrates needs of the Bukit Batu villagers are largely filled from purchases (76.38%) and support from plantation companies (23.62%). Villagers who work in the plantation companies and employees are supported with rice assistance from the company.

For protein, most of the supply are from purchase (88.33%), from the river around the settlement (8.71%), own private cattle (2.79%) and fish from the company trenches (0.17%). Similarly to the needs of vegetables and fruit, mostly are from purchases (82.59%). Others are met from own cultivation (17.07%) and garden / other forests (0.34%).

Communities in the Sudan Village rarely farm padi/rice. Beside the land getting smaller, the harvesting obtained poor yield because of traditional farming practices and the presence of pests so that this activity only accounts for 0.83% of the daily needs of the village. Most of the carbohydrate needs comes from purchases (98.75%), governments help program and companies around the village (0.42%). Most protein needs are from purchases (82.71%), fishing in the rivers around settlements especially Cempaga River (16.04%), garden / other forest (0.83%) and own livestock (0.42 %). Vegetable / fruit comes mostly from purchases (97.50%) and own cultivation (2.50%).

Wood demand are largely met from purchases (68.58%), forest area in other companies (17.04%), and a community garden area (14.58%). Traditional medicines sourced from forested areas are very rare and are mostly sourced from purchases (95.83%), and government and company support (4.17%). Generally animal feed are obtained from the settlements (100.00%). Livestock raised by the community are pigs, chickens, ducks and others.

Carbohydrate needs of Sei Ubar Mandiri villagers are mostly from purchases (89.44%), support from the employees of the company, especially the plantation companies (10.56%). Villagers working in the company are provided with rice assistance. For protein, most are from purchases (93.89%) and the rest are from the river around the settlement (6.11%). Similarly to the needs of vegetables and fruit,

mostly filled from purchases (88.33%) and others are met from own cultivation (11.67%). Wood supply are from purchases (74.38%), and their own garden (12.08%). Communities still utilize waste wood in oil palm planted area (10.76%) and the rest are from the company support (2.78%)

EMPLOYMENT AND PUBLIC RELATIONS

In general classification of labor in PT. Windu Nabatindo Lestari is a staff employee, non-staff, permanent and non-permanent daily worker (karyawan harian tetap dan karyawan harian lepas). The plantation is divided into seven estates, i.e. Selucing Agro Estate, Sarawak Damai Estate, Pantai Harapan Estate, Pundu Nabatindo Estate, Pelantaran Agro Estate, Katari Estate, and Keruing Raya Estate. All employees are in the legal age and there is no employee under the age of 15 years. Human resources division in PT. Windu Nabatindo Letari are general administration, estate operations, nurseries, engineering and mills, measurement (GIS) and accounting and finance and warehouse.

There is no Workers Union (Serikat Pekerja) at PT. WNL. However, the company does not restrict freedom of assembly and association, including not prohibit the establishment of trade unions. As the company is able to meet all the needs of the human resources at the plantation as well is paying at least at minimal wage rate level, provides housing with clean water and lighting, education and health services for all employees and their family, the employees do not feel the need for a workers union. The company itself already has a plan to form a company run Workers Union as a formal and informal channel of communication and in anticipation of emplyees needs and participation.

Workers Union serves as one of the company's partner in ensuring workers rights in accordance with the legislation, as a corporate partner in disseminating information of the company to the workers, and the mediator between the company and the workers in case of labor disputes.

In terms of facilities, the following are areas which the company can look into improving:

- a) clean water facilities in employee housing during the dry season.
- b) transportation for employees whose working place is away from the housing
- c) transport facilities for school children.
- d) possibility of providing uniforms for employees, especially to supervisor level.
- e) special leave for female employees during their menstrual cycle.

Overtime payment mechanisms are looked into and underway.

Based on company data and recognition of workers, fatal accidents are very rare. Work accidents are the most frequently only minor accidents, such as falling bunches or scratched by thorn in the hands or other areas of the body and thorns cutting soles of feet due to poor quality shoes.

Accidents that can cause serious injury are usually from usage of workers harvesting knife (sickle/crop tools) and sap from exposed palm flowers getting into eyes. Most of the accidents are due to negligence of workers, not using or putting on Personal Protection Equipment (PPE) such as helmets and goggles, as well as the lack of attention to operational safety standards such as wearing gloves and covering knife on harvest equipment (sickle) when not in use.

IMPACT of PT. WINDU NABATINDO LESTARI EXISTENCE ON COMMUNITY

The existence of oil palm plantation company PT. Windu Nabatindo Lestari certainly has an impact on communities around the company. These impacts included increased income, employment, regional development, development of trade and services. However, in addition to the positive impact, the company also generated some less desirable affect on the surrounding communities such as environmental pollution, social and other negative impacts.

In general, the villagers are absorbed into the workforce of PT. Windu Nabatindo Lestari as staff, non-staff, permanent and non-permanent daily worker (karyawan harian tetap dan karyawan harian lepas) and their placement are into seven estates, i.e. Selucing Agro Estate, Sarawak Damai Estate, Pantai Harapan Estate, Pundu Nabatindo Estate, Pelantaran Agro Estate, Katari Estate, and Keruing Raya Estate. As stated earlier, there is no employees under the age of 15 years. The workers and staff are divided into various work units in the PT. Windu Nabatindo Letari among these are general administration, estate operations, nurseries, engineering and mills, measurement (GIS) and accounting and finance and warehouse.

Pundu Village is a community that has a high interaction with the company PT. Nabatindo Windu Lestari. A total of 56.25% people of this village have interaction with the company in various forms while the remaining 43.75% does not interact with the company. Highest of interaction in the community is invited to discuss various issues, such as issues of land compensation, the excess measure, the concept and mechanism of plasma and various other issues as much as 31.25%. Other of interaction are as non permanen daily workers in the company (12.5%) and permanent employees (6.26%) and the co-operation as a provider of goods or services (6.25%).

The positive impact that has been felt by the people of the Pelantaran Village from the existence of PT. Windu Nabatindo Lestari is the employment, the business opportunity, accessibility becomes easier, the construction of various facilities and infrastructure as well as a variety of other social assistance.

Highist interaction village communities Pelantaran are non permanent employee 37,50%, permanent employees in the company (25,00%), were invited to a meeting to discuss the socialization program (25,00%), dan were invited ti discuss various issues (12,50%).

The positive impact that has been felt by the people of the Pelantaran Village from the existence of PT. Windu Nabatindo Lestari is the employment, the business opportunity, accessibility becomes easier, the construction of various facilities and infrastructure as well as a variety of other social assistance.

