

# **Roundtable on Sustainable Palm Oil New Planting Procedure**

## **Updated Summary Report of Management and Monitoring Plan** *(English Version)*

### **PT. Temila Agro Abadi**

**Regencies of Landak dan Kubu Raya, West Kalimantan  
Indonesia**

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Faculty of Forestry – Bogor Agricultural University  
In Cooperation With PT Temila Agro Abadi  
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## 1 Executive Summary

PT Temila Agro Abadi is an oil palm plantation company located in the regencies of Landak and Kubu Raya, West Kalimantan Province. Due to the company's concern to a sustainable development of oil palm plantation in accordance with P&C RSPO especially Principle 5 and 7 (*New Planting Procedure*), in 2013, the company of PT Temila Agro Abadi performed HCVs Tracing and Identification in his plantation area.

The company's area was formerly an ex illegal logging area and land utilized for traditional farming purposes by local communities. Currently, illegal logging is still being held in the remaining forested areas. In 2007, the company obtained the first area concession issued by Landak Regent according to the Landak Regency's Decree No. 595.1/166/HK-2007 dated 18 July 2007 which covering area of 20,000 ha. The area concession was then revised by Landak Regent according to the Landak Regency's Decree No. 595.1/225/HK-2012 dated 1 October 2012 covering area of 8,193 ha. Based on the attachment map of Forestry Minister's Decree No. No. 259/KPTS-II/2000 dated 23 August 2000, the area of PT Temila Agro Abadi is situated in the Non Forestry Areas or Dry Lands for Farming Purposes (PLK).

Administratively, the concession area of PT Temila Agro Abadi is located in two sub-districts, namely Sebangki Sub-district of Landak Regency (covering villages of Sebangki, Rantau Panjang, Agak and Kumpang Tengah) and Kuala Mandor B Sub-district of Kubu Raya Regency which covering villages of Karya Bhakti, Biung and Kuala Mandor A.

Geographically, the plantaion area is located in the East 109°35'37" – 109°37'3,9" and North 0°04'1,82" – 0°09'51". This plantation is bordered with plantation area of PT Citra Niaga Perkasa in the north; Landak River in the South; Protecled Forest Areas in the East; and Sambeh River in the West. The protected forest area is located adjacent to the plantation area of PT Temila Agro Abadi with the condition, as the damaged forest areas due to illegal logging.

According to the HCV's Tracing conducted on 725,34 ha of the company's area, in the plant and wildlife aspect, it was not found species habitat lost. Availability of the former plant species on the oil palm plantation area, can be represented on other areas especially in the Buffer Zone of Protected Forest. While in the environmental services aspect, it was not found river flowing and endangered ecosystem (deep peat ecosystem > 3 m) in the area assessed. It is also identified that the area is not included in the Areas of Moratorium on Granting New Licenses published by the Forestry Ministry in October 2012. While in the socio-cultural aspect, before converted to oil palm plantation, there was no any area that must be considered as HVC5 and HCV6 in the assessed area.

Meanwhile, according to the Identificaion of HCV's presence in the area of PT Temila Agro Abadi, it was found 954.35 ha of areas that identified as HCVA's containing (1) HCV1.2 (*Endangered Species*); (2) HCV3 (*Areas containing rare or endangered ecosystems*); (4) HCV4.1 (*Areas or ecosystems that have important functions in water supply and flood control for downstream communities*); (5) HCV5 (*Areas that have important functions in fulfilling basic need for local communities*); (6) *HCV6 (Areas that have important functions as cultural identity for local communities)*.

The EIA Assessment in the area of PT Temila Agro Abadi was held by competent consultant of CV DELTA EKOTROP RAYA INDO and has been approved by Landak Regent according to the Landak Regency's Decree No. No 660.1/205/HK-2008 dated 3 September 2008. Meanwhile,

the HCV and SIA assessments were conducted in 2013 by Faculty of Forestry – Bogor Agricultural University which supported by assessor team accredited by RSPO.

## **2. Reference Documents**

### **2.1 List of Reports**

- a) Document report on The Environmental Impact Analysis (AMDAL) of PT Temila Agro Abadi by CV DELTA EKOTROP RAYA INDO of 2008
- b) Document report on the High Conservation Value (HCV) in the area of PT Temila Agro Abadi by Faculty of Forestry – Bogor Agricultural University of 2013
- c) Document report on the Social Impact Assessment (SIA) in the area of PT Temila Agro Abadi by Faculty of Forestry – Bogor Agricultural University of 2013.

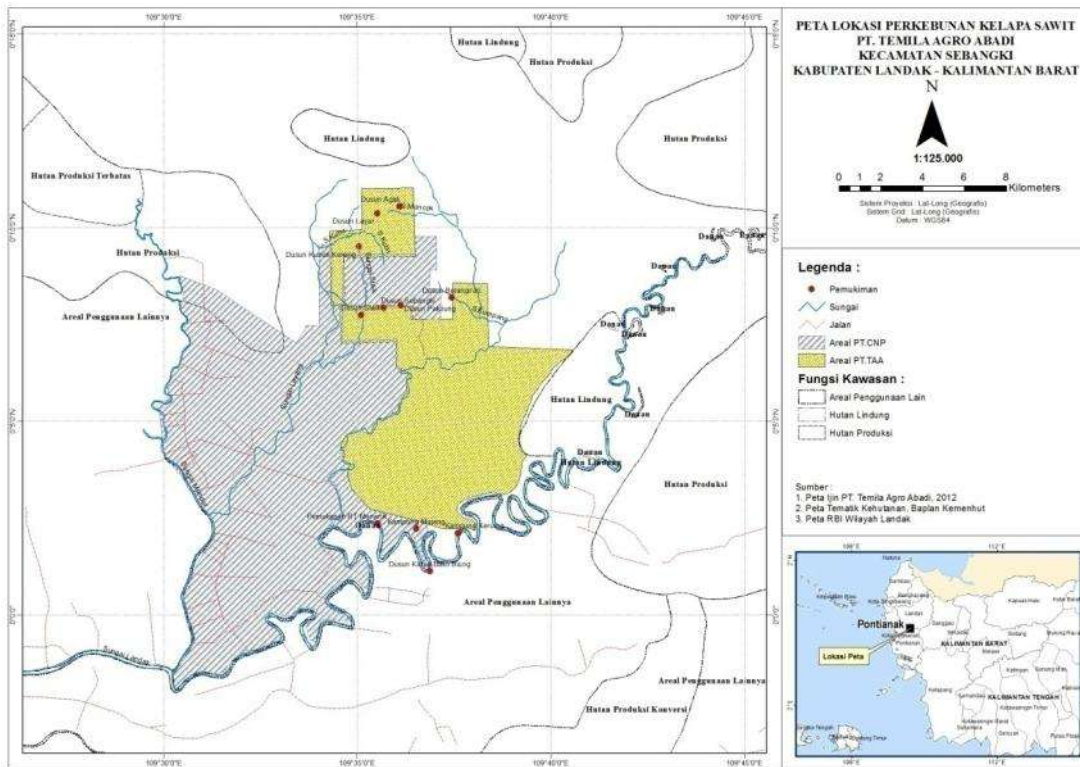
### **2.2 Legal Documents, Government Regulation and Property Deeds Related to The Area Assessed**

