

DEFORESTATION & SPECIES CONSERVATION IN INDONESIA

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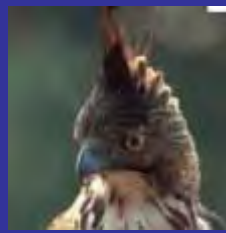
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Forestry Faculty
Bogor Agricultural University



MEGA DIVERSITY COUNTRY

Indonesia is home to:

- 11 percent of the world's flowering plants,
- 12 percent of the world's mammals,
- 15 percent of all amphibians and reptiles,
- 17 percent of all birds, and
- 37 percent of the world's fish.



Endangered Species List of Indonesia

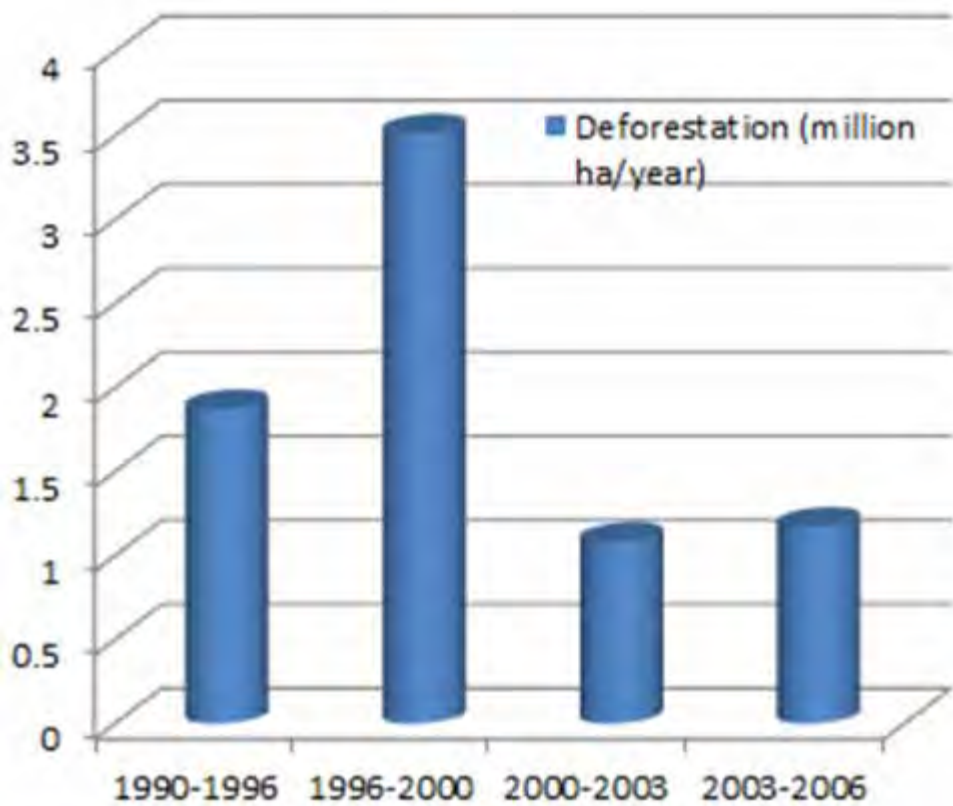
Taxonomic Group	Number
Plants	110
Birds	390
Reptiles	48
Fish	8
Mammals	131
Insects	19
Molluscs	12
Crustaceans	9

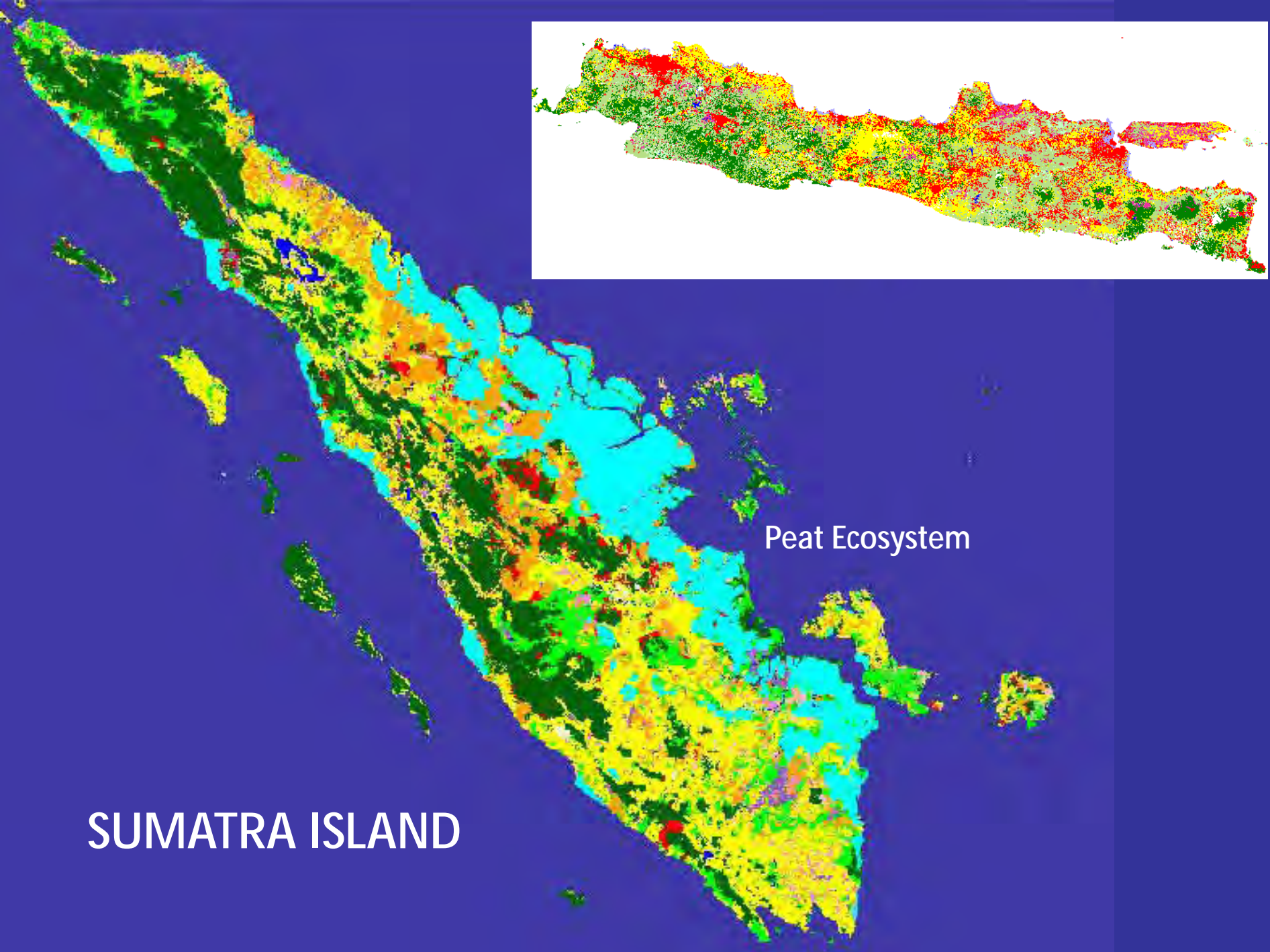
Species receives extra protection from a Presidential Decree (KepPres).

