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Marubeni CORPORATION

REDD+ Feasibility Study in Indonesia

17 February 2011

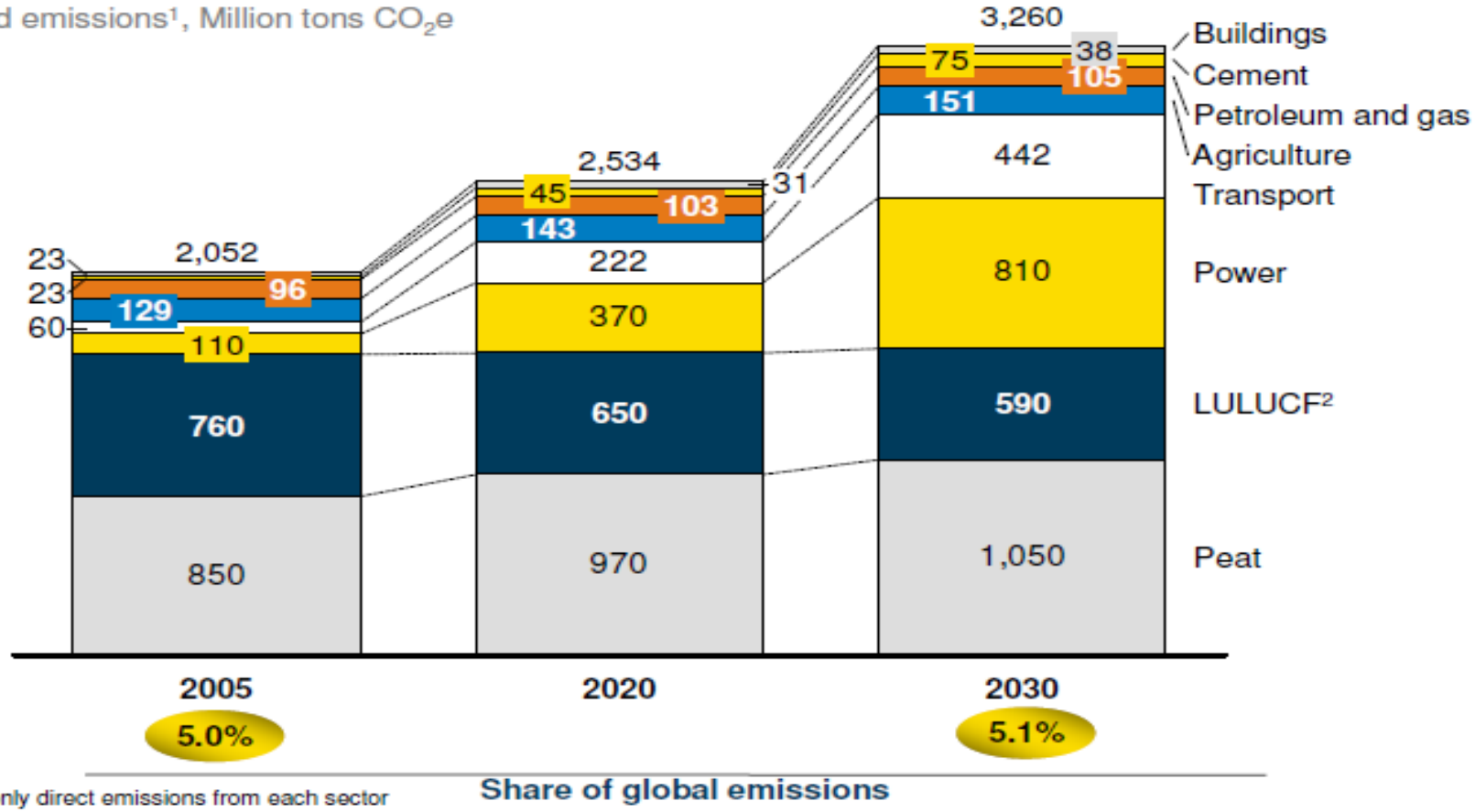
International Technical Seminar on REDD+

Marubeni Corporation

1-1) Projected Emissions (Indonesia)

Indonesian emissions are estimated to grow from 2.1 to 3.3 $GtCO_2e$ between 2005 and 2030

