



Roundtable on Sustainable Palm Oil

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<b>21<sup>st</sup> Meeting of RSPO Biodiversity and HCV Working Group (BHCV WG)</b>			
<b>Date</b>	19 June 2013		
<b>Venue</b>	Hotel Royale Bintang, KL		
	Olivier Tichit (OT)	Sipef	Co-chair
	Anne Rosenbarger (AR)	WRI	Co-chair
	Simon Siburat (SS)	MPOA	Member
	Calley Beamish (CB)	MPOA	Member (alternate)
	Sabarinah Marzuky (SM)	Sime Darby	Member
	Sophie Persey (SP)	REA Holdings	Member
	Norazam Abdul Hameed (NH)	Felda	Member
	Michal Zrust (MZ)	ZSL	Member
	Anders Lindhe (AL)	WWF International	Member
	Adam Harrison (AH)	WWF	Member
	Richard Kan (RK)	GAR	Invited
	Haskarlianus Pasang (HP)	GAR	Invited
	JP Caliman (JC)	PT Smart	Invited
	Subramanian Rasappan (SR)	PT Smart	Invited
	John Payne (JP)	BORA	Invited
	Dwi Rahmad Muhtaman (DM)	ReMark Asia	Invited
	Glen Reynolds (GR)	Royal Society SEARRP	Invited
	Salahudin Yaacob (SY)	RSPO	Secretariat
	Audrey Lee Mei Fong (ALMF)	RSPO	Secretariat
<b>Agenda</b>	<ol style="list-style-type: none"> <li>1. Welcoming remarks</li> <li>2. Review previous minutes</li> <li>3. HCV definition in P&amp;C 2013</li> <li>4. Sime Darby Stage 7 report</li> <li>5. Sipef's detailed compensation plan</li> <li>6. GAR Remediation Plan</li> </ol>		



	<ol style="list-style-type: none"><li>7. Endorsement of ZSL's Protocols</li><li>8. Update on sustainable palm oil website</li><li>9. AOB<ol style="list-style-type: none"><li>a. ToR of BHCV WG</li></ol></li></ol>
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**1. Welcoming remarks from co-chair**

OT welcomed all participants.

**2. Review previous minutes**

Amendments:

- Venue of the meeting was in Singapore
- To include Dr. Glen Reynolds as an invited participant
- On the issue of Sungai Kawan Batu HCV assessment, RK gave a summary of findings from the PT AKPL HCV assessment. He informed the WG that HCV 1.2 and 2.1 was not found during the assessment.
- On GAR's remediation plan, PH reminded the WG that at a meeting with the RSPO on 16 February 2012 in KL, a decision was taken not to remove oil palms planted in river riparian and peat.
- On the same subject, OT requested GR (SEARRP) and MZ (ZSL) to provide input and assist GAR to fine tune the test plan. The plans is to be submitted to the BHCV WG in June 2013 for final approval.
- On Sipef's remediation plan, OT suggested to standardise the names of the companies i.e. UMW and TUM.

**3. HCV Definition in P&C 2013**

SY updated the WG on the current definition of HCV. In the revised P&C, the definition follows the revised definition of HCV Resource Network. Members pointed out that the definition of HCV in some National Interpretations are outdated. This might cause problems during the audit process. National Interpretations will be revised soon and the definition of HCV will be updated.

#### 4. **Sime Darby Stage 7 report**

TMK highlighted stage 7 has been change from development of the remediation/ compensation procedure to development of a lessons learned paper from their remediation process. The Compensation Procedure is being developed by the Compensation Task Force.

In summary, 2,350 ha was cleared without any HCV assessment in the pilot area i.e. Baras Danum and Batang Garing estates. Following a retrospective HCV assessment, 151 ha was identified as HCV area. No primary forest was present in the area after 2002. A combination of legal and illegal logging activities from 1970 to 2000, and a series of devastating fires in 1997-1998 and 2002 had destroyed nearly all lowland forests. Only HCV 1 & HCV 4 were identified.

In the lesson learnt paper, Sime Darby outlined several challenges and lesson learnt from their remediation project. The actual remediation expenses for Baras Danum and Batang Garing from July 2011 to June 2012 amounted to IDR 325,530,700 (USD 34,300).

The Stage 7 report was approved by the BHCV WG. In addition to these areas, the WG requested Sime Darby to follow the Compensation Procedures for other HCV compensation areas.

Detailed presentation is attached as annex.

#### 5. **Sipef's detailed compensation plan**

OT and his colleague presented on the background of PT Umbul Mas Wisesa (UMW) and PT Toton Usaha Mandiri (PT TUM). Both area cover slightly more than 10,000 ha. The area was planted before Sipef took over the companies in 2006 and 2009. Calculation of liability using the initial land cover categories resulted in a liability of 3300 ha. In addition to best management practice such as water management and fertiliser application, Sipef is proposing a forest restoration project in Bengkulu as part of its HCV compensation. The area is about 12,000 ha and rich in biodiversity such as tigers and tapirs.

Sipef propose to also restore degraded areas, curb illegal activities within the forest area, protect wildlife and empower local community in this project. The proposal was accepted by the BHCV WG and members encouraged Sipef to continue to pursue its forest restoration license from

the authority. A compensation panel was formed composed of WRI, SEARPP, the Secretariat and Sime Darby. Sipef is to revise its liability using the land cover classes and include in a concept note to be submitted to the compensation panel.

The presentation is attached as annex.

## 6. **GAR Remediation Plan**

RK updated on the meeting with SEARRP and ZSL held in May 2013 in Singapore. The meeting focuses on the improvement of GAR's remediation plan. An ecosystem assessment and baseline establishment were incorporated as part of the action plan.

In general, GAR is committed to restoration of ecological functions of riparian, peatland and hilly area.

According to SEARRP, there was a discussion on giving up planted palm in these areas after five years and fully restore it into the natural habitats. RK reiterated on the agreement with RSPO in Feb 2012 to remain the palm trees for one rotation (25 years). However, GAR would develop a time-bound plan (eg. at five year interval) on the implementation of manual upkeep of the oil palms to continue harvest of the palms trees. This will include managing the risk of encroachment and mitigation in the riparian zone. At agreed intervals, there will be a review on the landscape condition ie. the progress of natural vegetation growth, the accessibility to harvest the oil palms etc, before resuming the subsequent three or five years.

Glen felt that continued harvesting within the riparian zone for a full cycle is incompatible with remediation. AH suggested GAR to develop an experiment to study and record implications of palm retention within these test sites located in PT Mitrakarya Agroindo (MKA) and PT Kencana Graha Permai (KGP), these test sites cover about 397ha. Results shall be reported as part of the compensation project and does not set a precedent to future oil palm companies.

The recommendations from SEARRP and ZSL should be considered for 41,000 ha of the total areas involved in remediation/ compensation.

Simon (MPOA) suggested that the BHCV WG should provide clearer guidelines for growers in developing the remediation and compensation proposal.

Tang (Sime Darby) raised that GAR, being in a similar position with Sime Darby and SiPEF as the first volunteers in developing the remediation process should be recognised for their efforts and be able to proceed with the remediation proposal as there were no previous references



being the first pilot. There will be progressive reports to the RSPO and any decision to prevent GAR from harvesting in this pilot is premature. The issue on harvesting in riparian zone is an industry issue and should not be a “barrier or issue” to GAR’s or other growers to progress its remediation works.

Olivier (SiPEF and co-chair) concurred and agreed that GAR’s remediation proposal is in line or exceeded BMP. The discussion on palm oil activities in the riparian area is an industry issue. BHCV WG can review GAR’s pilot as a case study for the industry to be tabled in the next meeting.

Olivier proposed that GAR to proceed with their remediation proposal and SEARRP and ZSL to continue to work with GAR in the remediation process. The BHCV WG concurred.

Next steps: BHCV WG requested GAR to prepare a comprehensive summary of the remediation plan to include the monetary liabilities to facilitate discussion at the next BHCV WG.

**7. Endorsement of ZSL’s Protocols and Sustainable Palm Oil Website**

Due to time limitation, BHCV WG could not discuss this matter. MZ had prepared a presentation and this will brought up at the next BHCV WG meeting.

**8. AOB (Review ToR of BHCV WG)**

Action: RSPO secretariat will submit proposed text to the BHCV WG and highlight participation of inactive members within the BHCV WG in the ToR.

Next meeting of BHCV WG is scheduled for 18 October 2013 in Kuala Lumpur.

## ANNEX 1



**REMEDICATION IN OIL PALM PLANTATION:  
EXPERIENCE AND LESSONS LEARNT FROM SDP  
REMEDICATION PROJECT**

**19 June 2013**



## Introduction – Background to the Project

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- RSPO requirements for HCV Assessment
  - Criteria 5.2 & 7.3 as per Nov 2005
  - RSPO National Interpretation for Indonesia w.e.f. May 2008
- Sime Darby Indonesian Plantation (SDIP) carried out global HCV assessment in September 2009
  - Possible HCV lost during land clearings & new plantings between the period of Nov 2005 & Sept 2009.
- RSPO Secretariat & SD Plantation agreed on options of 'acceptable solution for HCV compensation'.
  - HCV Remediation Pilot Project in 2010.
  - In Central Kalimantan, Indonesia.
  - Involving 2 of SDP's oil palm estates:
    - Baras Danum Estate
    - Batang Garing Estate

## HCV Remediation Pilot Project - Objectives

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- (1) to identify areas which had contained primary forest or HCV areas and their values (functions and/or benefits), which have been lost or degraded because of clearings and plantings in the period December 2007 to September 2009;
- (2) to propose acceptable remediation options;
- (3) to develop a remediation plan for the loss of HCV values, functions and/or benefits; and
- (4) to gain lessons learned from the entire remediation process and translate it into a generic methodology that can be applicable to all growers and industry.