Based on the interview / FGD at Keruing Village, it is known that 30.00% of people have interaction with the company, while the other 70.00% do not interact. The highest interaction is in the form of socialization meetings (20.00%) and the other is to discuss on land tenure, social, and CSR (10.00%). The positive impact that has been felt by the public because of the presence of PT. Windu Nabatindo Lestari is the employment opportunities, logistic access to which is more open, education, clean water and a variety of other social assistance.

Based on the interview / FGD in the village of Bukit Raya, only about 25.00% of the communities who had interactions with the company, while the other 75.00% do not interact. Interaction with the company was invited to a meeting to discuss a land tenure issue, social, CSR 25.00%

Based on the interview / FGD at Pantai Harapan Village, the interaction with the company is high at 66.77%. The high interaction is influenced by the location of the village, located adjacent to or within the company's operations. Due to close proximity, corporate programs, plasma and other CSR

programs are also more intensely conducted here by the company. Community with the highest interaction with the company is invited to the socialization program (22.22%). This village is also where the parent cooperative for implementation of plasma (smallholders scheme) that is run by the company PT. Windu Nabatindo Lestari is located. Other interactions are with the villagers who work as non-permanent daily workers (karyawan harian lepas) (14.81%), were invited to discuss various issues (11.11%), as a provider of goods and services (3.70%) and others (3.70%).

Based on the interview / FGD in the Bukit Batu Village, it is known that the public does not interact with the company PT. Windu Nabatindo Lestari. The villagers prefer to work in their rubber plantation and with other plantations whose proximity are closer to this village. Thus, the villagers said that the company has not given any real positive benefits to them. The existence of the company is actually seen as a negative impact on the community with the reduction of land and the increasingly polluted river water.

Based on the interview / FGD in the Sudan Village, it is noted the interaction here is quite low at 15.38%. This interaction is affected by the village location which is far from the company's operations. Interaction with the community is to socialize on company's activities such as plasma (smallholders scheme) and other programs (7.69%) and to discuss various issues such as flooding, tenure, etc.

Based on the interview / FGD in Sei Ubar Mandiri Village, it is noted that most villagers interact with the company (50.00%). Interaction are company socialization programs such as plasma, CSR and others (25.00%) and discussion on various issues such as flooding, tenure, etc. (25.00%).

CONCLUSIONS AND RECOMMENDATIONS

CONCLUSIONS:

- 1. Level of education and human resource capacity in the villages around PT. Windu Nabatindo Lestari is generally still relatively low. The villages that are located around the main roads such as the Pundu Village and Pelantaran Village have a better level of education and employment as compared to other villages.
- 2. There are some small instances of land conflicts between the villagers and company, as a result of the repeated claims, lack of legality of land ownership in the community and differences in measurement results. Potential land conflicts between companies and communities have to be put in high concern category, especially in the repeated claims areas. Major socio-economic issues are employment, low education level, lack of clean water, social jealousy, transparency of plasma management (scheme smallholders), etc.
- 3. The company already has a planned social activities programme for the whole year. However, most of the help is in the form of donation and charity.
- 4. In general, the community supports the development of oil palm plantation by PT. Windu Nabatindo Lestari. Expectations of the communities are mainly absorption of villagers into company's workforce, improved transparency in plasma management, improvement of social facilities / public, improving quality of water, and seeking cooperation opportunities with the company.
- 5. In general, the social and cultural management strategies of PT. Windu Nabatindo Lestari are directed to address four main issues as follows: settling land tenure issues, improved CSR program, resolving plasma plantation development issues and improvement of communications with related stakeholders.
- 6. The company has a positive impact on the surrounding communities in areas such as the ability of company to absorb villagers into the workforce, providing access via new roads and bridges, creating business opportunity in services and construction, forming plasma cooperatives, social assistance, local economy training programmes, aid and training in education, health services and other benefits.
- 7. The existence of the company to a lesser extend also have a negative impact in the form of the increasing potential for conflicts over land tenure, environmental problems, social, economic, cultural and other issues.

RECOMMENDATIONS

The recommendations related to the implementation of the criteria for sustainable palm oil plantation management is carried out by the PT. Windu Nabatindo Lestari oil palm plantation.

No	Criteria	Fulfill	ment	RECOMMENDATIONS	
INO	Citteria	done	Not done	RECOMMENDATIONS	
1.1	The oil palm producers (growers) provide adequate		٧	Required Information procedure	
	information for stakeholders in appropriate language and			needs documentation system	
	forms, to ensure the effective participation of stakeholders			improvement.	
	in decision-making.				

	0.755	Fulf	fillment	DECOMMENDATIONS	
No	Criteria	done	Not done	RECOMMENDATIONS	
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.		٧	Required Information procedure needs documentation system improvement.	
2.1	Compliance with all applicable local, national and ratified international laws and regulations.	٧		Company looking into improving land conflict resolution and land compensation procedures.	
2.2	The right to use the land can be demonstrated, and is not legitimately contested by local communities with demonstrable rights		٧	Company had implemented and incorporated procedures in this area.	
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.		٧	The company will implement additional procedures to strengthen this area.	
4.7	Occupational safety and health rules implemented.		٧	Will improved the compliance of OSH rules through various promotion and inclusion into job description, KPI and R&R system.	
4.8	All staff, workers, smallholders and contractors are properly trained.		٧	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.		٧	Impact assessment incorporated into the management planning and carried out in operational procedures	
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.		V	Positive and negative social impacts assessment need to be implemented and incorporated into the management planning and operational procedures	
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.		٧	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.		٧	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 people, local communities and other stakeholders to express their views through their own representative institutions.		٧	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.	٧		Wages are in accordance with the regulations of (Minimum wage/UMP) and facilities to employees are looked into annually	
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.		٧	The company delivers the freedom to develop unions to workers. Or if there are no employees that make up the United then the company will establish a Cooperation Organization Biparti between company representatives and workers' representatives	

NI-	Critoria	Ful	fillment	DECOMMENDATIONS
No	Criteria	done	Not done	RECOMMENDATIONS
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.	٧		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.	٧		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.		V	Creating communication forum between the company and plasma and local businessman. As a place for the exchange of information between companies and farmers.
6.10	Growers and millers contribute to local sustainable development wherever appropriate.	٧		Company contribution to communities such as employment, social programs, etc.
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.		٧	should be incorporated into management and operation plan
7.5	No new plantings are established on local peoples' land without their free, prior and informed consent, dealt with through a documented system that enables indigenous people, local communities and other stakeholders to express their views through their own representative institutions.		٧	Required new procedure of land acquisition and provide institutions to accommodate the 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.	V		Provide and preparing the process document of the land acquisition. Several complaints related to land tenure immediately resolved.