Projected emissions[1], Million tons CO_2e



1 Includes only direct emissions from each sector

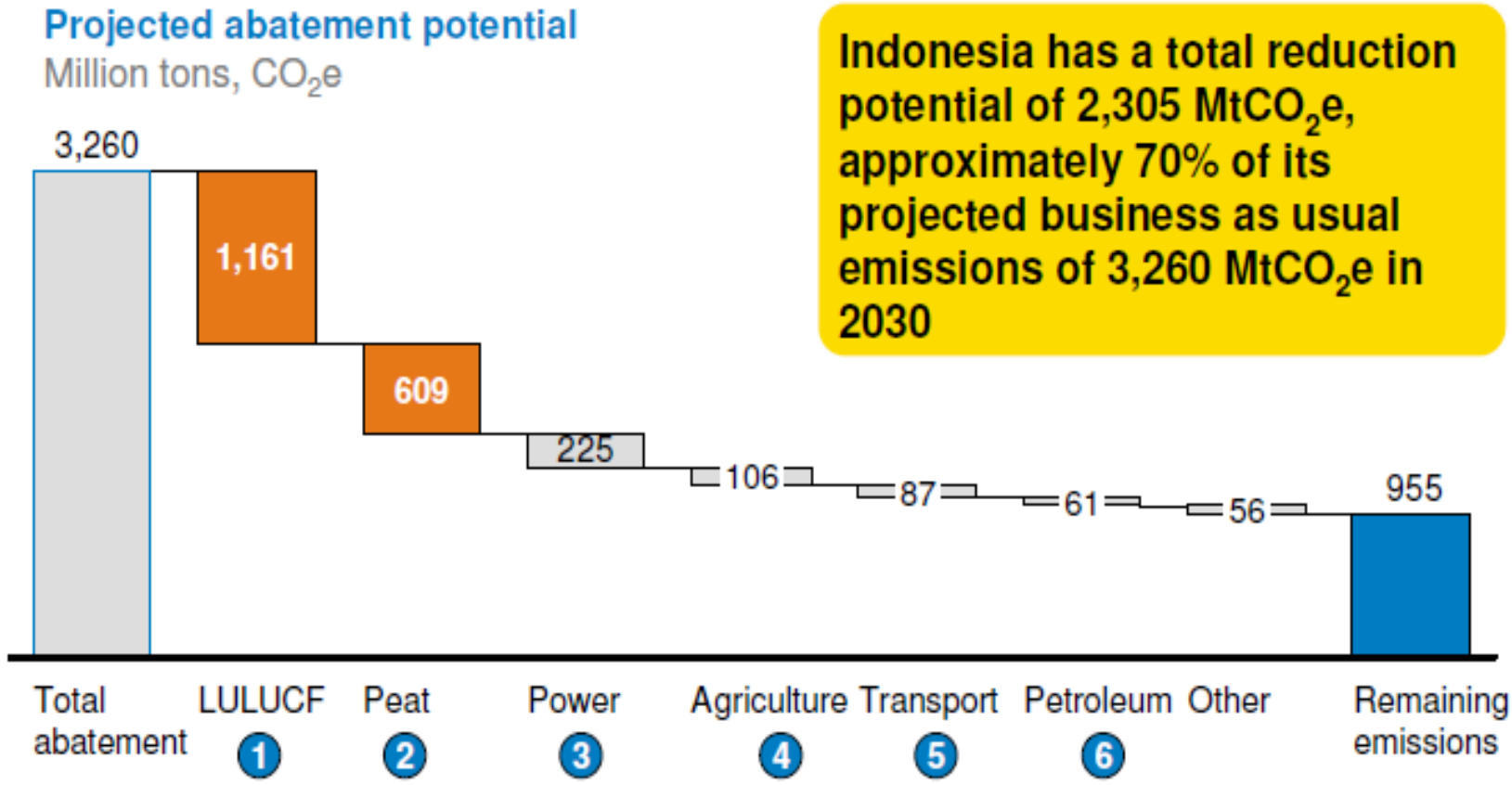
2 Emissions from LULUCF are based on a net emission approach i.e., including absorption

（DNPI,2010)

1-2) Potential to Reduce Emissions

●Projected abatement potential: 1,770 million tCO2e/year（LULUCF+Peat / compared to BAU in 2030)

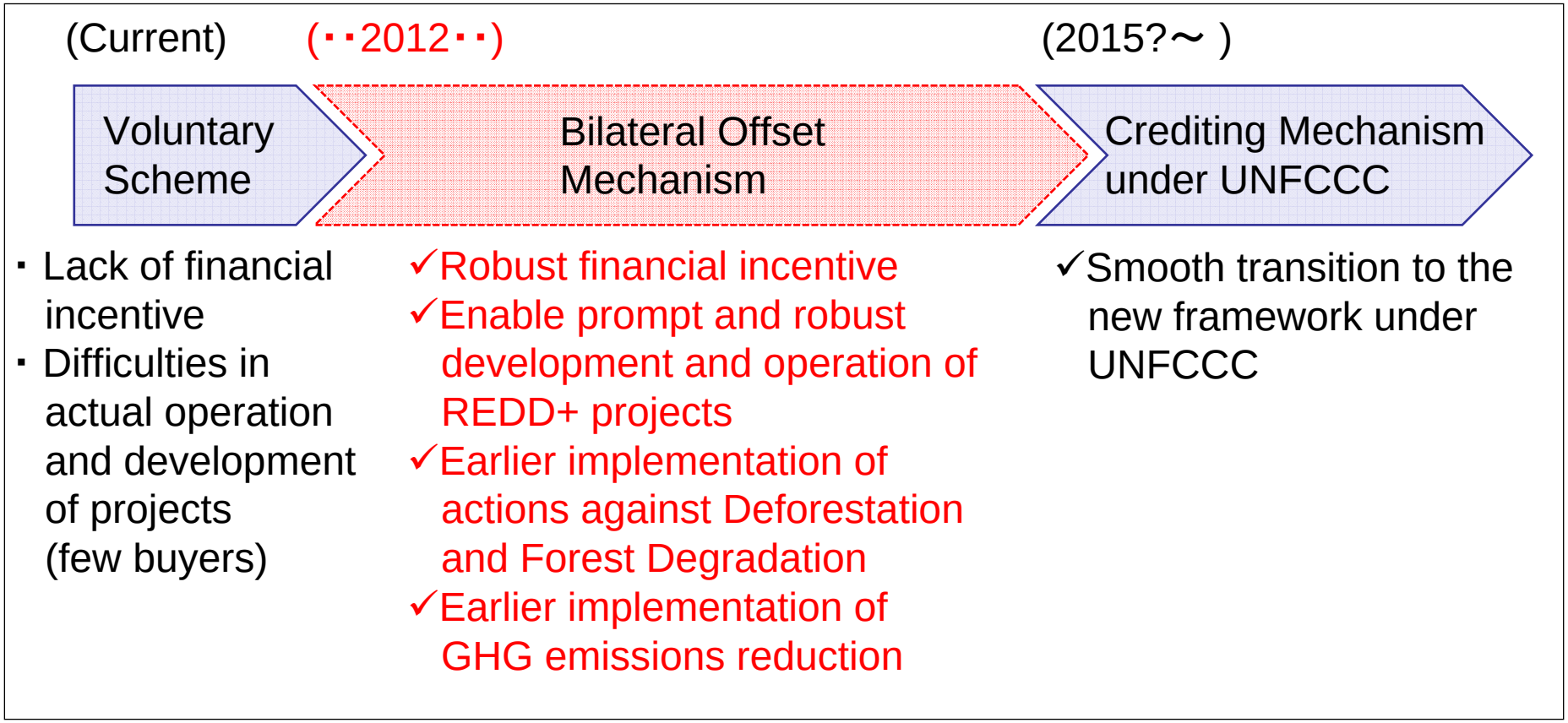
（Mitigation measures: Reduce Deforestation 570 MtCO2e／Zero Burning 310 MtCO2e／Reduce peat-decomposition 250 MtCO2e／SFM 240 MtCO2e／Reforestation　150 MtCO2e）