1. Javanese Gibbon (*Hylobates moloch*)
2. Sumatran Tiger (*Panthera tigris sumatrae*);
3. Orangutan (*Pongo pygmaeus*);
4. Javanese Eagle (*Spizaetus bartelsi*);
5. Anoa (*Anoa depressicornis*, *Anoa quarlesi*);
6. Babirusa (*Babyrousa babyrussa*);
7. Javanese Rhinoceros (*Rhinoceros sondaicus*);
8. Sumatran Rhinoceros (*Dicerorhinus sumatrensis*);
9. Komodo Dragon (*Varanus komodoensis*);
10. Bird of Paradise (all species in the family *Paradisaeidae*);
11. Leaf Monkey (*Presbytis potenziani*);

Noerdjito & Maryanto Nov. 2001



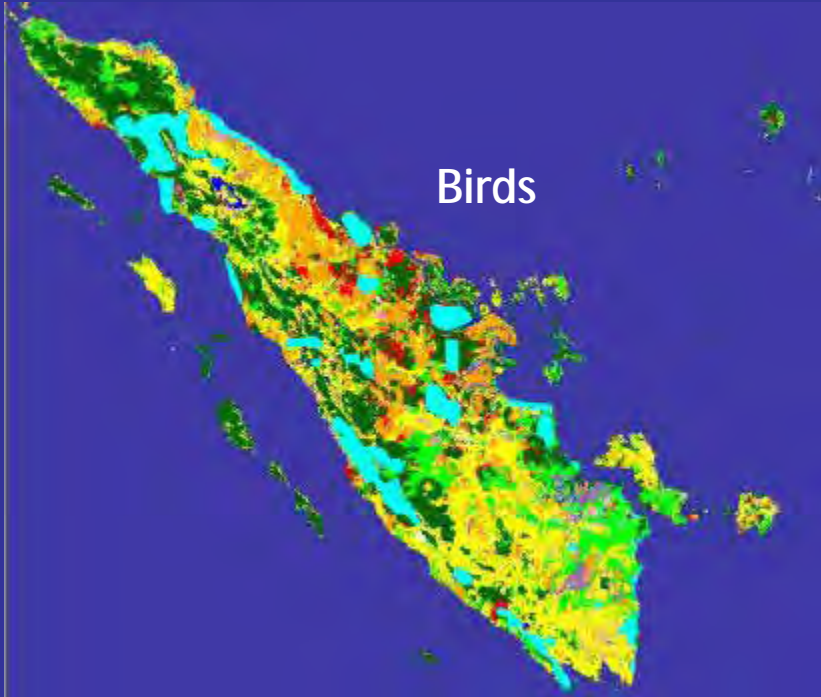