4.2. HCV Assessments

Physical

Climatic conditions in the Cempaga district are similar to other tropical areas where classified into rainy and dry seasons. Generally, the rainy season occurs between October to March, while dry season occurs between April and September. The duration of both of this season fluctuate, at times with longer dry season or a longer rainy season.

The average daily temperature can reach 24.8 °C, and relative humidity annually (average) is 79.5%, with a range of 70% average solar radiation annually of which 58.6% is within the range varying between 48-72%. Wind speeds varied between 3.4 to 4.4 knots per hour with a value of average wind speed of 4.2 knots / hour.

Physiographic shows a land surface that can be viewed as a factor in the process of soil formation, giving effect to the development of land. Based on the slope map, most of the land are flat area and these are located mainly in the North, West and South which reached 76% and with some areas classified as flood plain to plain crease with a slope of 0-3%. The eastern plains have a gentle slope of 24% with the hill folds creases with a slope of 4-15%.

Plantation areas and the Processing Plant of PT. Windu Nabatindo Lestari are located in an area with a height of 30-50 m asl (above sea level). The important factors in soil formation are parent material, because it influences the physical and chemical structures of soil. Almost all of the entire studied area is dominated by three formations; of alluvial formation, a formation with the materials in the form of peat with blackish brown sediment derived from the swamp, sand of the rough yellowish fine-layered that are not derived from river sediment and the very soft brownish gray clay containing the remains of plants.

Dahor Formation consisting of fine-grained sandstone to coarse hardened or not, and quartz with gray clay base period to bluish gray, rather soft and is composed of lignite. Volcanic rock formations composing of rock formations are volcanic breccias greenish gray with components consisting of andesite, basalt and chert and these materials are associated with a basal of reddish brown.

Based on the Exploration Soil Map in Central Kalimantan by the Soil Research Institute (LPT), Bogor and Soil Type Map of Central Kalimantan (1989) that the soil type in this area is as follows: (1) in the North, South and West are dominated by red-yellow podzolic soils derived from igneous and sedimentary rocks, (2) In the eastern part is a kind of red-yellow podzolic soil complex, latosol, and litosol with igneous parent material and metamorphic.

The working area of PT. Windu Nabatindo Lestari includes Cempaga River watershed. The rivers that crossed the area are as many as 16 rivers and creeks. Drainage patterns in the area of PT. WNL are not one of the rivers dominate. Use of rivers by the community is still intensive, both for drinking, bathing, washing, transport and others. In general, the water of the rivers meet the standards for local consumption needs, the workers in the plantations and oil palm crop irrigation even into the future.

Biological

Flora

There were 348 species found in the area of PT. WNL, 240 species identified and 108 species unidentified. They are 240 species that have been identified with their scientific names, are grouped into 79 families. Based on its location, Cempaga River has the highest vegetation composition (132 species).

Based on the plant class, plant species found in the working area of PT. WNL can be categorized into pteridophyta (8 species), gymnospermae (2 species) and angiospermae (232 species). The species of angiospermae comprise 42 species of monocotyledonae and 188 species of dicotyledonae.

The vegetation identified in the area of PT. Windu Nabatindo Lestari can be grouped into 79 families, where the majority number of plant species included in the family Dipterocarpaceae is 22 species.

Based on the habitat, the composition of vegetation in the area of PT. Windu Nabatindo Lestari can be differentiated into the 7 (seven) kinds of shrubs, palms, epiphytes, shrubs, lianas, herbs and trees. Based on the distribution, the tree has the highest species richness, as many as 256 species or equal to 73.56%.

Found as many as 4 protected species under PP. 7 / 1999 and 9 species are listed by CITES permits in the area of PT. Windu Nabatindo Lestari. In addition, also in this area are found as many as 31 plant species are included in the List of the IUCN Red List, with details: 4 species, including CR / Critically Endangered; 4 species including EN / Endangered; 7 species including VU / Vulnerable, 1 species including DD / Data Deficient and 15 species, including LR / Low Risk (Low risk); as presented in *Table 2*.

Table-2. List of Plant Species Found in the Area of PT. WNL Based on Their Status

	Scientific	Local			Status	
No.	Name	Name	Location	PP No. 7 /1999	CITES	IUCN
1	Alstonia scholaris	Pelawi	2,3,5,6,12	TD	TT	LR/lc
2	Bulbophyllum sp	Anggrek Bulbophyllum	4	TD	App. II	TT
3	Calophyllum inophyllum	Kapur Naga	8,9,13,14	TD	TT	LR/lc
4	Canarium aperum	Kajunjung	2,3,5,8,9,12,13,14	TD	TT	LR/lc
5	Coleogyne sp	Anggrek Coleogyne	4	TD	App. II	TT
6	Combretocarpus rotundatus	Tumih	2,3,6,10,13,14,15,17	TD	TT	VU
7	Cratoxylum arborescens	Gerunggang	2,3,4,6,10,12,13,14, 15,16,17	TD	TT	LR/lc
8	Cratoxylum formosum	Butun	2,3,4,6,8,9,10,12,15, 16,17	TD	TT	LR/lc
9	Dacryodes rostrata	Kayu batu	2,3,12,17	TD	TT	LR/lc
10	Dipterocarpus grandiflorus	Keruing	2,3,12,13,14	TD	TT	CR
11	Durio kutejensis	Paken/Pekawai	12	TD	TT	VU
12	Dyera costulata	Jelutung	2,3,6,9,12,13,14,15, 17	TD	TT	LR/lc
13	Eusideroxylon zwageri	Ulin	12,17	TD	TT	VU
14	Gonystylus bancanus	Gaharu Buaya	12	TD	App. II	VU
15	Gonystylus macrophyllus	Ramin	9,12,13,14,17	TD	App. II	VU
16	Hopea odorata	Meranti Bukit	4	TD	TT	VU
17	Hopea sangal	Cengal	12	TD	TT	CR
18	Knema conferta	Kumpang merah	10,12,13,14	TD	TT	LR/lc
19	Koompassia excelsa	Dohok	6,12	TD	TT	LR/cd
20	Koompassia malaccensis	Kempas	2,3,12	TD	TT	LR/cd
21	Nepenthes adnata	Kantung Semar	10,13,14,15,16	D	App. II	DD
22	Nepenthes ampullaria	Kantung Semar Gambut	13,14	D	App. II	LR/lc
23	Nepenthes gracilis	Kantung Semar-1	10	D	App. II	LR/lc
24	Nepenthes raflesiana	Kantung Semar-2	10,13,14	D	App. II	LR/lc
25	Podocarpus neriifolius	Seluang	4,10,	TD	TT	LR/lc
26	Pterocarpus indicus	Angsana	7	TD	TT	VU
27	Shorea balangeran	Belangeran	2,3,9,12,13,14	TD	TT	CR
28	Shorea bracteolata	Bunyau	3,6,12,13,14	TD	TT	EN
29	Shorea brunescens	Meranti Kontoi/Kunyit	2,3	TD	TT	EN
30	Shorea laevis	Bangkirai	10,13,14,15	TD	TT	LR/lc
31	Shorea pauciflora	Tengkawang	12,13,15	TD	TT	EN
32	Shorea smithiana	Meranti Mahambung	6,12,15,16,17	TD	TT	CR
33	Spathoglottis plicata	Lembak	2,3,6,8,9,10,12,13,14	TD	App. II	TT
34	Vatica pauciflora	Resak Bukit	4,10	TD	TT	EN