Legal documents provided before operational are as follows :

1. The Landak Regency's Decree No. 595.1/166/HK-2007 dated 18 July 2007 which covering area of 20,000 ha.
2. The Landak Regency's Decree No. 595.1/225/HK-2012 dated 1 October 2012 covering area of 8,193 ha.
3. Decree of The Forestry and Plantation Minister No 259/Kpts-II/2000 regarding The Determination of Forests and Aquatic Areas in the Province of West Kalimantan.
4. Law No. 32 of 2009 regarding The Environmental Management and Protection.
5. Government Regulation No 82 of 2001 regarding Water Quality Management and Water Pollution Control.
6. Regulation of The Environmental Minister No 11 of 2006 on The List of Bussiness and Activity Plans That Must be Provided with EIA (AMDAL).
7. Regulation of The Environmental Minister No 08 of 2006 on Guidance of The Environmental Impacts Assessment Document Preparation.
8. Regulation of The Environmental Minister No 45 of 2005 regarding to Guidance of The Implementation of Environmental Management (RKL) and Monitoring Plans (RPL).
9. Decree of The Head of Environmental Control Agency No. Kep-015, 1997 regarding to Guidance of The Implementation of Environmental Management and Monitoring Plan (RKL/RPL).

### 2.3. Map of The Company's Area at The Site and Landscape Levels

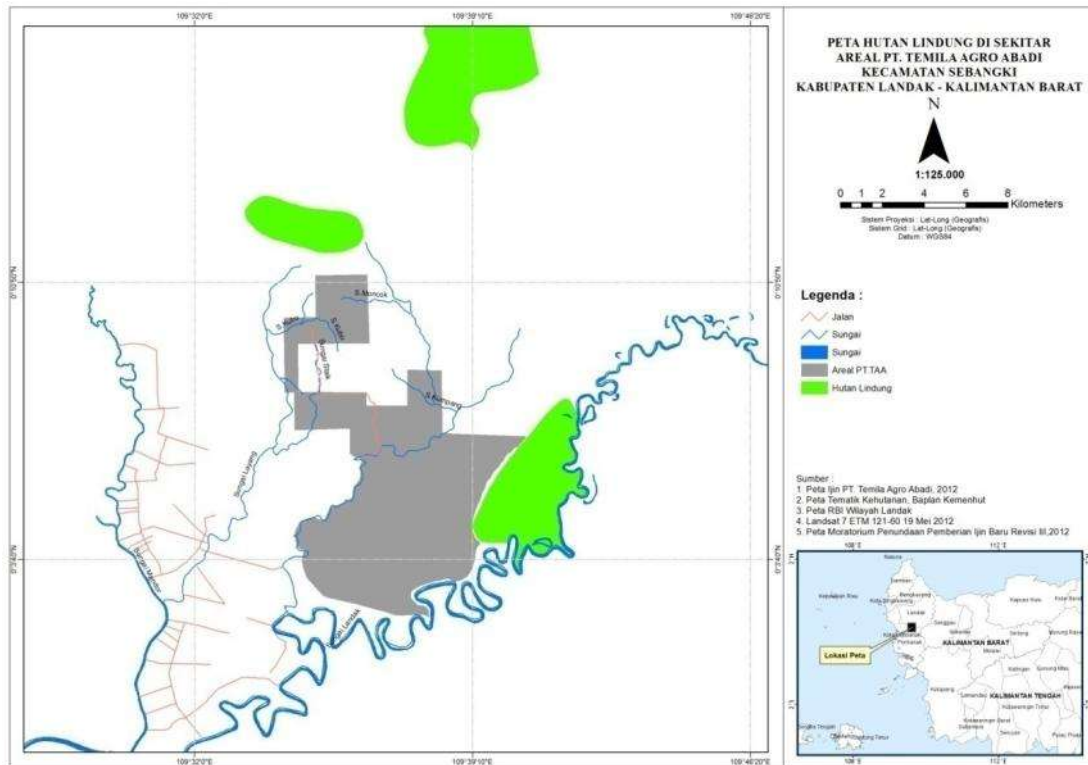
#### 1. Map of Company's Concession Area



**Figure 1.** Map of Company's Concession Area

Administratively, the concession area of PT Temila Agro Abadi is located in two sub-districts, namely Sebangki Sub-district of Landak Regency (covering villages of Sebangki, Rantau Panjang, Agak and Kumpang Tengah) and Kuala Mandor B Sub-district of Kubu Raya Regency which covering villages of Karya Bhakti, Biung and Kuala Mandor A.

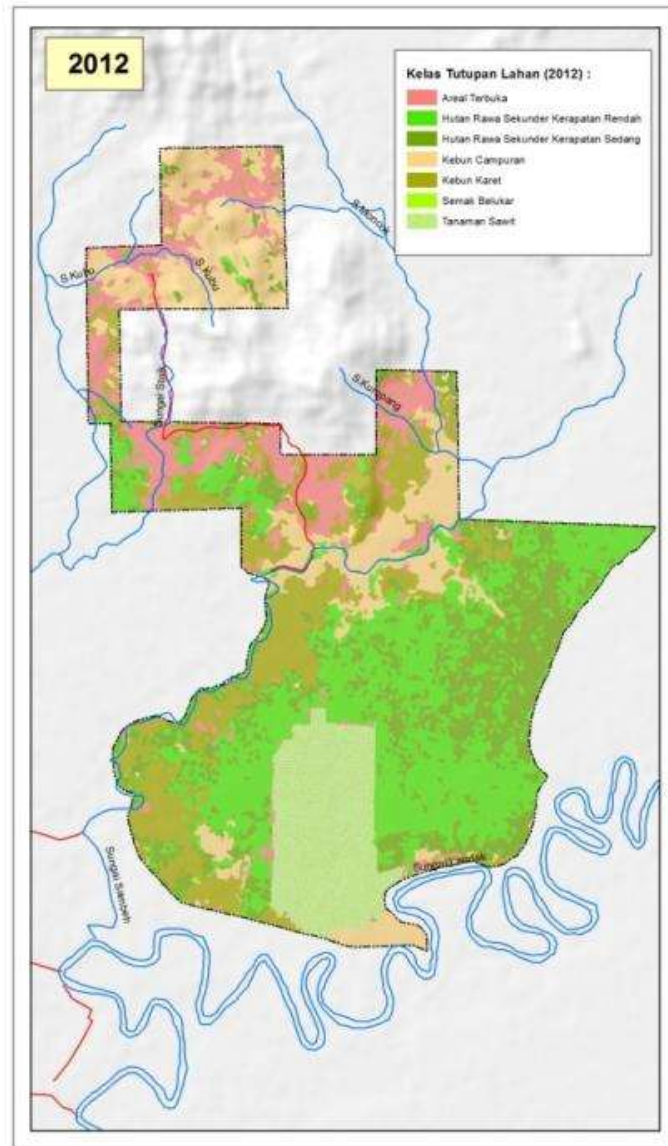
## 2. Map of Company's Area at Landscape Level



