OVERVIEW OF REDD IN WEST KALIMANTAN PROVINCE

PRESENTATED BY :
WEST KALIMANTAN REDD TEAM

WEST KALIMANTAN PROVINCE

ORGANIZATION FOR ENVIRONMENTAL AND DEVELOPMENT OF ASSET SUSTAINABILITY

PRESENTATION CONTENT

1. PROVINCE OVERVIEW
2. REDD POLICIES REGULATIONS DISCUSSION AND WEST KALIMANTAN POTENTIAL FACTORS
3. WEST KALIMANTAN IMPACT AND DESIGN FOR REDD PROJECTS
4. WEST KALIMANTAN REDD STRATEGY AND SUPPORT SUMMARY

PROVINCE OVERVIEW

1

PEMERINTAH PROPINSI
KALIMANTAN BARAT

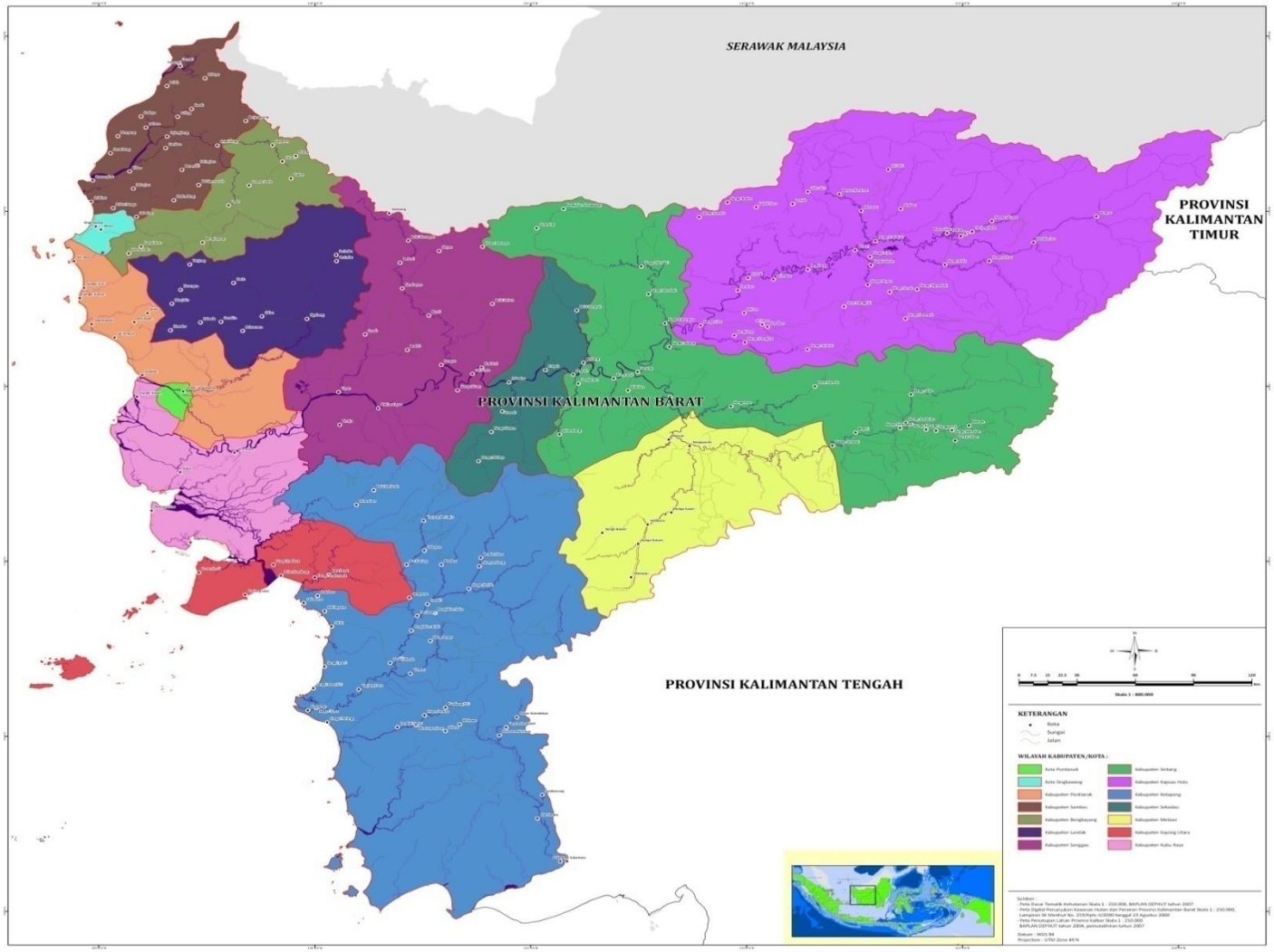
PROVINCE GEOGRAPHICAL

- West Kalimantan province is located in west part of Kalimantan Island or lines between 2°08' NL - 3°05' South Longitude and 108°30' – 114°10‘ West Longitude of earth map.
- West Kalimantan with 146.807 km² land area is the fourth largest province area in Indonesia, after Papua (421,891 km²), East Kalimantan (202,440 km²) and Central Kalimantan (152,600 km²).
- The following are complete boundaries of West Kalimantan province :

  - North : Sarawak (Malaysia)
  - South : Java Sea & Central Kalimantan
  - East : East Kalimantan
  - West : Natuna Sea and Karimata Strait