## 8 Stages of Implementation Plan

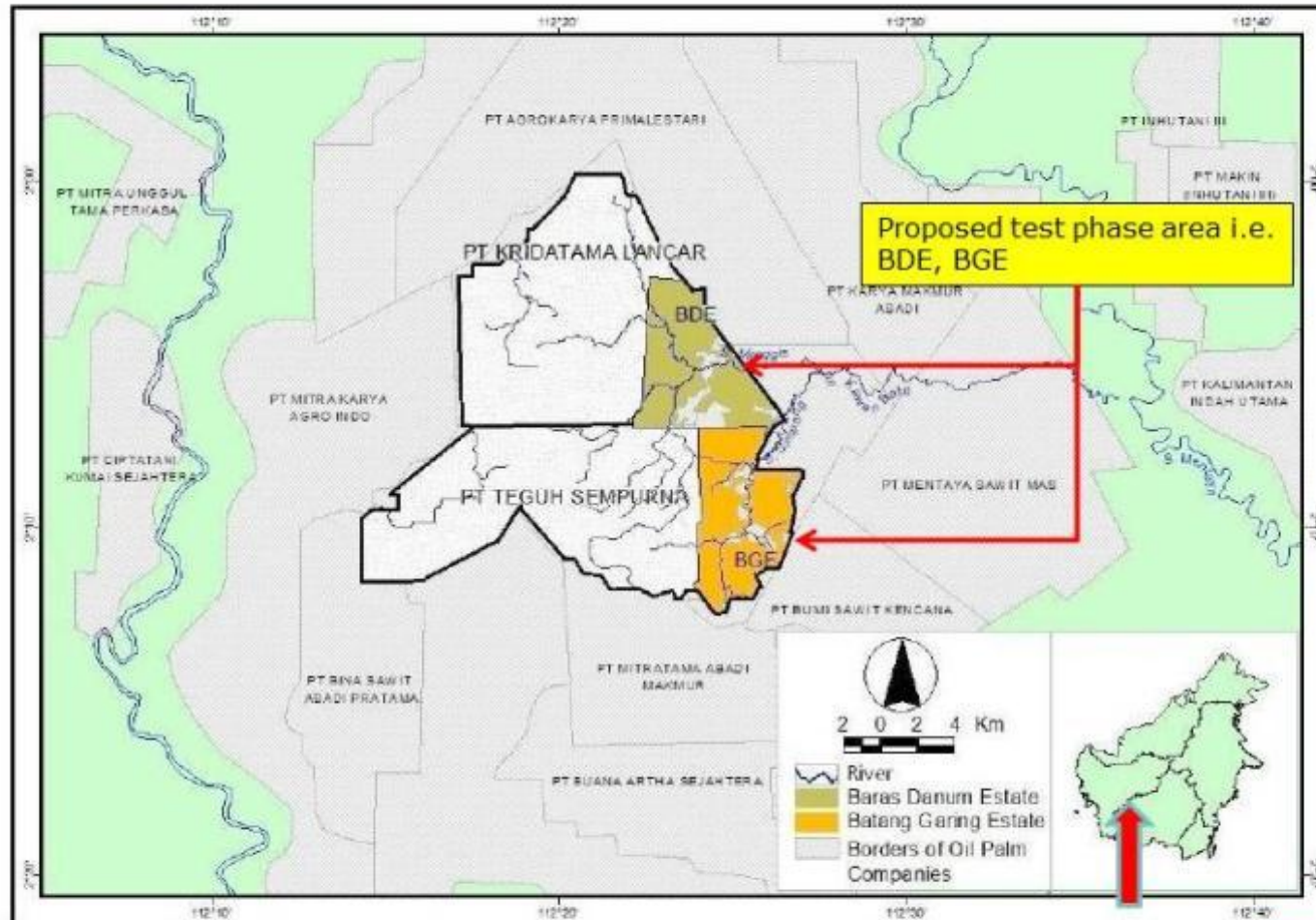
Stage	Implementation Plan
0	Appoint independent consultants
1	Establish land and remediation project parameters
2	Develop remediation plan to RSPO requirements
3	Carry-out test phase of remediation plan
4	Review and evaluate test phase outcomes
5	Complete remaining phases of remediation
6	Prepare final remediation report for EB review
<b>7</b>	<b>Prepare remediation guidelines for RSPO based on SDP Pilot Project (Lessons Learnt Paper)</b>
8	Maintenance of areas



## HCV REMEDIATION INITIATIVES (PILOT TEST)

- SDP's 8-stage HCV Remediation Project = **Pilot Test** at the identified areas – Central Kalimantan
- Pilot test ≠ all areas within SDP (whether 2005-2007/ 2007-2009) – post Nov 2007
- **HCV Remediation Plan** will be used as a **model for any HCV Remediation.**
  - The HCV Remediation Project offers the methodology on how to analyse HCV 1 - HCV 6 losses + detailed Remediation Plan.

## Location of Study Area

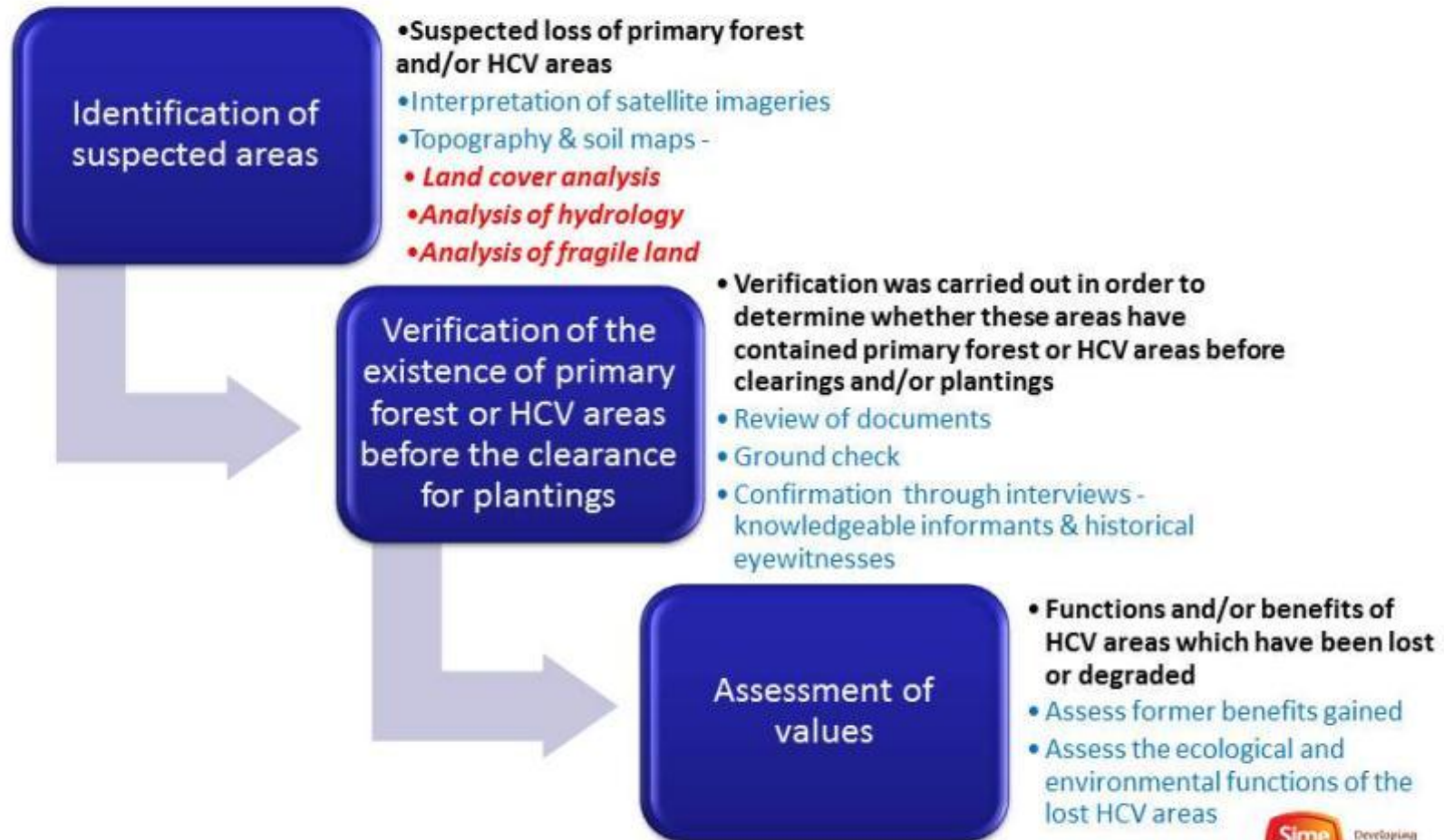


Location of Baras Danum Estate of PT Kridatama Lancar and Batang Garing Estate of PT Teguh Sempurna.

## 8 Stages of Implementation Plan – Chronology

Stage	Implementation Plan	Output	Period & Status
1	Establish land and remediation project parameters	Agreed land areas to be included in the scope and methods used through Historical HCV Assessment	March 2011 Approved: May 2011
2	Develop remediation plan to RSPO requirements	Agreed schedule of remediation plan and method of quantification of biodiversity values to be applied	April-October 2011 Approved: Nov 2011
3	Carry-out test phase of remediation plan	Test phase project, including activity and recommendations	December 2011 - July 2012 Approved: Sept 2012
4	Review and evaluate test phase outcomes	Final test phase on agreed method based on outcome of test phase and including any revisions/refinements	July 2012 Approved: September 2012
5	Complete remaining phases of remediation	Remediation implementation project and activity	August 2012
6	Prepare final remediation report for EB review	Report on all activities	December 2012
7	Prepare remediation guidelines for RSPO	Recommendations to RSPO and contribute to RSPO remediation guidance as necessary. <b>*replaced by a lessons learnt paper as at January 2013.</b>	Submission to RSPO/BHCV WG: April 2013
8	Maintenance of areas	Provision of policy brief on SDP pilot and recommendations	On-going

## Main Approach in the HCV Assessment



## Findings

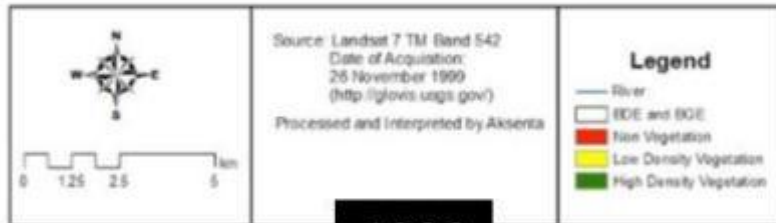
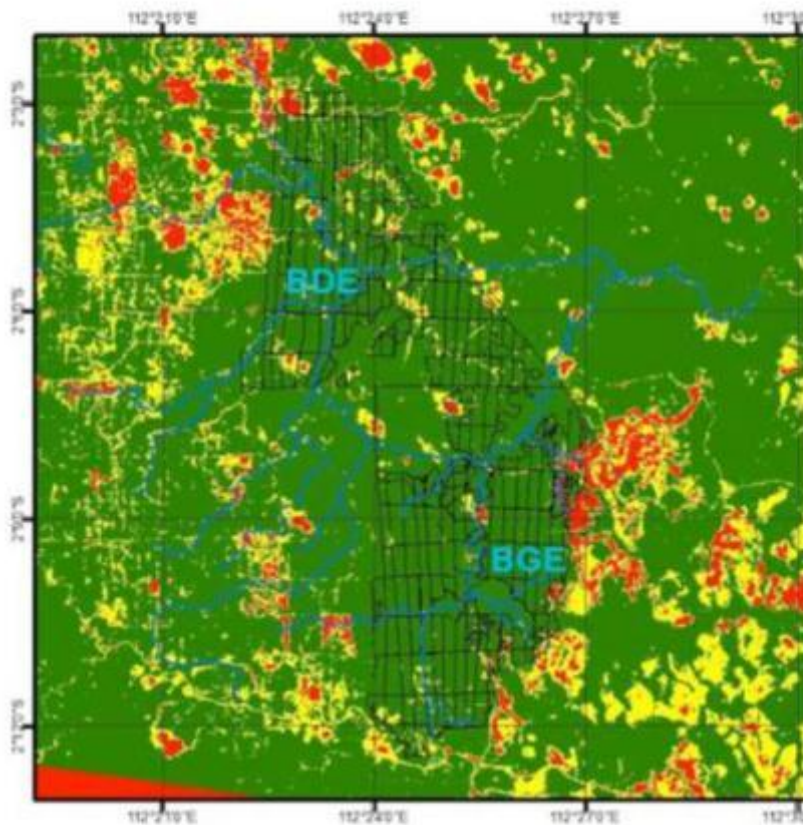
Suspected and verified HCV loss in Baras Danum (BD) and Batang Garing (BG) Estates.