（DNPI,2010)

1-3) Concept of Bilateral Offset Scheme

- Bilateral Offset Mechanism could incentivize early and effective implementation of actions against Deforestation and Forest Degradation through prompt development and operation of REDD project in Indonesia by filling the gap between the current voluntary scheme and the future crediting mechanism under the UNFCCC.



2-1) Outline of the Feasibility Study

Objective

To analyze feasibility of GHG emission reductions through REDD+ project developed by Japanese private companies

Study Items

①Analysis of Current Situation

②Establishment of REDD+ Project Plan

③Establishment of REDD+ Project Scheme

④Consideration of MRV/Methodology

(Including Expert Meeting)

⑤Consideration of Issues / Countermeasures

Partners/Project Location

○ERM Japan Ltd.

○ITTO

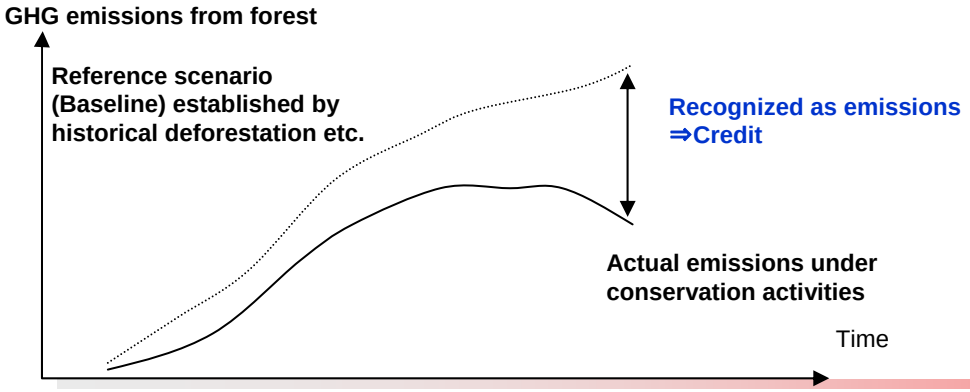
○Ministry of Forestry (Indonesia)

○Accounting/Legal Firm

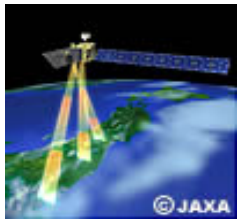
○Location: Kalimantan / Sumatra

Expected Reductions/ Measurement Method

Size: hundreds of thousands ~ millions -tCO2/y



Field sampling data and satellite imagery data by a satellite such as JAXA's ALOS will be utilized



Monitoring of Forest cover and its historical trend, Identification of deforestation and degradation area → Carbon stock measurement → Planning/Implementation of conservation activities, Measurement of the effects

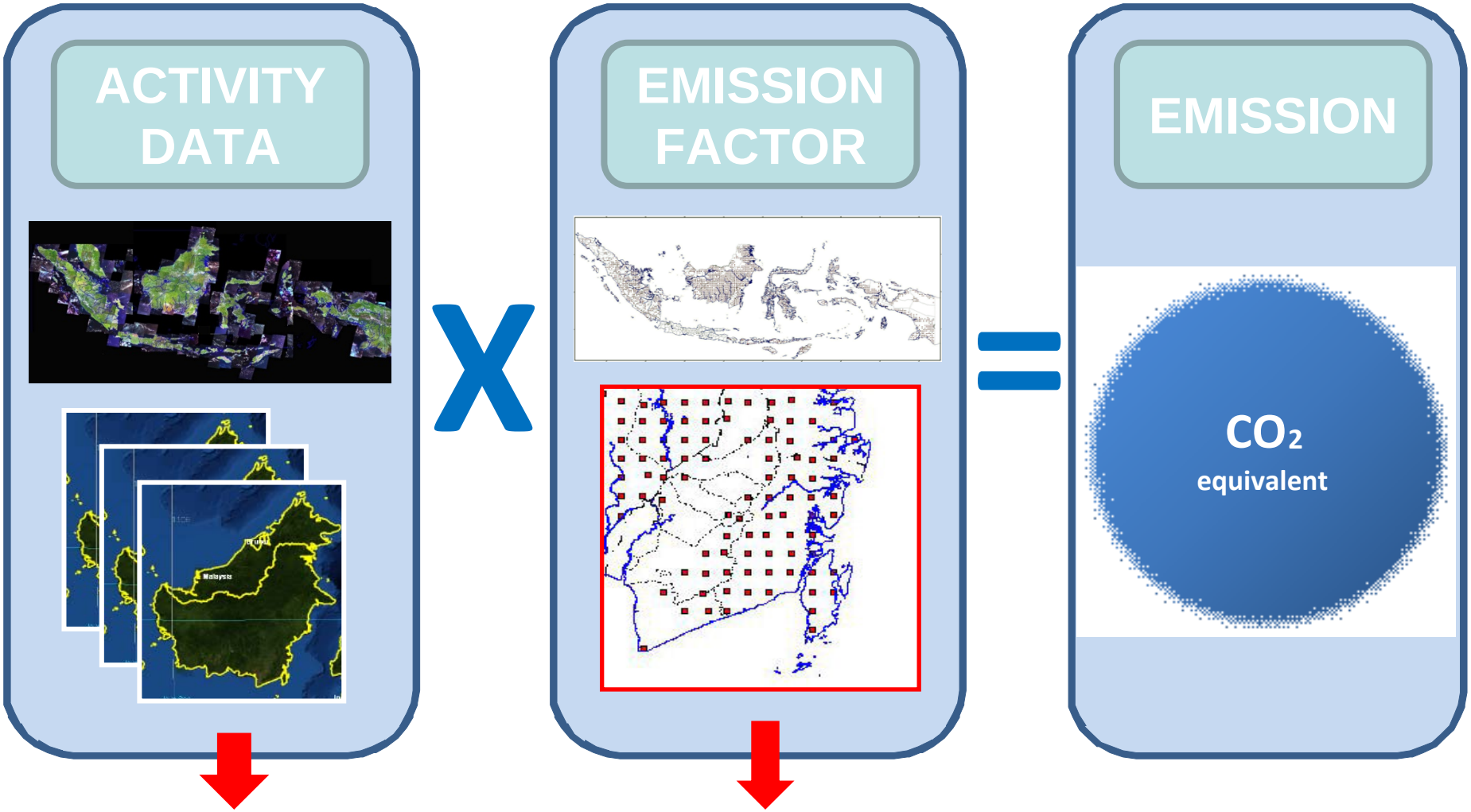
2-2) Progress of Activity: Site Selection

