Summary Report of SEIA and HCV Assessments
PT Tebo Indah
Tebo District – Jambi Province, Indonesia

1. Executive Summary

PT Tebo Indah (PT TI) which majority share held by PT Dendymarker Indahlestari. PT Dendymarker Indahlestari has been registered as a member of the RSPO (membership number 1-0146-13-000-00).

PT Tebo Indah received licenses (Izin Lokasi) to use land areas of ± 9,112 Ha through Keputusan Bupati Tebo No: 462 Tahun 2006 dated October 11th 2006. Izin Usaha Perkebunan/ IUP (Operational Plantation Permit) for this Izin Lokasi were obtain through Keputusan Bupati Tebo No: 376 Tahun 2006 dated August 10th 2006.

Location of PT TI is at S 01°30'19,2" and E 102°29'14,9", in the province of Jambi, Indonesia. Administratively the areas are located in Tebo Tengah sub-district, consisting of ten desas (villages) namely Mangun Jayo, Tengah Ulu, Teluk Pandak, Semabu, Kandang, Sungai Keruh, Pelayang, Aburan Batang Tebo, Penapalan, and Muara Kilis. For daily operational PT TI divided in to Four Division/ Afdeling namely Sungai Keruh, Sei Keruh II & Pelayangan, Teluk Pandak, and Mangun Jayo.

PT TI has conducted HCV Assessment carried out in November 2013 by Sonokeling Akreditas Nusantara (socio-enviro management consulting) from Indonesia led by Ir. Kresno Dwi Santosa, M.Si, who is an RSPO-accredited HCV lead assessor. The scope of the HCV assessment in PT TI was carried out on 7,038.06 Ha within the boundary of the HGU Area. Sonokeling Akreditas Nusantara has carried out HCV Assessment comprehensively for PT TI using Konsorsium Revisi HCV Toolkit Indonesia (2008).

From the HCV assessment, it was found that the area consists of HCV 1, HCV 2, HCV 4, and HCV 5. Some of HCV areas are overlapping with other HCV area and as such total HCV areas in PT TI is 264.06 Ha (3.75%) of the HGU Area. There were no HCV 3 and HCV 6 found in the area.

2. Scope of the SEIA and HCV Assessment

a. General Data of the Company

Company Name	: PT Tebo Indah
License of Establishment	: Notary B.R.AY. Mahyastoeti Notonagoro, SH No: 309, dated July 25th 1997, approval of Keputusan Menteri Hukum & HAM Nomor: C2-1114 HT.01.01.Th.98
Capital Status	: Domestic Investment (Penanaman Modal Dalam Negeri – PMDN)

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Tax Payer Notification Number : 02.042.110.3-402.000

Company Address : ***Head Office:***
Karawaci Office Park, Ruko Pinangsia Blok L No. 38-39, Lippo Karawaci, Tangerang, Banten, Indonesia
Site:
Teluk Pandak Desa (village) Tebo Tengah sub-district Tebo District Jambi Province

Type of Business : Oil Palm Plantation

Status of Concession Land and Permit :

No.	Kind of Permit/ Recommendation	Approved by	No. and Date	Ha
1	Approval for Cultivation Business Principles in Palm Oil Plantation		No: HK.350/E5.1256/12.97 15 December 1997	10.500 Ha 60 Ton FFB/ Hours
2	Location Permit	Head of Land Registry Office of Bungo Tebo Regency	No: SK.32/ PIL/ 460/ PBT/ 1997 26 December 1997	15.000 Ha
3	LC Permit	Head of Level II Region of Bungo Tebo	No: 525/3215/Perek 21 September 1998	a 4.500 Ha for tapah I
4	Location Permit Extension	Head of Land Registry Office of Bungo Tebo Regency	No: SK.32-1/ PIL-P/ 460/ PBT/ 1999 8 March 1999	15.000 Ha
5	Recommendation Permit for Land Development of Palm Oil Plantation	Tebo Regent	No: 525/ 1141/ Ekonomi 6 July 2000	An area of ± 15.000
6	Recommendation/ technical consideration for plantation land availability for PT Tebo Indah	Ministry of Forestry and Estate, Regional Office of Jambi Province	No: 1591/ Kwl-Iic/ 2000 27 July 2000	The location status of the area requested in accordance with RTRWP-TGHK including the APL farming and non-

				farming cultivation area, is not from the forest area
7	Plantation Business Permit	Minister of Agriculture	No: 640/Kpts/HK.350/Dj.Bun/VIII/2001	12.000 Ha 60 Ton FFB/ Hours
8	Plantation Business Permit Extension	Tebo Regent	No: 376 Tahun 2006 10 August 2006	8.000 Ha
9	Allotment of Location Permit	Tebo Regent	No: 462 Tahun 2006 11 October 2006	9.112 Ha
10	Committee B Treatise	The people's land gained from land clearing is then submitted to KUD Tujuan Murni, and together as members of KUD Tujuan Murni they submit the land to PT Tebo Indah (Deed of Transfer of Land Rights No. 1 dated 8 March 2006) The stated land will be managed by PT Tebo Indah by sharing 75% to PT Tebo Indah and 25% to KUD members (Cooperation Agreement No. 2 dated 8 March 2006 in connection to Deed of the Minutes of Meeting No. 1 dated 6 July 2005)		BPN regional office of Jambi Province states that the land being considered to be approved is 7,038.06 Ha
11	Ownership of HGU PT Tebo Indah	Head of National Land Authority	No: 27-HGU-BPN-RI-2009 4 February 2009	7,038.06 Ha

Contact Person : Mr. Donald Simanjuntak (Operational Director PT TI)

Geographical Location : S 01°30'19,2" and E 102°29'14,9"

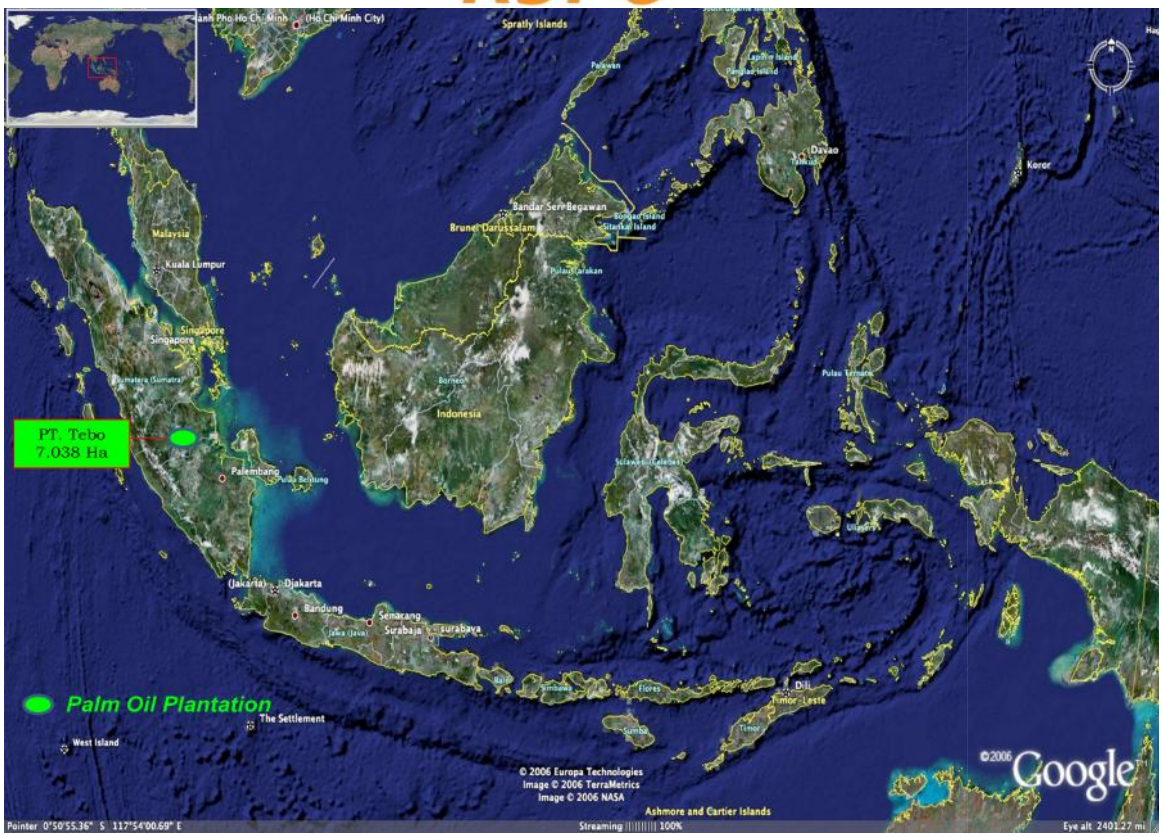
Surrounding Entities :
North : Tebo River and Batang Hari River
South : PT SKU (Sinarmas)
West : Aburan Desa (village)
East : Penapalan Desa (village)

The scope of Social and Environment Impact Assessment of PT Tebo Indah cover the HGU Area and the villages surrounding the project.