PETA WILAYAH ADMINISTRASI TAHUN 2009

PROVINSI KALIMANTAN BARAT - INDONESIA

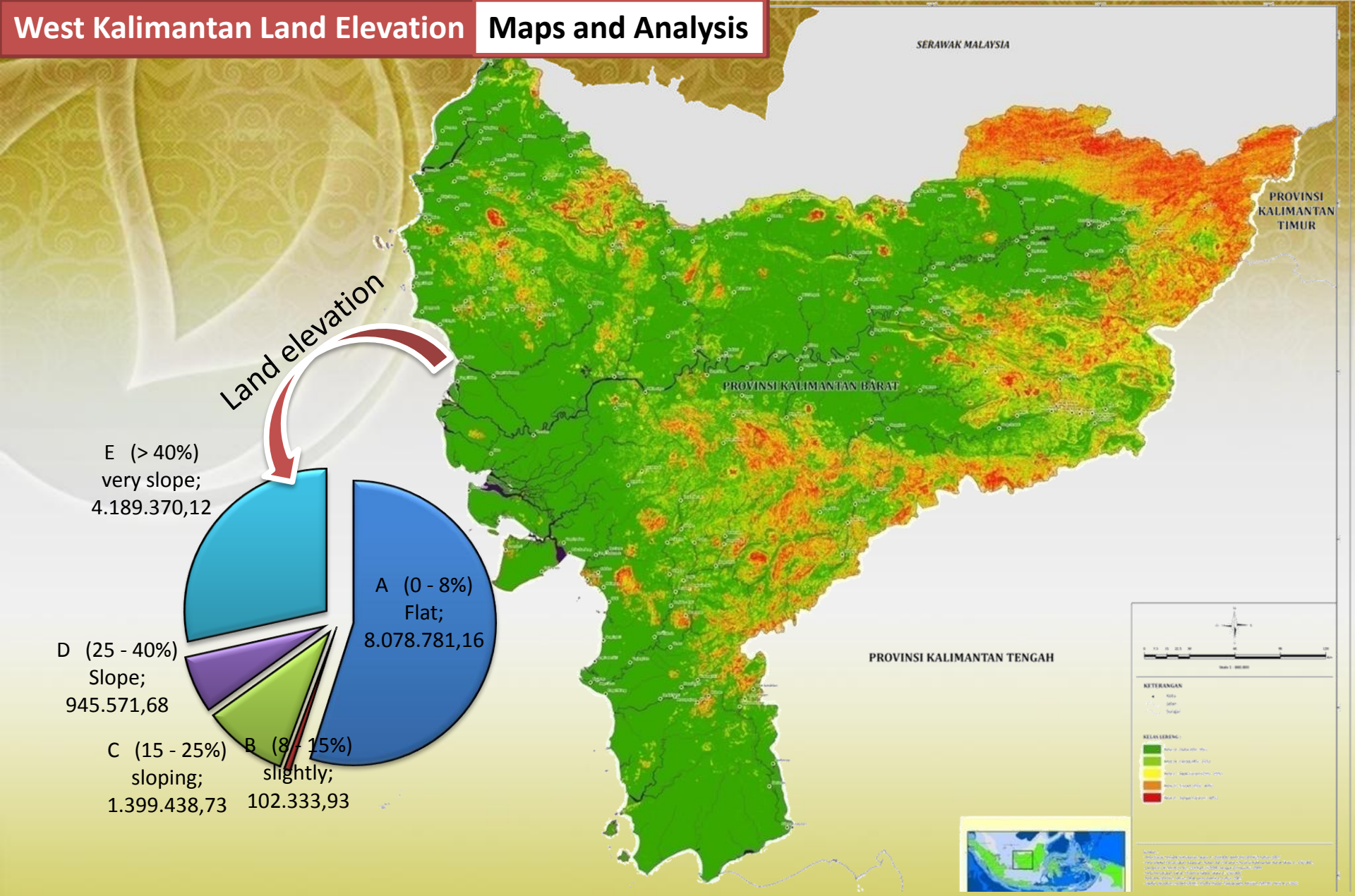


PEMERINTAH PROPINSI
KALIMANTAN BARAT

SOIL AND LAND ELEVATION

- The main land of Kalimantan Barat is mostly the plateau which have hundreds of peace full river when sailed, a little hilly along Kapuas Stream from the west to the east part of the region. The land extends from the south part to the north part of the region along Natuna Sea. Some part of the land are swampy mixed peat and mangrove forest.
- The type of the soil is mostly red-yellow podsolete (RYP) which spread over 10.5 million hectares area or 71. 28 percent of the size of Kalimantan Barat. The soil of Kalimantan Barat also contain with OGH soil (organosol, gley and humus) and Alluvial being 2.0 million hectares or 10.29 percent of the region area. OGH and alluvial are mostly in the coast region.

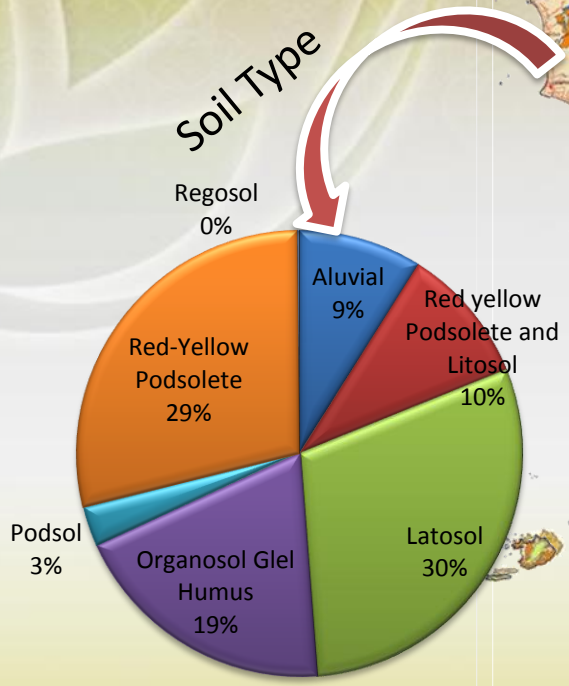
West Kalimantan Land Elevation Maps and Analysis