Estate	Area cleared (ha)	Suspected HCV Area Loss		Verified HCV Area Loss	
		Size (ha)	Number of Unit	Size (ha)	Number of Unit (Location Code)
Baras Danum (BD)	842	356.45	8	93.73	4 (BD4, BD5, BD6, BD7)
Batang Garing (BG)	1,508	843.71	11	57.71	1 (BG7)
<b>Total</b>	<b>2,350</b>	<b>1,200.16</b>	<b>19</b>	<b>151.44</b>	<b>5</b>

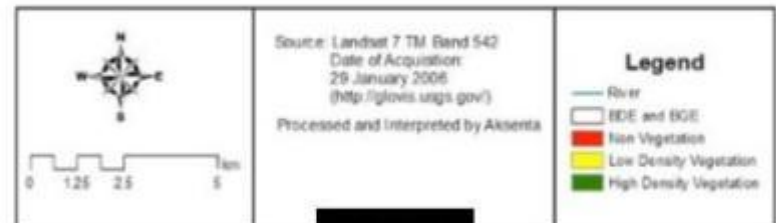
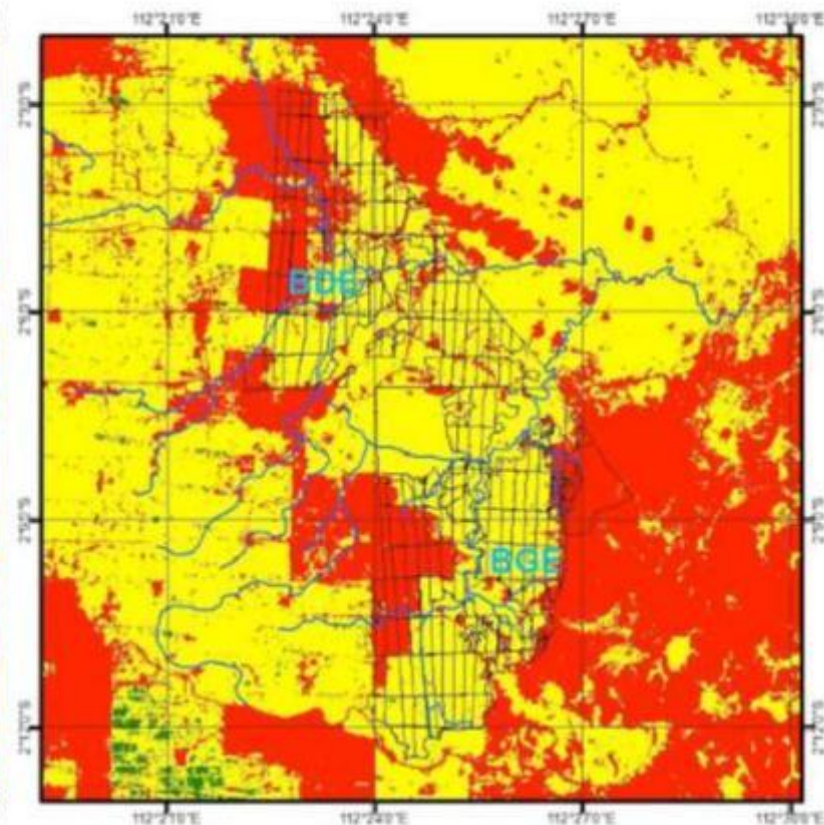
### Summary:

- 1.No primary forest was present in the areas after 2002** (as legal and illegal logging activities in the period 1970 to 2000, and devastating fires in 1997-1998 and 2002 have destroyed nearly all lowland forests in this area).
- 2.Only HCV 1 & HCV 4 were identified.**

## Satellite Map of Baras Danum Estate & Batang Garing Estate (1999 & 2006)

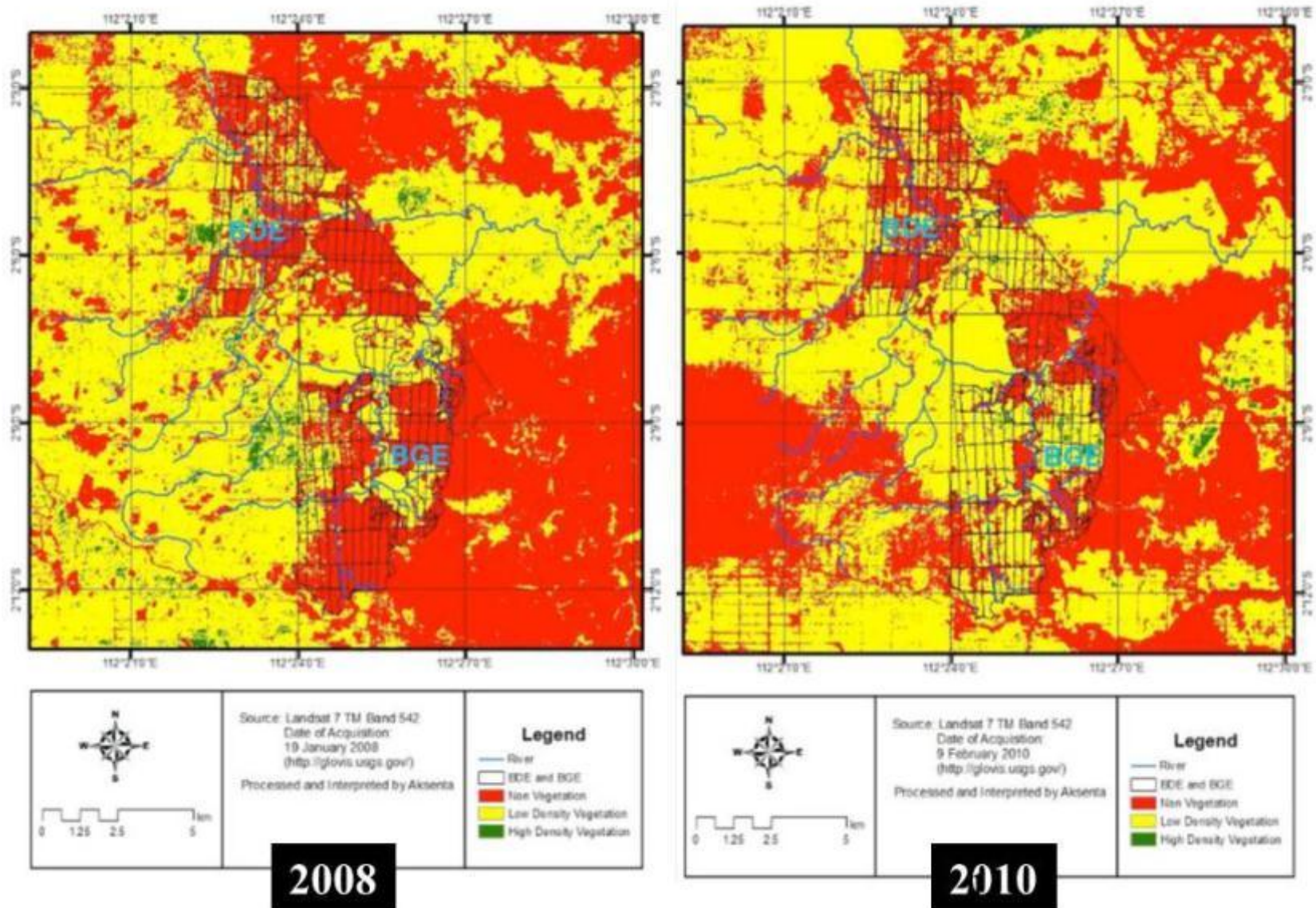


**1999**



**2006**

## Satellite Map of Baras Danum Estate & Batang Garing Estate (2008 & 2010)





## Challenges and Recommendations

Challenges during the Historical HCV Assessment and recommended actions in Baras Danum (BD) and Batang Garing (BG) Estates:

Challenges	Recommendations
<b>Satellite imagery is not available for a specific month, or available but with too much cloud cover</b>	Use the satellite image with the acquired date nearest to the date needed
<b>Map of planting months of the scope period (in this case December 2007 to September 2009) is unavailable</b>	Similar map can be derived through reviewing available document in the estate office (e.g. documentation of land clearings, monthly planting progress) and interviewing the estate manager and/or staff who involved in the plantings in the area in question
<b>Difficult field situation during ground-truthing (lack of road, rugged terrain)</b>	Reach the site on foot. Visit the nearest possible site
<b>Difficulty in locating local community to cross check HCV areas history</b>	Interview the available informants and company's workers who were involved in the beginning stage of the plantation; verification through triangulation applied
<b>The current and historical legal status of the company's concession around the study site is unclear</b>	Check with local government authorities and the Ministry of Forestry

## Development of Remediation/Compensation Plan

- 3 basic approaches for the programs and action, which can be in combination or stand-alone

Restriction	Rehabilitation	Mitigation
<ul style="list-style-type: none"><li>• Cancellation, prohibition, or limitation that leads to opportunity losses for the company</li></ul>	<ul style="list-style-type: none"><li>• Reverse, restore, or rehabilitate the long-term benefits and/or functions of HVC that has been lost due to oil palm planting</li></ul>	<ul style="list-style-type: none"><li>• Reduce the negative impacts which are a consequence of the loss of HCV areas</li></ul>

### **Remediation/Compensation Options – Priority**

1. *In-situ remediation*
2. *In-situ compensation*
3. *Ex-situ compensation*

## Progress of the Implemented Programme

Unit	Program	Progress to Date
<b>Baras Danum</b>		
<b>BD4</b> <b>BD5</b> <b>BD6</b> <b>BD7</b>	Establishment of collaborative biodiversity conservation for the Simpang-Kawan Batu wildlife corridor	<ul style="list-style-type: none"> <li>• Three local government institutions (Office of Cultural and Tourism Affair, Office for Development Planning, Office for Environmental Affairs) have expressed their support. Strong support has also been given by WWF Indonesia who have been working in Central Kalimantan Province.</li> <li>• An Ad-Hoc Committee has been established.</li> <li>• Despite positive progress which has been made, the remediation option for the loss of wildlife corridor (Blocks M59-60, N56-57 and N63-65; HCV1.4) was <b>discontinued due to legal and land title issues</b>.</li> </ul>
<b>Part of BD5,</b> <b>Part of BD6</b>	Establishment of civil engineering	<ul style="list-style-type: none"> <li>• Four different types of civil engineering structures has been constructed in 5 blocks (M59-60; N63-65), covering ca.32.8 ha.</li> <li>• This includes the construction of 2,049 silt pits to trap sediment and increase water catchment capacity, 12 gully plugs to slow down run-off water flow and trap sediment, 1 large retaining dam, and 1 water reservoir to catch the surface run-off water from the coverage area of ca. 2.65 ha and increase water catchment capacity.</li> <li>• Monitoring carried out in July 2012 gave strong indications that all civil engineering structures are functioning properly.</li> </ul>
	Planting forest tree species	<ul style="list-style-type: none"> <li>• A total of 1,189 seedlings (of which 233 were replacement seedlings) comprising five species of plants were planted. The average survival rate of the seedlings was 75.63%. Dead seedlings have been replaced.</li> </ul>

## Progress of the Implemented Programme

Unit	Program	Progress to Date
<b>Batang Garing</b>		
<b>BG7</b>	<ul style="list-style-type: none"> <li>• Compensating and conserving the mixed-rubber forest</li> <li>• Habitat enrichment</li> </ul>	<ul style="list-style-type: none"> <li>• Compensation to the local community who owned the land (small pocket of mixed rubber-forest which belongs to three individuals, located in Blocks T64-66 of BG, in Kapuk Village) was successfully implemented.</li> <li>• Habitat enrichment was not carried out successfully due to a long process of negotiation between SDP and the land owner. The habitat enrichment will be planned, scheduled and implemented properly and timely.</li> </ul>
	<ul style="list-style-type: none"> <li>• Rehabilitating soil and plant tree species</li> </ul>	<ul style="list-style-type: none"> <li>• Using the seedling stock at the nursery, 22,212 tree seedlings of five species were planted in July 2011-July 2012 (of which 1,750 were replacement seedlings) in 7 blocks (U68-71, U74, and V69-71), covering a total area of 59.6 ha. The average survival rate of the seedlings was 91.45%. Dead seedlings have been replaced.</li> </ul>



The civil engineering structures are functioning properly to achieve their purposes: the Retaining Dam (above-left), the Gully Plug (above-right), the Water Reservoir



The planted seedlings of *Gelam Melaleuca leucadendron* and *Gerunggang Cratoxylum arborescens* that grow well on the ex-mining area in Block U 68 of BGE.