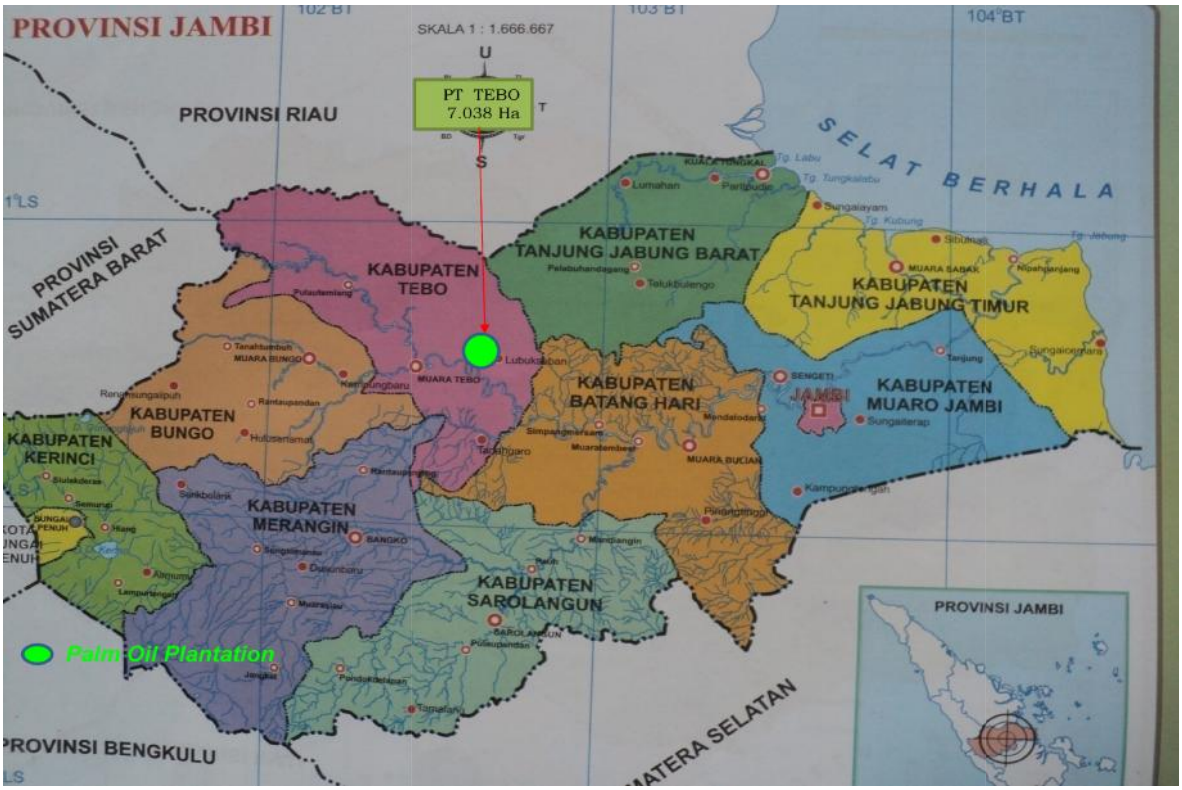
b. Legal Documents

The permits that have been obtained by the company as mentioned above.

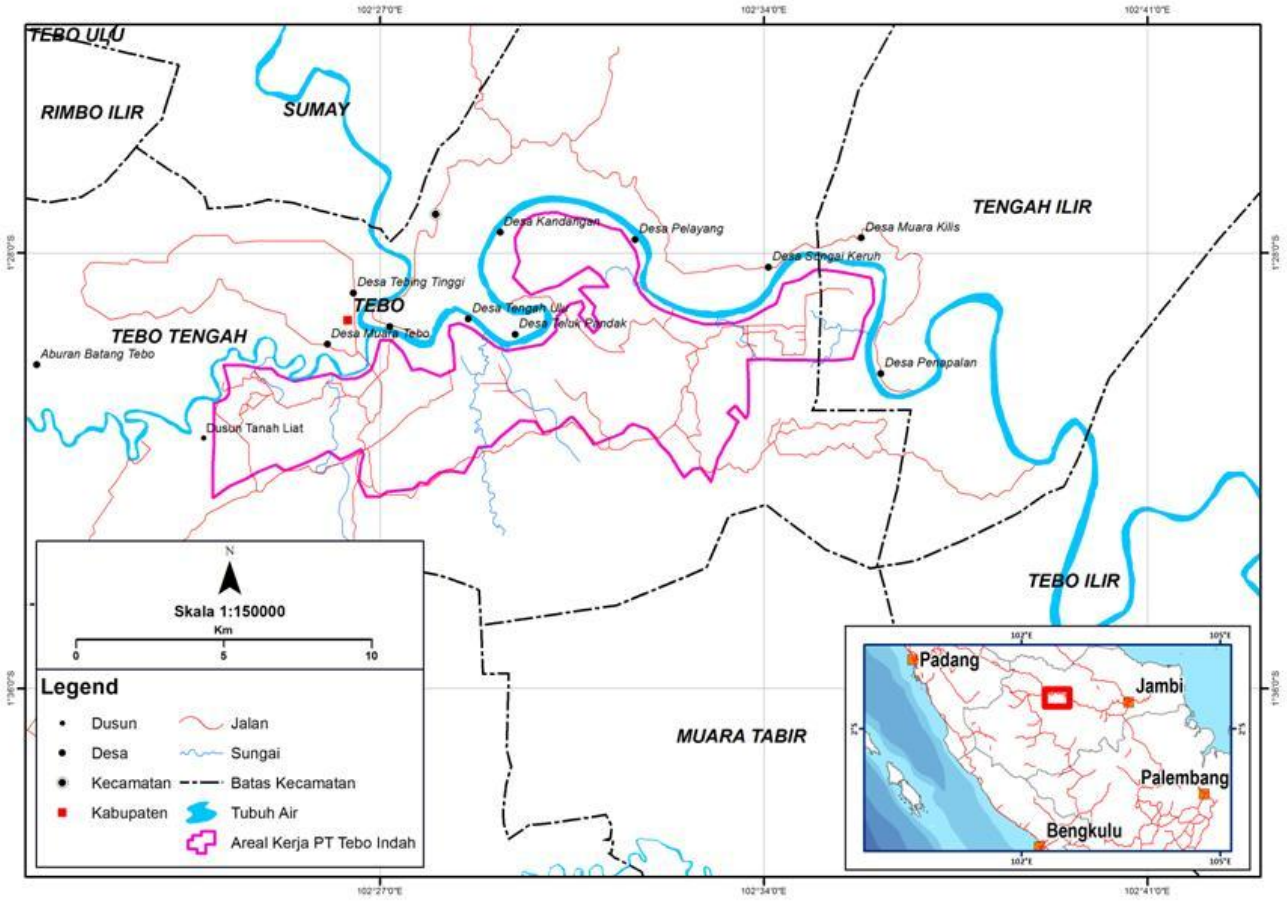
c. Location Maps



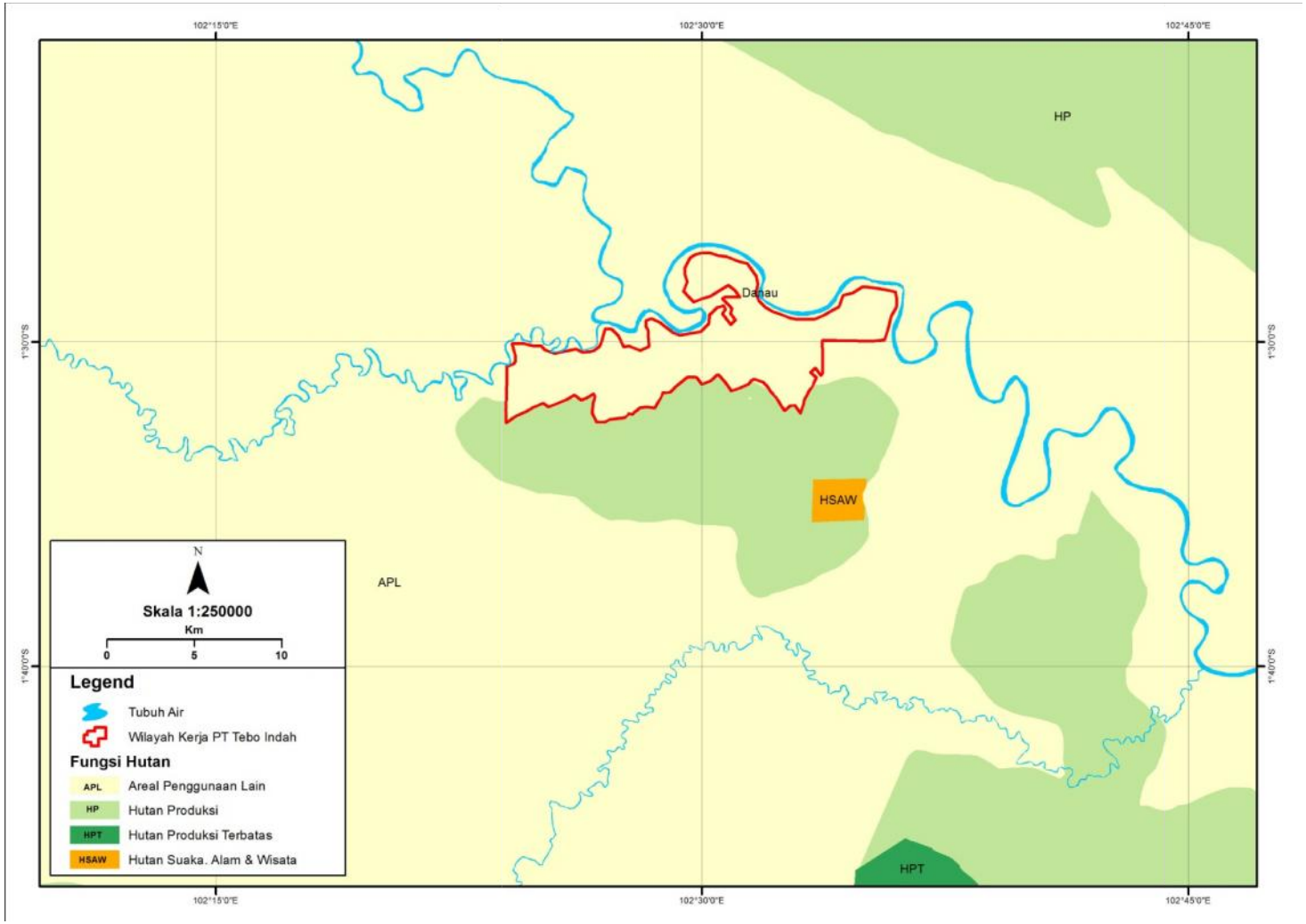
Picture 1. Location of PT Tebo Indah in Indonesia