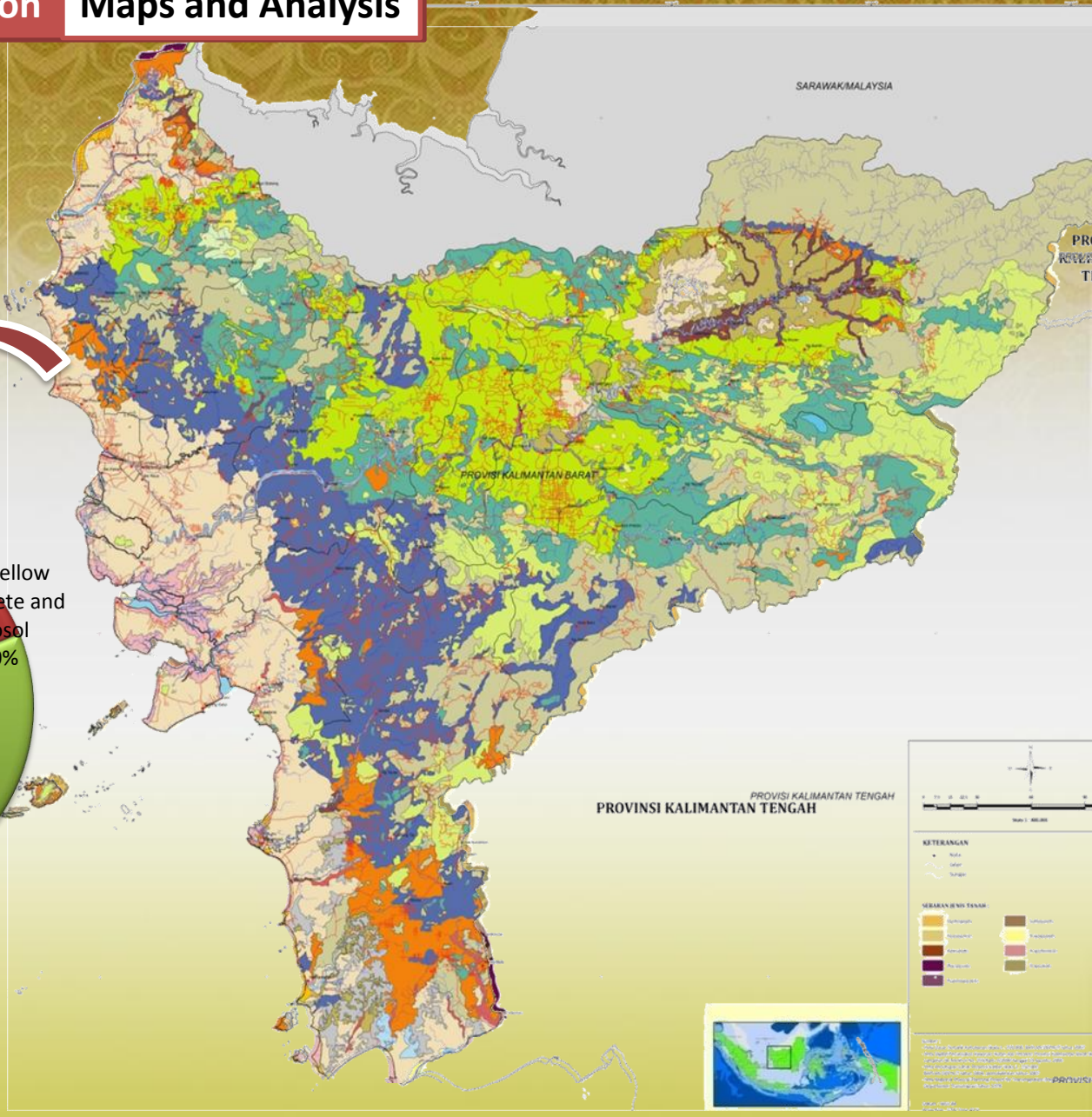


PEMERINTAH PROPINSI KALIMANTAN BARAT

OPDAS

West Kalimantan Soil Classification Maps and Analysis





PEMERINTAH PROPINSI KALIMANTAN BARAT

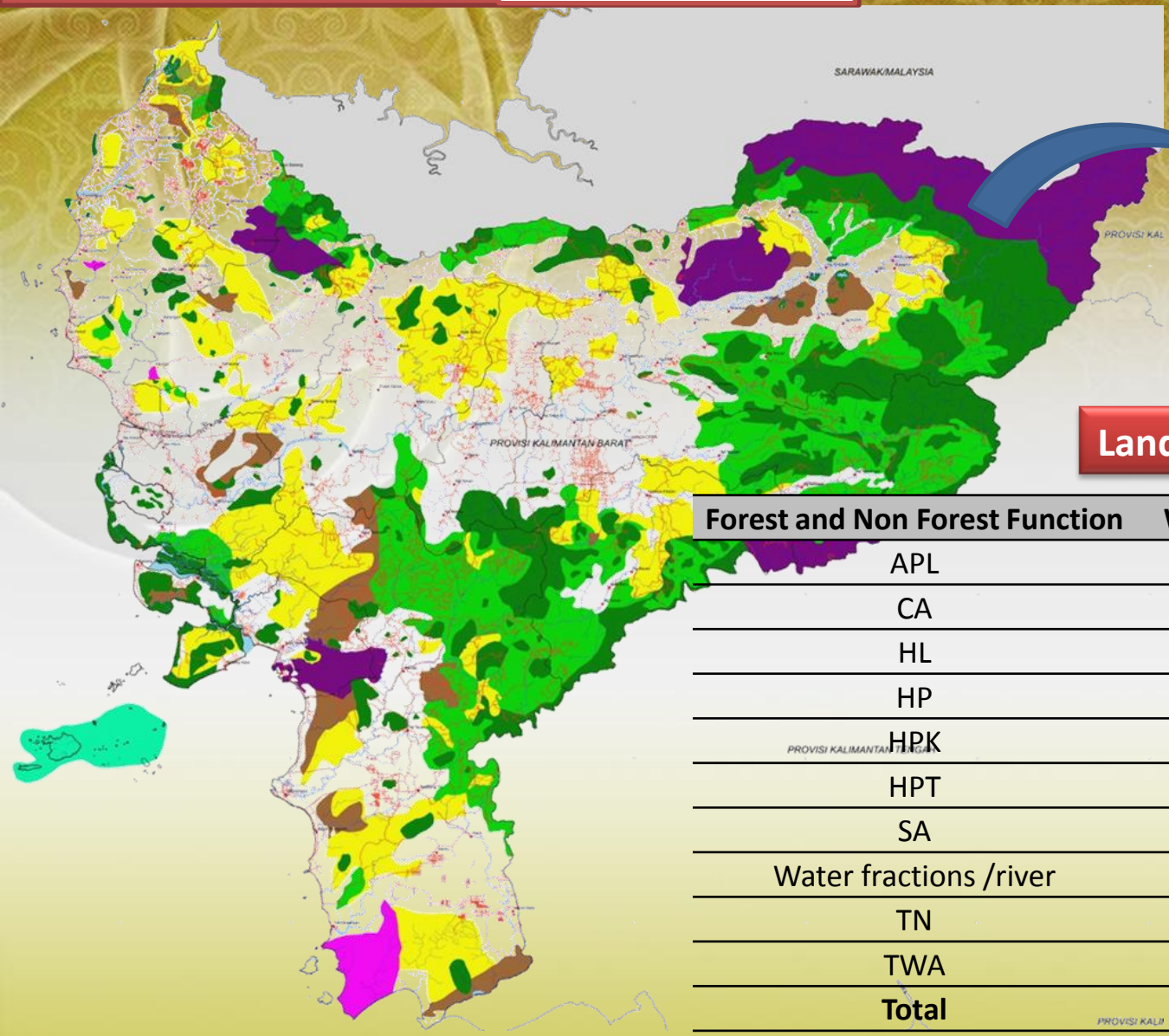
SOCIAL DAN CULTUE

- Estimated Population projection (2009) = 4,25 millions people within 28 soul per kilometer square density and population growth = 1,63 percents/year
- Majority tribe =Dayaknese (41%), Malayans (20%), Chinese (16%), Javanese (8%) and other tribe (15%)
- Major language use was Indonesia language and local language (Dayak, Malay, Chinese , etc)
- Majority religions Moslem (57%), Catholic (24,1%), Protestant (10%) Buddha (6,4%), Hindu (0,2%), and others (1,7%)

LAND AREA FUNCTION

- From total West Kalimantan land area = 14.715.495,63 hectare, had 10.326.906,46 ha (70,34 %) for forest area, it device to :
  - ❑ Forest (dry land and wet land area) = ± 6.016.610,985 hectare (58,26 %)
  - ❑ Other function = ± 4.310.295,15 hectare (41,74 %)
- West Kalimantan had 27 water catchment location and 64% from that covering by Kapuas water catchment