- **A definitive project site for the full- feasibility study will be selected by the end of March 2011**

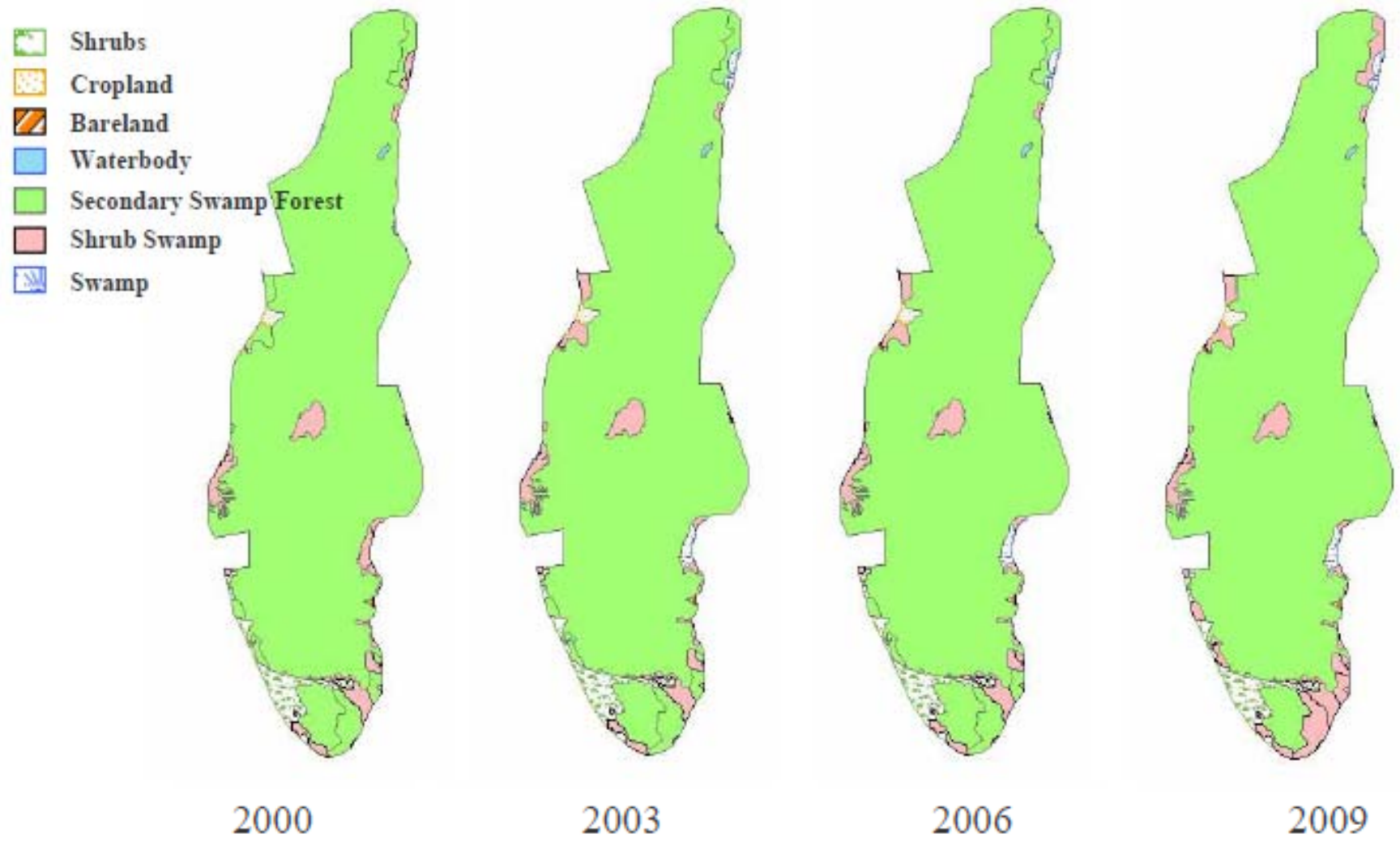
Location	Sumatra	Kalimantan
Area	70,000 ha	200,000 ha
Remarks	Peat land	Peat land