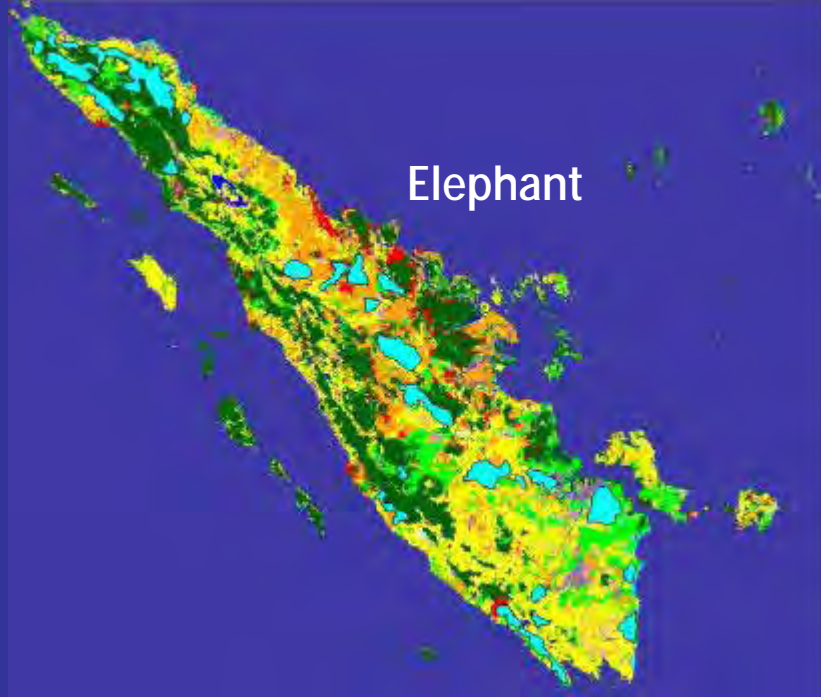
SUMATRA ISLAND

Peat Ecosystem

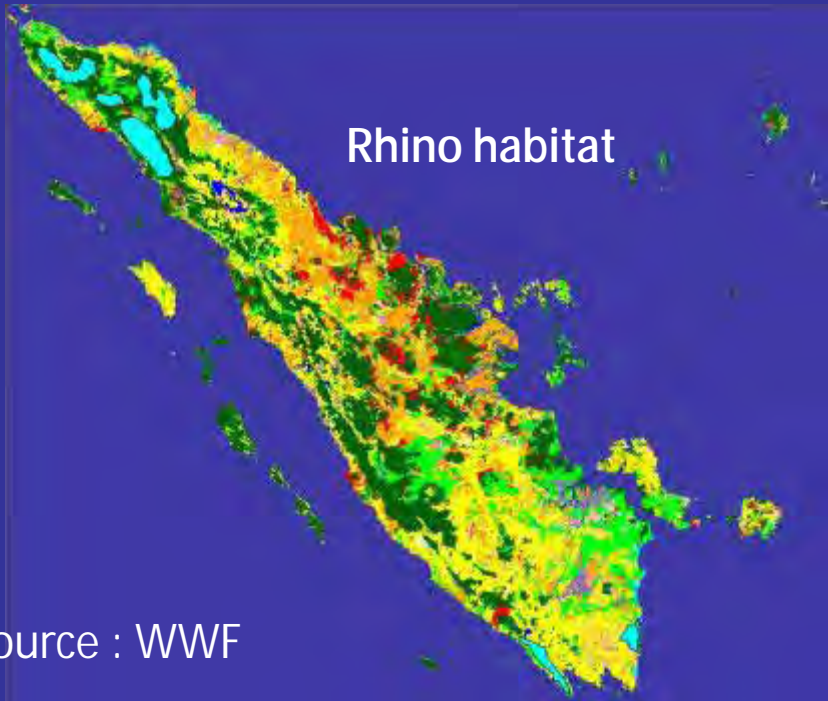
Birds



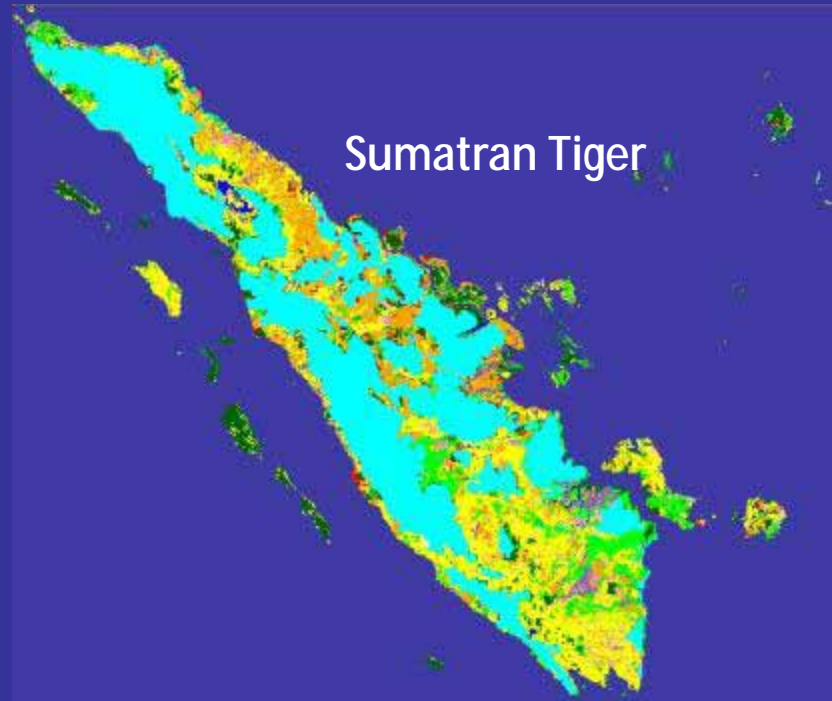
Elephant



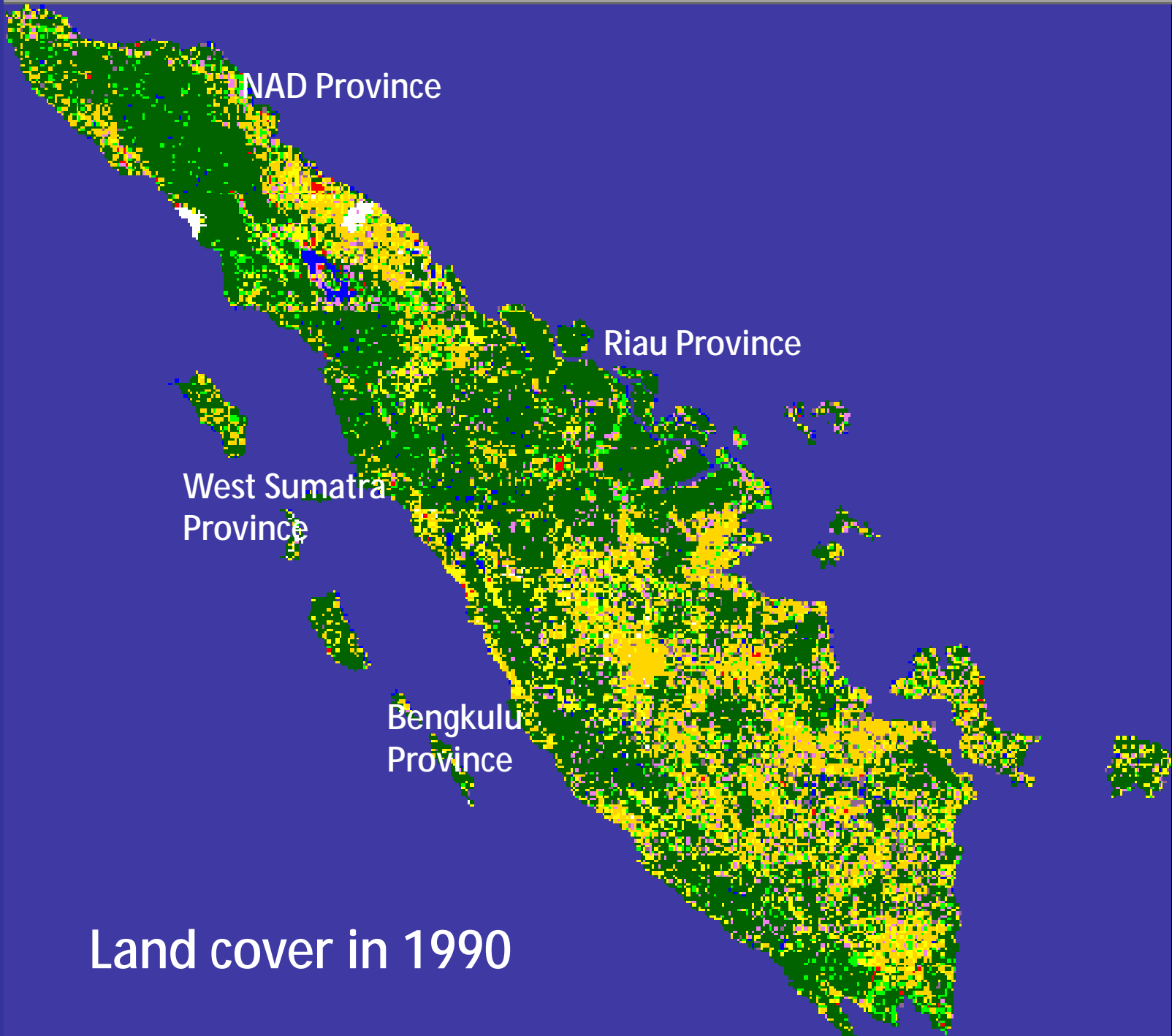
Rhino habitat



Sumatran Tiger



Source : WWF



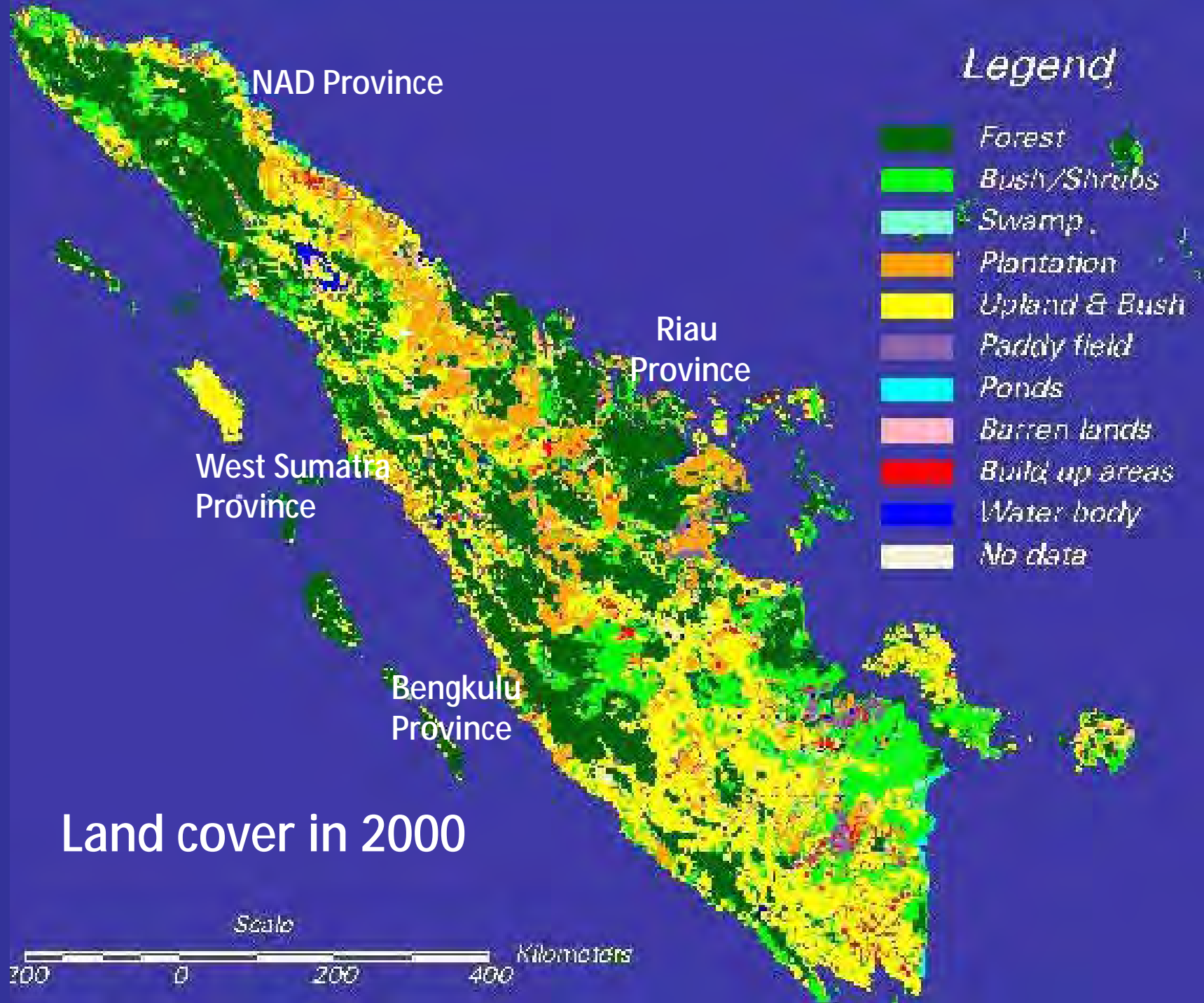
NAD Province

Riau Province

West Sumatra
Province

Bengkulu
Province

Land cover in 1990



Legend

- Forest
- Bush/Shrubs
- Swamp
- Plantation
- Upland & Bush
- Paddy field
- Ponds
- Barren lands
- Build up areas
- Water body
- No data