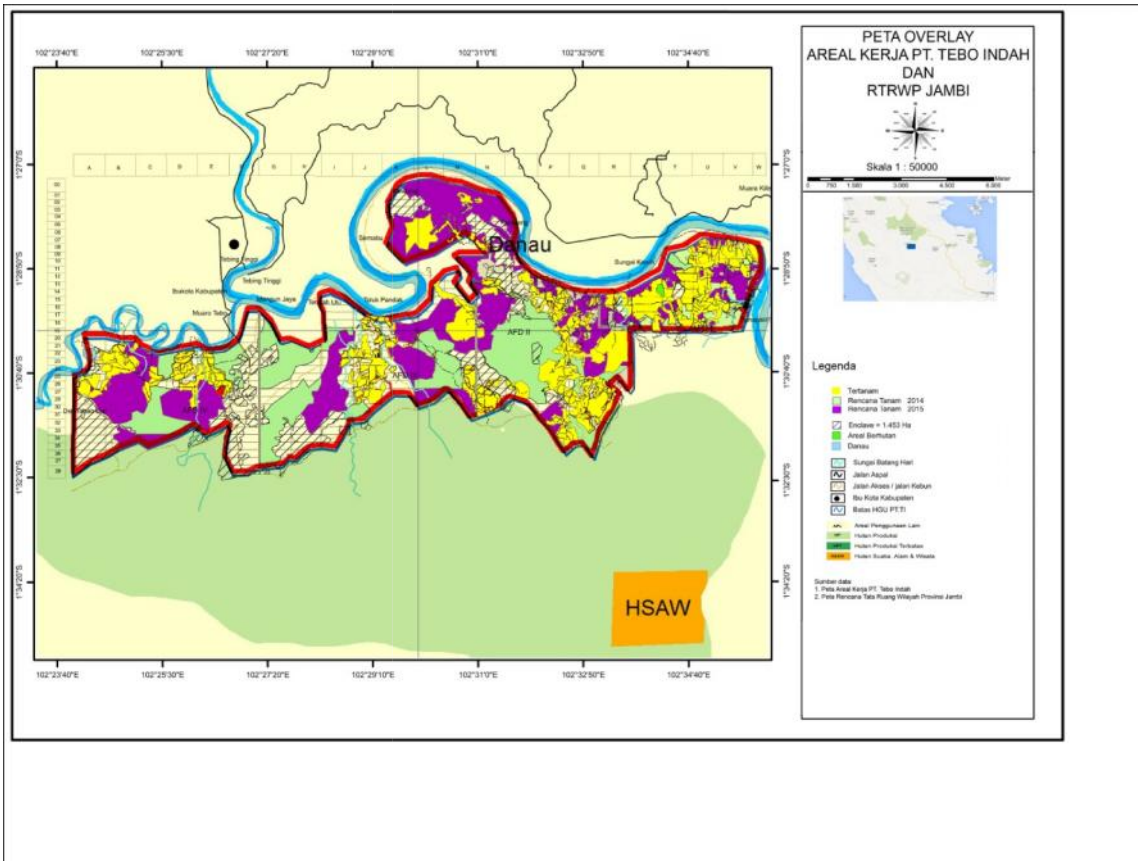
Picture 2. Location of PT Tebo Indah in Jambi Province



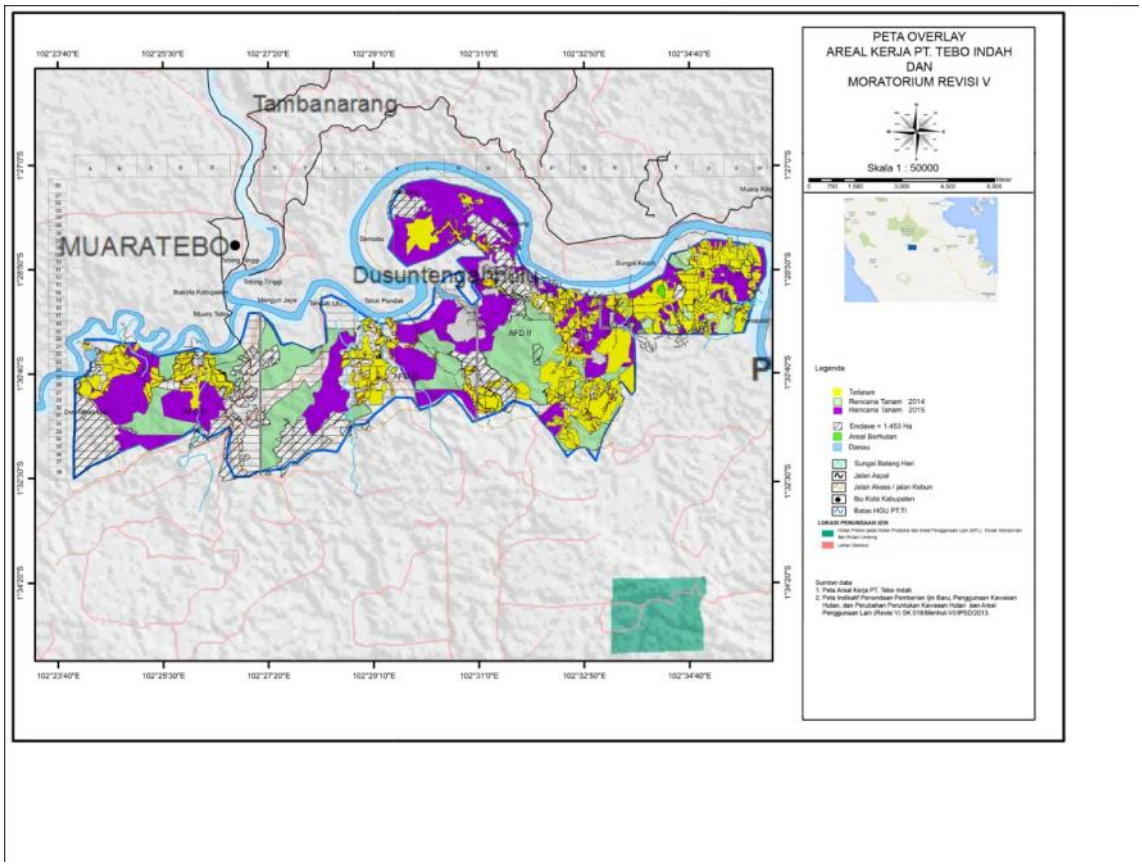
Picture 3. HGU Area of PT Tebo Indah in Tebo District



Picture 4. Overlay Map and Status of Forest Plantation PT Tebo Indah



Picture 5. Overlay Planting Project of PT Tebo Indah with RTRWP Tebo District, Jambi Province, Indonesia



Picture 6. Overlay Planting Project of PT Tebo Indah with Moratorium Revision 5 (13 November 2013), sesuai SK Menhut No. 6018/Menhut-VII/IPSDH/2013

d. Area and Time-plan for New Planting

PT Tebo Indah development plan has incorporated the findings from SEIA (AMDAL) by Pusat Penelitian Lingkungan Hidup (PPLH) Universitas Jambi and HCV Assessments and Social Impact Assessments by Sonokeling Akreditas Nusantara as described above when implementing the operational plans. Management plans for HCV areas and management plans for handling social impact have been drawn up.

The total area located in HGU of PT Tebo Indah is 7,038.06 Ha. The areas has been planted since 2008 is 3,380.50 Ha, proposed new planting areas is ± 2,875.50 Ha. The HCV management plan has been developed for these areas ± 264.06 Ha and there is unplantable areas around ± 518.00 Ha. According the operational management of PT Tebo Indah land development will commence in year 2013.

3. Assessment Process and Procedure

a. Assessor and Their Credential

HCV Assessor and Their Credential

The HCV assessment in the HGU Area of PT Tebo Indah by the RSPO accredited assessors. The HCV assessment conducted from 1st – 6th November 2013 in the HGU Area and villages surrounding area was carried by Sonokeling Akreditas Nusantara, located at Komplek Sari Inten No. 44 RT 02 RW 09, Ciomas Rahayu, Ciomas sub-district, Bogor District, 16610, West Java. Key consultants from Sonokeling Akreditas Nusantara have been accredited and approved by RSPO. The team members are:

- **Ir. Kresno Dwi Santosa, M.Si (Head of Expert Team in Social Economy and Culture)**

Approved RSPO HCV Assessor.