**Figure 2.** Map of The Plantation Area of PT Temila Agro Abadi at Landscape Level

This plantation is bordered with plantation area of PT Citra Niaga Perkasa in the north; Landak River in the South; Protected Forest Areas in the East; and Sambeh River in the West. The protected forest area is located adjacent to the plantation area of PT Temila Agro Abadi with the condition, as the damaged forest areas due to illegal logging.

### 3. Satellite Imagery of PT Temila Agro Abadi Plantation Area



**Figure 3.** Satellite Imagery of PT Temila Agro Abadi Plantation Area

Interpretation on the Satellite Imagery Path/Row 121/60 of 12 May 2012, showed that land cover of the concession area of PT Temila Agro Abadi consists of Open Land (983,69 ha), Low Density of Swampy Secondary Forest (2,213.81 ha), Medium Density of Swampy Secondary Forest (1,466.64 ha), mixed farming fields (1,482.54 ha), Rubber Farming Fields (1,311,25 ha), bush (9.73 ha) and Oil Palm Plantation Areas (725.34 ha).



## 2.4. New Planting Areas and Time of Implementation Plans

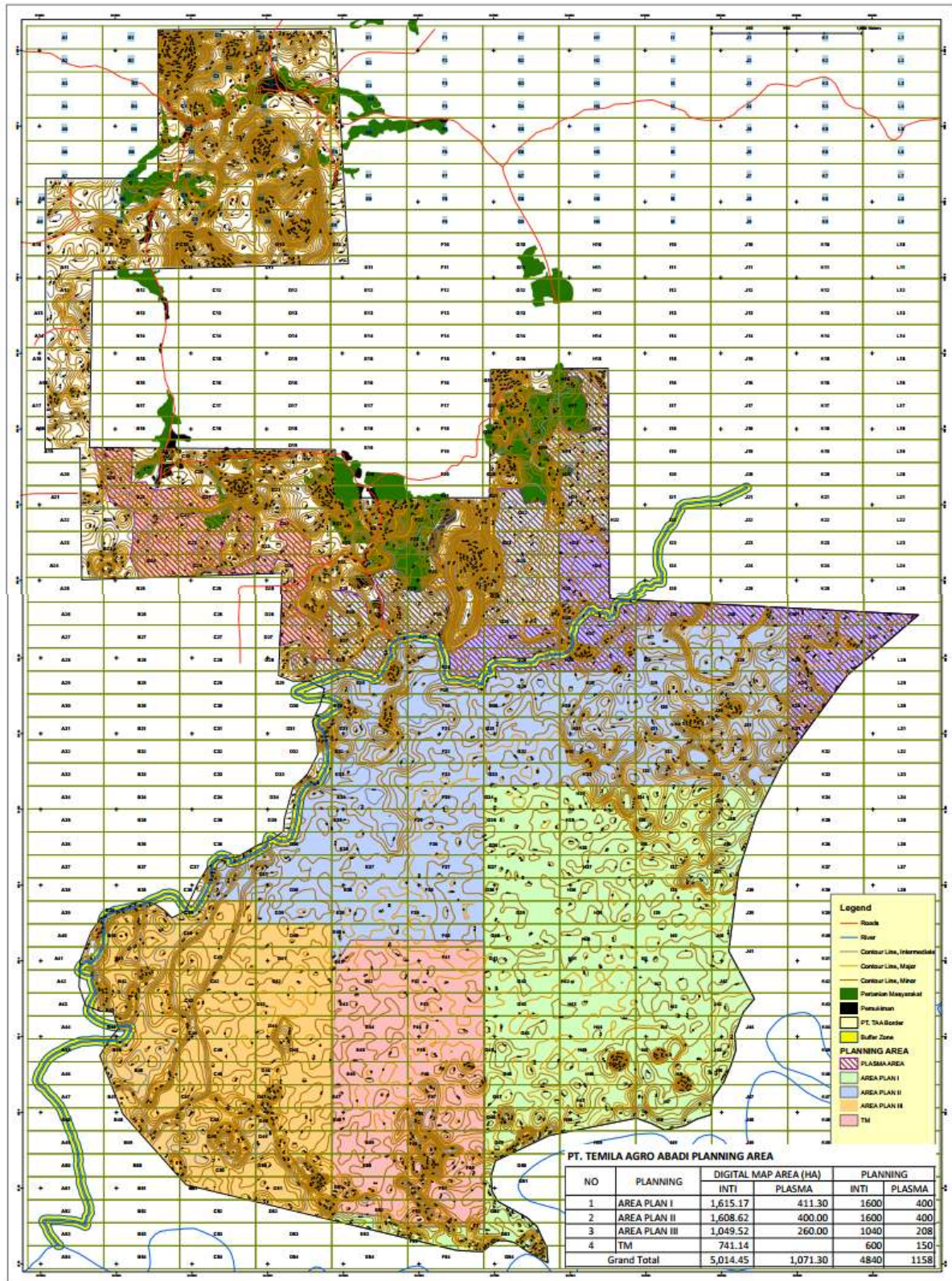


Figure 4 . Map of The Plantation Development Plan of PT. Temila Agro Abadi

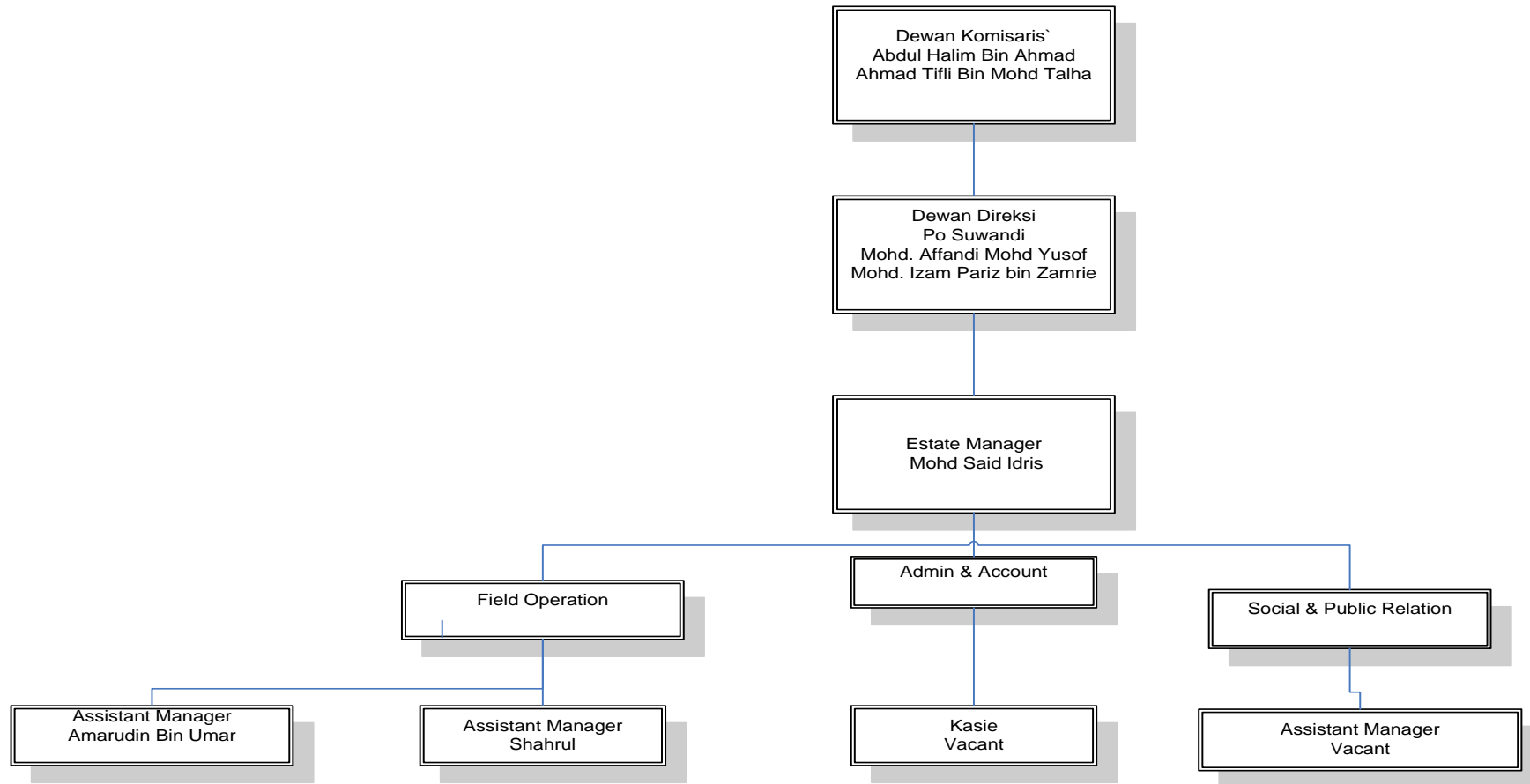


### 3 EIA, HCV and SIA Management and Planning Personnel

#### 3.1 Organizational Information and Contact Person

Company's Name	:	PT. Temila Agro Abadi
Address	:	Jalan Selayar No 18 Pontianak West Kalimantan Province
Contact	:	Mohamed Affandi Mohamed Yusof
Deed of The Company	:	Company Deed No. 110, dated 15 March 2007 Deed of Company's Change No. 169, dated 21 June 2007 Deed of Company's Change No. 07, dated 03 March 2008 Ministry of Justice Approval No. AHU-32895.AH.01.01 of 2008 dated 13-06-2008 Notary Eliwaty Tjitra, SH Deed of Company's Change No. 79, Tgl 21 Mei 2014.
Investment Type	:	Foreign Investment (PMA)