The planted seedlings of Waru *Hibiscus tiliaceus* and Angsana *Pterocarpus indicus* that grow well around the Water Reservoir in Block M 59 of BDE

## Review and evaluate test phase outcomes

- A field visit was conducted at site in July 2012, by an evaluation team of RSPO Secretariat & BHCV WG members. The visit was concluded with positive remarks from the members.



Field visit at Baras Danum Estate.



Briefing & discussion at site.



Group photo after the meeting on 17 July 2012.



Group photo at the Simpang-Kawan Batu area.



## Challenges and Recommendations

Challenges during the implementation of the remediation actions in Baras Danum (BD) and Batang Garing (BG) Estates

Challenges	Recommendations
<b>A multi-stakeholder collaboration for biodiversity conservation involves different stakeholders with different interest and objectives, and thus has the potential for disputes and conflicts</b>	This process needs passion, good facilitation, and communication skills; encourage the participants to be involved in and contribute to the process, as well as to build shared vision and common ground among different stakeholders
<b>Process of negotiation between the company (SDP) and the families who owned the land to obtain their approval and reach an agreed price is quite long</b>	Persistent approach to the land owner(s)
<b>All staffs should be involved in the remediation program</b>	Good human relations and communication with staff, especially field staffs; the management should declare that the remediation initiative and activities are integral parts of the plantation management and part of the accountability of the managers
<b>Difficulties in conducting biodiversity (plants and wild animals) inventory and monitoring by field staffs</b>	For the first time it can be done by the biologist or biodiversity conservation expert and later can be done by the staff after they received training on the biodiversity monitoring techniques
<b>High level of erosion (rainfall-runoff) occurs in several area</b>	Plant cover crops, such as ferns ( <i>Nefroliphis</i> sp.) and shade tolerant plants such as <i>Calopagonium choerolium</i>

## Lessons Learnt

Lessons Learnt	Details
Remediation proposal	<ul style="list-style-type: none"> <li>For plantations to <b>apply best management practices</b> for the conservation of soil and water</li> </ul>
Historical (Retrospective) HCV Assessment	<ul style="list-style-type: none"> <li><b>Comprehensive field verification</b> and ground-truthing should be carried out.</li> <li><b>Event of land clearing</b> and <b>period of planting</b> should be carefully taken into account, as HCV areas are lost because of land clearing and not necessarily because of plantings.</li> <li>As most companies have maps of planting years, and not of exact planting months, the task of thoroughly investigating exact planting locations using the cut-off date of November 2007 took much extra effort. This extra allocation of time and working hours should not be underestimated.</li> <li>The <b>land cover change analysis</b> is the first and most crucial step in the retrospective HCV assessment. For this process the support of high quality satellite imagery is needed.</li> <li>The result of the land cover change analysis is suspected HCV area loss. The map of planting months of the scope period of the assessment should be <b>overlaid</b> with the result of the land cover change analysis. <b>Accurate data and maps</b> are needed for this process.</li> <li>In the Historical or Retrospective HCV Assessment, '<b>ground-truthing</b>' has proven to be the only reliable way to interpret the satellite imagery (together with other secondary data sources).</li> <li>The <b>surrounding communities</b>, in particular those people who formerly owned and cultivated land, or utilized natural resources in the scope area, play a vital role in the</li> </ul>

## Lessons Learnt

Lessons Learnt	Details
<p><b>Remediation Implementation</b></p>	<ul style="list-style-type: none"> <li>▪ The remediation of loss of vegetation cover in relation to HCV 4, in general, should focus on the fast re-growth of the vegetation in order to restore its environmental services.</li> <li>▪ Remediation of HCV 4 loss implies the strict enforcement of Best Management Practices for Soil and Water Conservation.</li> <li>▪ Ex-situ compensation and ex-situ remediation are more <b>difficult</b> to implement than previously assumed, mainly because of:                             <ul style="list-style-type: none"> <li>(i) the government’s spatial planning has most of the seemingly unused areas already allocated for some purpose, and this usually does not include conservation;</li> <li>(ii) the commitment of most companies to expedite such a mission is generally lacking;</li> <li>(iii) the lack of expertise to lobby communities, governments and corporate stakeholders;</li> <li>iv) the RSPO has not enough power to force its members to make significant sacrifices for conservation.</li> </ul> </li> </ul>

## Cost of Implementation

- Remediation options were selected and 1.5 -year program was developed accordingly, amounting **IDR 1,027,700,000 or USD 108,290** for both estates. More than half of the cost was for ecosystem restoration of HCV 1.
- The remediation expenses for two companies, during a period of one year from July 2011 to June 2012 was IDR 325,530,700 (USD 34,300) as the breakdown below:

Cost of Implementation ( July 2011 – June 2012)	
Baras Danum Estate	IDR 43,944,500
Batang Garing Estate	IDR 281,586,200
	<b>IDR 325,530,700 (USD 34,300)</b>

- The actual implementation of the Remediation Project cost 32% of the initially estimated budget.

## Moving Forward

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- Due to the above challenges/obstacles, the HCV Remediation plan might not be practical as an immediate resolution to compensate HCV areas loss.
- To adopt the resolution by the Compensation Task Force which is agreeable to all industry stakeholders.