Accomplishing Master of Science in Natural Resource and Environmental Management, IPB, graduated in 1999.

In 2008 – now, working with Tropenbos International Indonesia Program as Forest Management Specialist and HCVF Coordinator. In the period he has performed assessment and training programs of Areas of High Conservation Value in HPH, HTI and Plantation. He is active in the drafting of Revision in Assessment Guidance of High Conservation Value Areas in Indonesia (HCVF Toolkit Indonesia) and in various meetings in the context of HCVF development in Indonesia. February 2003 – 2007, he worked with CIFOR under the Directorate of Forest and Livelihood Program as Researcher and Project Officer in ITTO PD 39/00 Rev. 3 (F): "Sustainable Collaborative Forest Management: Meeting the Challenges of Decentralization in the Bulungan Model Forest". In 2001 – 2003 he worked in BAPPENAS under the Directorate of Natural Resource and Environment as Project Assistance in the project of Integrated Biodiversity Strategy and Action Plan (IBSAP)-BSAP TF 023957-IND, GEF World Bank, which is funded by the Global Environment Facility.

In 1996 – 2001 he worked on his Master's degree and as a part time researcher in the Study Center of Coastal and Marina Areas of the IPB Faculty of Fishery. HCVF HTI pre-assessment of PT Sumalindo Lestari Jaya, Batuputih Site, East Kalimantan. HCVF pre-assessment of PT Rea Kaltim Plantations, Kutai Kartanegara, East Kalimantan. HCVF HTI risk rapid assessment of PT RAPP Estate Tasik Belat, Meranti Bay, Kampar Peninsula. HCVF full assessment of landscape level in Kampar Peninsula, a cooperation with TBI-APRIL-Research and Development Body of the Forestry. HCVF HTI full assessment of PT RAPP Estate Tasik Belat, Meranti Bay, Kampar Peninsula. Reviewer of HCVF HTI risk rapid assessment of PT RAPP Estate Padang Island. Training instructor of HCVF technical assessment level, a cooperation of TBI-WWF-TNC and INSTIPER.

Since December 2011 he has listed in RSPO as a specialist in Social Economy and Culture Discipline and as the Head of the Team.

- **Yanuar Wicaksono, Amd (Expert in Biodiversity)**

Approved RSPO.

Graduated in 2003 from Diploma III Program of Forest Resource Conservation of the Faculty of Forestry, IPB.

Has worked as a lecturer's assistance in subjects related with Wild Animals Ecology and Ecotourism at the Department of Forest Resource Conservation and Ecotourism, Faculty of Forestry, IPB and at the Ecotourism Diploma Program, IPB. He has also worked as co-assistant in various student's research for final examination in 2002 – 2009.

In 2003 – 2006, he has been active in natural tourism activities, such as in Carita Natural Tourism Park, Banten; Curug Nangka Forest Tourism, Bogor; Cimanggu Natural Tourism Park and several forest tourisms in South Bandung, a cooperation of Diploma III Program in Forest Resource Conservation and Ecotourism and Unit III Jabar-Banten of the General Company of Perhutani.

Since 2010 – now, he has been active in assessment activities of High Conservation Value both in forestry (HPH/HTI) and palm oil plantation. Other than being involved in the HCV assessment team, he has also been active in HCV trainings, both as executor and as manager.

Since December 2011 he has been listed in RSPO as specialist in Biodiversity discipline.

- **Ir. Agung Wibawa Anindita (Expert in Social Economy and Culture)**

Bachelor of Forestry, majoring in Forest Management – Bogor Institute of Agriculture (IPB), graduated in January 1994.

Having 15 years of work experience, such as in fields connected with Natural Resource Management (especially in Forestry, Agriculture and Mining), Environment Management (environmental impact analysis, UKL and UPL, RKL and RPL implementations, study baseline) and in **SOCIAL, ECONOMY AND CULTURE**.

- **Catur Wiradityo, S.Hut (Expert in Environmental Services)**

Bachelor program in the Department of Forest Resource Conservation and Ecotourism of the Faculty of Forestry in the Bogor Institute of Agriculture.

1. HCVA Assessment of PT Arrtu Borneo Perkebunan (Green Eagle Group) Palm Oil Plantation of Ketapang Regency, West Kalimantan. **PT Sonokeling Akreditas Nusantara**.
2. HCVA Assessment of PT Arrtu Energie Resources (Green Eagle Group) Palm Oil Plantation of Ketapang Regency, West Kalimantan. **PT Sonokeling Akreditas Nusantara**.
3. HCVA Assessment of PT Arrtu Agro Nusantara (Green Eagle Group) Palm Oil Plantation of Ketapang Regency, West Kalimantan. **PT Sonokeling Akreditas Nusantara**.

- **Farhan Nahdia, S.Hut (Assistant in Biodiversity)**

- **Rahmat, Amd (Assistant to GIS and Mapping Expert)**

Diploma III in Forestry of the Department of Silviculture, the Bogor Institute of Agriculture.

Has been actively involved in various HCV studies as member of expert team in GIS and mapping, such as in HCV activities and management in palm oil plantation areas, palm oil forests, Industrial Forests (HTI), Natural Forests (HPH) and mining.

The HCVA/F activities performed are:
1. Industrial Forests (HTI) and Natural Forests (HPH) companies, namely: PT Korintiga Hutani – Korinda Group (Central Kalimantan), PT Arara Abadi (Riau), PT Satria Perkasa Agung (Riau), PT Riau Abadi Lestari (Riau), PT SPA Serapung (Riau), PT KTH Sinar Merawang (Riau), PT Wirakarya Sakti (Jambi), PT Finnantara Intiga (Central Kalimantan), PT Rimba Hutani Mas (Jambi), PT Tebo Multi Agro (Jambi), PT Salaki Summa Sejahtera (West Sumatera).
2. Palm Oil Plantation Companies, namely: PT Guntung Idaman Nusa (Riau), PT Agro Palindo Sakti (South Sumatera), PT Agro Muara Rupit (South Sumatera).
3. Coal Mining Company, namely: PT Daya Bumindo Kurnia (Central Kalimantan).

Identification result of HCV PT TI involved public consulting process at 7 November 2013 and Peer Review by a party other than Assessor i.e. Dr. Harnios Arief (approved RSPO HCV Assessor).

SEIA Assessor and Their Credential

The Social Impact Assessment of PT DMIL was carried out on by Pusat Penelitian Lingkungan Hidup Universitas Jambi. The key consultants conducting these assessments have been accredited and approved by RSPO. The team members are:

- **Ir. Yanuar Fitri, M.Si**

Accomplishing master's degree in Regional and Rural Development in UNAND. Previously accomplishing the bachelor's degree in Agriculture Development in UNJA.

Having AMDAL (environmental impact analysis) A and B.

- **Ir. Ermadani, M.Sc**

Accomplishing master's degree in Soil sciences in Australia. Previously accomplishing the bachelor's degree in the same science in UNPAD.

Having basic AMDAL training certificates.

- **Mursalin, S.TP, M.Si**

Accomplishing master's degree in Food Technology in IPB. Previously accomplishing the bachelor's degree in Agriculture Products Technology in UNILA.

- **Drs. M. Naswir, M.Si**

Accomplishing master's degree in Analytical Chemistry in UNPAD. Previously accomplishing bachelor's degree in Chemistry Education in UNJA.

Having basic AMDAL training certificates.

- **Ir. Neliyati, M.Si**

Accomplishing master's degree in Agronomy in IPB. Previously accomplishing bachelor's degree in the same science in UNJA.

Having AMDAL A competence.

- **Dr. Ir. Lizawati, M.Si**

Accomplishing doctoral degree in Biotechnology in IPB. Previously accomplishing magister's and bachelor's degrees in Agronomy in IPB and UNJA.

- **Ir. Nahri Idris, M.Sc**

Accomplishing master's degree in Natural Resource Management in IPB. Previously accomplishing bachelor's degree in Husbandry Social and Economy in UNJA.

Having AMDAL A competence.

- **Chodidjah Alie, S.Pd, M.Kes**

Accomplishing master's degree in Community Health Science. Previously accomplishing bachelor's degree in Counseling Assistance.

- **Ir. M. Zuhdi, M.Sc**

Accomplishing master's degree in GIS in the Netherlands. Previously accomplishing bachelor's degree in Soil sciences in UNJA.