Land Status	:	In 2007, the company obtained the first area concession issued by Landak Regent according to the Landak Regency's Decree No. 595.1/166/HK-2007 dated 18 July 2007 which covering area of 20,000 ha.  The area concession was then revised with Landak Regent according to the Landak Regency's Decree No. 595.1/225/HK-2012 dated 1 October 2012 covering area of 8,193 ha.
Total Areal	:	8.193 Ha

## STRUKTUR ORGANISASI PT. TEMILA AGRO ABADI



**Figure 5.** Oragnizational Structure in The Plantation Management Planning and Implementation of PT Temila Agro Abadi

### 3.3. Stakeholders

Stakeholders identification was focused on the relevant parties in accordance with the plantation management plan of PT Temila Agro Abadi at the site level. In this step, the parties at the site level who affect and affected, directly or indirectly will be listed as stakeholder.

PARTIES	DETAILS OF THE PARTIES
<b>Government</b>	<ol style="list-style-type: none"> <li>1. Regency Government</li> <li>2. Sub-district Government</li> <li>3. Village Government</li> <li>4. Village Development Council (BPD)</li> </ol>
<b>Company's Management</b>	<ol style="list-style-type: none"> <li>1. Plantation Management of PT. Temila Agro Abadi</li> </ol>
<b>Labor</b>	<ol style="list-style-type: none"> <li>1. Staff</li> <li>2. Monthly employees</li> <li>3. Permanent daily labor (KHT)</li> <li>4. Permanent daily labor (KHL)</li> <li>5. Contractor</li> </ol>
<b>Community</b>	<ol style="list-style-type: none"> <li>1. Land Owners</li> <li>2. Village Cooperative / Farmers Group</li> </ol>

### 4. Summary of Management and Monitoring Plan (SIA)

According to the review on the EIA, RKL/RPL and SIA documents, it is shown that the presence of PT Temila Agro Abadi Plantation has generated impacts, both positive and negative, to the environment and the surrounding village communities. In order to minimize the negative impacts, the company of PT Temila Agro Abadi is committed to implement the Environmental Management Plan (RKL) and Social Management Plan that has been prepared.