West Kalimantan Land Use Maps and Analysis

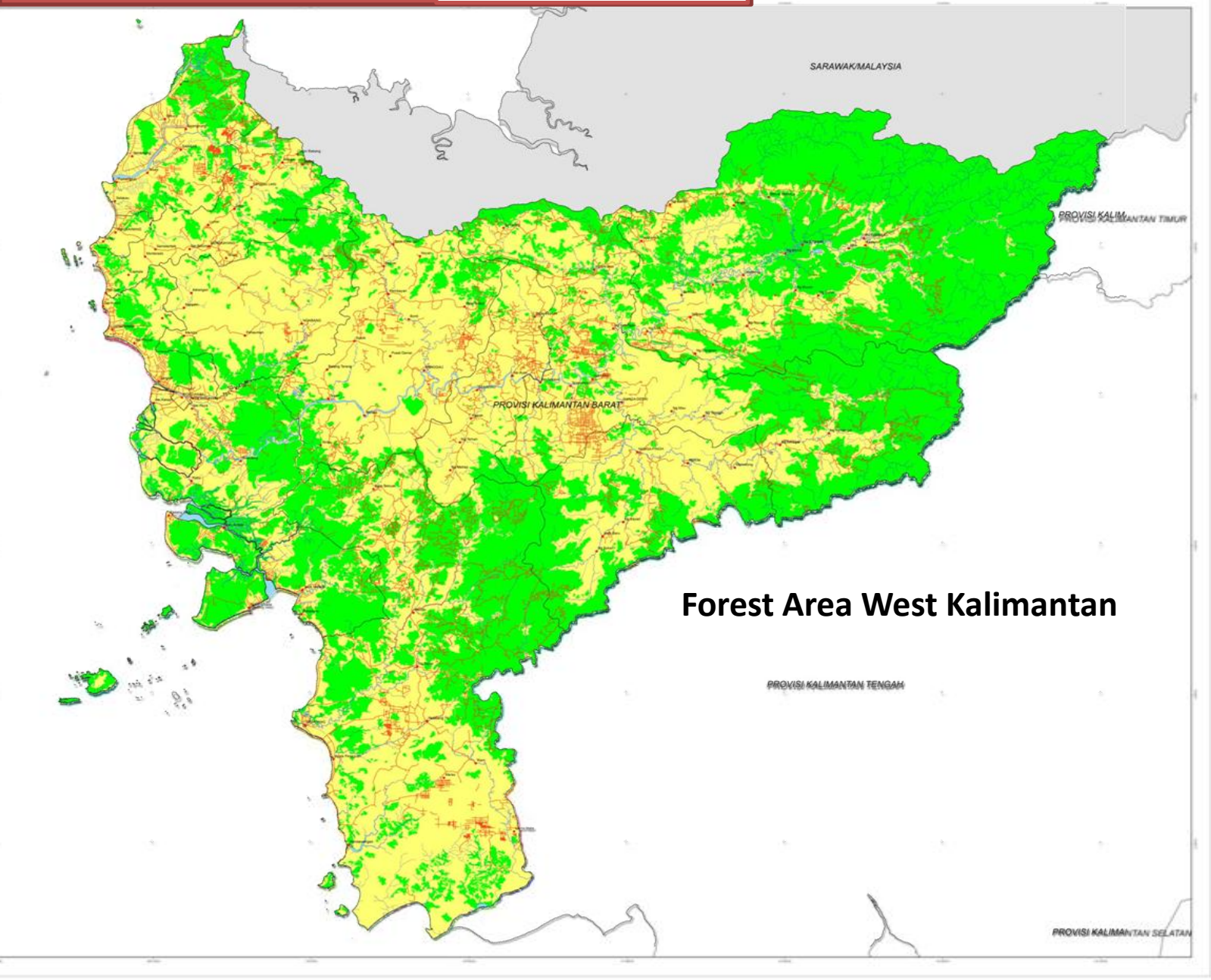


Land Use Function

Forest and Non Forest Function	Wide Area (Ha)	Percentage (%)
APL	5.633.661,60	38,28
CA	150.021,22	1,02
HL	2.304.661,27	15,66
HP	2.271.807,75	15,44
HPK	507.542,18	3,45
HPT	2.407.804,21	16,36
SA	21.095,06	0,14
Water fractions /river	130.529,36	0,89
TN	1.258.139,57	8,55
TWA	30.233,42	0,21
Total	**14.715.495,63**	**100,00**