NAD Province

Riau Province

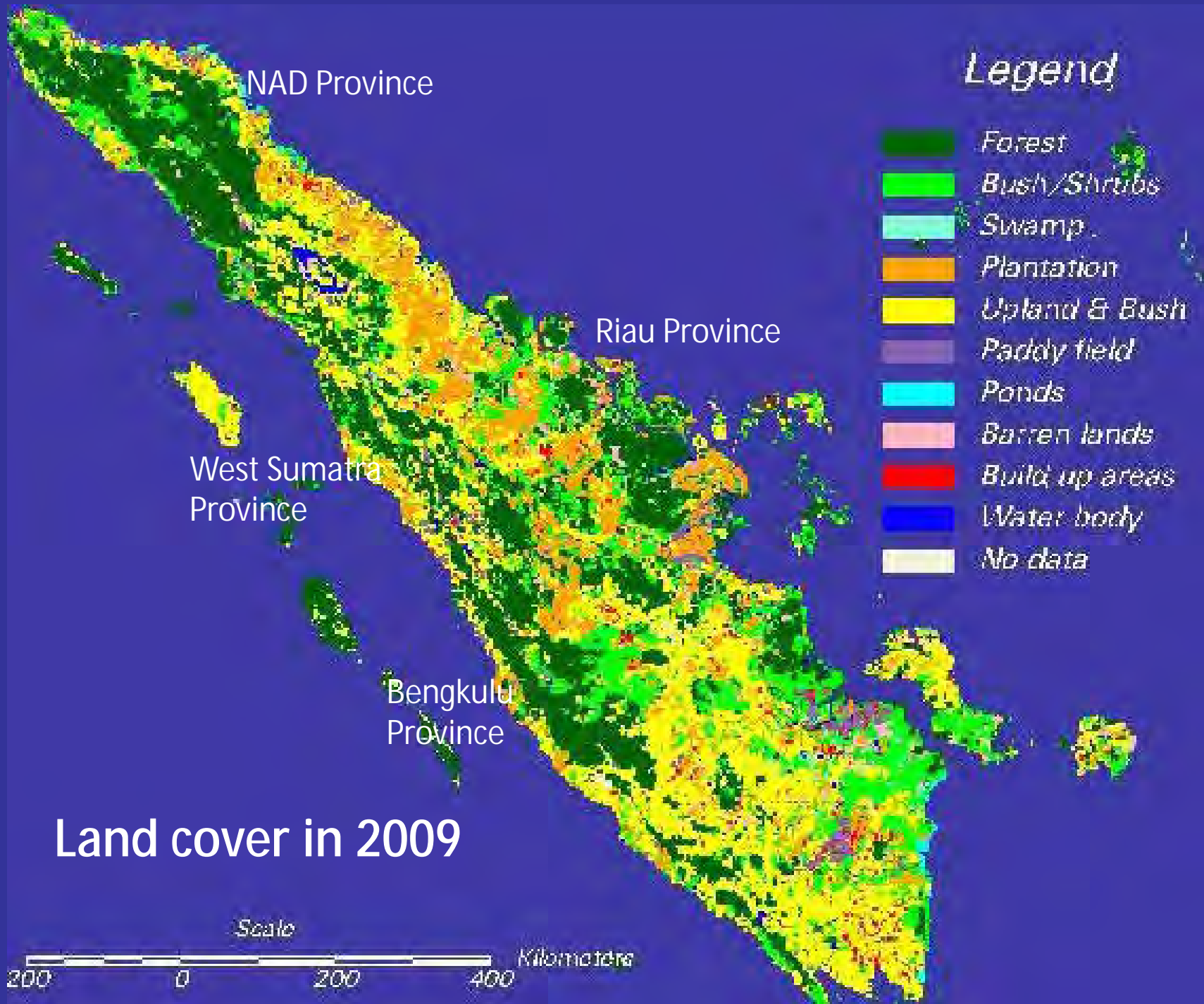
West Sumatra
Province

Bengkulu
Province

Land cover in 2009