- **Evaluation Criteria**:
  - **a) Data Availability**
  - **b) Ecosystem, Biodiversity**
  - **c) Threat to forest resources**
  - **d) Social, economy and culture, Community dependence, Conflict**
  - **e) Economic feasibility**
  - **f) Governance**

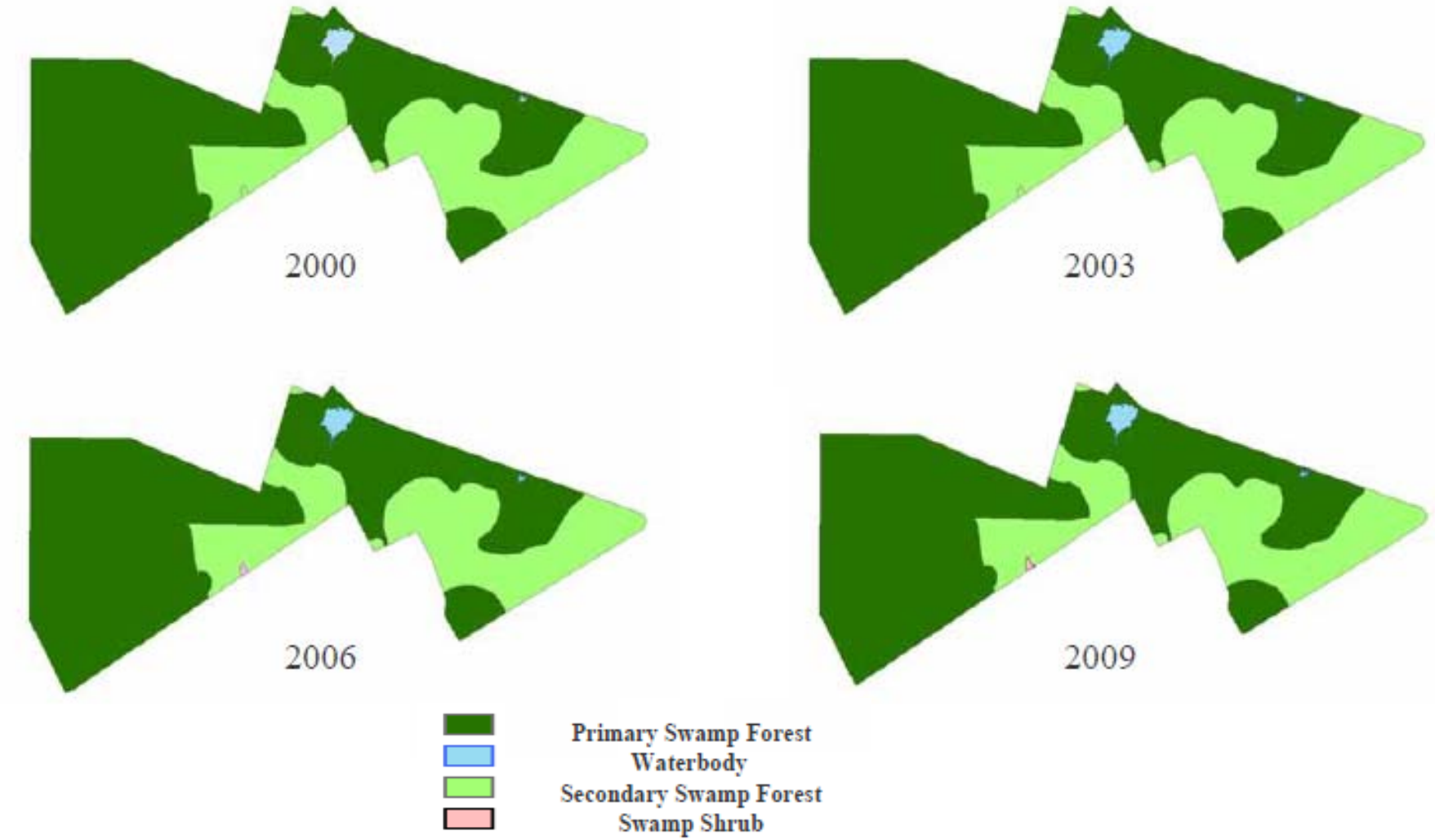
3-1) Progress of Activity: Measuring Carbon Stock



3-2) Landcover of Central Kalimantan Site (Landsat)



3-2) Landcover of Riau Site (Landsat)