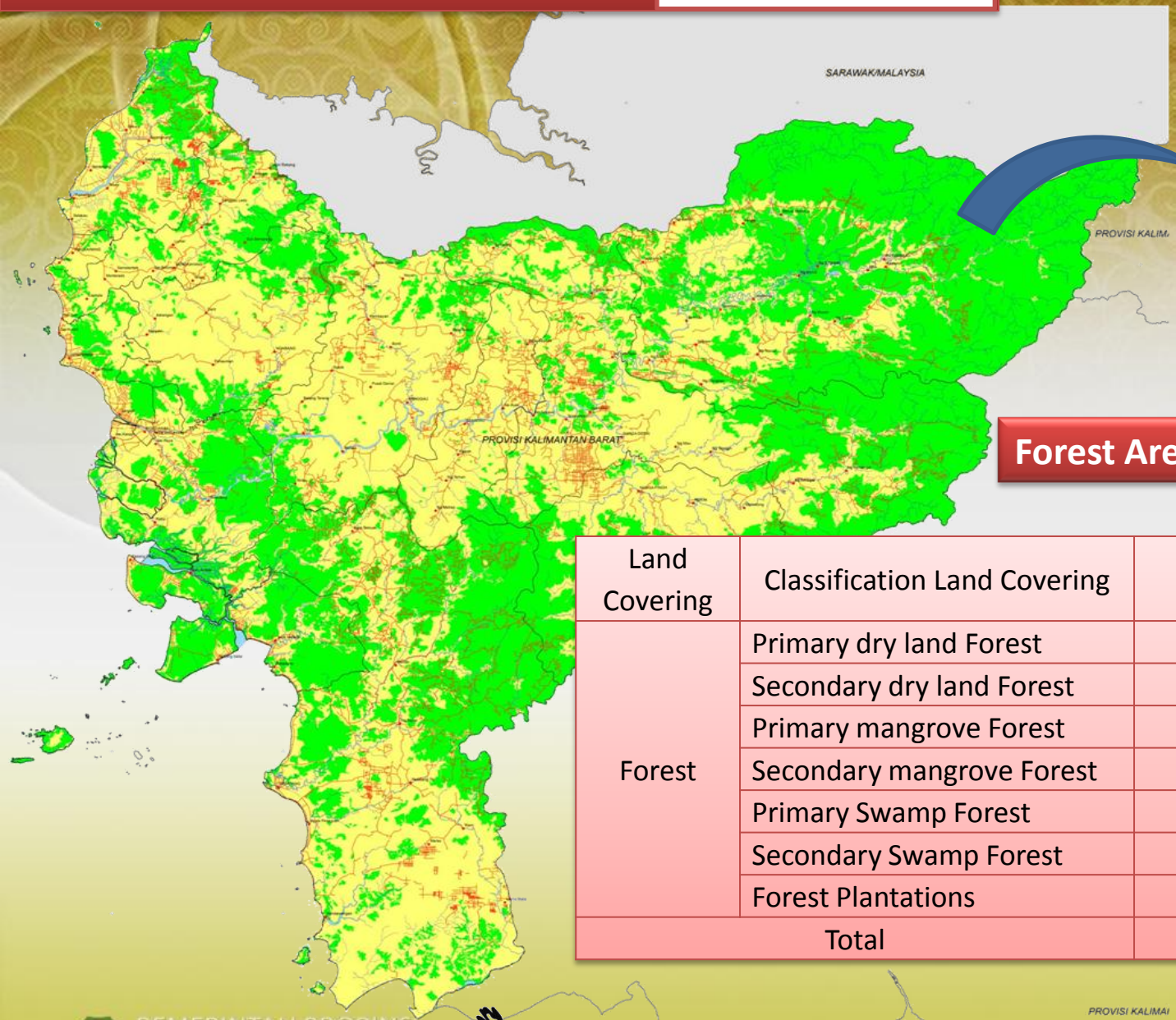
PEMERINTAH PROPINSI KALIMANTAN BARAT

West Kalimantan Land Use Maps and Analysis



West Kalimantan Forest Area Function

Maps and Analysis

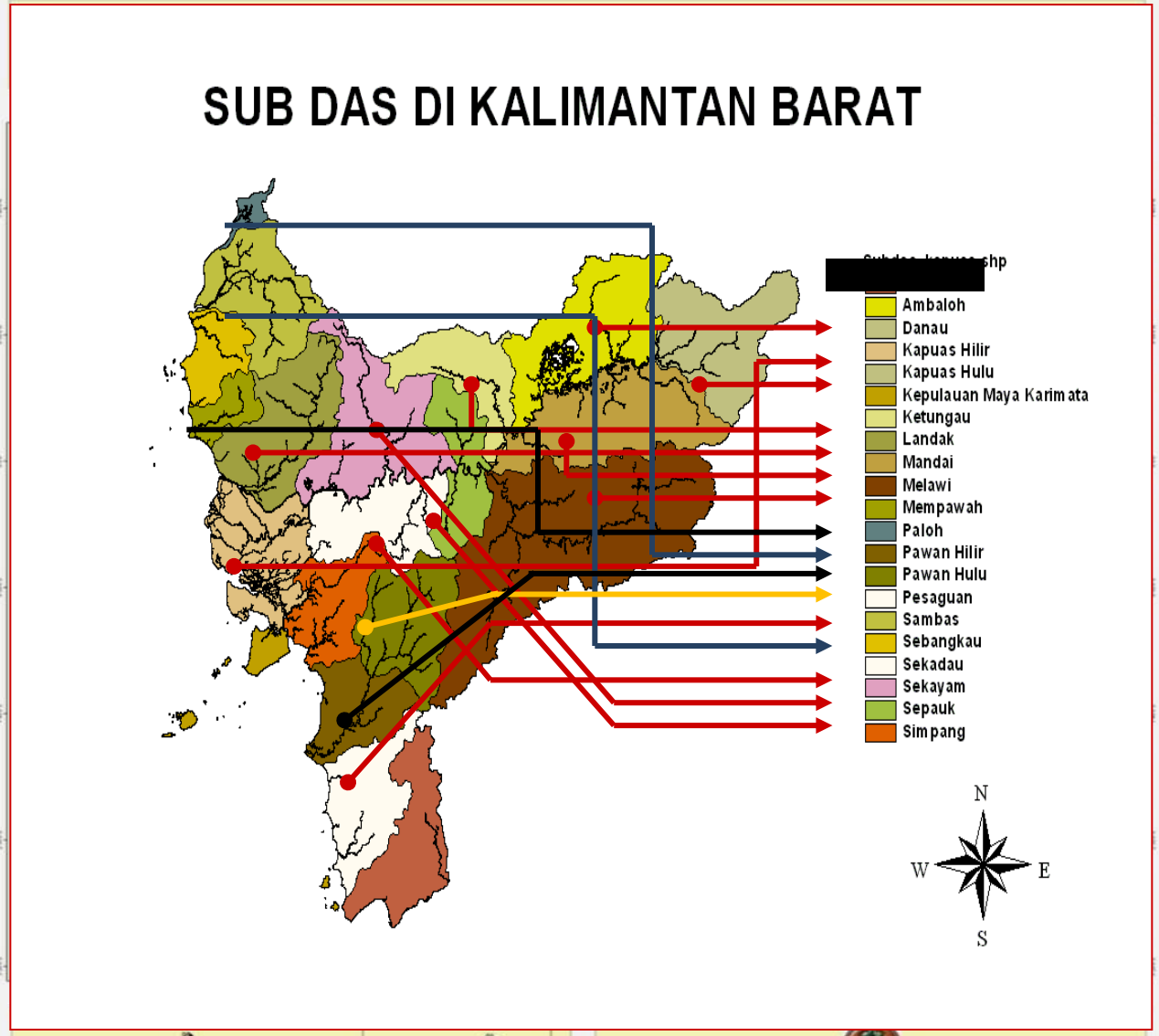


Forest Area Function

Land Covering	Classification Land Covering	Wide Area (Ha)	Percentage (%)
Forest	Primary dry land Forest	2.352.206,10	39,10
	Secondary dry land Forest	2.504.112,64	41,62
	Primary mangrove Forest	3,50	0,00
	Secondary mangrove Forest	105.501,46	1,75
	Primary Swamp Forest	5.843,87	0,10
	Secondary Swamp Forest	1.040.412,08	17,29
	Forest Plantations	8.531,34	0,14
Total		6.016.610,99	100,00

PEMERINTAH PROPINSI KALIMANTAN BARAT

DAS


SUB DAS DI KALIMANTAN BARAT
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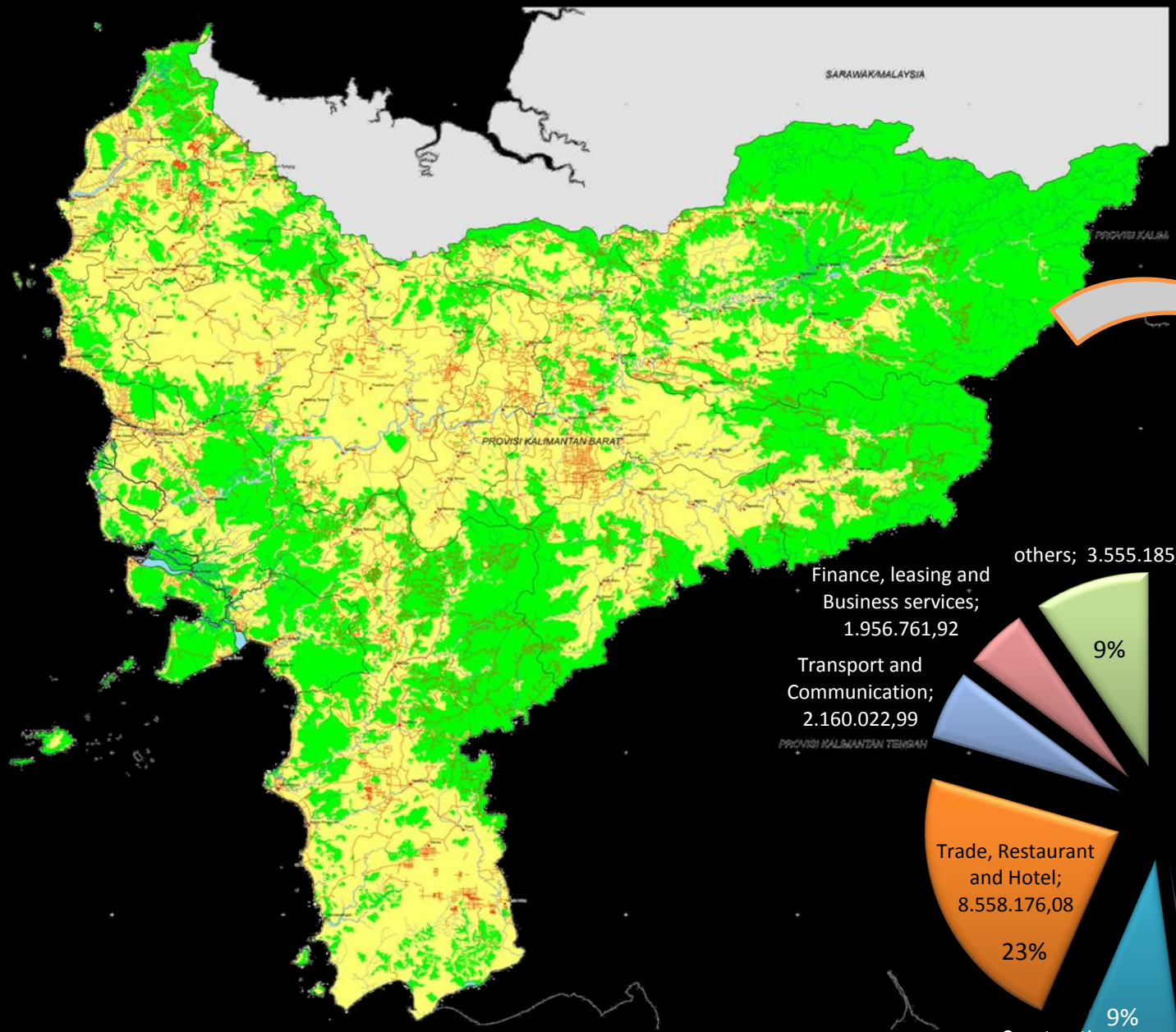
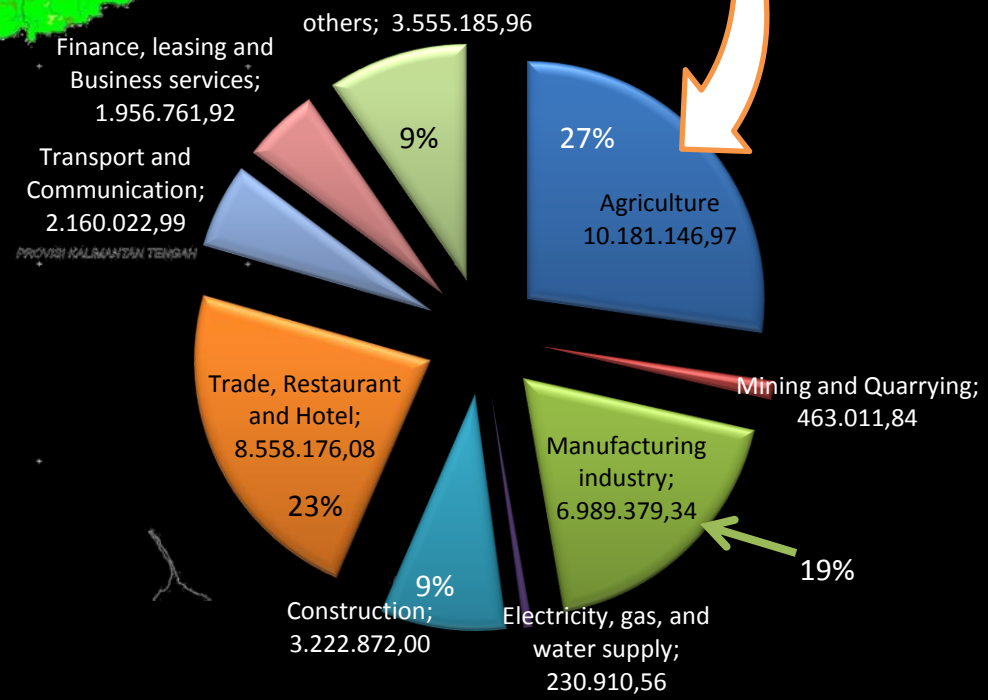
Ambaloh
Danau
Kapuas Hilir
Kapuas Hulu
Kepulauan Maya Karimata
Ketungau
Landak
Mandai
Melawi
Mempawah
Paloh
Pawan Hilir
Pawan Hulu
Pesaguan
Sambas
Sebangkau
Sekadau
Sekayam
Sepauk
Simpang
N
W
E
S
SKALA 1 : 1000.000
80
120
160
Km
BALAI PENGELOLAAN DAERAH ALIRAN SUNGAI KAPUAS
DIREKTORAT JENDERAL REHABILITASI LAHAN DAN PERHUTANAN SOSIAL
DEPARTEMEN KEHUTANAN
2008