Description of Location:

9 = Kembar Lake Cempaga Buang Riparian 17 = Katari Riparian 2 = Bahaur Kunina Riparian 10 = Heath Forest Block 22-23 3 = Bahaur Riparian 11 = Keruing Riparian 12 = 4 = Heath Forest Block G18 Cempaga Riparian 5 = Bengkuang Riparian 13 = Peat Forest Block B-27 Location of Pongo Block C41 14 = Peat Forest Block E-22/24 The area around Palm Oil Factory 15 = Conservation Area Block A-33 Riparian Bengkuang Sub River Ringgung Riparian 16 =

Description of Status:

CR = Not Protected = Critically Endangered VU = Protected = Vulnerable D = Low Risk/Least Concern TT = No Listed LR/lc LR/cd = Low Risk/Conservation Dependent App = Appendix = Endangered DD = Data Deficient

Wildlife

There were 119 species of wildlife found in the area of PT. WNL and 119 species grouped in 62 families that consist of mammals 40 species (17 families), aves 57 species (30 families), reptile 6 species (6 families) and fish 16 species (8 families). Ringgung River has the highest species and families, 48 species and Letu River has the lowest species that is 2 species.

Wildlife in the area of PT. Windu Nabatindo Lestari can be grouped into 62 families, where the largest number of wildlife species in the group of mammals is dominated by the Cercopithecidae (7 species), group of birds is dominated by Acciptridae, Columbidae, Nectarinidae and Silviidae (each of 4 species), groups of reptile is each family consists of 1 species and for groups of fish is Clariidae (as many as 3 types).

There are 36 species that are protected by Government Rule No 7/1999 i.e. 20 species of mammals, 15 species of birds and 1 species of reptile. Based on CITES, there are 27 species i.e. 4 species of mammals of Appendix I, 21 species of Appendix II (15 species of mammals, 4 species of birds and 2 species of reptiles); and 2 species of Appendix III (mammals).

Whereas, 98 species are included in IUCN RED LIST that consist of DD/Data Deficient 2 species, LC/Least Concern 73 species, NT/Near Threatened 5 species, VU/Vulnerable 13 species and EN/Endangered 5 species (see *Table 3*).

Table 3. Wildlife Species in the Area of PT. Windu Nabatindo Lestari Based on Their Status

	Scientific			Sta	Status Satwaliar		
No.	Name	Local Name	Location	PP No. 7/ 1999	CITES	IUCN	
A.	MAMALIA						
1	Macaca fascicularis	Bakai	1,4,9,12,13,14,15,17	TD	App. II	LC	
2	Macaca nemestrina	Beruk	1,14	TD	App. II	VU	
3	Nasalis larvatus	Bekantan	7	D	App. II	EN	
4	Presbytis cristata	Lutung kelabu	12	D	App. II	VU	
5	Presbytis hosei	Lutung	9	TD	App. II	VU	
6	Presbytis rubicunda	Lutung merah	9	D	App. II	LC	
7	Muntiacus atherodes	Kijang kerahau	1,12, 13,14,15,17	D	TT	LC	
8	Muntiacus muntjak	Kijang palis	9,12,13,14,15	D	TT	LC	
9	Rusa unicolor	Bacang	1,9,13,14,15,17	D	TT	VU	
10	Cynochepalus variegatus	Kubung	1,12,17	D	TT	LC	