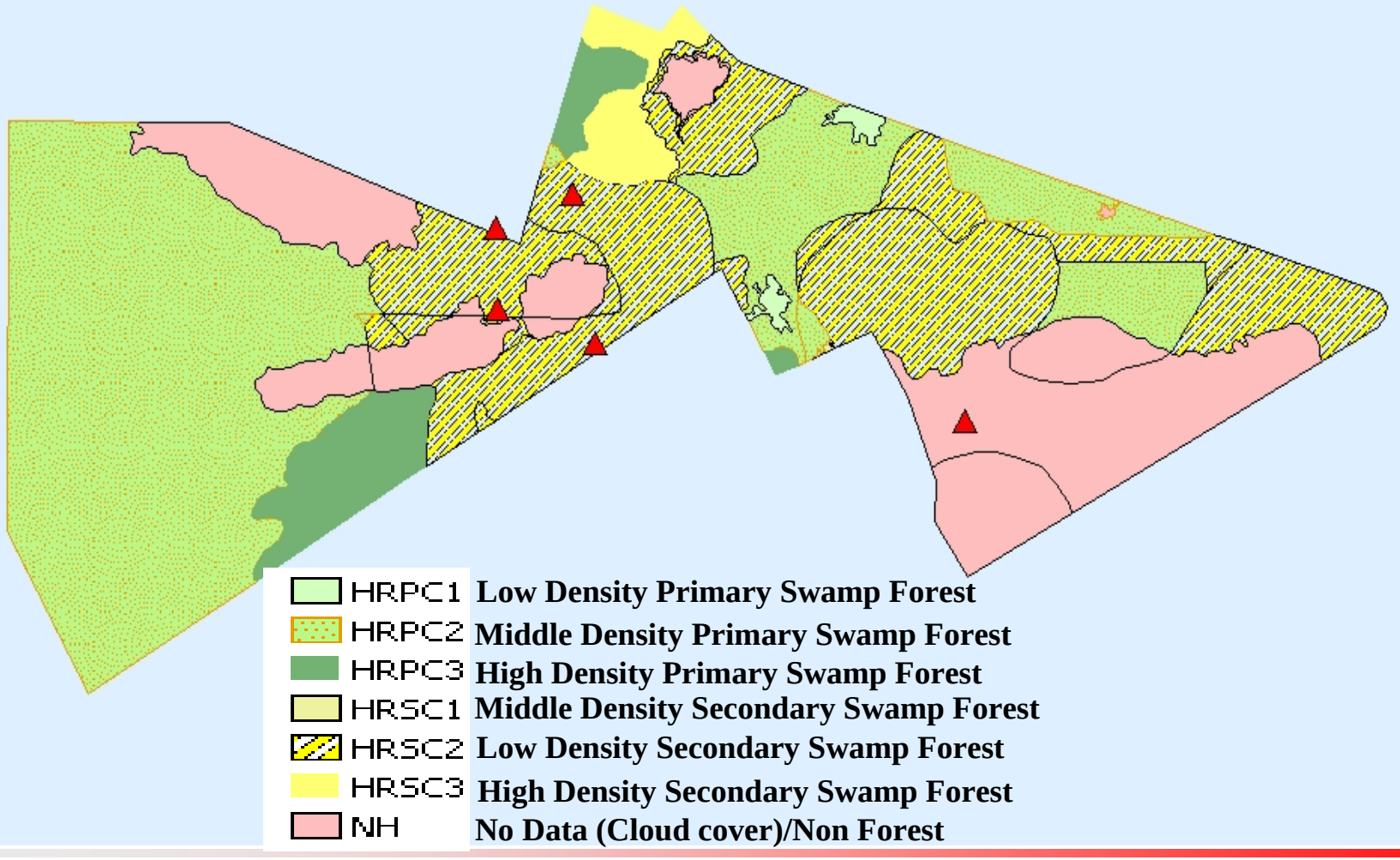
3-2) Landcover Change in 2 Sites (Landsat, 2000-2009)

<Riau>	2000			2003			2006			2009		
	Area(ha)	chg	%	Area(ha)	chg	%	Area(ha)	chg	%	Area(ha)	chg	%
Primary Swamp Forest	50,404	–	71%	50,404	0	71%	50,404	0	71%	50,404	0	71%
Water Body	557	–	1%	557	0	1%	557	0	1%	557	0	1%
Secondary Swamp Forest	20,532	–	29%	20,532	0	29%	20,480	-52.51	29%	20,480	0	29%
Shrubs Swamp		–					53	52.52	0.1%	53	0	0.1%
Grand Total (Ha)	71,493	–	–	71,493	–	–	71,493	–	–	71,493	–	–

<Kalimantan>	2000			2003			2006			2009		
	Area(ha)	chg	%	Area(ha)	chg	%	Area(ha)	chg	%	Area(ha)	chg	%
BareLand	872	–	0.4%	872	0	0.4%	872	0	0.4%	872	0	0.4%
Water Body	217	–	0.1%	217	0	0.1%	217	0	0.1%	217	0	0.1%
Secondary Swamp Forest	201,601	–	93%	199,961	-1,640	92%	199,805	-156	92%	193,713	-6,092	89%
Shrubs Swamp	14,699	–	7%	14,878	179	7%	15,034	156	7%	21,126	6,092	10%
Swamp	68	–	0.0%	1,529	1,461	0.7%	1,529	0	0.7%	1,529	0	0.7%
Grand Total (Ha)	217,457	–		217,457			217,457			217,457		