Positive impacts that have been generated by the company of PT Temila Agro Abadi consisted of better village accessibility, job and bussines oportunities for local community and increase in land values. On the other hand, village communities generally argued that the existence of PT Temila Agro Abadi potentially generated the following negative impacts : 1) Water quality degradation due to land clearing and the use of chemicals; 2) Higher river water fluctuation which causing flooded in wet season and drought / shortage of water in dry season; 3) Arising social conflicts due to land acquisition, land occupation, plasma distribution and social programs; and 4) reduction in areas of timber sources.

#### 4.1. Social Impact Management for Local Communities

- a. Build communication and networking with all stakeholders associated with PT. Temila Agro Abadi, consisting of the following activities
  - To organize regular meeting with stakeholders and coordination with village officials, community's leaders and other informal leaders.
  - Socialization of the oil palm plantation development plan of PT Temila Agro Abadi to the surrounding communities.
- b. Improve public education quality which containing
  - To prepare educational development plan according to the local community's need.
  - Provide scholarships for excelled students and poor peoples..
- c. Improve public health quality through public educations, medical examination and treatment to the community; and improve public health facilities.

d. Local community empowerment which consisting of :

- To accelerate the realization of land clearing and planting on the acquired land (GRTT)
- Oil palm plantation maintenance
- Partnership program
- Re-activate the existing cooperative partner
- To develop intensive farmings of rice field, vegetables, rubber, fishery and livestock.
- Public education and training on the Alternative Community's Livelihoods and Bussines Opportunity

e. Environmental management programs consisting of :

- Mitigation on the potential of water quality degradation
- Identification of the HCV's Presence
- Public education and trainings on the 3R (Reduce-Reuse-Recycle) to local community

#### **4.2. Social Impact Management for Company's Internal**

Program required related to the Social Impacts Management for Company's Internal consists of the following activities:

- Labor Union establishment : a) To accelerate the labor union (SPSI) establishment; b) Sociolization of rights and obligations of labor union member; c) To support labor union activities.
- Labor requitment : a) Giving priority to local labor; b) Building capacity of local communities; c) Improved work ethic of local communities.
- Prioritize Safety: a) Support the availability of an institution relating to the K3; b) Support the aavailability of K3 equipments on both office and plantation; c) To provide personal protection equipment (APD) for employee and employee's training on the importance of using personal protection equipment (APD) in avoiding accident; d) To provide SOP on each step of work and socialized to the relevant employees; e) Socialization of safety driving.
- Labor relation and status : a) Providing transparent information on the labor requitment; b) Providing employee's contract; c) Do not support the implementation of forced labor; d) Do not support the use of child labor; e) To ensure the contractor's workers rights.
- Minimum wages, working hours and overtime must comply with local and national rules.
- Female labor : a) No sex discrimination in the labor recruitment; b) Support female labor union in the Labor Union (SP).
- Providing proper employee's housing.
- Educational Facilities : a) Providing proper educational facilities for each worker's family; b) Providing School Bus.
- Health Facilities: a) Providing proper health care for each employe and his familiy (Policlinik, Askes, etc); b) Providing proper health facilities; c) Socialization of Jamsostek to employees.
- Providing proper transportation for employee and labor.
- Training : a) Providing proper transportation for employee and labor; b) Using competent trainers.

## 5. Summary of Management and Monitoring Plan (HCV)

### 5.1. HCVA Management

Before managed by PT Temila Agro Abadi, the company's area of 725,34 ha were formerly secondary forest as an ex illegal logging area and land utilized for traditional farming purposes by local communities (rubber farming fields). Currently, illegal logging is still being held in the remaining forested areas and even, has expanded in the protected forest on the east side of the plantation.

Results of the HCV's tracing in area of 725.3 ha are as follows :

- a. According to the HCV's Tracing conducted, in the plant and wildlife aspect, it was not found species habitat lost. Availability of the former plant species on the oil palm plantation area, can be represented on other areas especially in the Buffer Zone of Protected Forest.
- b. While in the environmental services aspect, it was not found river flowing and endangered ecosystem (deep peat ecosystem > 3 m) in the area assessed. It is also identified that the area is not included in the Areas of Moratorium on Granting New Licenses published by the Forestry Ministry in October 2012.
- c. In the socio-cultural aspect, before converted to oil palm plantation, there was no any area that must be considered as HVC5 and HCV6 in the assessed area.

Meanwhile, according to the Identificaion of HCV's presence in the area of PT Temila Agro Abadi, it was found 954.35 ha of areas that identified as HCVA's containing (1) HCV1.2 (*Endangered Species*); (2) HCV3 (*Areas containing rare or endangered ecosystems*); (4) HCV4.1 (*Areas or ecosystems that have important functions in water supply and flood control for downstream communities*); (5) HCV5 (*Areas that have important functions in fulfilling basic need for local communities*); (6) HCV6 (*Areas that have important functions as cultural identity for local communities*)..

#### 5.1.1. Objectives

HCVA Management Plan is aimed at the prevention and maintenance of the functions on each HCV area identified using the following steps :

1. Formulation of policy and efforts to maintain and enhance the values of HCV's in the area of PT Temila Agro Abadi.
2. Formulation of relevant stakeholder in the implementation, coordination and surveillance of HCVA Management in order to maintain and enhance the values of HCV's in the area of PT Temila Agro Abadi.



### 5.1.2. Importance

The importance of HCVA Management Plan in the area of PT. Temila Agro Abadi are :

1. **For Company** : It can be used as Guidance in the implementation of HCVA Management.
2. **For Community** : As source of informations of the company's activities of environmentally sound plantation management It is expected to avoid misunderstanding, which in turn can establish mutually beneficial cooperation between the management of PT. TAA with the communities in and around the working area.

### 5.1.3. Goals

Goals to achieved is the sustainability of each HCVA and other area in general, in order to achieve the plantation productivity and community's wefare in the long term.

## 5.2. HCVA Monitoring

Monitoring plan is focused on the following : 1) Area conditions consist of area boundaries, biodiversity and HCVA object, river width changes; 2) Intensity of interference consists of land fires, habitat destruction, poaching of wildlife; and 4) Level of awareness on the understanding and knowledge of education and training participants

### 5.2.1. Objectives

Objectives of monitoring are aimed at the activies that will be monitored that have been explained on each type of monitoring. This is to synchronize planning with the goals that want to be achieved.