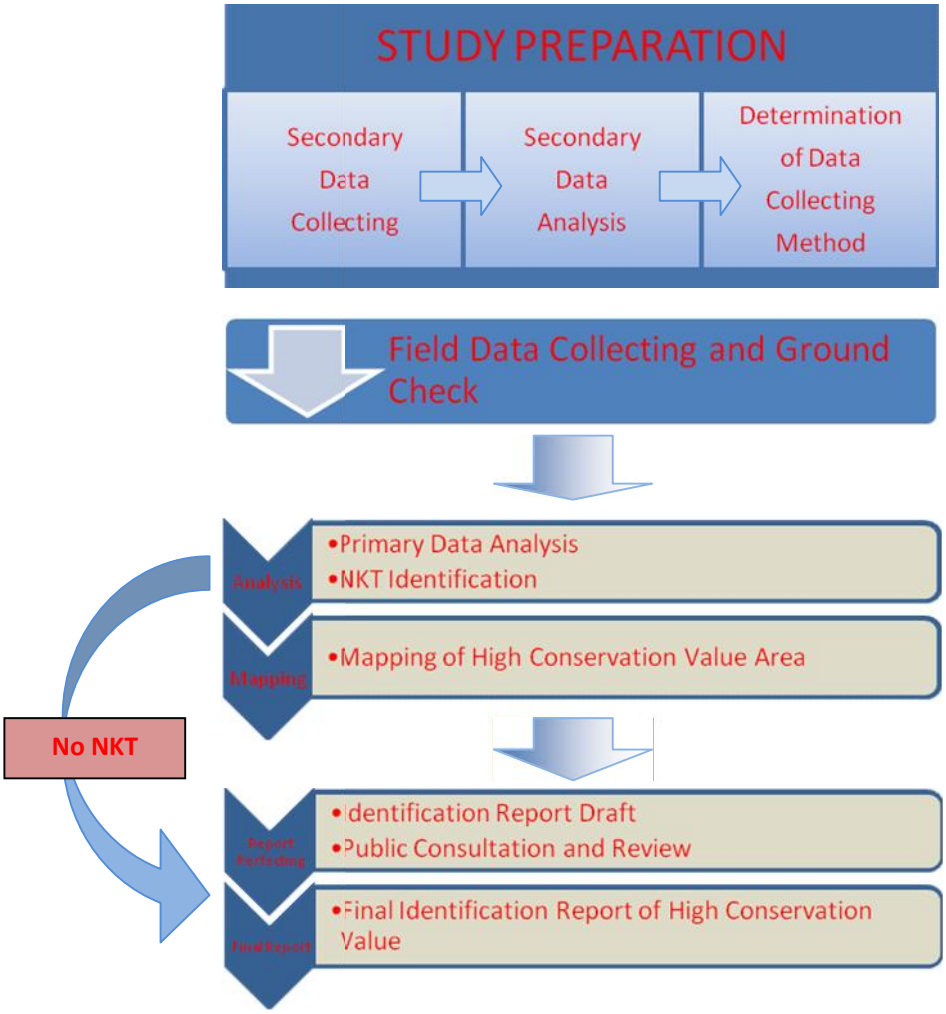
Having basic AMDAL training certificates.

The AMDAL documents have been approved based on the Decree of Jambi Governor No. 362/Kep.Gub/BLHD/2009 dated 8 September 2009.

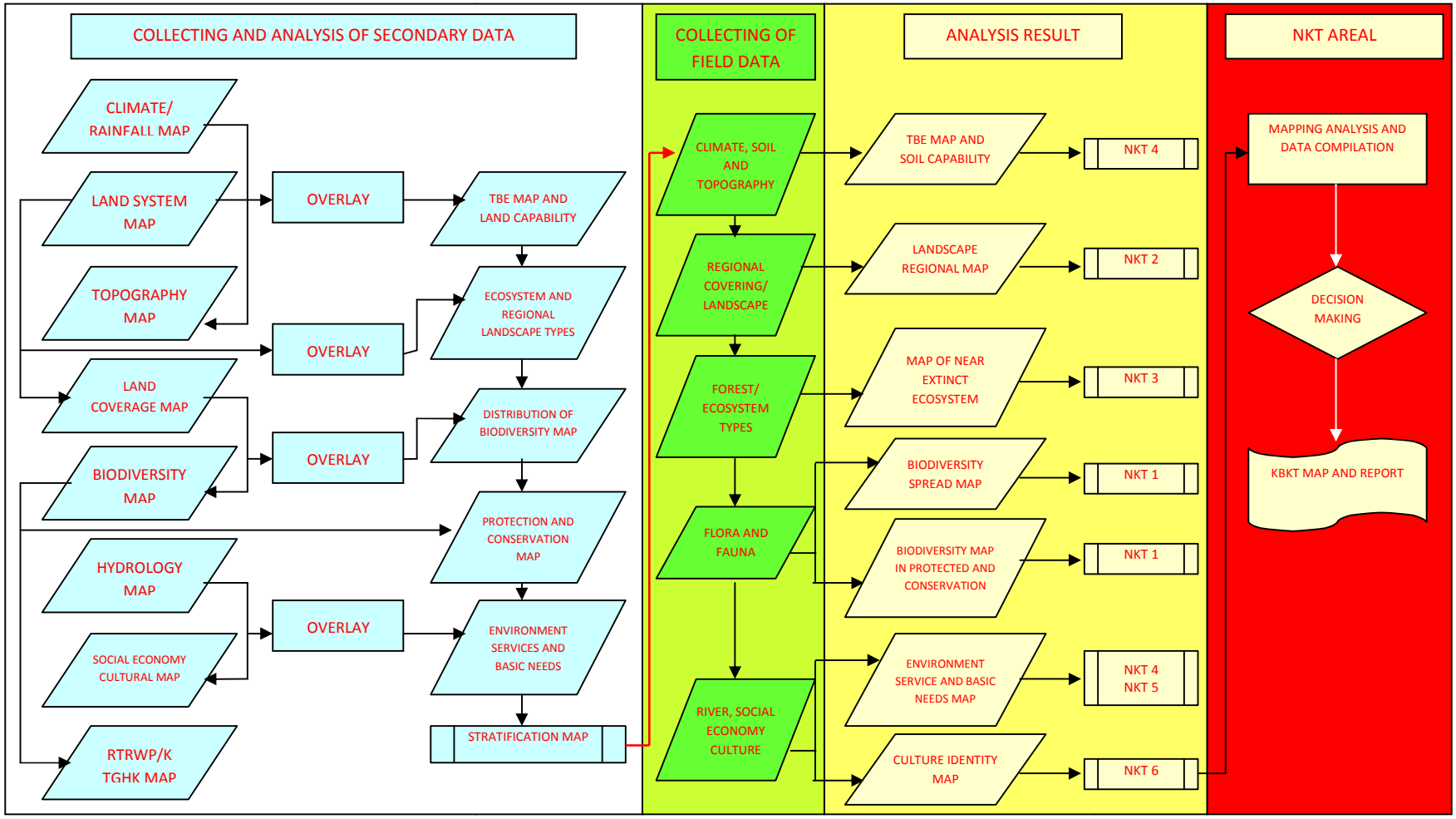
b. Assessment Methodology

HCV Assessment Methodology

Generally, the identification and analysis activities of NKT 1 – NKT 6 in PT Tebo Indah palm oil plantation area, with activity stages as is described in Picture 7 and Picture 8.



Picture 7. Identification Process of High Conservation Value of PT Tebo Indah Palm Oil Plantation Area



Picture 8. Spatial Analysis Process of Related Maps to Support Early Analysis of High Conservation Value Potentiality

SEIA Assessment Methodology

The method is performed in the collection and analyses of data for PT Tebo Indah are:

a. Identify the potential impact that comes from a description of the activity plan proponent and the condition of the environment hue. The result of the identification of potential impacts is the potential impact.
b. Evaluation of all potential impacts that generated hypothetical significant impacts by eliminating potentially significant impact.
c. Classification and priority hypothetical significant impacts with the intention that the scope and depth AMDAL studies that produce significant impacts hypothetical priority.

4. Summary of Findings

a. Summary of Assessment Findings for HCV Assessment

From the HCV assessment, it was found that the area consists of HCV 1, HCV 2, HCV 4, and HCV 5. Some of HCV areas are overlapping with other HCV area and as such total HCV areas in PT TI is 264.06 Ha (3.75%) of the HGU Area. There were no HCV 3 and HCV 6 found in the area.

Table 1. High Conservation Area in PT TI Palm Oil Plantation

No.	Location HCVA	Attributes HCVA	Area (Ha)
1	Bungkal River	1.1, 1.3, 1.4, 2.3, 4.1	34.45
2	Rengas River	4.1	18.81
3	Belilas River	1.1, 1.3, 1.4, 2.3, 4.1	59.60
4	Kait River	1.1, 1.3, 1.4, 2.3, 4.1	41.81
5	Keruh River	1.1, 1.3, 1.4, 2.3, 4.1	21.00
6	Air Hitam River	4.1	8.95
7	Penapalan River	1.1, 1.3, 1.4, 2.3, 4.1	39.43
8	Penyabungan River	4.1	19.35
9	Tebo River	4.1	3.36
10	Forested area	1.1, 1.3, 1.4, 2.3	5.54
11	Lake Cape Disconnect	1.1, 1.3, 1.4, 2.3, 4.1, 5	11.36
12	Breeding ponds	4.1	0.31
13	Ponds	4.1	0.11
Total			264.06