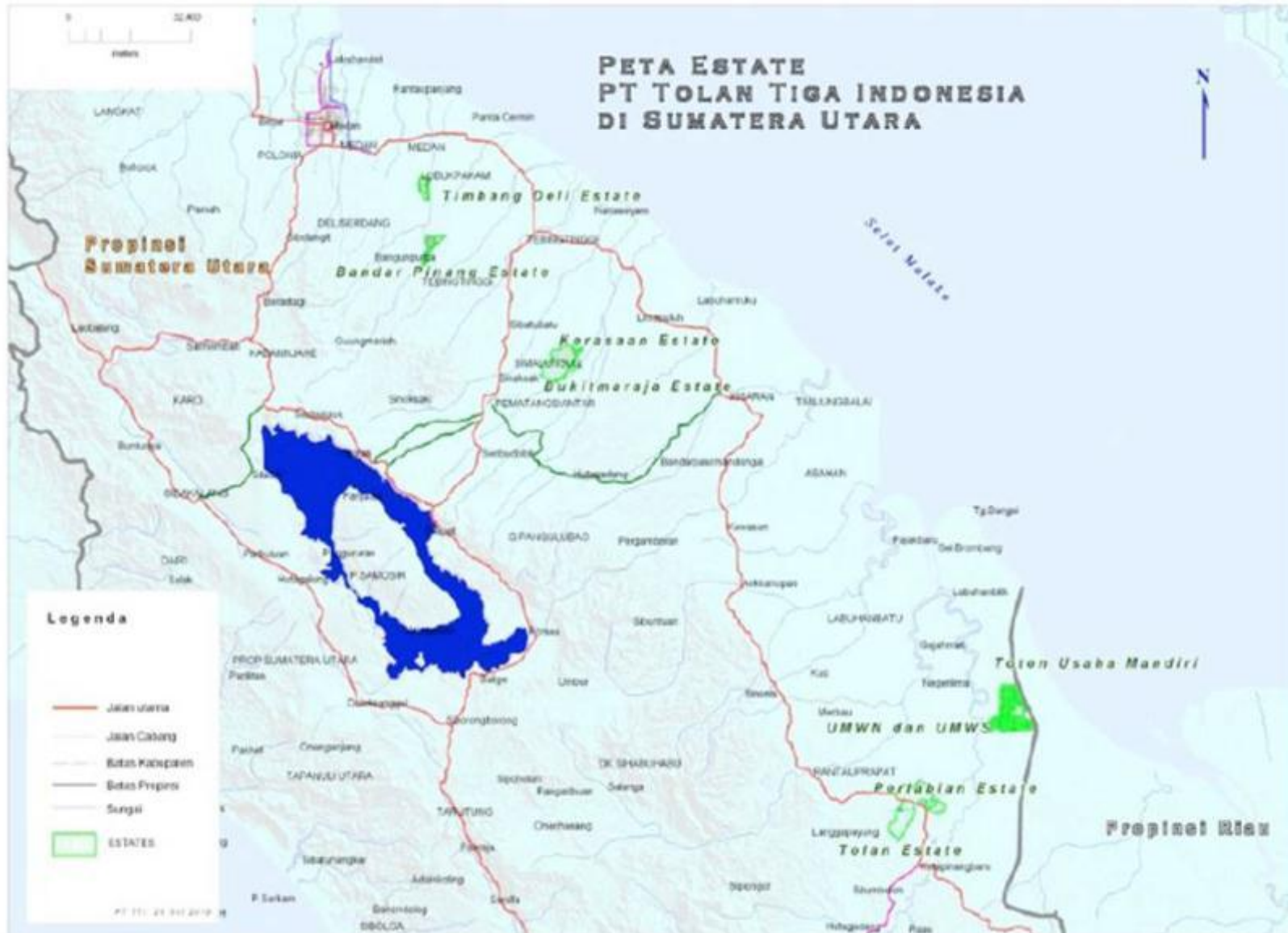
## ACKNOWLEDGEMENTS

### Special thanks to:

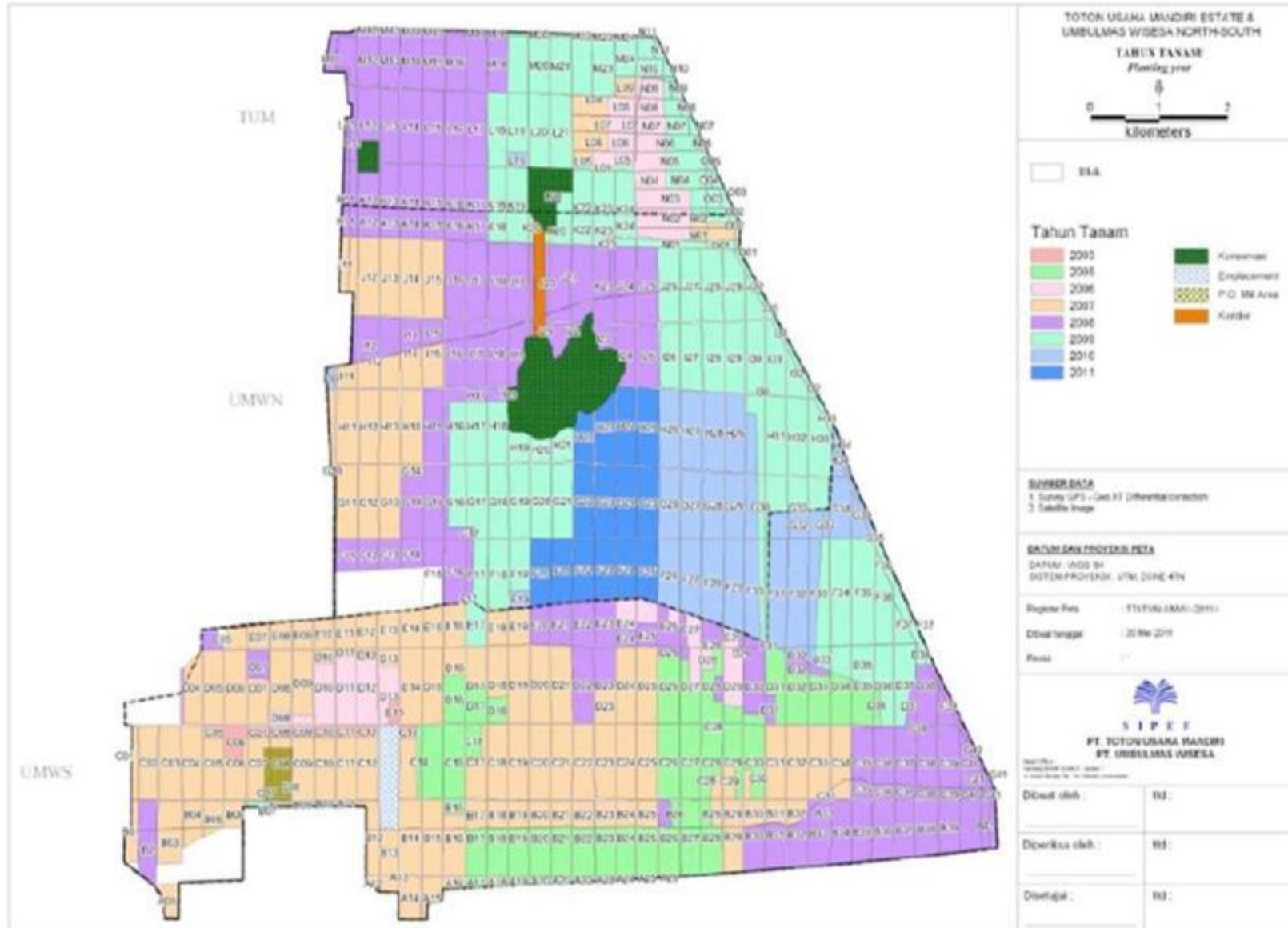
- ❖ Roundtable on Sustainable Palm Oil (RSPO) Secretariat
- ❖ Biodiversity and High Conservation Value Working Group (BHCV WG)
- ❖ Indonesian Operations - Sime Darby Plantation (Baras Danum Estate Management Team and Batang Garing Estate Management Team)



**BEST MANAGEMENT PRACTICES  
PT. UMBUL MAS WISESA ( UMW )  
PT. TOTON USAHA MANDIRI ( TUM )**







## Basic information UMW/TUM

### PT UMBUL MAS WISESA

**SIZE : 8'726HA**

**LEGAL STATUS : APL**

**FIRST PLANTINGS : 2003.**

**TAKE OVER BY SIPEF IN JULY 2006.**

**HCV ASSESSMENT : NOVEMBER 2009.**

## Basic information UMW/TUM

### PT TOTON USAHA MANDIRI

**SIZE : 1'199HA**

**LEGAL STATUS : APL**

**FIRST PLANTINGS 2006.**

**FINAL TAKE OVER BY SIPEF IN JANUARY 2009.**

**HCV ASSESSMENT : NOVEMBER 2009.**

## BMP

1. **Water Management**
2. **Fertilizer and Nutrient Management**
3. **Integrated Pest and Diseases Management**
4. **Weed Management**
5. **Management of leaning and fallen palms**
6. **Nursery Management**
7. **Transport System**
8. **Field Supervision**
9. **Replanting Practices**
10. **Environmental and Social**

PT TOLAN TIGA INDONESIA  
 ENC department

**PLANTING MAP REVIEW**

**ESTATE : KRE**

date sent by estate : 10 december 2012  
 date received from ESD : 19 december 2012  
 ESD recommendation : N/A

date of ENC review : 20 december 2012  
 reviewed by : D-MD

oil palm / rubber / tea  
 replanting / conversion / new-planting  
 area : 155.41ha

**ENC recommendation : approved / ~~rejected~~**

**Comments :** Approved. Good document.

documents submitted :

1. memo detailing planting programme, HCV/fragile soil areas and their management plan
2. planting programme map
3. topography map
4. soils map
5. slopes class map
6. HCV map
7. working schedule

comments (if needed)

Yes / ~~No~~  
 Yes / ~~No~~  
 Yes / ~~No~~  
 Yes / ~~No~~  
 Yes / ~~No~~  
 Yes / ~~No~~

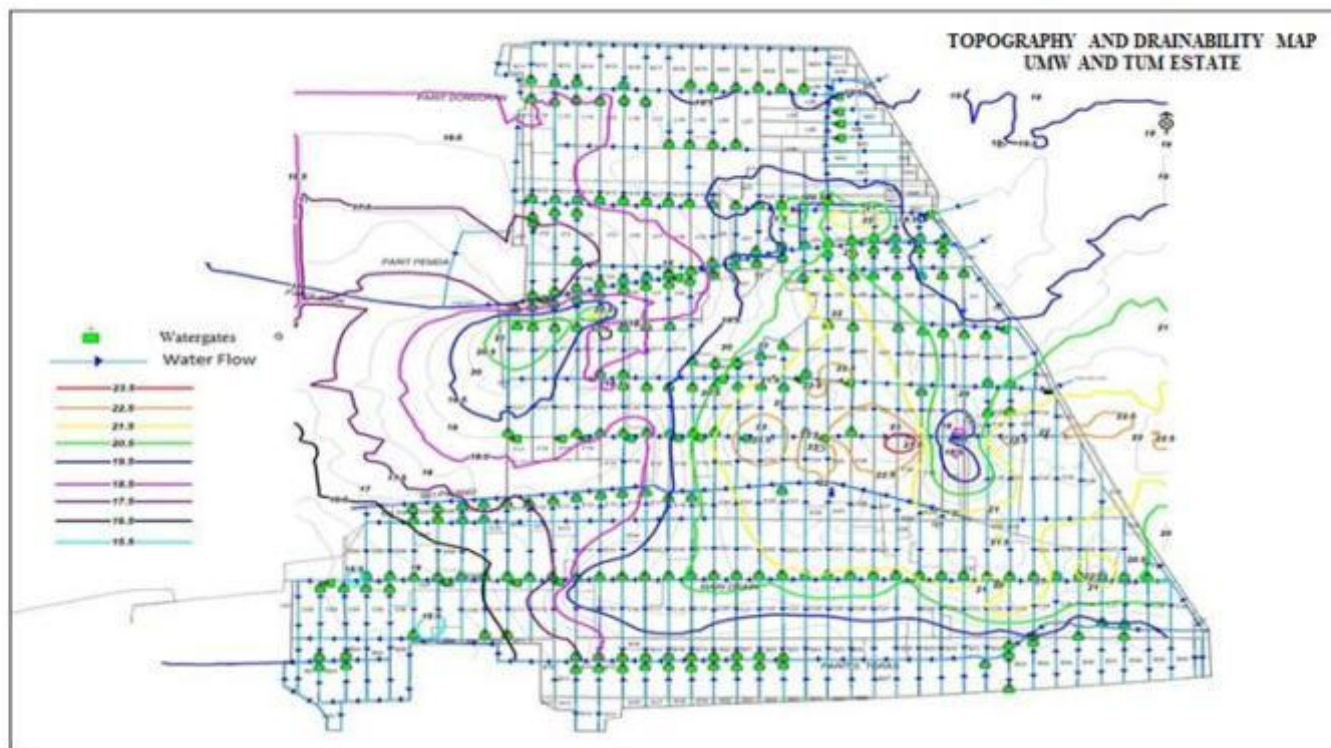
(if not reviewed by D-MD)  
 initials of D-MD

initials of reviewer

## WATER MANAGEMENT

### Drainability Study

- To investigate the long – term drainability
- To determine the right planning and design of drainage system and water management





Weir



Main Drain



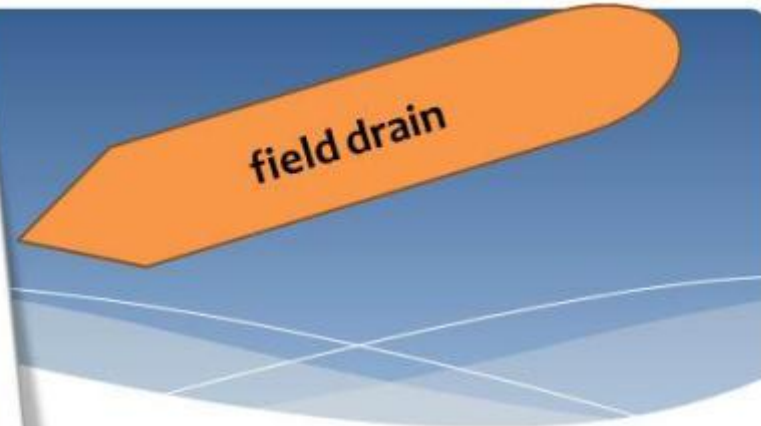


- **Water level recording once a month**
- **Dedicated Field Assistant for water management**

**Water level gauge**







Collection  
drain

## FERTILIZER AND NUTRIENT MANAGEMENT

### 1) 6 Monthly Visit by Consultant Agronomist

- Fertilizer recommendation
- Agronomic advice

### 2. Fertilizer Program

- Planting Hole
  - = 300 grm **Slow release fertiliser**
  - = 50 grm **ZinCop**
  - = 250 grm **Mycorrhizae**
- Immediately After Planting
  - = 1000 grm **RP**
  - = 1000 grm **Limestone Dust**
  - = 50 grm **ZinCop**
- 5 – 24 MAP
  - = **NPK, MOP, RP, ZinCOP, B**
  - = **NPK + CuZnB Mixture ( 2X )**
  - = **NK Mixture ( 1X )**