### 5.2.2. Importance

The importance of HCVA monitoring in the area of PT Temila Agro Abadi are :

1. **For Company** : a) To examine the existing management activity effectivity; b) To identify unexpected changes on the HCV areas so that it can be overcome early and effectively.
2. **For Community** : As a basis in social control and a Guidance in the HCVA Monitoring implementation.

### 5.2.2. Goal

HCVA monitoring is performed regularly and aimed at the results of the existing HCVA management implemented. HCV's areas are the areas that kept protected and no uses as production areas, in order to maintain the area's functions.

### 5.3. Management and Mitigation Plan

Following are management and mitigation plan on each HCV area identified in the area of PT Temila Agro Abadi :

#### Management and Mitigation Plan for HCV 1.1

Activity : Inventory and Identification of Land Cover, Area Boundary Marking, Boundary Marker Maintenance, Flora and Fauna Protection, Species Enrichment Planting, Public Education, Employee's Training and Institutional.

Location : Peatland in the Buffer Zone of Protected Forest

#### Management and Mitigation Plan for HCV 1.2

Activity : Inventory and Identification of Land Cover, Area Boundary Marking, Boundary Marker Maintenance, Flora and Fauna Protection, Species Enrichment Planting, Public Education, Employee's Training and Institutional.

Location : Bukit Tunggal, Bukit Batung, Bukit Papanoh, Bukit Balang and KSMA Balang, Bukit Besar and KSMA B.Besar, Peatland in the Buffer Zone of Protected Forest.

#### Management and Mitigation Plan for HCV3

Activity : Inventory and Identification of Land Cover, Area Boundary Marking, Boundary Marker Maintenance, Flora and Fauna Protection, Species Enrichment Planting, Public Education, Employee's Training and Institutional.

Location : Peatland in the Buffer Zone of Protected Forest

In the utilization of swampy land / peatland, it is highly suggested to implement a conservation approach in order to provide sustainable benefits. Utilization on the drained swampy land, "water management" will be the key to success.

Utilization of peatland for agriculture purposes, it will be started with manufacture of drainage channels and land clearing, then continued with land preparation for planting.. Drainage is a prerequisite in the reclamation with the main objectives, namely : 1) to drain excessive water on the right time and efficiently; and 2) to control ground water level to achieve optimal condition for plant growth. Peat reclamation is associated with drying and leaching of the peat soil, interfering on soil which may generate impacts on the physical and chemical properties of soil. Therefore, management and control of drainage system will be very important in a peatland reclamation for agriculture purposes (*Rajagukguk, 1999 in Barchia, 2006*).

Layout of channels will deliver enormous impacts on changes in the nature and characteristics of peat soil. In the short term, the more tightly the channel is more appropriate in accelerating the amelioration of wetlands and peatlands due to more intensive leaching of organic acids. While in the long term, it will make the ground water level deeper and accelerate the peat soil decomposition process.

Soil moisture will enormously determine the peat stability. Peat is highly susceptible to external interference, especially the influence of drought and excessive drainage which causing

irreversible drying. Proper drainage on a peatland for agriculture purposes is a drainage which maintaining the critical level of water but not to interfere the plant growth that may decrease the plant yields (Chotimah, 2002 dalam Barchia, 2006).

Excessive drainage, exceeding the critical limit of irreversible drying, will change the peat property into hydrophobic and the peat is highly susceptible to fire. Meanwhile, hydrophobicity that accompanied by peat compaction due to subsidence causes susceptible to surface erosion.

The drained peatland causes subsidence, i.e. decrease of peat surface. While rate of subsidence is strongly influenced by the drainage depth and maturity of the peat. The deeper the drainage, the higher the subsidence rate and the more peat maturity, the lower the subsidence rate.

Drainage network in peatland is not the same as that one in mineral soil due to the difference in the soil structures. According to the function and size, there are several types of drainage channels in peatland, namely :

1. **Pheriphare Drain** is channel that is constructed along the area boundary and has function to control ground water level in the plantation area. Size of Pheriphare Drain is about 4 m wide and 2 – 3 m depth.
2. **Primary Trench / Main Drain** is reservoir trench that hold water from secondary trench and drain it to outlet. It made paralel to the main road. Construction of main drain is performed before planting seedlings so as not to reduce the effective planting area. Size of a main drain depends on the volume of water that need to be accomodated. It is commonly made 4 x 4 m wide at the top and 2 -3 m wide at the bottom. In tidal areas, it is required to provide fortress and sluice.
3. **Secondary Trench (Medium Drain)/Collection Drain** is made to hold water from a low land and drain it to the primary trench which made paralel to the collection road and should be parallel to each other. The secondary trench size is 2 x 2 m wide at the top and 1.5 – 2 m wide at the bottom with distance between trenches varies from 400 to 500 m.
4. **Tertier Trench (Small Drain)/Sub Drain/Field Drainage** is made to drain water in low land / peat land to secondary trench. Tertier trench is made parallel to the rows of oil palm plantations. In peatland, it is made in a wide size of 1 m and in the comparison of 8 rows of oil palm plantation by 1 tertier trench, or maximum at the comparison of 2 rows of oil palm plantation by 1 tertier trench..

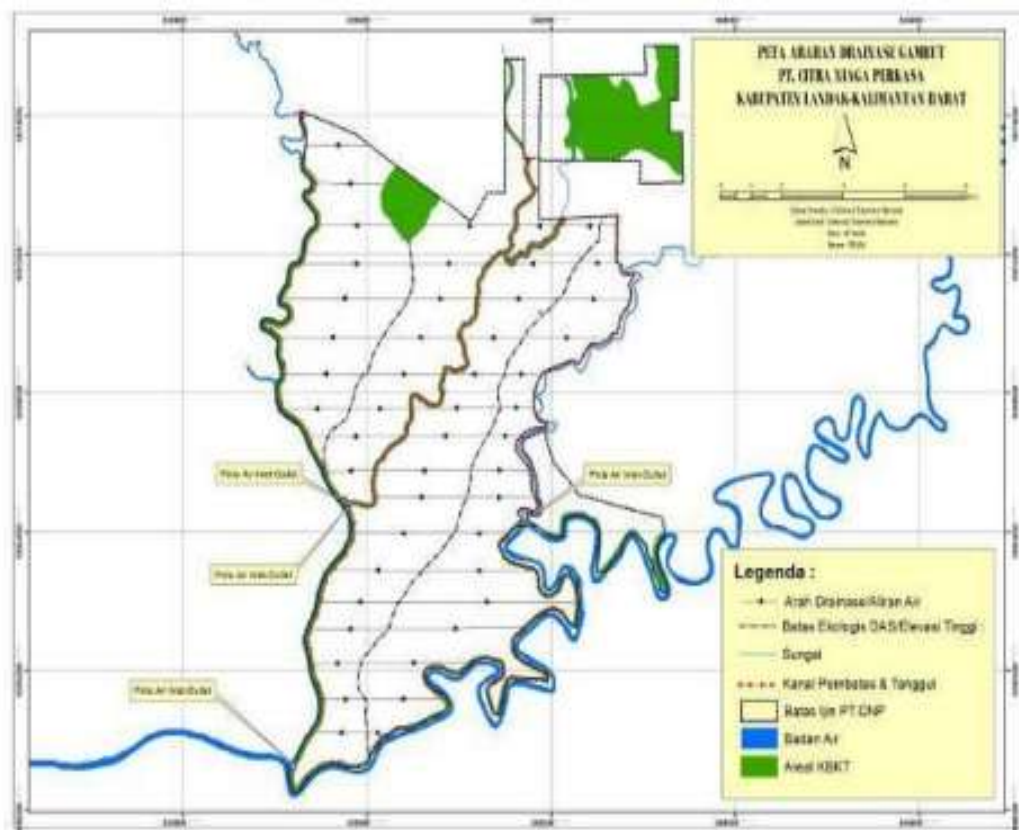
In a small scale water management, distance between channels (between primary channel and other primary channel, seconadry channel and tertier channel) will depend on the local land conditions. According to the attachment of Agriculture Ministry Decree No 14 of 2009 regarding the guide of Peatland Utilization for Oil Palm Plantation Purpose, the distance between channels are presented in the following :