				Sta	r	
No.	Scientific Name	Local Name	Location	PP No. 7/ 1999	CITES	IUCN
11	Felis bengalensis	Kucing akar	1,2,4,9,17	D	App. II	VU
12	Pardofelis marmorata	Kucing batu	12	D	Арр. І	VU
13	Pongo pygmaeus	Orang utan	6,14	D	App. I	EN
14	Hylobates agilis	Kelawet	1, 12,14,15,17	D	App. I	EN
15	Hystrix brachyura	Landak raya	12	D	TT	LC
16	Hystrix crassispinis	Tatung ngawan	1,12,17	TD	TT	LC
17	Trichys fasciculata	Angkis	1,17	TD	TT	LC
18	Nycticebus coucang	Kukang	1,12,17	D	TT	VU
19	Tarsius bancanus	Iker	1,12,17	D	TT	VU
20	Manis javanica	Trenggiling	1,9, 13,14,15,17	D	App. II	EN
21	Rattus tiomanicus sabae	Tikus	9	TD	TT	LC
22	Aonyx cinerea	Sero ambrang	12	TD	App. II	VU
23	Calosciurus nottatus	Bajing	1,8,17	TD	TT	LC
24	Iomys horsfieldii	Bajing terbang ekor-merah	12	D	TT	LC
25	Ratufa affinis cothurnata	Tupai karang	1,17	TD	App. II	NT
26	Rheithrosciurus macrotis	Bajing-tanah ekor-tegak	12	TD	TT	VU
27	Sus barbatus	Babi	1,2,3,4,5,7,11,12,13, 14,15	TD	TT	VU
28	Traqulus javanicus	Pelanduk sahang	1,9,12,14,17	D	TT	DD
29	Tragulus napu	Pelanduk Bakat	1,17	D	TT	LC
30	Tupaia dorsalis	Tupai	1,17	TD	App. II	DD
31	Tupaia gracilis	Tupai	6,14	TD	App. II	LC
32	Tupaia tana	Tupai	1,17	TD	App. II	LC
33	Helarctos malayanus	Bahuang	14	D	App. I	VU
34	Arctogalidia trivirgata	Musang akar	12	TD	TT	LC
35	Herpestes hosei	Garangan	1,17	TD	TT	TT
36	Mustela nudipes	Musang	1,17	TD	TT	LC
37	Paguma larvatai	Musang galling	12	TD	App. III	LC
38	Paradoxurus hermaproditus	Musang luwak	12	TD	App. III	LC
39	Prionodon linsang	Linsang-linsang	12	D	App. II	LC
40	Vivvera tangaluna	Tenggalung Malaya	12	TD	TT	LC
		56 5 7				
В.	BIRDS/BURUNG	Claus Ailus	2 42 45			1.0
1	Elanus caeruleus	Elang tikus	3,13,15	D	TT	LC
2	Haliaestur indus	Elang bondol	1,16,17	D	TT	LC
3	Ichthyophaga ichthyaetus	Elang ikan kepala kelabu	8	D	TT	NT
4	Ictinaetus malayensis	Elang hitam	1,17	D	<u></u>	LC
5	Alcedo meninting	Raja-udang meninting	9,12	D	TT	LC
6	Pelargopsis capensis	Pekaka emas	1,17	D	TT	LC
7	Dendrocygna arcuata	Belibis kembang	1,3,9,16,17	TD	TT Amm II	LC
8	Anthracoceros malayanus	Kangkareng hitam	1,17	D	App. II	NT
9	Buceros rhinoceros	Rangkong badak	1,17	D	App. II	NT
10	Coracina striata	Kepudang-sungu sumatera	8	TD	TT	LC
11	Hemipus hirundinaceus	Jingjing batu	1,17	TD	TT	LC
12	Megalaima australis	Takur tenggeret	14	D	TT	LC
13	Caprimulgus affinis	Cabak kota	6,9	TD	<u></u>	LC
14	Leptoptilos javanicus	Bangau tongtong	12	D	<u>TT</u>	VU
15	Chalcophaps indica	Delimukan zamrud	1,17	TD	<u>TT</u>	LC
16	Streptopelia chinensis	Tekukur biasa	13,14,15,16	TD	TT	LC
17	Treron olax	Punai kecil	9	TD	<u>TT</u>	LC
18	Treron vernans	Punai gading	1,8,17	TD	TT	LC
19	Corvus enca	Gagak hutan	1,2,3,4,5,6,7,9,11,17	TD	TT	LC
20	Cacomantis sonneratii	Wiwik lurik	14	TD	TT	LC
21	Centropus bengalensis	Bubut alang-alang	1,6,9, 13,15,16,17	TD	TT	LC
22	Centropus sinensis	Bubut besar	1,4,9,12,17	TD	TT	LC
23	Prionochilus thoracicus	Pentis kumbang	8	TD	TT	NT
24	Hemiprocne comata	Tepekong rangkang	14	TD	TT	LC
25	Hirundo tahitica	Layang-layang batu	6,12,13,15,16	TD	TT	LC

				Sta	r	
No.	Scientific Name	Local Name	Location	PP No. 7/ 1999	CITES	IUCN
26	Lanius schach	Bentet Kelabu	12	TD	TT	LC
27	Merops viridis	Cirik-cirik biru	4,8	TD	TT	LC
28	Hypothymis azuera	Kehicap ranting	10	TD	TT	TT
29	Terpsiphone paradisi	Seriwang asia	10	TD	TT	LC
30	Aethopyga siparaja	Burung-madu sepah-raja	8	D	TT	LC
31	Anthreptes malacensis	Burung madu kelapa	4,8	D	TT	LC
32	Anthreptes singalensis	Burung madu belukar	6	D	TT	LC
33	Arachnothera longirostra	Pijantung kecil	10	D	TT	LC
34	Coturnix chinensis	Puyuh batu	1,2,3,4,11,17	TD	TT	LC
35	Dryocopus javensis	Pelatuk ayam	1,17	TD	TT	LC
36	Meiglyptes tristis	Caladi batu	14	TD	TT	LC
37	Picoides moluccensis	Caladi tilik	1,17	TD	TT	TT
38	Lonchura fuscans	Bondol kalimantan	1,2,3,4,5,6,7,9,11,13, 15,17	TD	TT	LC
39	Lonchura malacca	Bondol rawa	1,16,17	TD	TT	LC
40	Loriculus galgulus	Serindit melayu	1,6,9,14	TD	App. II	LC
41	Pycnonotus atriceps	Cucak kuricang	12	TD	TT	LC
42	Pycnonotus aurigaster	Cucak kutilang	4,16	TD	TT	LC
43	Pycnonotus simplex perplexus	Merbah corok-corok	1,2,3,4,5,6,7,8,9,11, 12,14,16,17	TD	TT	LC
44	Amaurornis phoenichurus	Kareo padi	1,2,3,4,5,7,9,11,12, 16,17	TD	TT	LC
45	Ixobrychus cinnamomeus	Bambangan merah	9	TD	TT	LC
46	Porzana pusilla	Tikusan kerdil	9	TD	TT	LC
47	Tringa stagnatilis	Trinil rawa	1,16,17	TD	TT	LC
48	Orthotomus ruficeps	Cinenen kelabu	4,6,8,9,12,16	TD	TT	LC
49	Prinia flaviventris	Prenjak rawa	1,2,9,11,12,13,14,15, 16,17	TD	TT	LC
50	Strix leptogrammica leptogrammica	Kukuk beluk	1,2,12,17	TD	App. II	LC
51	Gracula religiosa robusta	Tiong emas	1,17	D	TT	LC
52	Gerygone sulphurea	Remetuk laut	4,9	TD	TT	LC
53	Orthotomus seriuceus	Cinenen merah	8,14	TD	TT	LC
54	Macronous gularis bornensis	Ciung-air coreng	4,8,9,13,15	TD	TT	LC
55	Stachirys erythroptera	Tepus merbah-sampah	9	TD	TT	LC
56	Copsychus malabaricus	Kucica hutan	12	TD	TT	LC
57	Copsychus saularis	Kucica kampung	1,3,6,9,17	TD	TT	LC
C.	REPTILIA					
1	Phyton reticulatus	Ular phyton	1,10,14	TD	ТТ	TT
2	Tomistoma schlegelii	Buaya senyulong	9	D	App. II	EN
3	Naja sumatrana	Kobra itam	13,15	TD	App. II	TT
4	Eutropis multifasciata	Kadal	1,2,3,4,5,7,8,9,11,14, 17,	TD	TT	TT
5	Dogania subplana	Labi-labi	9	TD	TT	LR/lc
6	Varanus salvator	Biawak	4,9,13,15	TD	App. II	TT
D.	Fishes					
1	Anabas testudneus	Ikan Papuyu	8	TD	TT	TT
2	Mystus spp	Ikan Baung	8	TD	TT	LC
3	Channa micropeltes	Ikan Toman	8	TD	TT	TT
4	Channa striatus	Ikan Gabus	8	TD	TT	TT
5	Clarias batrachus	Ikan Sili	8	TD	TT	TT
6	Clarias nieuhofi	Ikan Lembat	8	TD	TT	TT
7	Clarias sp	Ikan Lele	8	TD	TT	TT
8	Puntius tetrazona	Ikan Macan	8	TD	TT	TT
9	Betta splendens	Ikan Cupang	8	TD	TT	TT
10	Trichogaster trichopterus	Sepat	8	TD	TT	TT
11	Kryptopterus limpok	Ikan Lais	8	TD	TT	TT