WEST KALIMANTAN GROSS REGIONAL DOMESTIC BRUTO (GRDP)





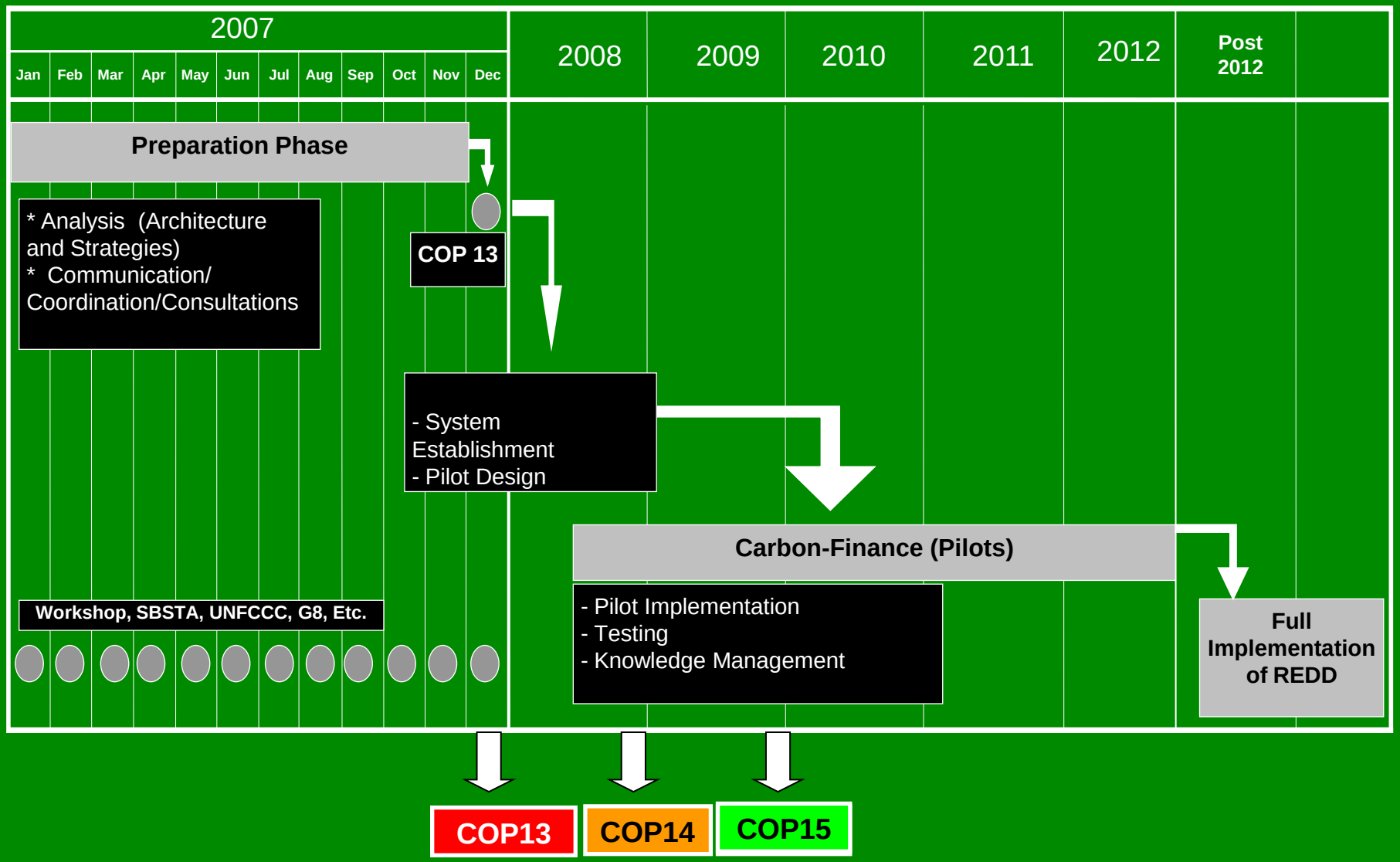
REDD POLICIES REGULATIONS DISCUSSION AND WEST KALIMANTAN POTENTIAL FACTORS

2

PEMERINTAH PROPINSI
KALIMANTAN BARAT

REDD Mechanism

From 2007 to 2012



INDONESIA LAWS AND REGULATIONS RELEVANT TO REDD

1. Ministry of Forestry Regulations number: P. 68/Menhut-II/2008 about Implementation demonstration Activities REDD

   Explanations procedure and how to have process permissions of REDD demonstration activities

   How to construct REDD plot demonstration activities to be come more relevant for implementation programs at the future

INDONESIA LAWS AND REGULATIONS RELEVANT TO REDD

2. Ministry of Forestry Regulations number P. 30/Menhut-II/2009 (1 Mei 2009) about Procedures for REDD

   Still had more discussion about Standard and criteria emission level and comparative standard to calculate it

3. Ministry of Forestry Regulations number 36/2009 about REDD permissions procedure for Production Forest and Protected Forest

   How to create REDD procedure activities on other area conversion like Palm plantations, rubber plantations, etc

Fact and Main Issue

- Fact 50% carbon supply was in peat land
- Many threat in peat land like: conversion area to human domestication, land reclamation, fishpond, port development, industry, domestic waste, illegal logging, community social economic impact, and sedimentation.
- Land degradations were main sources of anthropogenic emissions
- Land degradations had negative impact to millions human life and biodiversity
- Two main cause of carbon release were fire land and drying land.

PEMERINTAH PROPINSI
KALIMANTAN BARAT

West Kalimantan Total Land Area
= 14.715.495,63 Ha

WEST KALIMANTAN IMPACT AND DESIGN FOR REDD PROJECTS

3

PEMERINTAH PROPINSI
KALIMANTAN BARAT

THREAT AND CHALLENGES TO LAND

THREAT

- Deforestation
  - Illegal logging
  - Forest threat
  - Forest Land conversion
- Land fire
  - Forest fire
  - Peat land fire
- Conversion planning for plantation area
- Community land use (community plantation and paddy field)
- Wildlife hunting
- Illegal trading

CHALLENGES

- Keeping area which several functions to productions forest, nature reserve, wildlife, nature tourism park, and National Park
- Struggling quality and quantity of ecosystem as natural function
- Collaborate working within Local Government, private sector and community to development Sustainable Forest Management (SFM)
- Critical land rehabilitations activities
- Practice and applicative REDD mechanism which had benefit to all stakeholder

West Kalimantan Deforestations Cause

West Kalimantan Land Covering (Base on Land Satellite view, 2009)