**Field visit by consultant agronomist**

**Controlled release fertiliser**

**HARACOAT MX**  
Pupuk Papanan Terkendal  
7/6/34/ZnCuB



Pre - packed fertilizer





## COMMON OIL PALM PEST IN UMW & TUM



## INTEGRATED PEST AND DISEASES MANAGEMENT



**Beneficial Plants**





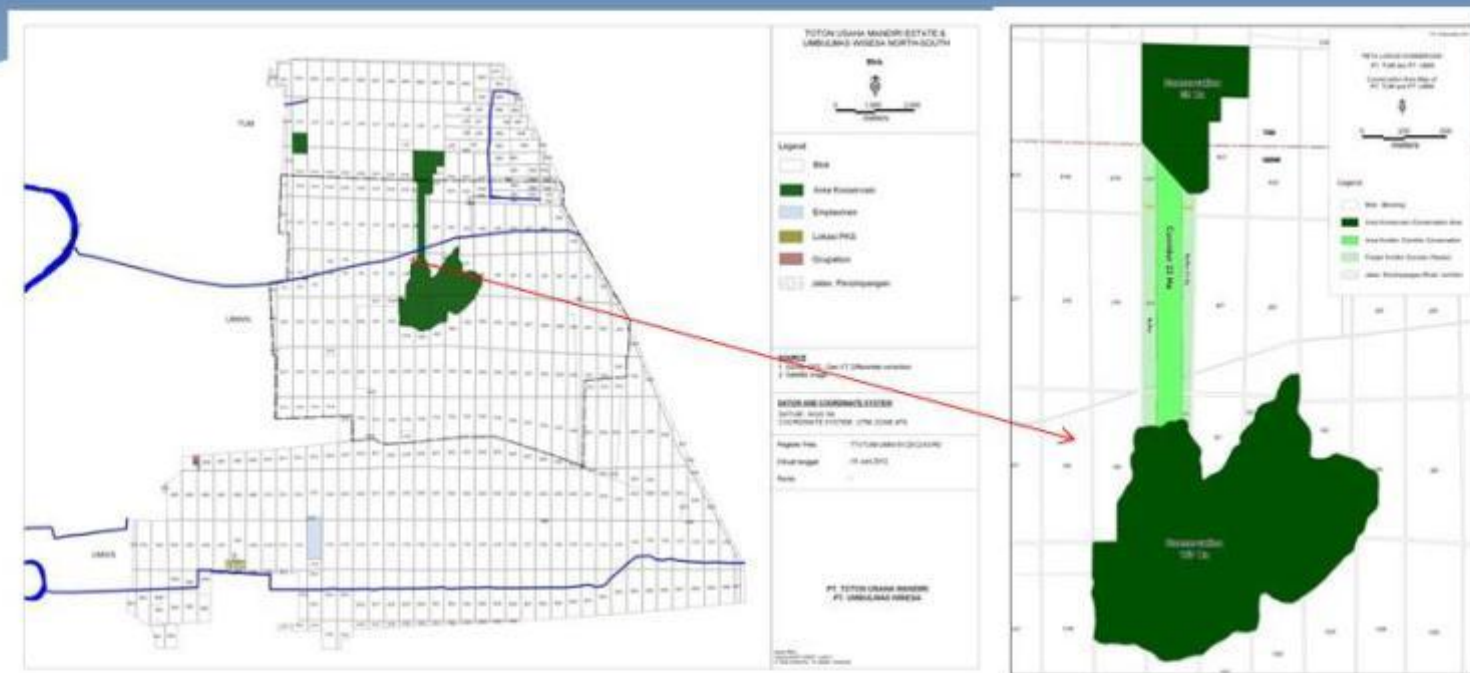
## Environmental and Social Issues

<i>(all areas in ha)</i>	HCV1	HCV2	HCV3	HCV4	HCV5	HCV6	TOTAL
<b>existing</b>	221	0	0	0	0	0	221
<b>potential</b>	69	0	0	0	0	0	69
<b>TOTAL</b>	290	0	0	0	0	0	290

(OVERLAPPING HCV AREAS NOT CONSIDERED)



## HCV Corridor



# RSPO

Roundtable on Sustainable Palm Oil

RSPO Secretariat Sdn Bhd  
Company No.: 787510-K  
Unit A-33A-2, Level 33A, Tower A  
Menara UOA Bangsar,  
No.5 Jln BangsarUtama 1  
59000 Kuala Lumpur  
Malaysia

Telephone : +603-2302 1500/  
Fax : +603 2201 4053  
Email : [rspo@rspo.org](mailto:rspo@rspo.org)



**Conservation Area**



White eagle



Python



Honey bear





Roundtable on Sustainable Palm Oil

RSPO Secretariat Sdn Bhd  
Company No.: 787510-K  
Unit A-33A-2, Level 33A, Tower A  
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Staff & Workers Housing



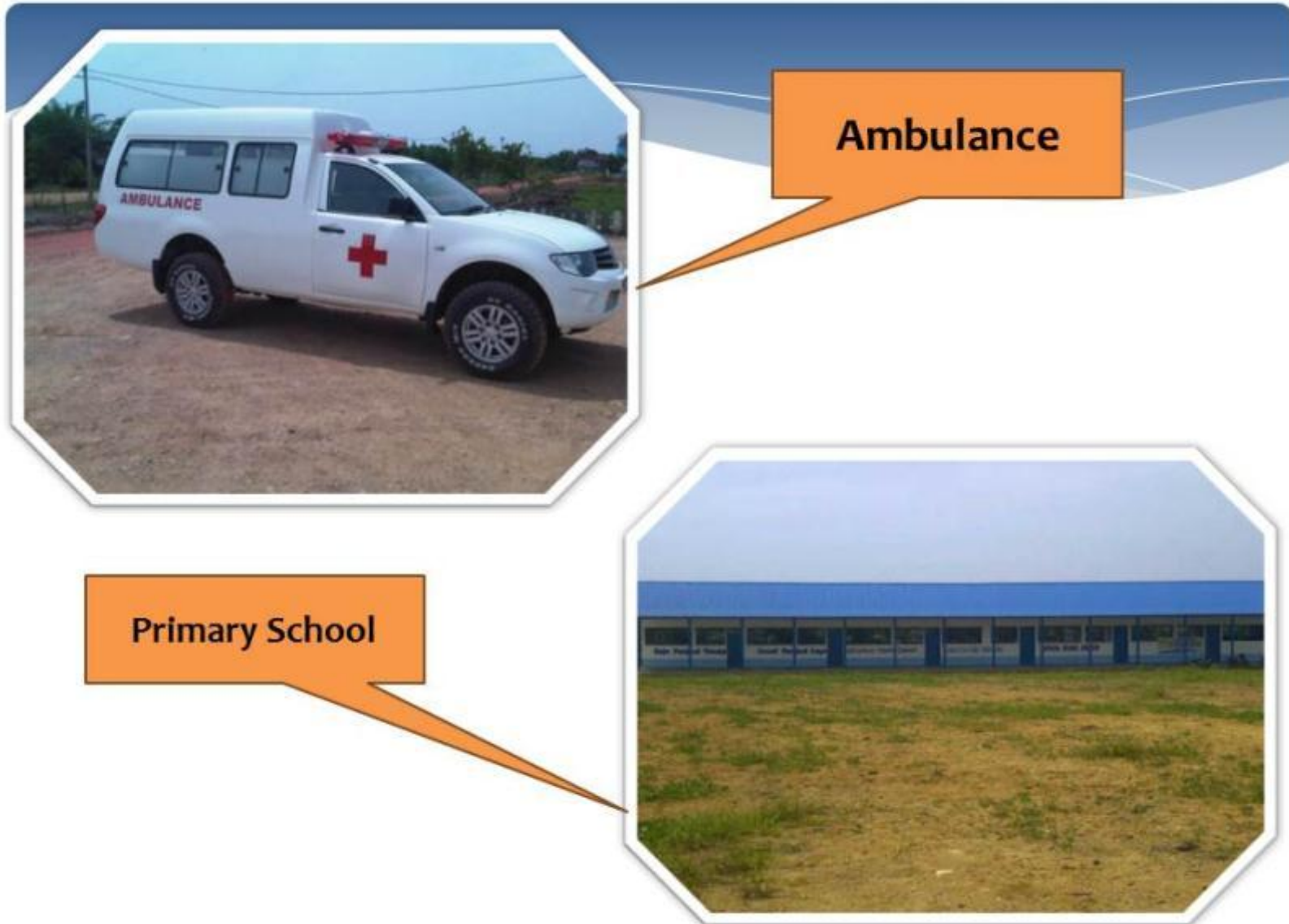
Labour House



Water Filtration Plant











**Workers training**



UMW Mill under construction  
(to be ready by end 2013)

# RSPO

Roundtable on Sustainable Palm Oil

RSPO Sekretariat Sdn Bhd  
Company No.: 787510-K  
Unit A-33A-2, Level 33A, Tower A  
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Fax : +603 2201 4053  
Email : rspo@rspo.org

**BIODIVERSITY PROJECT**

**FOREST RESTORATION**



**PT. SIPEF BIODIVERSITY  
INDONESIA**

**KL, 19 JUNE  
2013**

## INTRODUCTION

**HELLO.....**

**MY NAME SUGENG PRANTIO  
PROJECT MANAGER**

**FOREST RESTORATION  
PT. SIPEF BIODIVERISTY  
INDONESIA**

**CONTACT:**

**08116136824 / 0813 416 936 49**

***Sprantio @ sipef.com***





## Restoration Area

### ADMINISTRATIVE AREA

#### SUB DISTRICT

- LUBUL PINANG
- V KOTO
- PENARIK

FOREST STATUE : LIMITED PRODUCTION FOREST

TOTAL AREA : ± 12.672 ha

### BOUNDARY

NORT AND EAST : KERINCI SEBELAT NATIONAL PARK

WEST AND SOUTH : LIMITED PRODUCTION FOREST

## OUR VISION

RECOVERY AND PROTECTION WILD LIFE AND THEIR  
HABITATE THROUGH FOREST RESTORATION

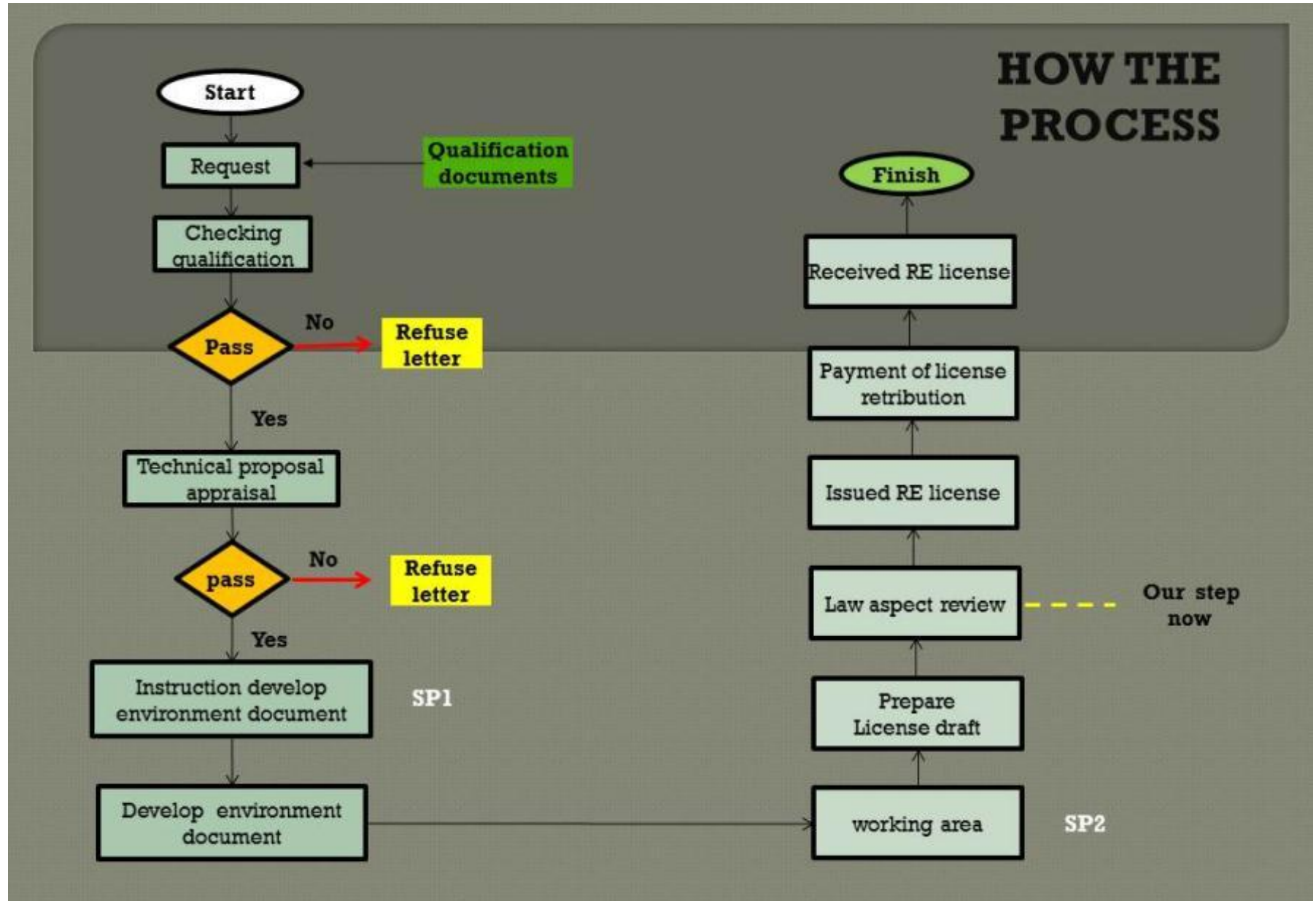
## OUR MISSION

- REPLANTING DEGRADED AREA
- WILD LIFE PROTECTION
- PROTECTION FROM ILLEGAL ACTIVITIES
- DEVELOP SCIENTIFIC RESEARCH
- OPTIMIZING FOREST RESOURCE (TIMBER & NON  
TIMBER FOREST PRODUCT)
- EMPOWERING COMMUNITIES IN PROJECT AREA