	Scientific			Status Satwaliar		
No.	Name	Local Name	Location 8 8 8 8	PP No. 7/ 1999	CITES	IUCN
12	Wallago attu	Ikan Tapah	8	TD	TT	TT
13	Ophisternon sp	Belut	8	TD	TT	TT
14	Unidentified	Ikan Kerandang	8	TD	TT	TT
15	Unidentified	Ikan Mihau	8	TD	TT	TT
16	Unidentified	Ikan Kapar	8	TD	TT	TT

Location information:

1 = Kembar Like 9 = Cempaga Buang reparian 17 = Katari Reparian 2 = Bahaur Kunina reparian 10 = Heath Forest Block 22-23 11 = 3 = Bahaur reparian Keruing reparian 4 = Heath Forest Block G18 12 = campaga reparian 5 = Bengkuang Riparian 13 = Peat Forest Block Blok B-27 6 = Location of Pongo Block C41 14 = Peat Forest Block E-22/24 The area around Palm Oil Factory 7 = 15 = Conservation Area Blok A-33 8 = Ringgung Riparian 16 = Reparian Bengkuang Sub River

<u>Description of Statu</u>:

= Not Protected CR = Critically Endangered = Protected = Vulnerable TT = No List LR/lc = Low Risk/Least Concern = Appendix LR/cd = Low Risk/Conservation Dependent App = Endangered DD = Data Deficient

Environmental Services Aspect

Region or ecosystem that is important as a provider of Water and Flood Control for Downstream Communities.

Region or ecosystem that is found in the area of PT. Windu Nabatindo Lestari is lowland forest ecosystems, forest heath and peat swamp forests; while the Cloud forest ecosystems, forest ridge and karst ecosystems are not found in the area.

Important Ecosystem and Its Relationship with the various Classes of Land Based on RePPProT

Ecosystems found in the area of PT. Windu Nabatindo Lestari consists of 3 (three) types, namely lowland forest ecosystems, heath ecosystem and peat ecosystem but not too deep. Land classes found in the region consists of 7 (seven) types, namely HJA (Honja), BLI (Beliti), BRH (abscess), BWN (Bawin), GBT (Gambut/Peat), PKU (Pakau), and SBG (Sebangau). Based RePPProT and HCV Toolkit (June 2008), land classes HJA, BWN, GBT, SBG including the threatened land systems and / or rare. However, because the condition of ecosystems has been much damaged (degraded) due to forest exploitation activities (logging) before any fields/cultivation, and forest encroachment activities (illegal logging, traditional gold mining), then some of the functions and benefits of ecosystems have degraded.

With regard to technical aspects of the management of oil palm plantations, the presence of heath forest ecosystems, lowland forest can be utilized as a land of oil palm cultivation. Similarly shallow peat lands, also technically can be used for oil palm cultivation.

But ecologically, particularly in peat ecosystems (with land system under GBT) will need to consider the legal aspects (relating to Regulation of the Minister of Agriculture No.14 years of 2009 and Presidential Decree No.32 of 1990), as well as other aspects (Prinsip.7 RSPO).

Regions that serves as a natural insulation to prevent the spread of forest fires and land

Regions that serves as a natural insulation to prevent the spread of forest fires and natural forest land is still in good condition, including swamp forests in the hydrological system (the peat swamp forest is still intact), swamp forest, inundation areas, other wetland and green lanes (green belt) with various types of fire-resistant plants.

In the area of PT. WNL there is no area that can serve as a fire breaker, because the condition of degraded natural forests and forest area are inadequate. Besides, the area surrounding the area of PT. WNL also has done a lot of land clearing for oil palm plantation development, and agricultural cultivation activities of society.

Economy, Socio Culture of Local Community

Administratively, oil palm plantation of PT. Windu Nabatindo Lestari is located in Pundu, Pelantaran, Keruing, Bukit Raya, Pantai Harapan, Bukit Batu, Sudan, and Sei Ubar Mandiri village, Cempaga Hulu Distric, East Kotawaringin Regency, Central Kalimantan Province.

Based on the results of field observation and review of existing maps show that areas of High Conservation Value (HCVA) planned in the area of Oil Palm Plantations in the Area of PT. Windu Nabatindo Lestari, Central Kalimantan Province is 359.75 ha, with details as in **Table 4** and **Figure 3**.

Table 4. Results of Identification and Analysis of HCV 1 – HCV 6 in The WNL and WNS Oil Palm Plantation Area Central, Kalimantan.

HCV Component	HCV Presence	HCVA	Extent (Ha)
HCV1. Areas with Important Levels of Biodiversity			
HCV1.1. Areas that Contain or Provide Biodiversity Support Functions to	Present	Riparian of Bengkuang and Sub Bengkuang River	148.66
Protection or Conservation Areas		Riparian of Cempaga Buang River	65.71
		Riparian of Bahaur River	44.73
		Riparian of Bahaur Kuning River	12.86
		Riparian of Ubar River	26.85
		Riparian of Ringgung River	0.35
		Riparian of Katari River	18.20
		Riparian of Keruing River	11.07
		Riparian of Kembar Like	1.00
HCV1.2. Critically Endangered species	Present	Riparian of Bahaur Kuning River	*)
		Riparian of Bahaur River	*)
		Riparian of Cempaga Buang River	*)
		Riparian of Bengkuang and Sub	*)
		Bengkuang River	
		Riparian of Katari River	*)
		Conservation Area Block A-33	1.00
HCV1.3. Areas that Contain Habitat for	Present	Riparian of Kembar Like	*)
Viable Population of Endangered,		Riparian of Bengkuang and Sub	*)
Restricted Range or Protected Species		Bengkuang River	
		Riparian of Keruing River	*)
		Riparian of Bahaur Kuning River	*)
		Riparian of Bahaur River	*)
		Riparian of Cempaga Buang River	*)
		Conservation Area Block A-33	*)
		Riparian of Katari River	*)
		Riparian of Ringgung River	*)
HCV1.4. Areas that Contain Habitat of	Absent	-	-