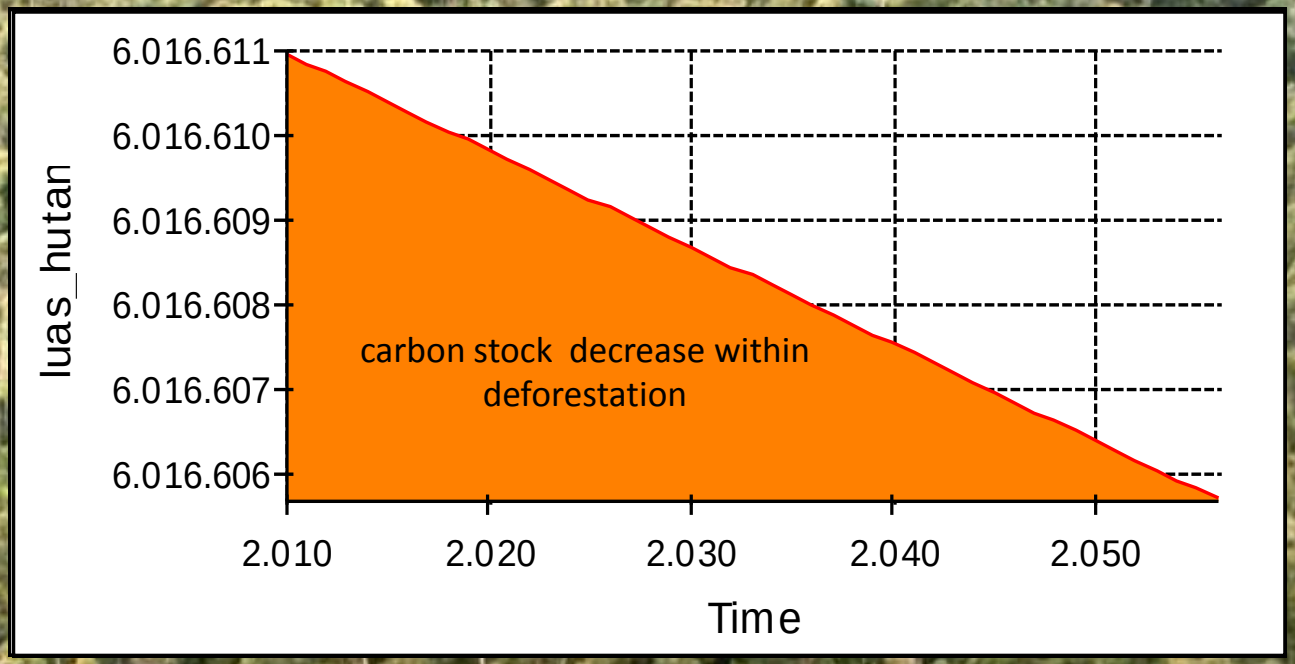
No.	Area	Functions and Status Area	Approximated (Ha)
1	Land	Protected Forest	2.304.661,27
2		Conversion Production Forest	507.542,18
3		Limited Production Forest	2.407.804,21
4		Production Forest	2.271.807,75
5		Conservation area	1.459.489,27
7		Other use area (KBNK)	5.633.661,60
8	Water fractions	River	130.529,36
TOTAL AREA (Hectare)			14.715.495,63

ESTIMATION DEFORESTRATION

± 130.398 ha/year

Estimated Carbon Release cause Deforestations in West Kalimantan = 18.386.188 TON KARBON

Predictions Forest Covering for 50 years (2010-2060) in West Kalimantan



Weakness

- Lack of clearly forest land right
- Needed to clearly responsible and task stakeholder on REDD mechanism
- Who had right to become carbon trader(local community, private sector, forest management unit, local government, or national government)

Solutions Approach

- Development effective management in protected and conservation area
- Development effective management on Production forest area
- Optional forest harvesting and forest management within sustainable approach for industry
- Optional support to build palm plantation needed
- Strategic and Restoration models for wetland and dry land forest
- Capacity building for local community, including indigenous community structure and forest management through REDD activities

4

WEST KALIMANTAN REDD STRATEGY AND SUPPORT SUMMARY

PEMERINTAH PROPINSI
KALIMANTAN BARAT

- Increasing land potential capacity on Forest and non-forest area;
- Support sustainability protected conservation area within ecosystem support functions
- Development land rehabilitation activities, mostly on degradated land
- Support and development forest land area within ecosystem support functions
- Support equalize economic-ecology-social on forest area management in West Kalimantan

Project Goal

- Development environmental services ;
- Development environmental services for alternative Non-Tax Country Income;
- Calculate capacity of forest and non-forest area for support implementation REDD and carbon stock;
- Development alternative income for community ;
- Support restoration of land hydrology;
- Keeping forest area for carbon stock capacity supply and environmental services;
- Support of land rehabilitation and reforestation;
- Development and campaigned practical of Sustainable Forest Management (SFM) system;
- Development Non Timber Forest Product (NTFP)

- Development working groups and partnerships between Community and local institution ;
- Increase knowledge about sustainability management of mitigations and climate change adaptations ;
- Empowerment stakeholder capacity about mitigations and climate change adaptations;
- Preparing REDD socializations and Champaign ;
- Development community empowerment programs surround forest for environmental services;
- Support National and Local for pro poor, pro job and pro growth policies

WEST KALIMANTAN GOVERNMENT INTERVENTIONS REDD PROJECT

- Development province baseline carbon reference within REDD comprehensive and useful method
- Public consultative about implementation REDD within stakeholder
- Development incentive carbon fund which came from local entity or international base on international integrated agreement , national policies and regulations, and local wisdom
- Development integrated REDD project within province spatial planning
- Development fire prevention, patrol and participatory law enforcement
- Development distribution carbon fund mechanism for increase local community income alternative (village fund development, education and health, etc)

Projection Methodological Used

- Use IPCC Default Value
- Use Brown method calculation (1997)
- Use Murdiyarso *et.al* method calculation(2004)

ESTIMATED CARBON YIELD

Using IPCC guidelines Steps Tier 1 -------- C-total = A.B.CF

C-total *= Carbon Stock*

A = Forest Area

B = Default value for Biomass at Tropical Rain Forest = 280 – 520 ton/ha

CF =Carbon Fractions default for land conversion to agriculture = 0.47 ton C

Estimated Carbon Stock

- **Dry land Forest carbon** = 4.864.850,08 Ha x 300 ton/ha x 0.47
  = 685.943.861,56 ton
- **Wetland Forest carbon** = 1.151.760,90 Ha x 600 x 0,47
  = 324.796.574,65 ton

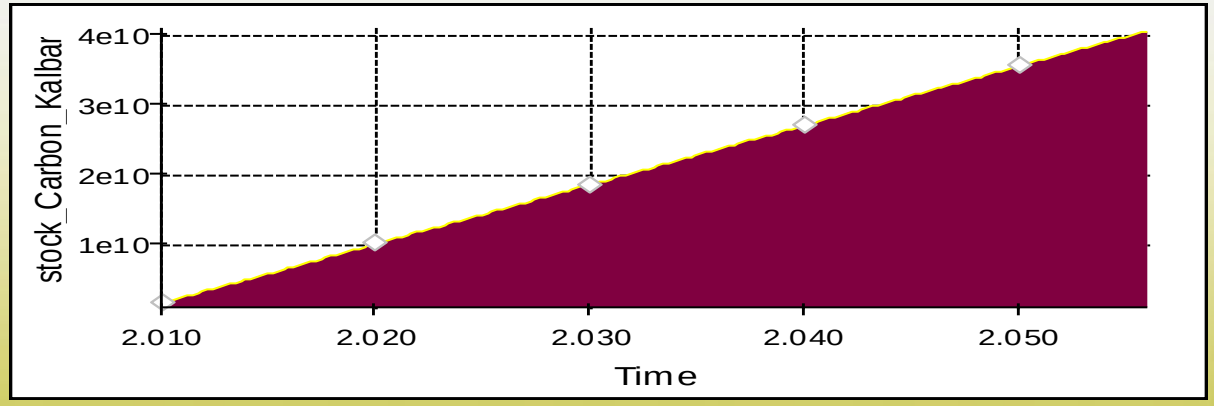
1.010.740.436,21 ton or (1.01 x 10^6 gigaton carbon)