## LICENSE/LEGAL

- 60 YEARS**
  
- MAY EXTEND 35 YEARS**





## **SIPEF**

## **COMMITMEN**

## **BEST FOREST MANAGEMENT PRACTICE**

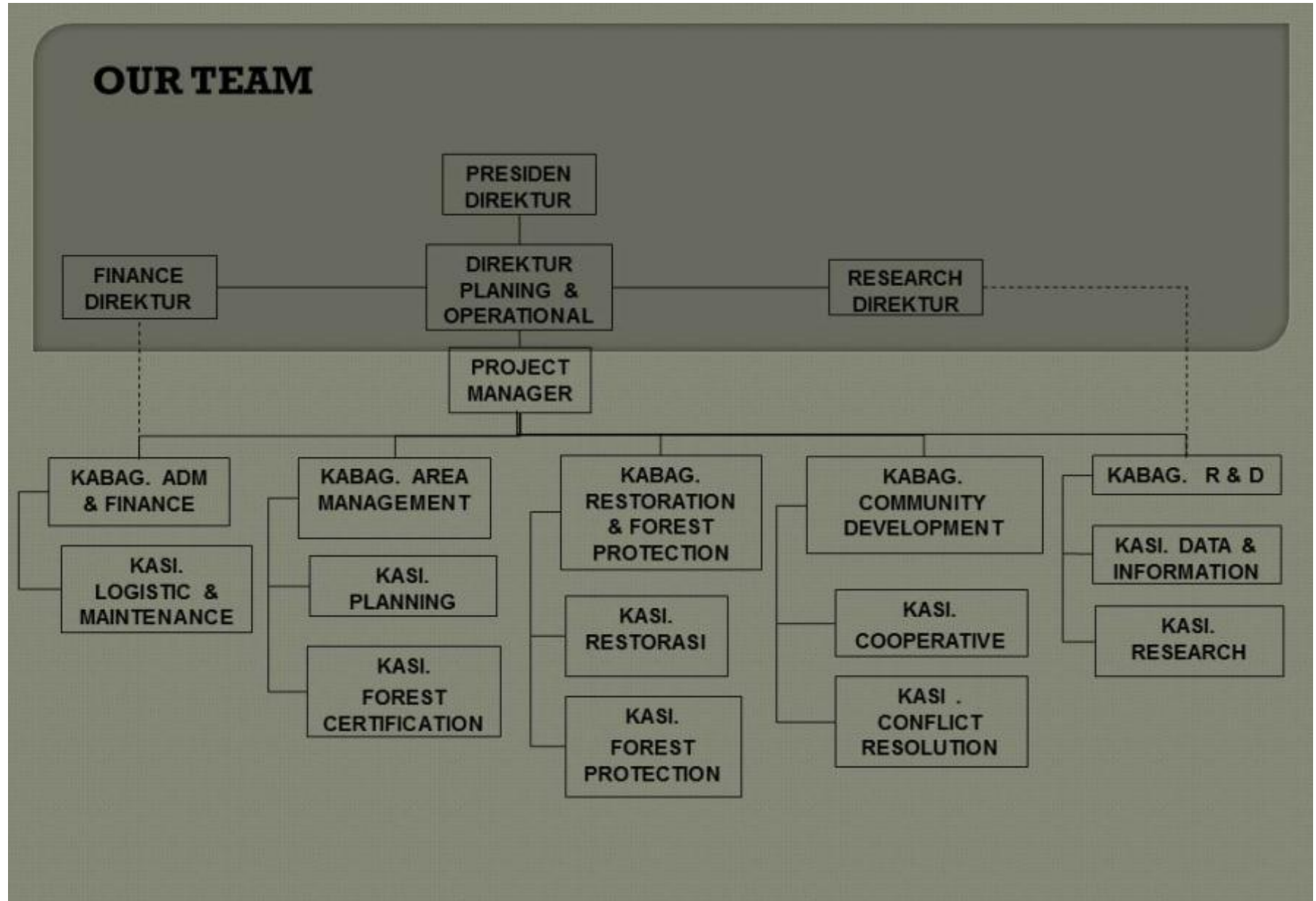
### **❑ SOCIAL ASPECT:**

- a. Social impact assessment**
- b. Conflict resolution mechanism**
- c. Safety and health occupation management system (SMK3)**
- d. Empowering local community**
- e. Education and trainings**

## **BEST FOREST MANAGEMENT PRACTICE**

### **□ ENVIRONMENT ASPECT:**

- a. Identification and management HCV area**
- b. Nursery and replanting**
- c. Inventory**
- d. Erosion and hydrology Monitoring**
- e. Patrols**
- f. Wildlife monitoring**



## OUR PARTNER

- ❖ **LOCAL GOVERNMENT**
- ❖ **ACADEMIC INSTITUTION**
- ❖ **RESEARCH INSTITUTION**
- ❖ **SECURITY FORCES**
- ❖ **NGO**
- ❖ **LOCAL COMMUNITY**

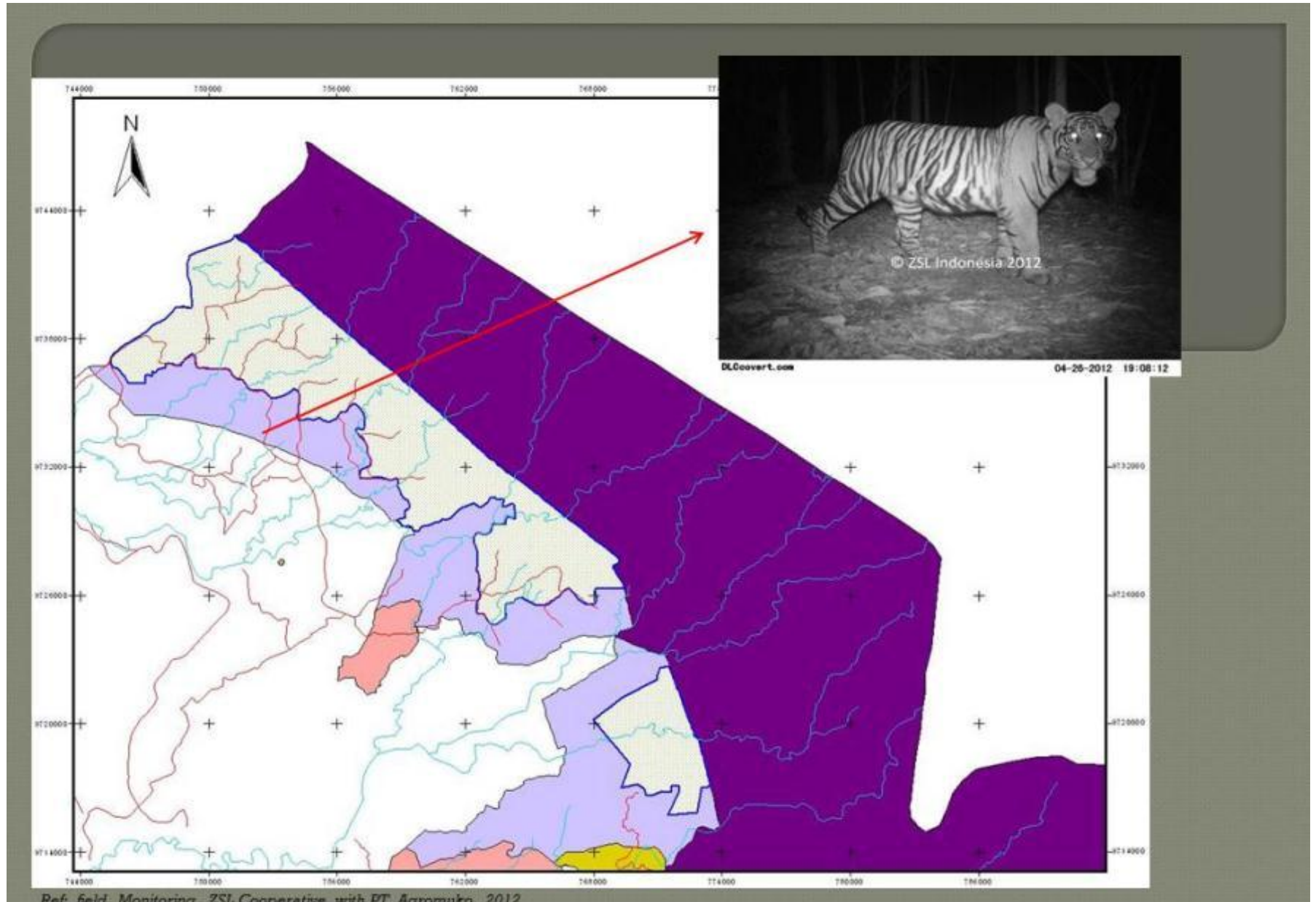
## WHY IMPORTANT?