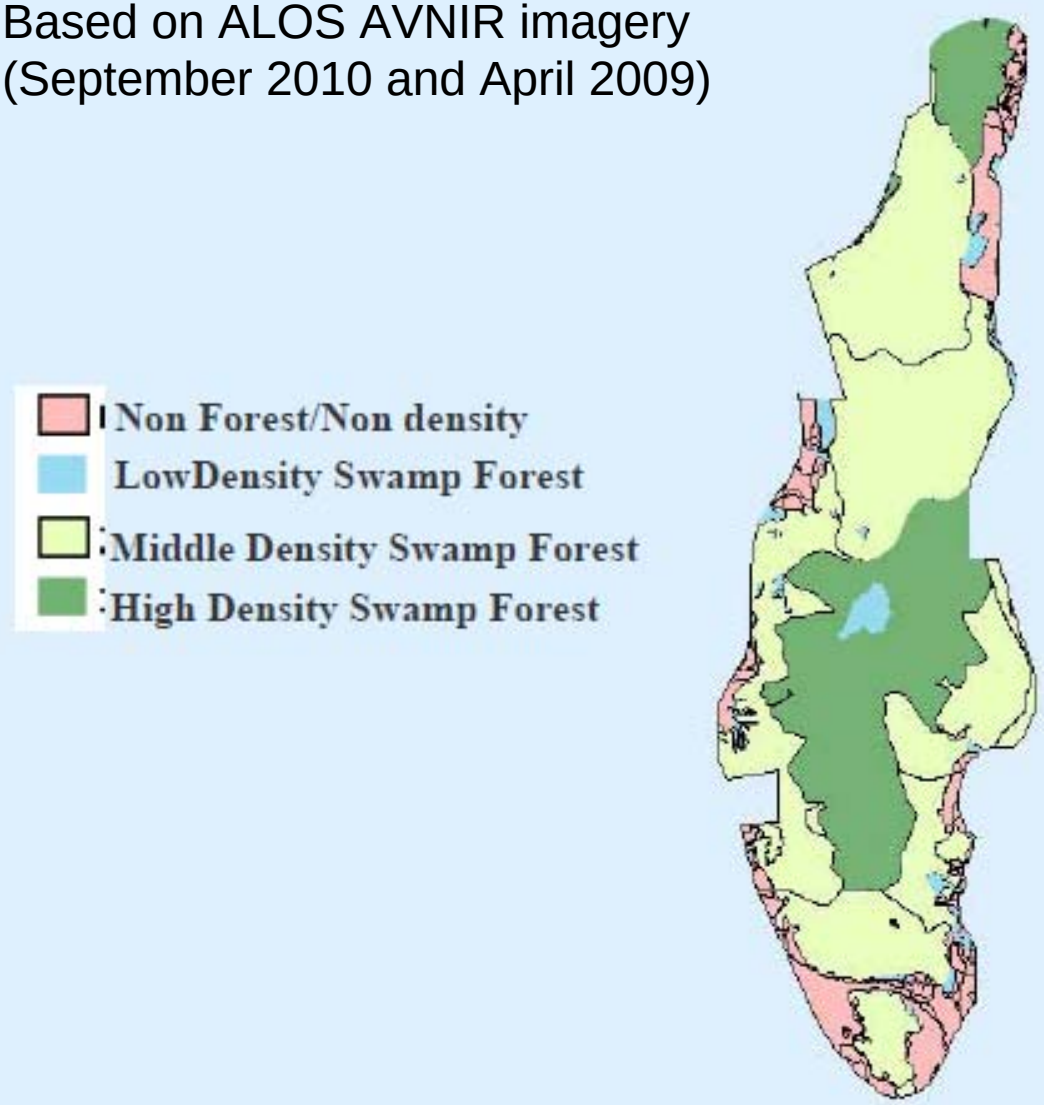
3-3) Landcover by Alos Data (Riau)

Based on ALOS AVNIR imagery (April 2010 and August 2009)

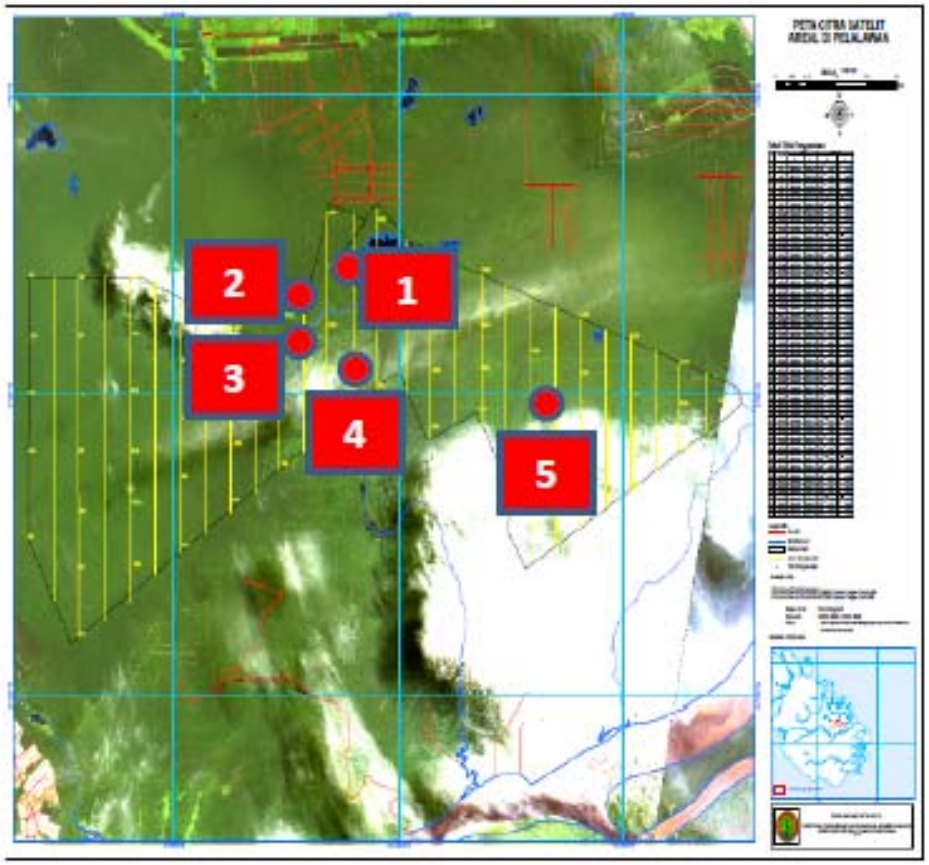


3-3) Landcover by Alos Data (Central Kalimantan)