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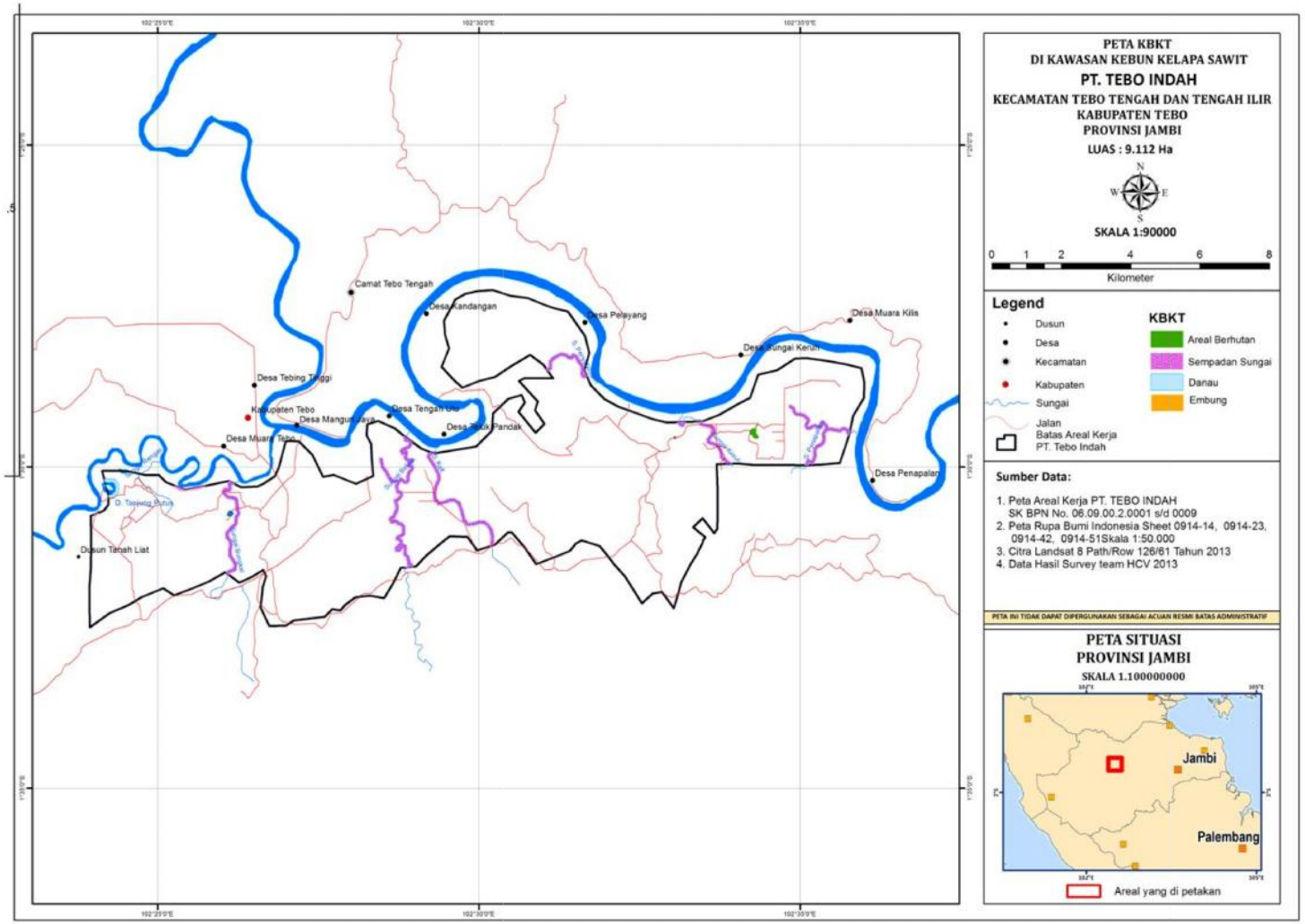
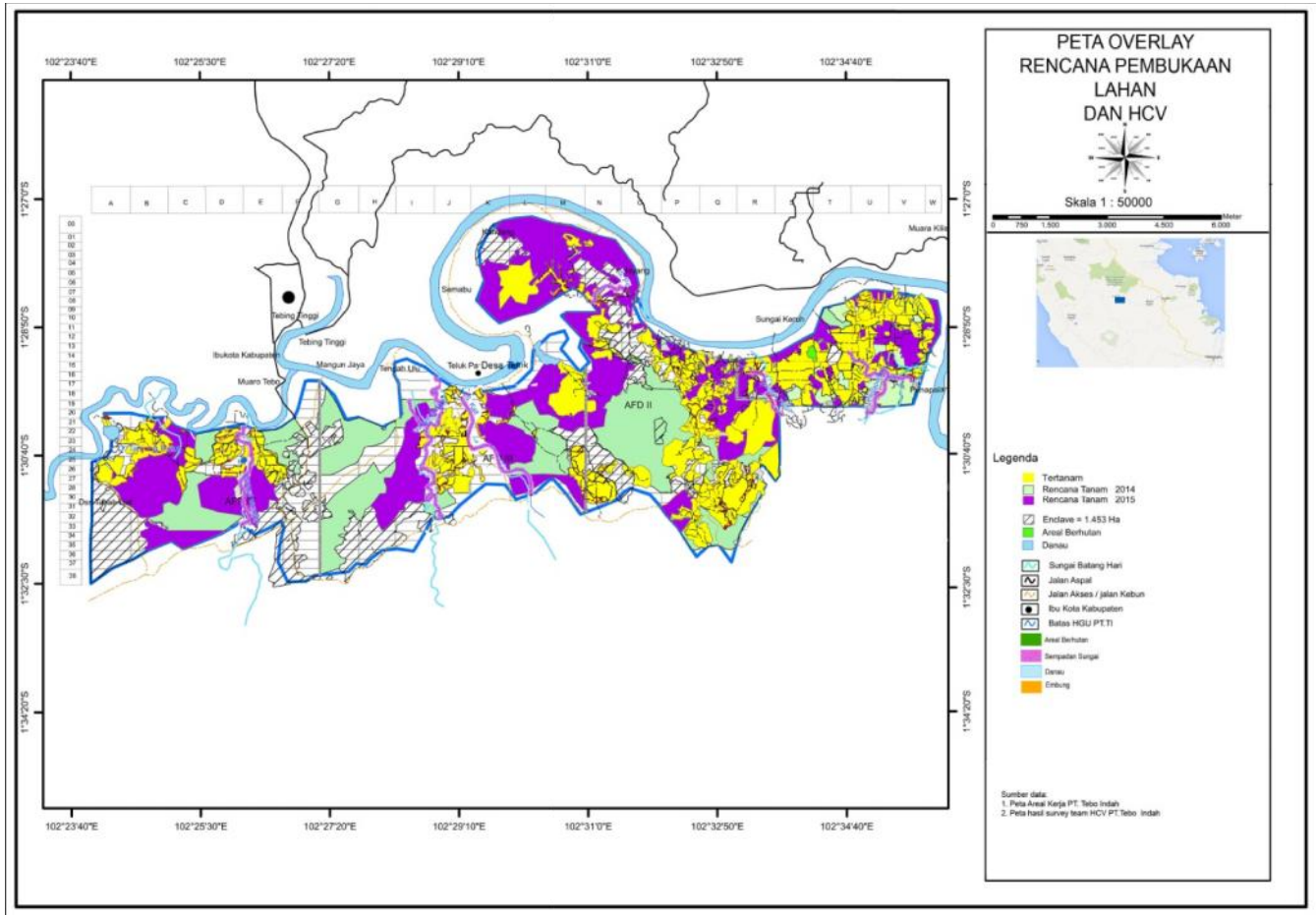


Picture 9. Identification HCV Area and Plan Project Area of PT Tebo Indah



Picture 10. Overlay HCV Area and Planting Project in HGU Area of PT Tebo Indah

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Table 2. Summary of Management and Monitoring Recommendation

HCVA	Threat	Management Recommendation	Monitoring Recommendation
HCVA GENERAL (river / lake / water basin along the border and forested area)	1) Forest fire danger when considering the drought conditions in part shrub areas. Generally, land and forest fires that occurred were intentionalperformed when clearing land for cultivation. 2) Occupational status of the protected area because this area there are some parts that are owned by the community and the UP has not released him. 3) Illegal logging in the area has been designated as a protected area. 4) a potential threat in the future is at the opening of the land (landclearing), the contractor usually ignoring the limits of areas defined as HCVA. 5) Surrounding communities	1) Establishment of protected areas. 2) Dissemination of High Conservation Value Areas (HCVA) and protected areas to all parties, including the public, local government and management unit. 3) Structuring and participatory boundary measurements. 4) Pile limits, either in the form of boundary markers and *poletan* in the stem of the plant. 5) Installation of information boards and signs Area High Conservation Value (HCVA), and protected areas, especially in the area around the town / village and roads traversed by the public and staff management unit. 6) Maintenance of boundary markers, signs, information boards and tree trunks *poletan* on a regular basis. 7) Security area of activity	1) Level Measurement effectiveness of socialization / education environment indicated the level of community participation in helping to secure the area and / or actively maintain protected areas. 2) Measurement of the extent of damage / disturbance of protected areas as a result of the activity of UP and other activities. 3) Measurement of levels of plant diversity in protected areas. 4) Measurement of the level of diversity of wildlife in protected areas. 5) Monitoring the intensity of disturbance (encroachment, logging, fire).

	and workers (employees) do not understand fully the importance of High Conservation Value / HCV for sustainable farm management and environmental sustainability. 6) The possibility of differences in interpretation of the boundary area identified as HCV, if there are no clear boundaries. It iscan lead to land clearing in areas that have HCV, because contractors are often more oriented to the target size of the volume of work.	encroachment, logging and poaching it and as fire control implementation can be integrated with other security activities. Then for the existence of the protected area can be preserved and maintained in the long term in accordance with the expected goals socialization and counseling / education environment should be done regularly And the implementation can coordinate with relevant agencies. 8) To increase the biodiversity in HCVA necessary enrichment. The types of plants are best are the types of native plants, endangered / protected, and the seed easily obtainable from the surrounding area. 9) Establish connectivity between pockets of animals, especially that contained in the connecting area between the UP corridor (in this case riparian potential as a natural corridor), and then connect with large corridors, namely Batang Hari river border. 10) At the time of the opening of the land (land clearing) by the contractor is	6) Monitoring rehabilitation success rate.

		expected to be disseminated about the existence HCVA, so that the opening is no longer haphazard.	
HCVA SPECIAL (river / lake / water basin and river border		1) Making water tank which is more adequate to prevent the entry of chemical residues. 2) Do not do the cleaning cover crop (cover crops) for the blocks in the area of water protection. 3) Do not use chemicals containing chemicals B3 around bodies of water.	1) Discharge and water quality monitoring on a regular basis with a certain period. 2) Monitoring sedimentation rate.