- BUFFER TO TNKS AND RICH BIODIVERSITY**
- WATER SOURCE**
- THREAT AREA**

## ❑ **BUFFER TO TNKS AND RICH BIODIVERSITY**

- 115 VEGETATIONS SPECIES
- 42 MAMMALS SPECIES
- 10 REPTILE SPECIES
- 6 AMPHIBIOUS SPECIES
- 6 PRIMATES SPECIES
- 306 BIRDS SPECIES









**Tapir (*Tapirus indicus*)**



**Beruang madu (*Paradoxurus hermaphroditus*)**



**Ajak (*Cuon alpinus*)**



**Kijang (*Muntiacus muntjak*)**



**Landak (*Hystrix brachyura*)**



**Musang Luwak (*Paradoxurus hermaphroditus*)**



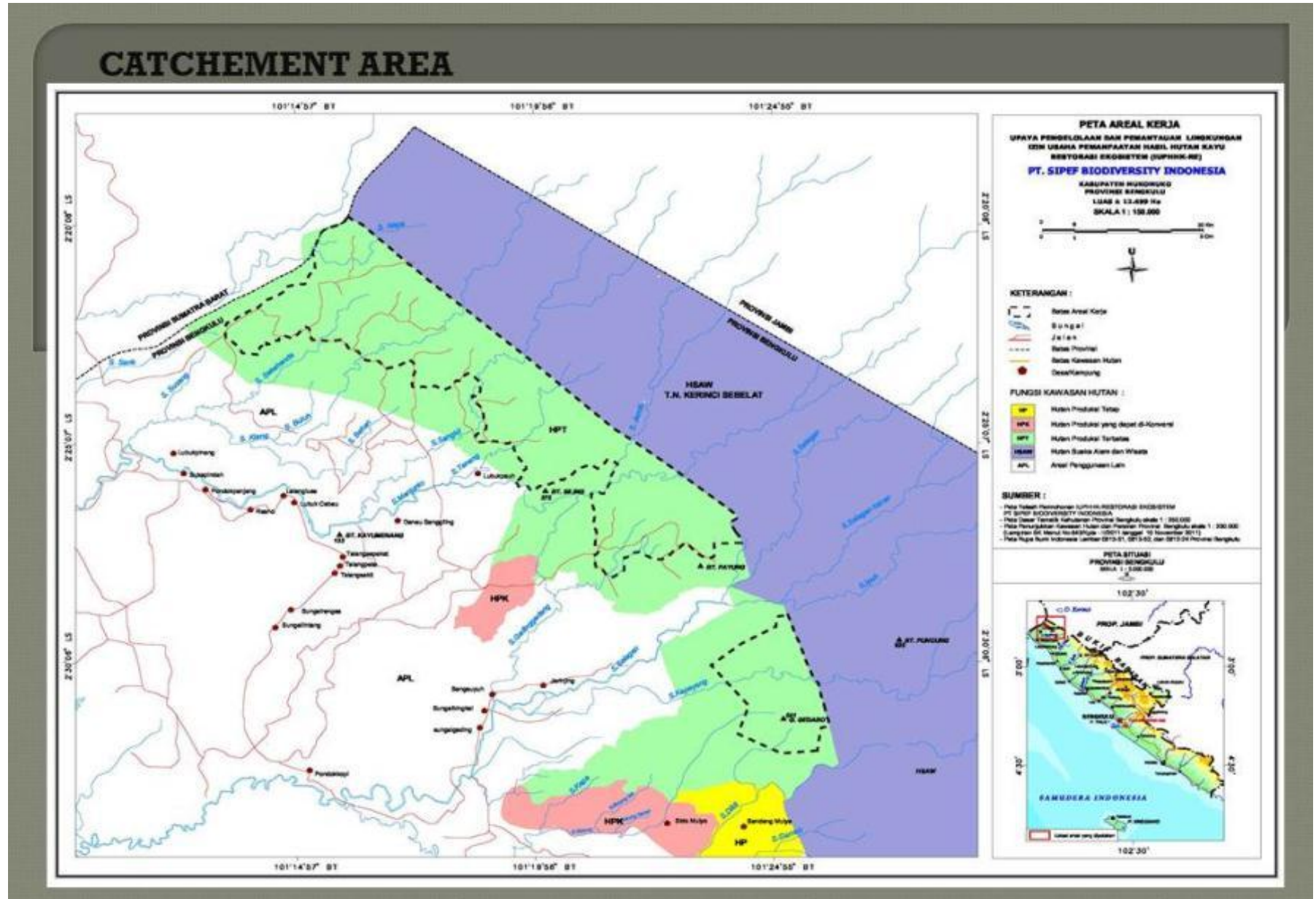
**Kancil (*Tragulus javanicus*)**



**Babi hutan (*Sus scrofa*)**



**Kera ekor panjang (*Macaca fascicularis*)**

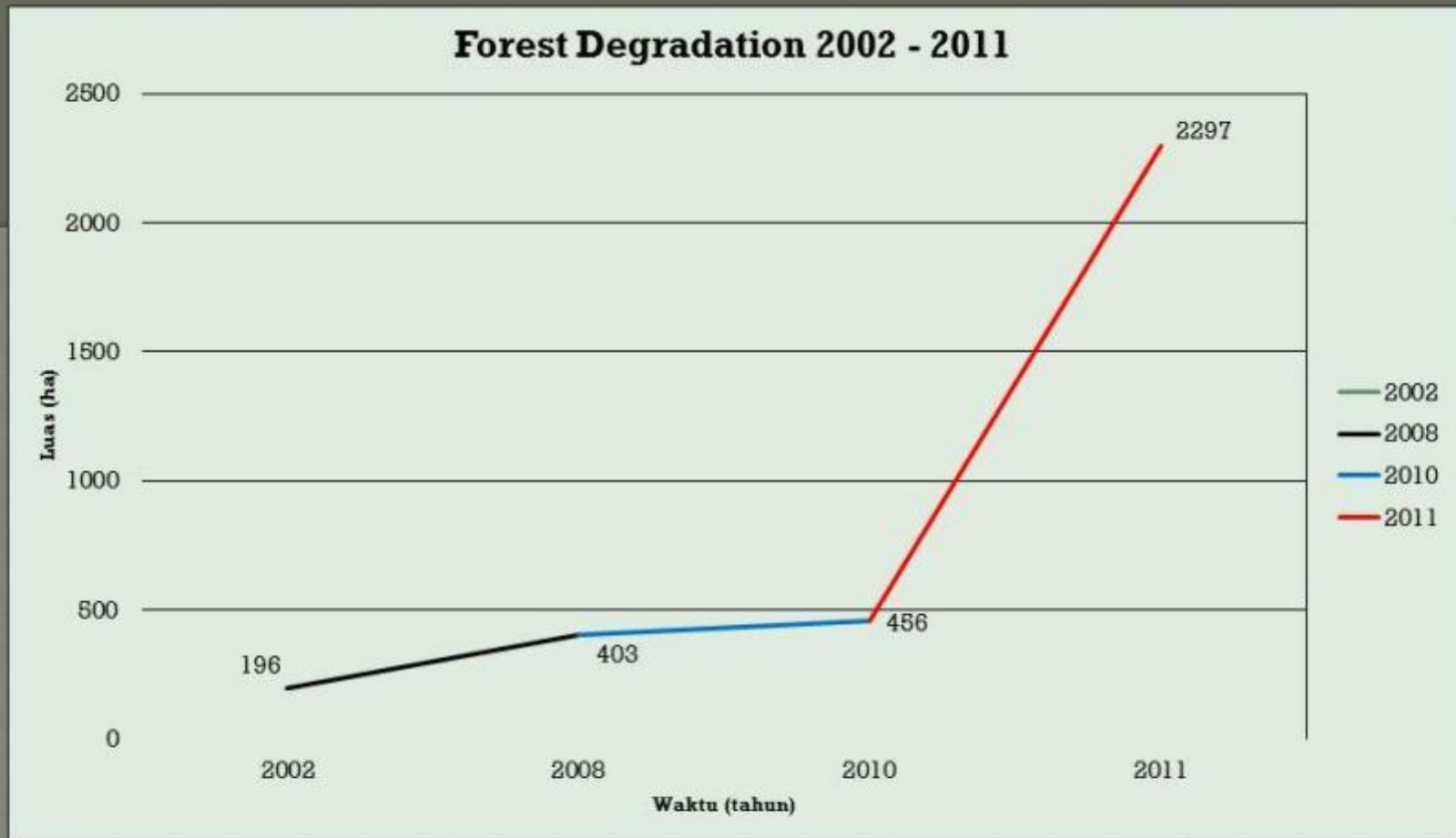


## USING OF WATER

- IRRIGATION
- COMSUMPTION

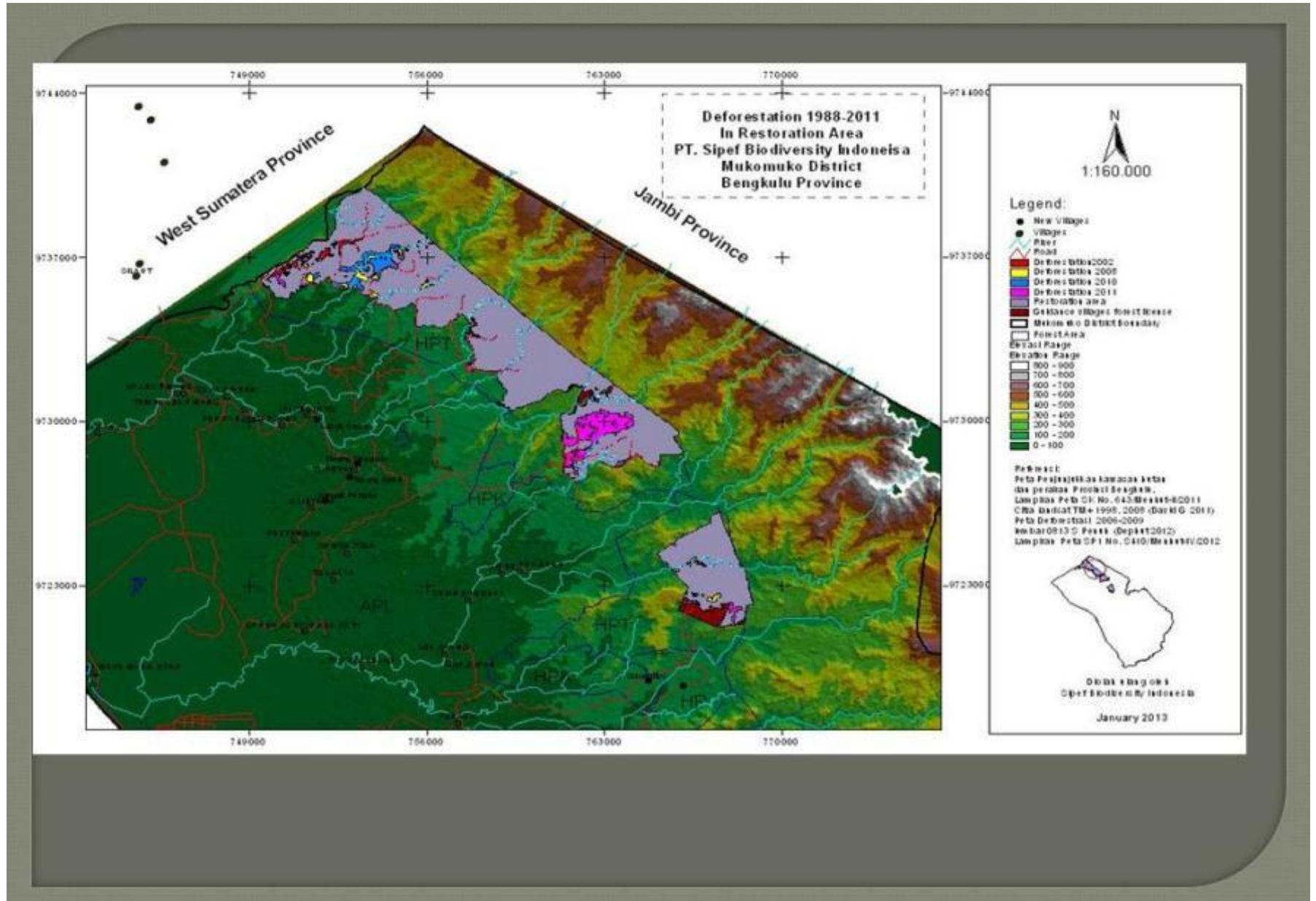


## THREAT AREA



2002-2010: open area

2011: open area, bush, mix agriculture area



## ILLEGAL LOGGING ACTIVITIES