HCV	HCV	HCVA	Extent
Component	Presence	HCVA	(Ha)
Temporary Use by Species or			
Congregations of Species			
NKT2. Areas of landscape that are			
important to the dynamics of natural			
ecology			
HCV2.1 Natural Landscape & Dynamics	Absent	-	-
HCV2.2. Areas that Contain Two or More	Absent	-	-
Contiguous Ecosystems			
HCV2.3. Areas that Contains	Present	Conservation Area Block A-33	*)
Representative Population of Most		Riparian of Kembar Like	*)
Naturally Occurring Species		Riparian of Bengkuang and Sub	*)
		Bengkuang River	
		Riparian of Bahaur Kuning River	*)
		Riparian of Bahaur River	*)
		Riparian of Cempaga Buang River	*)
		Riparian of Katari River	*)
		Heat Forest Block G18	29.3
HCV3. Rare or Endangered Ecosystem	Absent	-	-
HCV4. Environmental Services			
HCV4.1. Areas or Ecosystems Important	Present	Riparian of Bengkuang and Sub	*)
for the Provision of Water and Prevention		Bengkuang River	
of Floods for Downstream Communities		Riparian of Cempaga Buang River	*)
		Riparian of Bahaur River	*)
		Riparian of Bahaur Kuning River	*)
		Riparian of Ubar River	*)
		Riparian of Ringgung River	*)
		Riparian of Katari River	*)
		Riparian of Keruing River	*)
		Riparian of Kembar Like	*)
HCV4.2. Areas Important for the	Absent	-	-
Prevention of Erosion and Sedimentation			
HCV4.3. Areas that Function as Natural	Absent	-	-
Barriers to the Spread of Forest or Ground			
Fire			
HCV5. Natural Areas Critical for Meeting	Unavailable	-	-
the Basic Needs of Local People			
HCV6. Areas Critical for Maintaining the	Available	Sacred Stone	0.01
Cultural Identity of Local Communities		Sacred Tree	0.01
Total of HCVA			359.75

Note: *) = Extent of the area same as those previously mentioned.

Internal Responsibility

Formal signing off by assessors and company

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

Bogor Agriculture Institute

Dr. Tr. Nyoto Santoso, MS Team Leader HCV & SIA Management PT Windu Nabatindo Lestari,

> Priyanto, PS President Director

Statement of acceptance of responsibility for assessment

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

Management PT Windu Nabatindo Lestari,

Priyanto, PS

President Director

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	Race	Religion	qualification	Job
A. Keruing Village							
1	Kudak (RT)	Male	45	Dayak	Protestan	Primary	Farmer
2	Danutari	Male	42	Dayak	Protestan	Junior high	Farmer
3	Taufik	Male	28	Dayak	Protestan	Junior high	Farmer
4	Toya	Male	24	Dayak	Protestan	Junior high	Farmer
5	Deden	Male	25	Dayak	Protestan	Junior high	Farmer
6	Karel (Kep Sek SD)	Male	36	Dayak	Protestan	Bachelor's	Civil servants
7	Mardianpel	Male	40	Dayak	Protestan	Junior high	Farmer
8	Edi Katuming	Male	46	Dayak	Protestan	Junior high	Farmer
9	Hamkudi	Male	43	Dayak	Protestan	Bachelor's	Civil servants
10	Roman	Male	28	Dayak	Protestan		Civil servants
11	Alam	Male	34	Dayak	Muslim		Civil servants
B. Bu	ukit Raya Village						
1	Dibar	Male	67	Dayak	catholic	Primery	Farmer
2	Arif	Male	28	Dayak	Muslim	Primary	Farmer
3	Usni	Male	33	Dayak	Kaharingan	Primary	Farmer
4	Budi	Male	46	Jawa	Muslim	Primary	Farmer
5	Lenjuk	Male	60	Dayak	Kaharingan	Primary	Farmer
6	Obie	Male	52	Dayak	Kaharingan	Primary	Farmer
7	Nurkami	Male	41	Jawa	Muslim	Primary	Farmer
8	Yengki	Male	41	Dayak	Protestant	Primary	Farmer
9	Darmadi	Male	46	Dayak	Protestant	Bachelor's	Priest
10	Buhari	Male	41	Jawa	Muslim	Senior High	Civil servants
11	Munis	Male	46	Dayak	Catholic	Primary	Farmer
12	Supendi	Male	47	Dayak	Catholic	Senior High	Farmer
13	Teluk	Male	50	Dayak	Kaharingan	Primary	Farmer
14	Radci	Male	46	Dayak	Catholic	Primary	Farmer
15	lpet	Male	25	Dayak	Catholic	Senior High	Civil servants
16	Zapris	Male	40	Dayak	Catholic	Primary	Farmer
31	Tatie	Female	39	Dayak	Protestant	Senior High	Employee
C. Pu	ındu Village		1		I		
1	Antong Setiawan	Male	35	Dayak	Muslim	Primary	Farmer
2	Radenas	Male	43	Dayak	Muslim	Primary	Farmer
3	Rahmat	Male	29	Dayak	Muslim	Primary	Businesses
4	Kaspul Anwar	Male	33	Dayak	Muslim	Primary	Farmer
5	Sarnadi	Male	50	Dayak	Muslim	Junior high	Employee
6	Nurlali	Male	54	Dayak	Muslim	Primary	Farmer
7	Imuhardiansyah	Male	37	Dayak	Muslim	Senior High	Farmer
8	Amrin	Male	60	Dayak	Muslim	Primary	Lain-lain
9	H. M. Dalemi	Male	60	Dayak	Muslim	Senior High	Lain-lain
10	H. Darmawan	Male	54	Dayak	Muslim	Primary	Farmer
11	Heriyono	Male	29	Dayak	Muslim	Senior High	Driver
12	Sugiyanto	Male	34	Dayak	Muslim	Senior High	Civil servants
13	Subuh	Male	48	Dayak	Muslim	Primary	Farmer
14	Dodo Pangestu	Male	24	Jawa	Muslim	Senior High	Employee
15	Ahmad Subli, S. Sos	Male	36	Dayak	Muslim	Bachelor's	Civil servants
16	Heri Risdiyanto	Male	30	Jawa	Muslim	Diploma	Employee
17	Heros Pasaribu	Male	34	Batak	Catholic	Senior High	Employee
18	Imam Mudin	Male	30	Banjar	Muslim	Senior High	Employee
				-		_	Employee
19	Asen N	l Mal≏	70	1 1)21/24			
19 20	Asep N Syaiful Razi	Male Male	28 26	Dayak Banjar	Protestant Muslim	Senior High Senior High	Employee