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b. Summary of SEIA Findings

Large and Necessary Effects (Positive)

- The structuring and coaching activities of the conservation areas and the construction of terrace and planting of covering plants will protect the soil of damages due to erosion that the land quality/fertility will be maintained and there will no soil particles flown into the river. Therefore the river will be avoided from turbidity process.
- Fertilization activities and raising of appropriate soil covering plants can improve soil fertility/quality.
- Changes of work opportunity and business, household earnings, cooperation organization, accessibility and people's mobility.
- Procurement of work force creates work opportunities.

Large and Necessary Impacts (Negative)

- Land clearing and preparation will cause the lost of land covering vegetation which causes land erosion because of rain water particles and surface flow.
- The quality of surface water will decline due to agrochemical residue used in raising activities including pest and disease control and also weeds. The overuse of fertilizer will also cause the decline in water quality.
- Changes in the process (social conflice), behavior and people's perception.
- If plantation business does not operate there will be dissolution in partnership and work relationship.

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Source of Impact	Purpose of Management	Method of Management
Geophysican-Chemical Component		
Air quality 1) Transportation and Production Means and Fresh Fruit Bunch	1) Reducing air pollution level so as not to exceed the quality standard.	Construction until operation stage (technological approach) 1) The vessel used for transportation must already pass emission test. 2) The vessel must travel down the road at limited speed. 3) The roads travelled by the vessel in summer must be sprinkled with water. 4) Consider layering asphalt on the main road of plantation.
Surface water quality 1) Clearing and preparation of lands for plantation, nurturing of non-yielding plants (TBM) and yielding plants (TM).	2) Reducing the surface water pollution level so as not to exceed the threshold of surface water quality standard Class II.	Construction to operation stage (technological approach) 1) Land clearing must be performed gradually in accordance with the condition and distribution of land area. 2) Planting of legume cover crop (LCC) immediately after the land is cleared. 3) Usage of fertilizer in accordance with the recommendation, which includes dosage, frequency and method of fertilizing. 4) Minimizing the usage of agrochemical ingredients to control pets and disease by applying the integrated and natural pest control system. 5) Maintaining and creating green belt around the river banks and other conservation areas.

Quality of ground water 1) Clearing and preparation of land for landscaping, management of TBM and TM.	3) Reducing the level of ground water pollution in order to not exceed the threshold for ground water (well water) quality standard.	Construction to operation (technological approach) 1) Land clearing is performed gradually in accordance with the respective land area and inclination. 2) Coverage of cleared land with legume cover crop. 3) Balanced usage of organic and chemical fertilizer. 4) Implementation of integrated pest and disease and parasite control system by minimizing the usage of chemicals.
Land Erosion 1) Land clearing and preparation for plantation.	4) Attempting to accelerate land erosion without exceeding the allowed erosion rate.	Construction to operation (technological approach) 1) Land clearing is performed gradually in accordance with the respective land area and inclination. 2) Coverage of cleared land with legume cover crop. 3) Creation of green belt around the river bank and other conservation area. 4) Creation of terrace on land with 20-25% of inclination.
Land fertility / quality 1) Land clearing and preparation for plantation.	5) Mitigating the reduction of soil quality.	Construction to operation (technological approach) 1) Land clearing is performed gradually in accordance with the respective land area and inclination. 2) Coverage of cleared land with legume cover crop. 3) Creation of green belt around the river bank and other conservation area. 4) Balanced usage of organic and chemical fertilizers in accordance with the recommended method and dosage. 5) Creation of terrace on land with 20-25% inclination.

Biological Components Changes in ecosystem 1) Negative impact: land preparation and clearing. 2) Positive impact: management and layouting of conservation area.	1) Protecting and managing the remaining natural ecosystem and safeguarding the conservation area in the activity zone as well as converting the area into a source of biodiversity.	Construction stage (technological approach) 1) Gradual land clearing, burning restriction, restriction from clearing land in a river bank area, production forest area inside the authorization zone. 2) Soil coverage is performed on cleared lands. 3) Verification of conservation area by stipulating legal boundaries, conservation of river banks, inclination > 25%. 4) Involving the surrounding population by creating local forest. 5) Construction of security posts, periodical patrol and procurement of emergency response facilities / infrastructure. Construction to operation stage (social approach) 1) Development of cooperation with universities and BKSDA in managing / layouting conservation area.
Changes in vegetation component 1) Negative impacts: from land clearing and preparation activities, which result in reduction / loss of vegetation component.	2) Maintaining the balance of natural plant biodiversity. 3) Minimizing disturbance, damage and reduction in protected vegetation species.	Construction stage (technological approach) 1) Not clearing lands in conservation area. 2) Verifying zone by stipulating legal conservation area boundaries. 3) Refraining from cutting down protected trees. 4) Planting or enriching the river bank area. 5) Replanting aroundd houses, offices and other infrastructures. 6) Labeling protected trees.

2) Positive impact: from management and layouting of conservation area based on the existing regulations.		7) Creating no logging board in conservation areas such as river banks, with inclination > 25%. 8) Research and development of protected vegetation. 9) Placing a sign which restricts people from cutting down protected trees. 10) Protection and observation of the said area through periodical patrol. Construction to operation stage (social approach) 1) Socialization and briefing for the local population and employees regarding the conservation of river bank / stream, inclination > 25% and replanting of trees around the company. 2) Socialization and procurement of skills for the local population and company employees regarding the forest vegetation cultivation techniques. Operational stage (Institutional approach) 1) Development of cooperation with stakeholders such as universities and research institutions in the attempt to study and develop forest vegetation, especially protected flora.
Changes in animal habitat, biodiversity and protected animals 1) Land preparation and clearing gives negative impact 2) Layouting and	4) Minimizing the reduction of animal habitat quality, empowering the conservation area to function as substitute habitat and maintaining the biodiversity of wild fauna, especially those considered to be part of the biodiversity and deemed useful for the ecosystem and science alike.	Construction Stage (Technological Approach) 1) Gradual land clearing by refraining from burning trees. 2) Refraining from clearing lands within the conservation area. 3) Refraining from cutting down trees / remaining vegetation which can serve as source of food /

management of conservation area as well as planting of palm coconut trees to give positive impact.		nesting grounds for certain animal species. 4) Verifying conservation area by stipulating legal conservation area boundaries. 5) Planting and enriching river bank area through the involvement of local population. 6) Replanting of vegetation around houses, offices and other infrastructures. 7) Placing a sign which restricts people from poaching protected animal species. 8) Replacing a list of the types of wildlife. 9) Constructing security posts and assigning patrols. Construction stage (social approach) 1) Socialization and briefing to local population regarding protected animal species and poaching restrictions. 2) Involving field technicians in trainings / seminars related with animal conservation. Construction to Operational Stage (Institutional approach) 1) Law enforcement on restrictions regarding restrictions on cutting down trees in conservation area. 2) Law enforcement on poaching of protected animals within the plantation area.
Changes in pests, diseases, parasites and natural predators' population	5) Optimizing pest, disease and parasite control through preventive methods. 6) Safeguarding natural balance / existence of natural predators.	Construction to operation stage (technological approach) 1) Gradually clearing the area without burning trees. 2) Planting palm coconut trees using certified trees.

1) Land clearing and preparation, procurement of seeds and seeding, planting of palm coconut trees with monocultural system. 2) Maintenance of palm coconut trees, especially pest and disease elimination using excessive pesticides over a prolonged period of time.		3) Integrated plant management using mechanical and biological control methods. 4) Research and development of various PHT technology. 5) Minimizing the use of chemical materials. 6) Forming a monitoring team to monitor pest and disease as well as competent natural predators. 7) Routine / scheduled monitoring of pest, disease and natural predators. 8) Creating a list of natural predators, their images and host plants. 9) Placing a sign which restricts people from damaging the host plants and natural predators. 10) Research and development on natural predator species. Construction to operation stage (social approach) 1) Briefing and training to local farmers and employees regarding integrated plant management. 2) Socialization on types of pest and diseases invading palm coconut trees and natural predators as well as host plants. 3) PHT technology aid package for plasma farmers. Construction to operational stage (institutional approach) 1) Cooperating with universities in conducting research and briefing on plant management in an integrated manner and development of host plants and natural predators for pests and plant diseases.