Channel Type	Wide (m)		Depth (m)
	Top	Bottom	
Primary	3.0 – 6.0	1.2 – 1.8	1.8 – 2.5
Secondary	1.8 – 2.5	0.6 – 0.9	1.2 – 1.8
Tertier	1.0 – 1.2	0.5 – 0.6	0.9 – 1.0

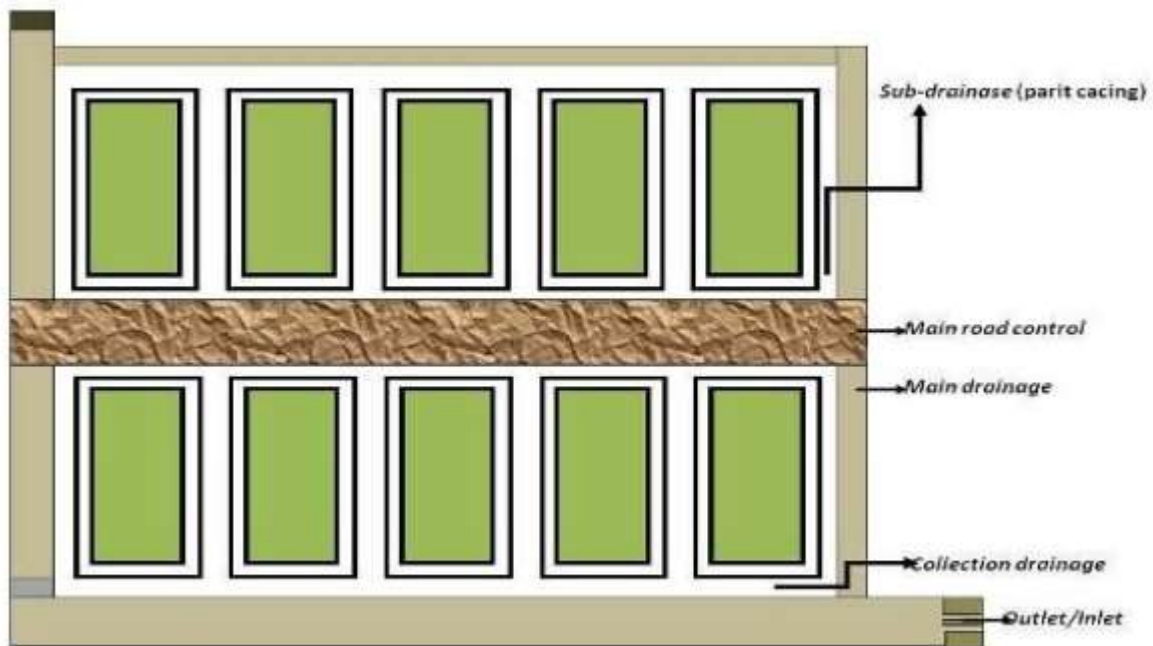
In certain places such as at the junction between primary channel to river, or between primary and secondary channel, it should be provided with Stop Bunch and Automatic or Manual Sluice that will open (unlocked) when water level is higher in the planting area and on the contrary, it will close (lock) when water level is lower in the planting area. Stop bunch is installed in the tertiary channel which serves to keep water in an area.

Controlling water in drainage channels is aimed to maintain the ground water level at 60 – 80 cm depth in order to maintain the availability of water and avoid the land flammable.

Lay out design of drainage channels, trenches and sluices in the field are determined based on the hydrological survey on the drainage pattern, existing river conditions and observations of tidal waters; and micro-topography survey on a peatland to identify the peat dome and directions of water movement in the peatland. See **Figure 6** below.



**Figure 6.** Design of Water Management Plan in The Area of PT Temila Agro Abadi



**Figure 7.** Water Management Plan in The Area of PT Temila Agro Abadi

### **Monitoring on The Ground Water Surface and Peat Subsidence Rate**

Monitoring on the ground water surface and peat subsidence rate is required to identify the strengths and weaknesses (effectivity) in the implementation of water management in the plantation area. Monitoring is mainly aimed at two key parameters, namely ground water level and decrease in peat level which can be performed daily, weekly or monthly. At the beginning, monitoring should be conducted in shorter period (daily) in order to identify the strengths and weaknesses of an existing water management implementation, and then the monitoring can be done in rather sparse intervals such as weekly and monthly.



## Peat Land Subsidence Monitoring Tools



Measure scale in above and under of soil surface



**Gambar 8.** Measurements of Ground Water Surface and Peat Subsidence

### Drainage Channel Maintenance

Drainage channel maintenance is highly required because the trenches are often buried by landslides. Cleaning landslides on primary and secondary trnches, it is usually used excavator, while on the tertier trenches, it is usually performed manually.

Cleaning / deepening trenches should be started from the outlet trench bordering the exhaust flow out of the plantation and headed to the trench in the plantation area. The right time to do the cleaning / deepening trenches is in the summer / dry season. The grass on either side of the cliff trench must be maintained to prevent landslide.