Scale

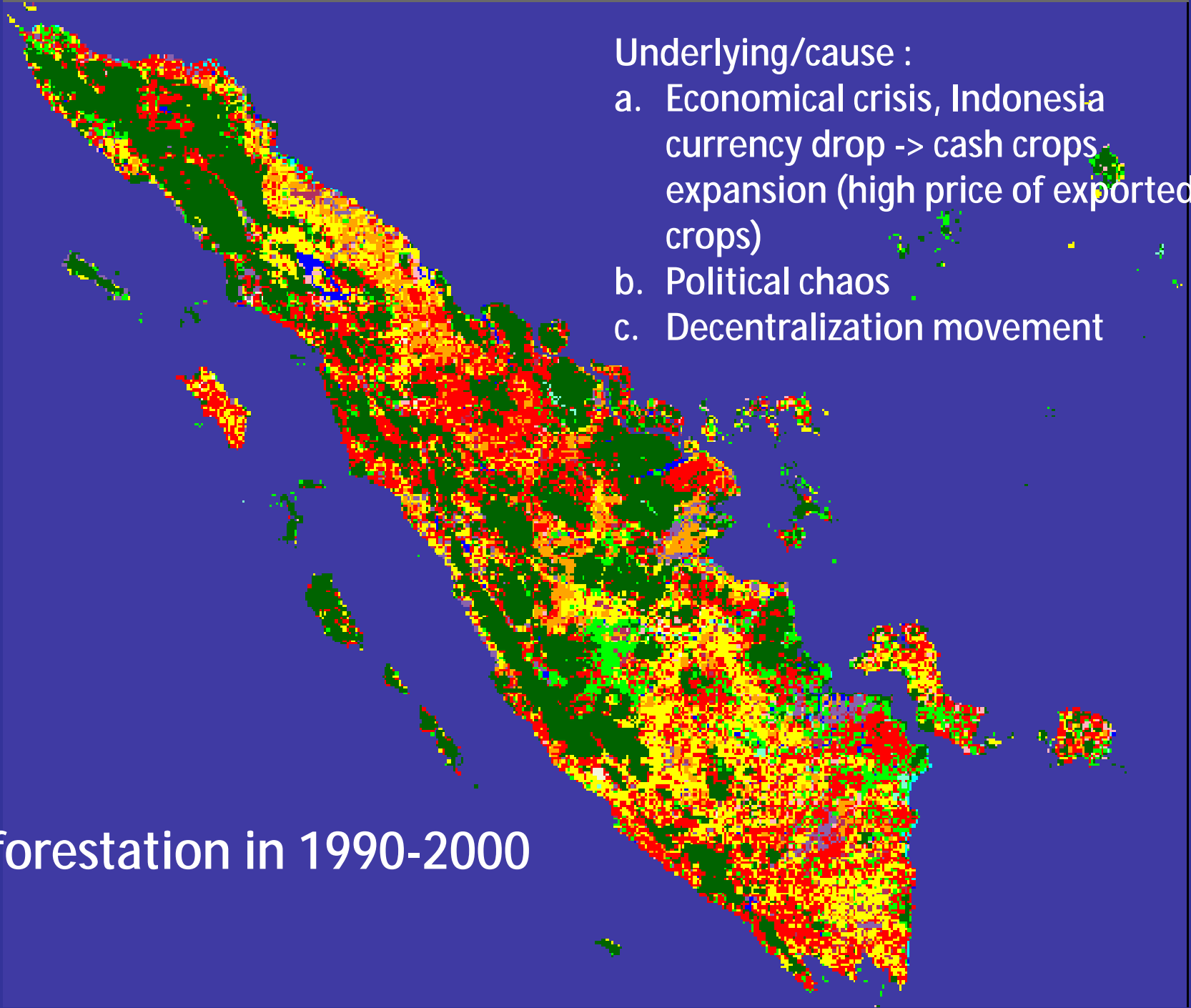
200 0 200 400 Kilometers

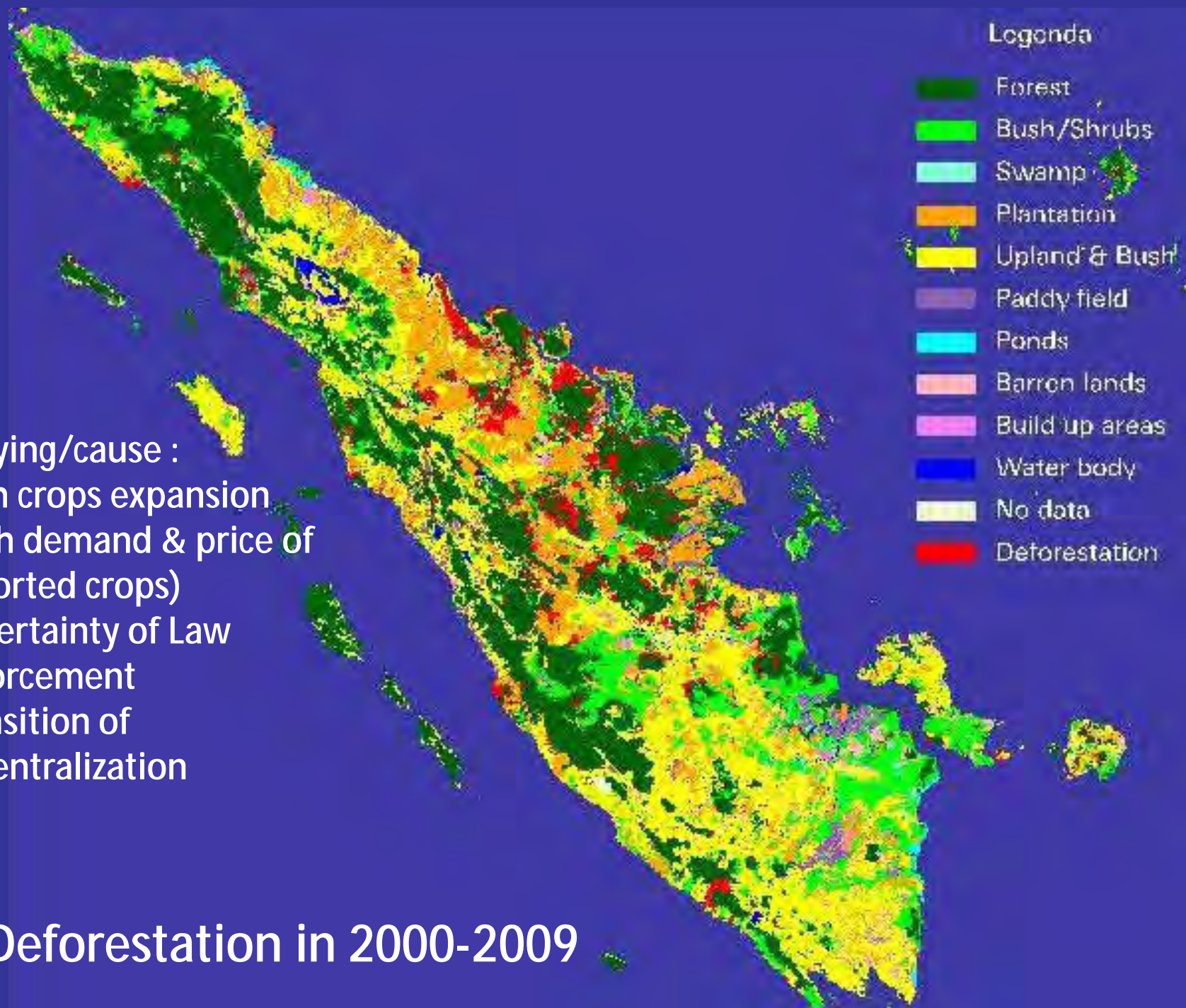


Underlying/cause :