Water organism 1) Negative impact: land clearing and preparation and plant maintenance. 2) Positive impact: Management of conservation area and soil coverage.	7) Protecting water organism biodiversity to conserve the water ecosystem.	Construction to operational stage (construction of integrated pest control unit at PT Tebo Indah) Construction to operation stage (technological approach) 1) Land clearing and preparation is performed gradually, without fuel and immediately followed by soil coverage legumes. 2) Refraining from clearing and preparing land in the river bank area. 3) Letting natural plants grow at river banks. 4) Conducting integrated plant management which prioritizes pest, disease and parasite control without using chemicals. 5) Placing signs which restrict people from fishing in the river using toxic methods. 6) Monitoring river water organisms. Construction to operational stage (social approach) 1) Briefing for the local population, employees and plasma farmers regarding the importance of water organisms and river bank conservation. 2) Briefing and training for plasma farmers and plantation employees regarding integrated plant management. 3) Conducting briefings and trainings on fishery business. Operational stage (Institutional approach) 1) Construction of integrated pest control unit at PT

		Tebo Indah. 2) Conducting research with universities and educational institutions on environmental management, specifically on pests, diseases and parasites.
Socioeconomic and cultural component Demographic changes 1) Procurement of work force.	1) In order for the demographic changes to occur reasonably and to not disturb the daily lives of local population as well as minimize potential conflicts due to employee migrants.	Preconstruction to construction stage (technological approach) 1) Socializing plantation activities to the local population, especially regarding the recruitment of employees and the possibility of non-local employees staying in the area. Preconstruction to operational stage (Social approach) 1) Encouraging and briefing non-local employees on ways to adapt with the local situation and condition. 2) Holding activities which encourage employees and local population to familiarize with each other. Preconstruction to operation stage (institutional approach) 1) Giving routine and detailed reports to village apparatus and authorities regarding the arrival of employees in the area.
Changes in work and business opportunities 1) Procurement of	2) To give work opportunities to local poulation, reduce unemployment, create production economy business	Preconstruction to operation stage (technological approach) 1) Giving priority to local work force in accordance

worker, land clearing and soil coverage legume, maintenance of TBM and maintenance of TM.	opportunities.	with the required education and skill set with a ratio of 70: 30 (local: non-local). Meanwhile, skilled employees should prioritize local work force in accordance with the required knowledge. 2) Conducting education programs and trainings for local work force. 3) Conducting public empowerment program in productive economy to create work opportunities. Preconstruction to operation stage (social approach) 1) Socializing and briefing the local population regarding the types of work, position, education and skills required for the job. 2) Providing transparent/open information for the local population when recruiting new employees in accordance with the required skills and education, including transparency of selection. Preconstruction to operational stage (institutional approach) 1) Involving village authorities and the local Employment Agency in recruiting and preparing work force.
Changes in household income 1) Procurement of work force, land clearing and soil coverage, maintenance of TBM, TM and harvesting.	3) To increase public income from pioneering activities.	Preconstruction to operational stage (technological approach) 1) Priority local employment in accordance with the education and skills possessed. Preconstruction to operational stage (social approach) 1) Education and training programs for local workers,

		especially in the attempt to empower local people. Preconstruction to operational stage (Institutional approach) 1) Cooperating with public economic institution / cooperatives and relevant institutions to develop family potentials in order to increase household income.
Changes in cooperative institution 1) Procurement of work force, land clearing and soil coverage, maintenance of TBM, maintenance of TM and harvesting.	4) In order to further empower the cooperative for the purpose of improving the economy and welfare of its members.	Preconstruction stage (technological approach) 1) Making use of the existing cooperative as the company's partner. 2) Creating a new cooperative based on areal grid, ex. In ever village. Preconstruction to operational stage (technological approach) 1) Providing education programs and trainings for cooperative officials and public figures. 2) Assisting cooperative administration. Preconstruction to operational stage (social approach) 1) Socializing the imporance of a healthy cooperative for the people's economic activities to its members. Preconstruction to operational stage (institutional approach) 1) Involving the cooperative in plantation activities, eg. in monitoring the maintenance of plants and harvesting.

Changes in public mobility and access 1) Creation of roads, base camp and drainages.	5) In order to increase public dynamics by improving public access and mobility in a positive manner due to pioneering activities.	Preconstruction to operational stage (technological approach) 1) Assisting village road maintenance. Preconstruction to operational stage (social approach) 1) Creating sidewalks for pioneering and public needs. Pre-construction to operational stage (Institutional approach) 1) Cooperating with relevant institutions in maintaining and repairing roads.
Social Changes (Social conflict) 1) Land acquisition, procurement of work force and resolution of partnership and employment dispute.	6) To minimize social conflicts which may occur due to pioneering activities as well as to prevent public unrest.	Preconstruction stage (technological approach) 1) Land clearing in a wise, voluntary and legal manner by the public, free of duress or peer pressure. 2) Creating an ideal, transparent partnership system. Preconstruction to operational stage (technological approach) 1) Handling and treatment of work force in accordance with the existing provisions of law. 2) Local work force priority in every stage of activity. Preconstruction to operational stage (Social approach) 1) Socializing every stage of activity to the public. 2) Harmonizing the people around the plantation and the employees. Preconstruction to operational stage (institutional

		approach) 1) Routine meeting between the Company and government authorities on every level as well as the public figures for the purpose of good communication and relationship. 2) Involving the village authorities, public figures and relevant institutions in community-wide decision making. Operational stage (technological approach) 1) Harvesting and dividing yields in a transparent manner. Operational stage (institutional approach) 1) Involving the public, in this case the cooperative, as supervisors during the harvest. Post-operational stage (technological approach) 1) Termination of partnership and employment in accordance with the applicable provisions of law.
Change of public attitude and perception 1) Socialization, methods of acquiring lands, procurement of employees, harvesting, management of conservation area, CSR, resolution of	7) In order to bolster good perception among the public towards the pioneering activities as well as prevent public unrest.	Preconstruction stage (technological approach) 1) Acquisition of lands in a wise manner through consensus. Preconstruction to operational stage (technological approach) 1) Prioritizing local workers in every stage of activity. 2) Involving cooperatives in monitoring the management of plantation and harvest.

employment disputes and partnership disputes.		Preconstruction to operational stage (social approach) 1) Socializing every stage of activity to the public. 2) During public dispute, the people are given the opportunity to resolve it on their own, facilitated by village authorities. Preconstruction to operational stage (institutional approach) 1) Holding activities for the employees and the public to bolster harmony. 2) Routine meeting between the Company and formal / non-formal government apparatus on every level and the public figures to create good communication and relationship. 3) Cooperating with public social institutions when holding social activities. Construction to operational stage (social approach) 1) Creation of public facilities used by the local population, eg. Roads, healthcare facilities, schools and social infrastructures. Post-operational stage (technological approach) 1) Resolution of partnership and employment issues in a proper manner according to the applicable provisions of law.
Changes in natural resources economy 1) Impact of reduced economic value of	8) In order to prevent drastic decrease of natural resources' economic value in the area.	Pre-construction to post-operational stage (technological approach) 1) Complying with all provisions and regulations regarding plantation business and conservation of

natural resources is derived from the land clearing activities to construct plantations, whereas positive impact can be gained from layouting and management of conservation area.		the environment. 2) Conducting provisions on environmental management and monitoring plans. 3) Layouting and managing conservation areas in accordance with the applicable regulations.
Public Healthcare Component Disease Pattern 1) Mobilization of heavy equipments, land preparation, maintenance of TBM and TM. Environmental Health 1) Creation of roads, base camp, drainages, land clearing and preparation and maintenance of TBM and TM.	1) Preventing work accidents and diseases among the employees and local population. 2) Preventing increased density of surface water pollution level and vectors as well as increasing work productivity without losing work days due to decreased work environment quality.	Construction to operational stage (technological approach) 1) Implementing optimal work health and safety management for the workers. 2) Implementing general principles of safety. 3) Attempting promotive and preventive actions. Construction to operational stage (technological approach) 1) Monitoring ground surface passed by vehicles and immediately patching potholes that can turn into pool during the rain. 2) Paying attention to the inner space and shape of drainage. 3) Monitoring fishbone duct around the plantation. 4) Cleaning fishbone duct. 5) Monitoring larvae density around the breeding site

		or adult mosquitoe population around the location, especially during the rainy season. 6) Controlling vectors using larvae-eating fish as a means of biological control. 7) Managing surface water quality. 8) Implementing the HSE management in a hollistic manner by taking into account the workers' rights regarding healthcare and safety.

5. Internal Responsibility

Formal Sign-off by Assessors and Company

This document is the Summary of SEIA (Social & Environmental Impact Assessment) and HCV (High Conservation Value) Assessment of PT Tebo Indah.

(_____)
Consultant of HCV

(_____)
Consultant of SEIA

Statement of Acceptance of Responsibility for Assessment

The Assessment Result of the Social & Environment Impact Assessment (SEIA) and High Conservation Value (HCV) Assessment of PT Tebo Indah by Pusat Penelitian Lingkungan Hidup (PPLH) Universitas Jambi and Sonokeling Akreditas Nusantara will be applied as part of the guidelines in developing and managing PT Tebo Indah.

Beni Hendrawan
Chief Executive Officer