No.	Name	Gender	Age	Race	Religion	qualification	Job
D	Bukit Batu Village						
1	Asep	Male	40	Banjar	Muslim	Senior High	Businesses
2	Syahan	Male	51	Dayak	Protestant	Primary	Farmer
3	Monsi	female	32	Dayak	Kaharingan	Primary	Housewife
4	Lina	female	23	Banjar	Muslim	Primary	Farmer
5	Hando	Male	42	Dayak	Kaharingan	Senior High	Civil servants
6	Pendi	Male	40	Dayak	Kaharingan	Primary	Farmer
7	Bungariani	Female	35	Dayak	Muslim	Primary	Housewife
E	Sudan Village			,		,	
1	Upak	Male	40	Dayak	Catholic	Primary	Businesses
2	Subur Martaji	Male	23	Dayak	Protestant	Senior High	Student
3	Aci	Male	30	Dayak	Kaharingan	Primary	Businesses
4	Salinak	Male	45	Dayak	Kaharingan	Primary	Civil servants
5	Salih Hadi	Male	32	Dayak	Kaharingan	Senior High	Farmer
6	Suhardi	Male	45	Dayak	Muslim	Junior high	Farmer
7	Herman	Male	22	Banjar	Muslim	Senior High	Farmer
8	Dubur	Male	40	Dayak	Kaharingan	Primary	Farmer
9	Ewil	Male	29	Dayak	Kaharingan	Primary	Farmer
10	Jumei	Male	32	I -	Muslim	Primary	Businesses
11		Male	53	Dayak	Kaharingan	Junior high	Civil servants
12	Kasmirasing		22	Dayak			
12	Rusnawati	Female	22	Banjar	Muslim	Primary	Businesses
F .	Pantai Harapan Village	1					
1	Asmuni	Male	66	Dayak	Muslim	Primary	Lain-lain
2	Atun	Male	43	Dayak	Muslim	Primary	Civil servants
3	Nasir	Male	30	Dayak	Muslim	Senior High	Businesses
4	Lian	Male	25	Dayak	Muslim	Junior high	Businesses
5	Gapuri	Male	60	Dayak	Muslim	Primary	Farmer
6	Sahril Jafri	Male	50	Dayak	Muslim	Junior high	Civil servants
7	Midan	Male	43	Dayak	Muslim	Primary	Farmer
8	Sadikin	Male	42	Dayak	Muslim	Junior high	Civil servants
9	Guntur	Male	50	Dayak	Muslim	Primary	Farmer
10	Gumanti	Male	35	Dayak	Muslim	Senior High	Farmer
11	Ridayah	Female	38	Dayak	Muslim	Primary	Businesses
12	Anci	Female	23	Dayak	Muslim	Primary	Businesses
13	Loter	Male	50	Dayak	Muslim	Primary	Farmer
14	Rina	Female	33	Dayak	Muslim	Junior high	Businesses
15	Cici	Female	31	Dayak	Muslim	Primary	Businesses
16	Ardiah	Female	38	Dayak	Muslim	Primary	Farmer
17	Ani	Female	29	Dayak	Muslim	Primary	Businesses
18	Rahman	Male	42	Dayak	Muslim	Senior High	Farmer
19	Juanda Aditya	Male	36	Dayak	Muslim	Junior high	Civil servants
20	Burhan K.	Male	54	Dayak	Muslim	Senior High	Civil servants
21	Handi	Male	58	Dayak	Muslim	Primary	Civil servants
22	Muhtar	Male	53	Dayak	Muslim	Junior high	Farmer
23	Indra Saputra	Male	26	Banjar	Muslim	Senior High	Employee
24	Kosso mujiono	Male	22	Jawa	Muslim	Senior High	Employee
25	Suryadi	Male	24	Dayak	Muslim	Senior High	Employee
26	Sandri Yanto	Male	29	Dayak	Muslim	Senior High	Employee
27	Supiansyah	Male	35	Dayak	Muslim	Junior high	Employee
28	Parjiyo	Male	30	Dayak	Muslim	Senior High	Employee
29	Wahyudi	Male	30	Jawa	Muslim	Senior High	Employee
G.	Sei Ubar Mandiri Village	*	•		•	•	
1	Hardiyanto	Male	28	Dayak	Muslim	Senior High	Civil servants
2	Sya'ban	Male	45	Dayak	Muslim	Primary	Farmer
3	Wahendri	Male	41	Dayak	Muslim	SMA	Civil servants
4	Ruslan	Male	54	Dayak	Kaharingan	Primary	Civil servants
4			, ,,			1 ,	J JCI VAIILJ
5	Idira	Male	42	Dayak	Protestant	Bachelor's	Civil servants

No.	Name	Gender	Age	Race	Religion	qualification	Job
7	Martinus	Male	58	Dayak	Muslim	Primary	Farmer
8	Abdul Hadi	Male	41	Dayak	Muslim	SMA	Civil servants
9	Amer Husen	Male	38	Dayak	Muslim	Primary	Employee
н.	Pelantaran Village						
1	Hendra Saputra	Male	22	Banjar	Muslim	SMA	Employee
2	Dwi Kus H	Male	30	Jawa	Muslim	SMA	Employee
3	Iswadi Ichis	Male	31	Jawa	Muslim	Diploma	Employee
4	Masyarakat (absen FGD)						

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.	
	RI State Legislation (Acts):		
	1931 Dierenbeschermings Ordinance (Wild Animals Protection Ordinance) / 1931	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	
3.	1977 Decree of Minister of Agriculture, No. 90/Kpts/Um/2/1977	Wildlife protection	
	1978 Decree of Minister of Agriculture, No. 327 / Kpts / Um/5/1978	Wildlife protection	
	1979 Decree of Minister of Agriculture No. 247 / Kpts/Um/4/1979	Wildlife protection	
	1980 Decree of Minister of Agriculture, No. 716 / Kpts/Um/10/1980	Wildlife protection	
	1999 Government Regulation No. 7 of 1999	Wildlife protection	
	Government Regulation, PU 63/1993 PU	Determination width of the river riparian	
4.	Map of TGHK (Forest Land Use Agreement) and government's official documents concerning the appointment status of forest areas.	To determine the status of an area whether or not in the protected areas.	

Appendix 3. Overlay map of HCV area and planting year PT Windu Nabatindo Lestari