West Kalimantan wetland total area = 2.367.977,82 Ha x 600 x 0,47
= 667.769.745,24 ton

West Kalimantan wetland carbon total =
= 324.796.574,65 ton + 667.769.745,24 ton
= 992.556.319,89 ton

West Kalimantan C-Carbon = 685.943.861,56 ton + 992.556.319,89 ton
= 1.678.510.181,45 ton
= 1.678 X 10^6 gigaton Carbon

1.678.510.181,45 ton or (1.678 X 10^6 gigaton Carbon)



Carbon Stock Increase Possibilities

No	Area Function	Hectare	%	biomass Ton/Ha	CF ton C/Ha	Total Emissions	
						Ton C	Gt C
1	Forest area	620.646,25	27,75	300,00	0,47	87.511.121,25	87.511,12
2	Other use	1.615.517,04	72,25	300,00	0,47	227.787.902,53	227.787,90
Grand Total		2.236.163,29	100,00			315.299.023,78	315.299,02

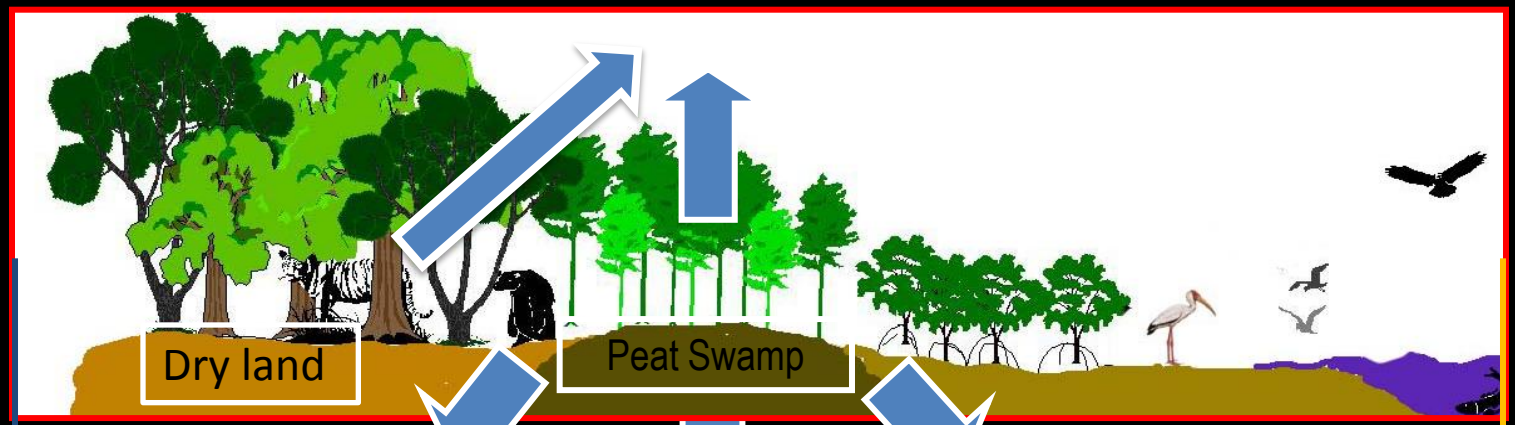
Out put and **Outcome**

Reduction Global Warming/
Climate Change

Biodiversity

Carbon Stock

Nature reserve, Orang Utan, bekantan, Owa, crocodile etc



Wildlife corridors

Water supply

Forest resources

Ecosystem
Resources

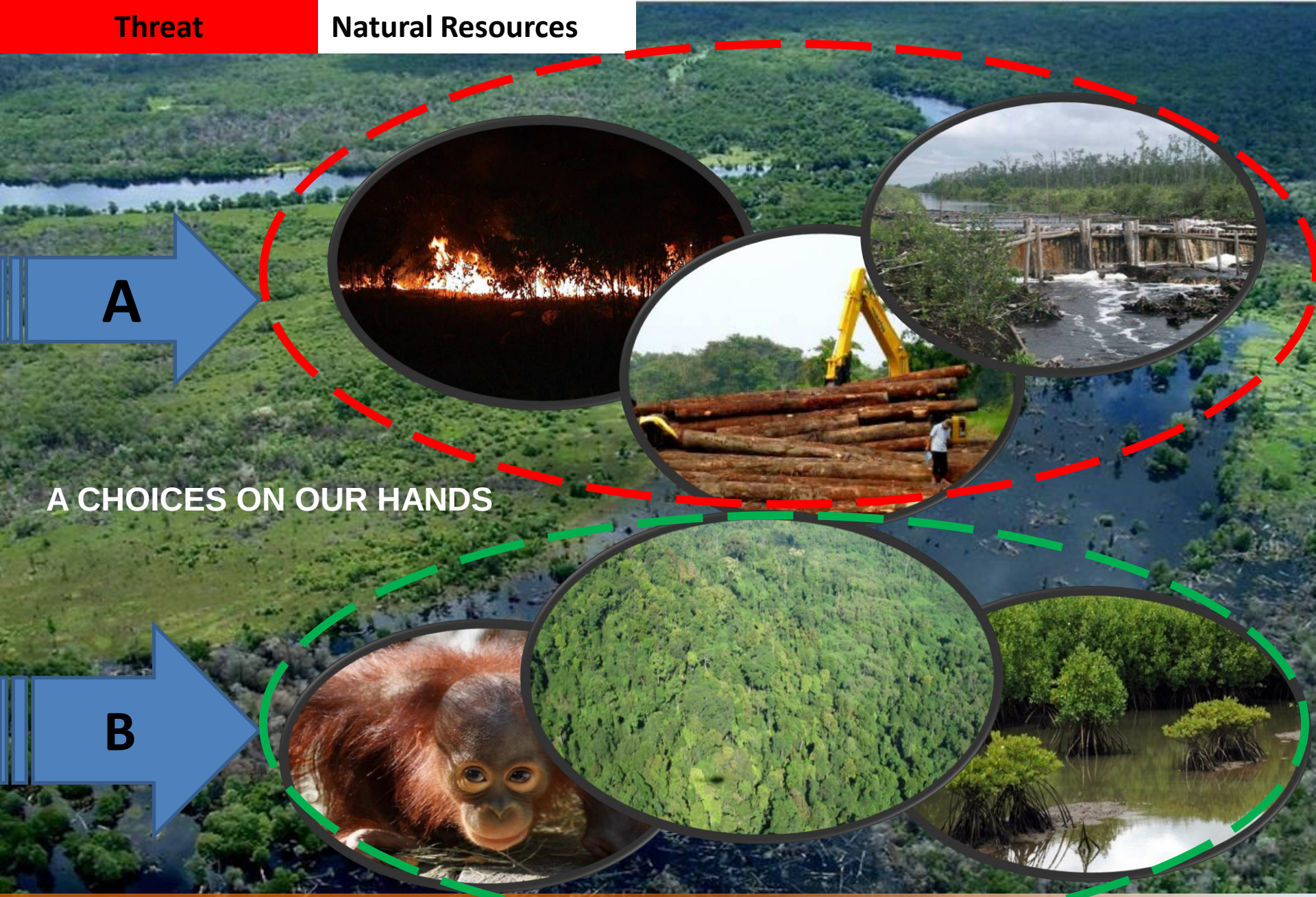
Buffer Zone National park

Watersheds catchment
area

Sustainability impact for Community

Threat

Natural Resources



Increasing poverty, un-sustainable exploitation, social friction, lack of health = environmental destruction with very high cost level

THANK YOU

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AND DEVELOPMENT OF ASSET SUSTAINABILITY