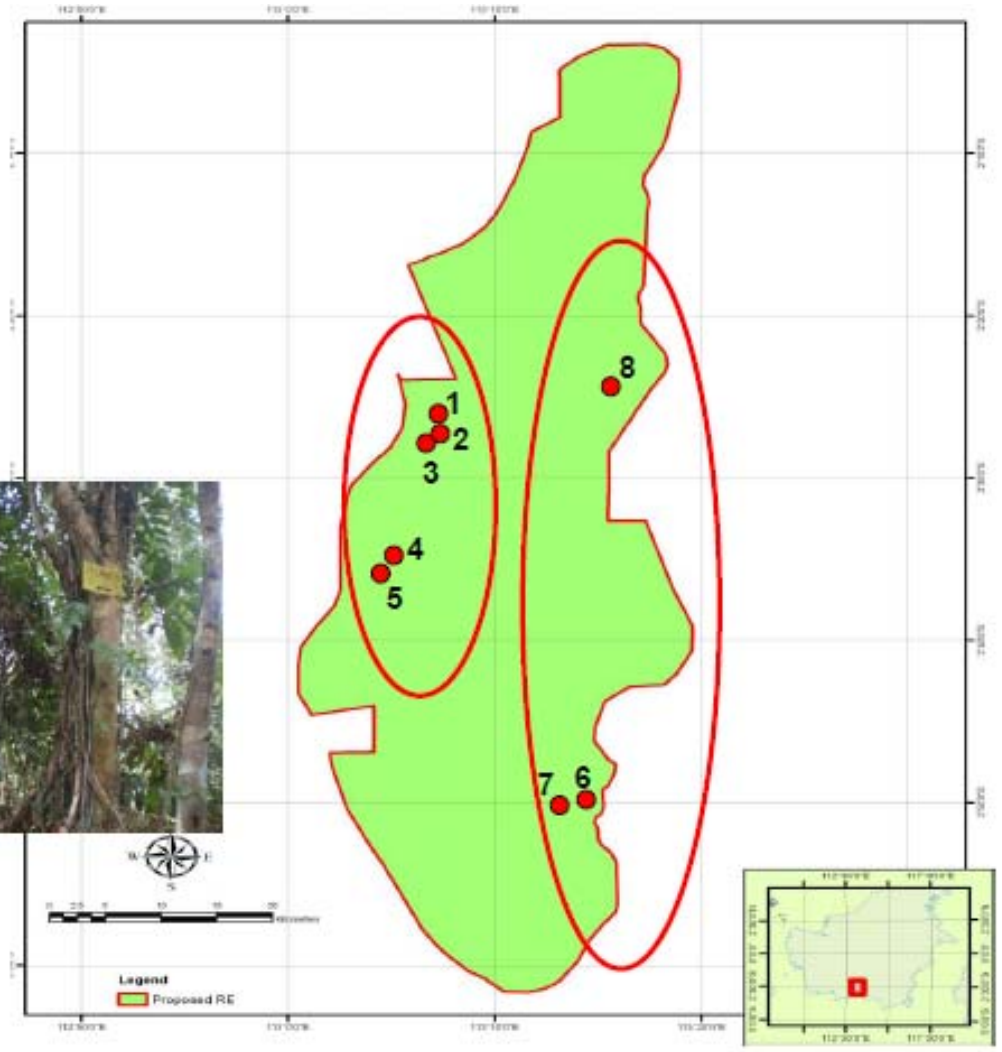
Based on ALOS AVNIR imagery
(September 2010 and April 2009)



3-4) Sampling Plot (Riau Site)



3-4) Sampling Plot (Central Kalimantan)



3-5) Ground Measurement

RIAU SITE	CENTRAL KALIMANTAN SITE
17 – 26 December 2010	15 – 23 JANUARY 2011
FIVE (5) PLOTS	EIGHT (8) PLOTS
37 SPECIES	± 32 SPECIES
PRIMARY FOREST, SECONDARY FOREST	SECONDARY FOREST, GRASS (EX FOREST FIRE)
Measure DBH and shrub-non tree biomass samples	
Collect the wood samples for wood density analysis	
Collect the herbarium	
Measure of peat depth and also collect the peat samples	
Placement of paralon pipe for measure the water table level	

3-5) Accessibility to the plot (Riau)

3-5) Accessibility to the plot (Central Kalimantan)

3-5) Vegetation Condition in the plot (Riau)

3-5) Vegetation Condition in the plot (Central Kalimantan)

3-5) Collection of the samples

3-6) MRV / Methodologies: Framework for Consideration

Consideration of Existing REDD Methodologies

VCS　VM0004
（Applicable to peat land）

<Points to be considered>
・Measurement method in peat land
・Applicable only to planned deforestation

<Measurement method of the carbon stock>
3 methods presented

Comparison / Study

VCS REDD related other methodologies（4 methodologies）

・Applicable to unplanned deforestation as well
・Base line setting

Expert Meeting

<Objective> To Consider REDD+ MRV and Methodology under the Bilateral Offset Mechanism（especially to address the expected gap between required criteria under the future standard and existing REDD standard）
※Compare and study the existing methodologies and consider countermeasures to the issues

<Next Step> Consultation with Indonesian side on MRV which is under consideration in Indonesia

4-1) Some Important REDD Initiatives

●Development of REDD Compliance Regime in California, US

（GCF; The Governors' Climate and Forest Task Force）

-Subnational Collaboration

(Brazil : 5 states, Indonesia : 5 states, Mexico: 2 states, Nigeria ; 1 state)

-Nesting of projects under subnational accounting is considered

●Establishment of REDD Carbon Fund by Private Sector

-Private companies announced to establish carbon fund worth €50-100 Mil.

-Purchase VCS/ CCBA based projects

-Expect demand under future compliance regime

●VCS "Jurisdictional and Nested REDD Initiative"

-Subnational Baseline and Accounting Framework

4-2) Challenges

i) Development of MRV/ Methodologies

- Required Criteria under the Bilateral Offset Scheme
- National MRV in Indonesia

ii) Policy Design for Subnational Accounting

-National approach with subnational implementation

-Leakage and Non-Permanence

iii) Framework

-Credit Issuance, Certification, Registry etc.

Contact

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