- a. Economical crisis, Indonesia currency drop -> cash crops expansion (high price of exported crops)
- b. Political chaos
- c. Decentralization movement

Deforestation in 1990-2000





Legenda

- Forest
- Bush/Shrubs
- Swamp
- Plantation
- Upland & Bush
- Paddy field
- Ponds
- Barron lands
- Build up areas
- Water body
- No data
- Deforestation

Underlying/cause :

- a. Cash crops expansion (high demand & price of exported crops)
- b. Uncertainty of Law enforcement
- c. Transition of decentralization

Deforestation in 2000-2009

Actor & Driving force of deforestation

Actors.

Agricultural expansion (Company, Small holder)

Illegal logging (company/private)

Encroachment (individual/group)

Driving force

National/global Demand of Cash crops (CPO/rubber/coffee etc)

National/Global demand of wood & its products

Infrastructure development

Underlying Factors

Uncertainty Law enforcement

Agrarian conflicts

Unsynchronized maps among government

Lack of coordination among institution

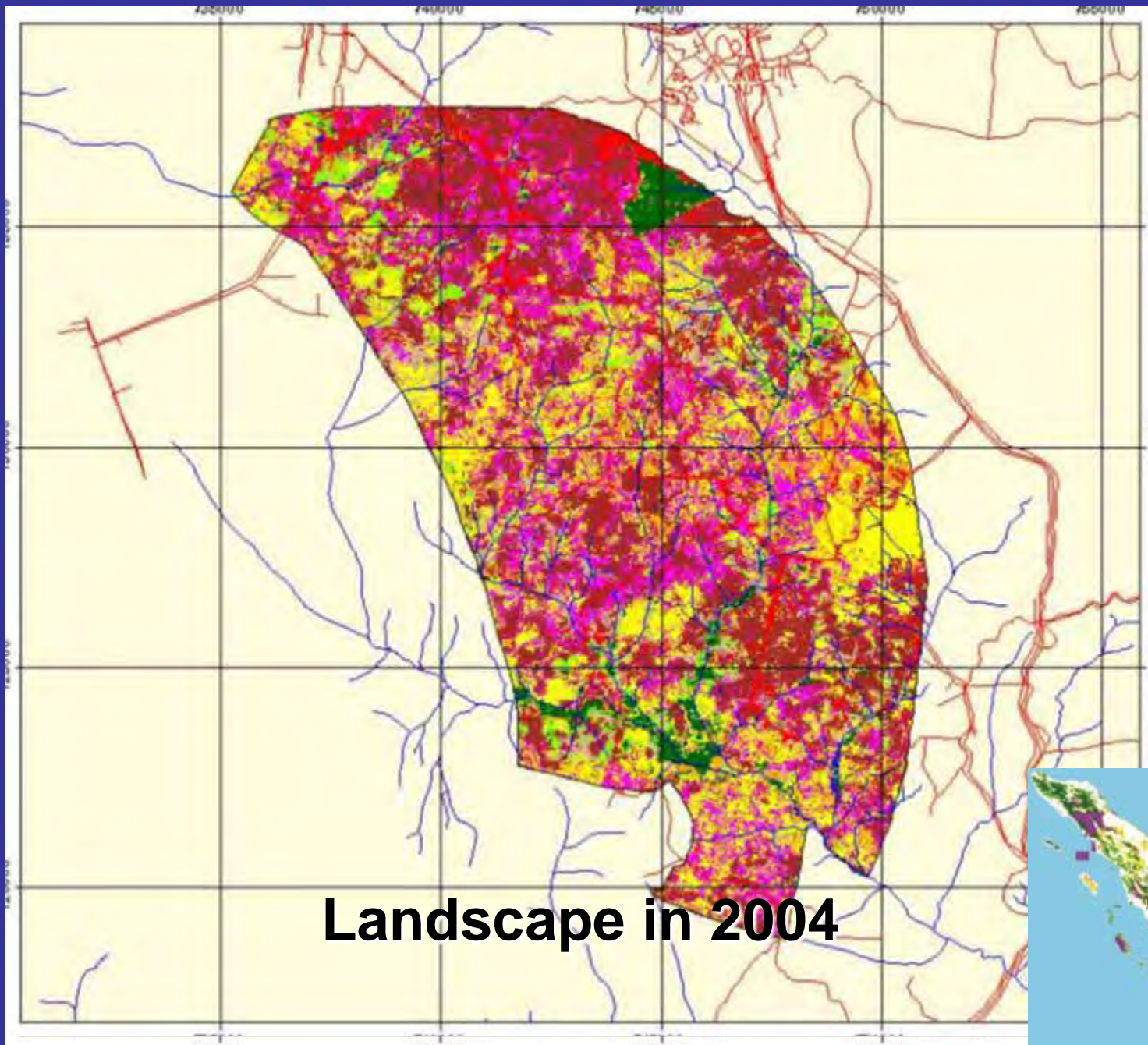


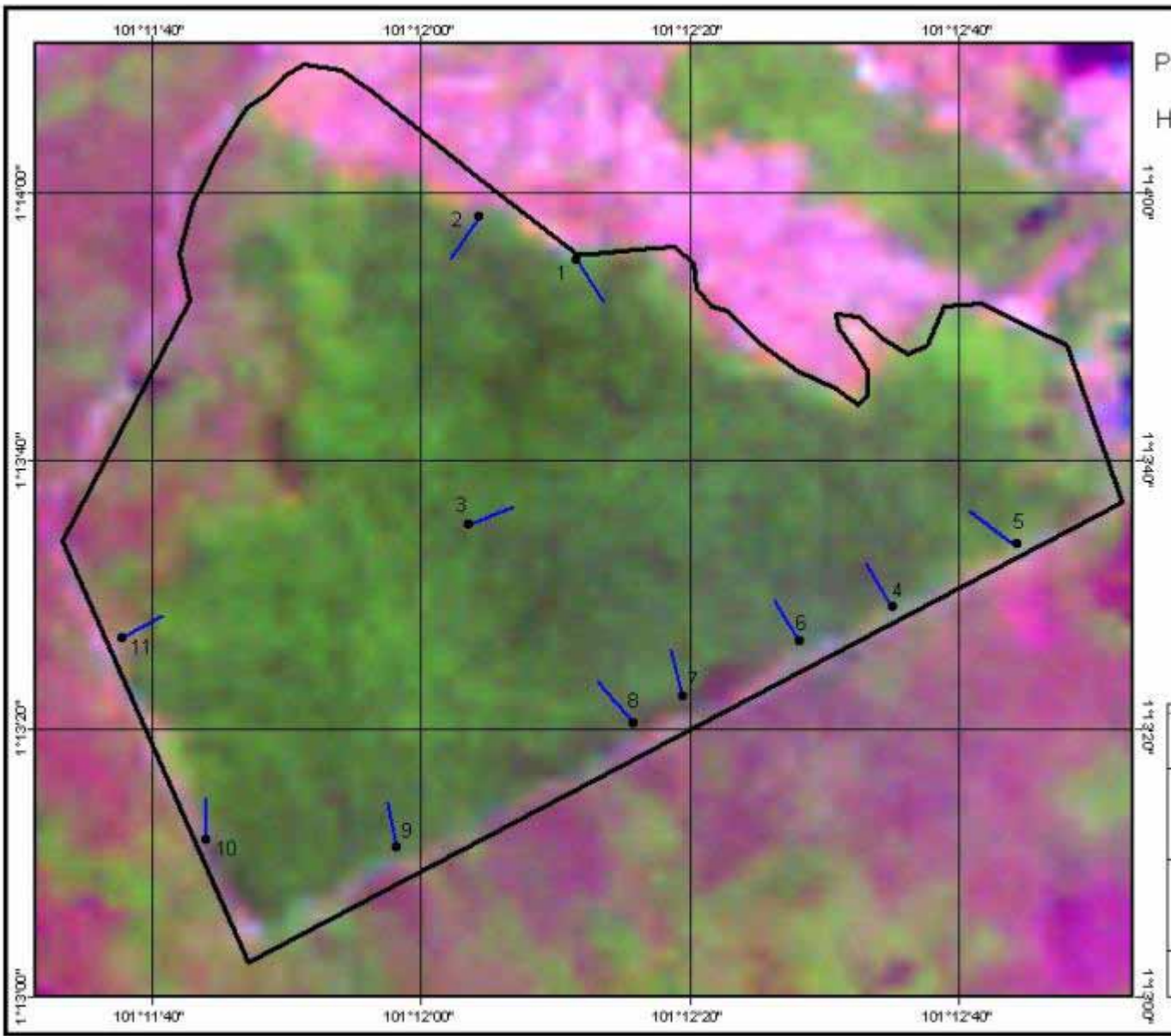
Habitat Loss & Fragmentation

Impact on Species

- a) Extinction forest specialist species
- b) Extinction of core/interior species
- c) Species isolation -> lead to extinction
- d) Increase edge species
- e) Increase habitat generalist species
- f) Increase conflict between wildlife & Community







DISTRIBUTION PATTERN :

Distance from edge (m)



Distance from edge (m)

Interior species

Rattus tiomanicus



Distance from edge (m)

Callosciurus notatus



Distance from edge (m)

Tupaia glis



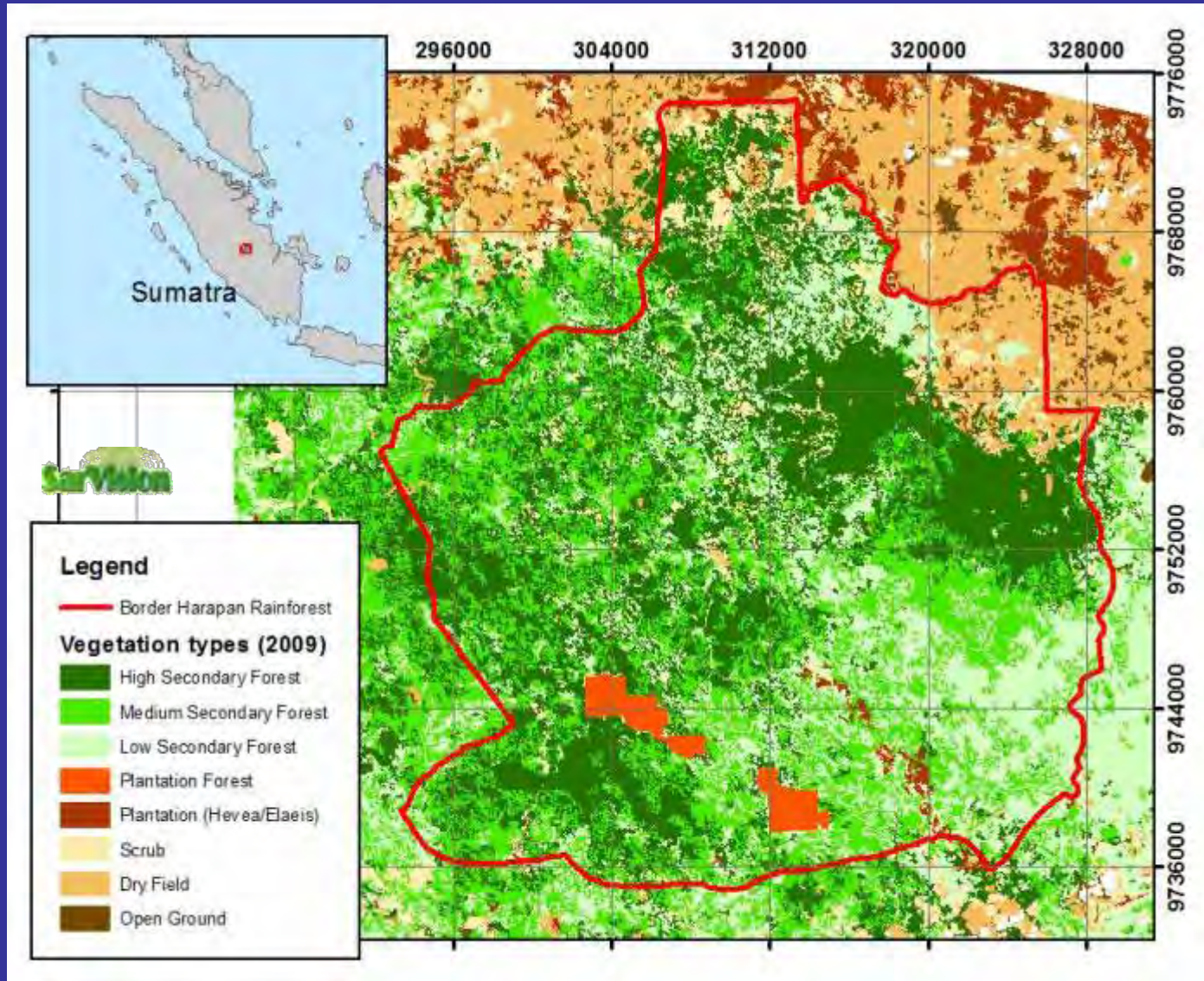
EDGE SPECIES

MITIGATION EFFORT TO SAVE BIODIVERSITY

Concession for Forest restoration
Second habitat/relocation (Sumatran Tiger)
Established High Conservation Value Forest (Voluntary
base)