Management and Mitigation Plan for HCV4.1

Activity : Inventory and Identification of Land Cover, Area Boundary Marking, Boundary Marker Maintenance, Flora and Fauna Protection, Species Enrichment Planting, Public Education, Employee's Training and Institutional.

Location : S Sambeh, S Staik, S Kumpang, S Kubu, S Moncok, S Layang and Peatland in the Buffer Zone of Protected Forest.

Management and Mitigation Plan for HCV 4.2

Activity : Inventory and Identification of Land Cover, Area Boundary Marking, Boundary Marker Maintenance, Flora and Fauna Protection, Species Enrichment Planting, Public Education, Employee's Training and Institutional.

Location : Bukit Tunggal, Bukit Batung, Bukit Papanoh, Bukit Balang and KSMA Balang, Bukit Besar and KSMA B.Besar.

Management and Mitigation Plan for HCV 5

Activity : Inventory and Identification of Land Cover, Area Boundary Marking, Boundary Marker Maintenance, Flora and Fauna Protection, Species Enrichment Planting, Public Education, Employee's Training and Institutional.

Location : Bukit Balang and KSMA Balang, Bukit Besar and KSMA B.Besar

Management and Mitigation Plan for HCV 6

Activity : Area Boundary Marking, Boundary Marker Maintenance, Public Education, Employee's Training and Institutional..

Location : Kediaman Kubu (dusun Kubu Kereng), Penyugu Kereng, Public Cemetery of Kereng 1, Public Cemetery of Kereng 2, Cemetery of Kemajo (Dusun Layar), Sandung Agak Village, Public Cemetery of Sebangki, Public Cemetery of Dusun Staik, Cemetery of dusun Ibul 1, Penyugu Nek Jaraya, Sacred Batu Prupuk, Penyugu Tiansa, Public Cemetery of RT Menanik.

*a) HCVA Protection*

a.1) Boundary Marking

- Boundary marking is made clearly on along the HCV area boundaries to prevent HCV area reduction.
- HCVA boundary marking using boundary markers of durable material with a certain size, communicative, clear, in accordance with the rules applicable in a certain location.

a.2) Provide and Maintain Signboards

Signboards are required to be provided on each HCV area identified containing informations : name of HCV area, area purpose, area wide, appeal or prohibition, and sanctions for violators in accordance with the applicable regulations.

a.3) Land Fire Prevention and Control

The suggested follow up actions relating to the land fire prevention and control is to provide observation towers to determine the source of fire; and b) establishment of trenches on the border of coffee plantation area which can be used as fire-breaks.

a.4) Area, Plant and Wildlife Species Protection

There is still wildlife species utilization in this area but with very low level. Some species are estimated to become extinct in the long term. Following are the priority species of wildlife that need to be protected from use by the local community including Owa (*Hylobates agilis albibarbis*), Trenggiling (*Manis javanica*), while for the priority species of plants are Tengkawang (*Shorea pinanga*) dan Bulian/Ulin (*Eusideroxylon zwageri*). The protection efforts can be in the forms of providing signboard on the prohibition of the use of wildlife within the area, patrol and public education to the surrounding communities and employees.

*b) Area Function Maintenance*

- Inventory and identification of land cover using Satellite imagery analysis every year and field checking to verify the analysis results, which performed on the river riparian, buffer and deep peat land (>3m) and hilly areas with land slope > 40%.
- Habitat rehabilitation and species enrichment planting.

*c) Empowerment of Human Resource Quality*

The empowerment of human resource quality can be done through education and training activities to both local communities and company's staff in a certain amount and gradually, with the education/training content : the importance of HCVA and biodiversity conservation internally and externally to the relevant institutions (Training Centers/ PUSDIKLAT).

*d) Institutional Strengthening*

The institutional strengthening in management unit can be implemented by the establishment of an organization which in charge on the HCVA management implementation in the concession area. When the organization existed, then it needs to optimize the functions of the environmental division. In the plantation management of PT Temila Agro Abadi, it is found that the Environmental and Conservation Division has been established

In addition, it is also required to invite the relevant parties (such as community's leader, village head, head of sub-district, Regency Government of Landak, Province of West Kalimantan Government especially Forestry and Plantation Agency, BKSDA and local NGO's) to establish togetherness in maintaining the HCV areas sustainability.

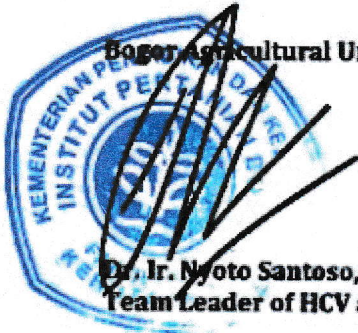
## **6. HCVA Monitoring Plan and Regular Data Review**

Monitoring plan is focused on the following : 1) Area conditions consist of area boundaries, biodiversity and HCVA object, river width changes and riparian areas; 2) Intensity of interference consists of land fires, habitat destruction, poaching of wildlife, patrol activities in the HCVA; and 4) Level of awareness on the understanding and knowledge of education and training participants.

Tools used in monitoring consist of : map of the concession area, GPS, camera, compass, tally sheet, measuring tape, plastic rope, and stationery. While the method used is Satellite imagery analysis such as percentage of land cover and direct field observations on each HCV type in a HCV area. After monitoring results collected, then the conclusions will generate the following indicators, namely : good, moderate and bad (poor). When the indicator shows moderate and bad, it means the HCVA management that has been carried out, need to be maintained and improved.

**INTERNAL RESPONSIBILITY**  
**Formal Signing Off by Assessors and Company**

This document is the updated summary of HCV (High Conservation Value); EIA (Environmental Impact Assessment) and SIA (Social Impact Assessment) in PT. Temila Agro Abadi and has been approved by Management PT. Temila Agro Abadi



**Bogor Agricultural University,**

**Dr. Ir. Nyoto Santoso, MS**  
**Team Leader of HCV and SIA Assessment**

10 July 2014

**Management of PT. Temila Agro Abadi**



**Mohamed Affandi Mohamed Yusof**  
**President Director**

10 July 2014

**Statement of acceptance of responsibility for assessments**

Assessment result document on High Conservation Value (HCV); Environmental Impact Assessment (EIA) and Social Impact Assessment (SIA) of PT. Temila Agro Abadi by Faculty of Forestry - Bogor Agricultural University (IPB) will be applied as one of the guidelines in managing palm oil plantation in PT. Temila Agro Abadi.

**Management of PT. Temila Agro Abadi**



**Mohamed Affandi Mohamed Yusof**  
**President Director**

10 July 2014