Indirect
Moratorium Forest Conversion

Harapan Rainforest

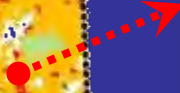




27%
Medium Secondary



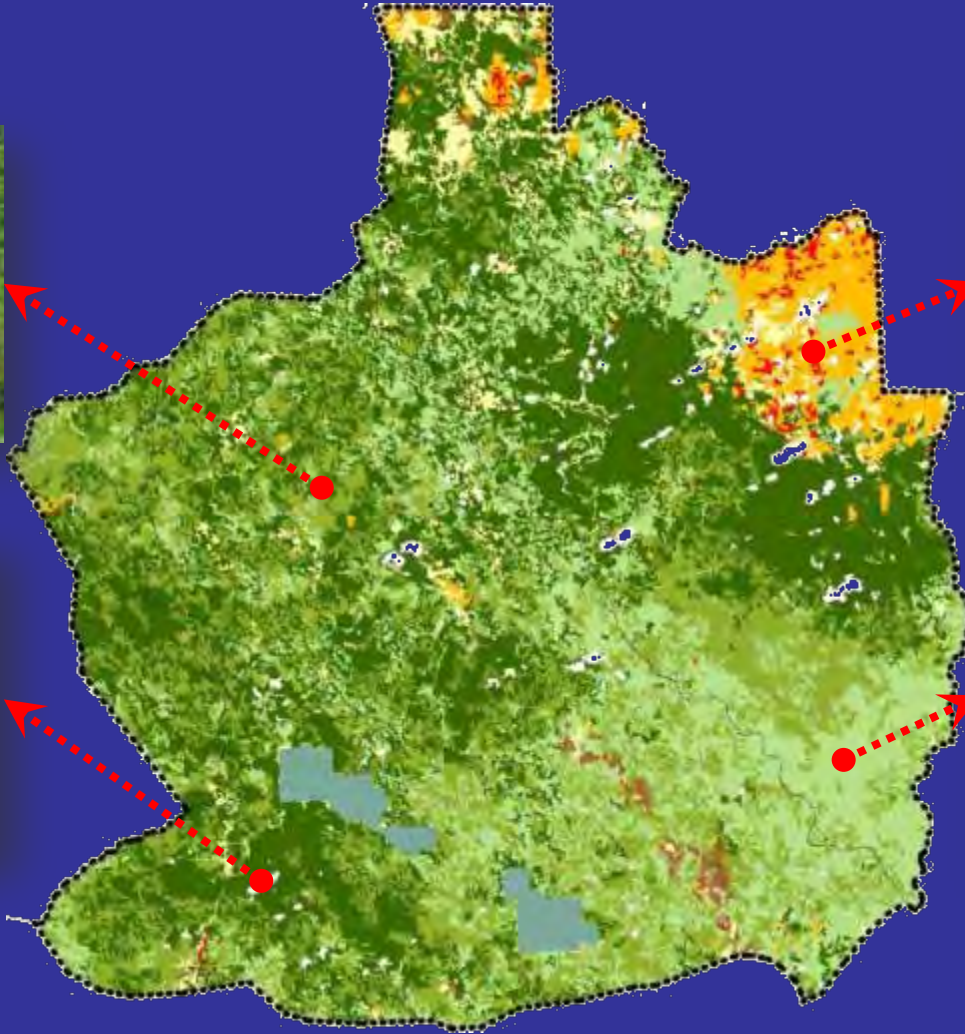
12%
Opened Land



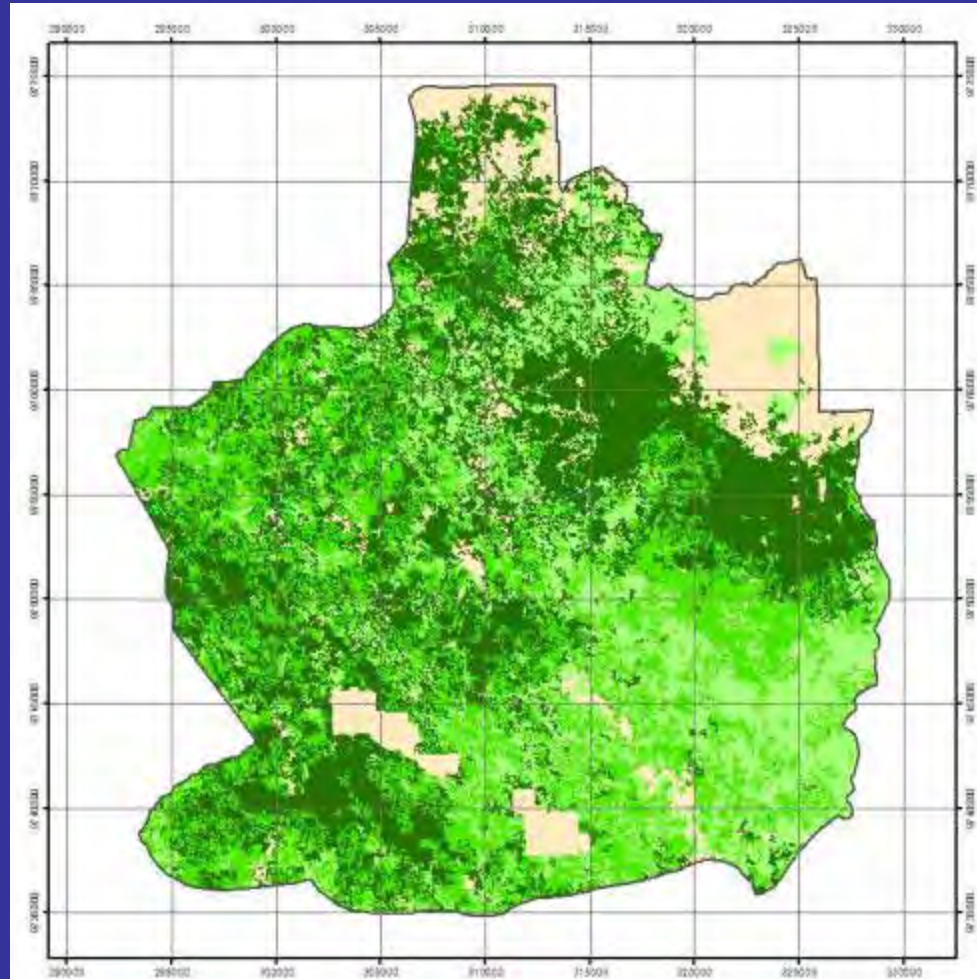
38%
Tall Secondary



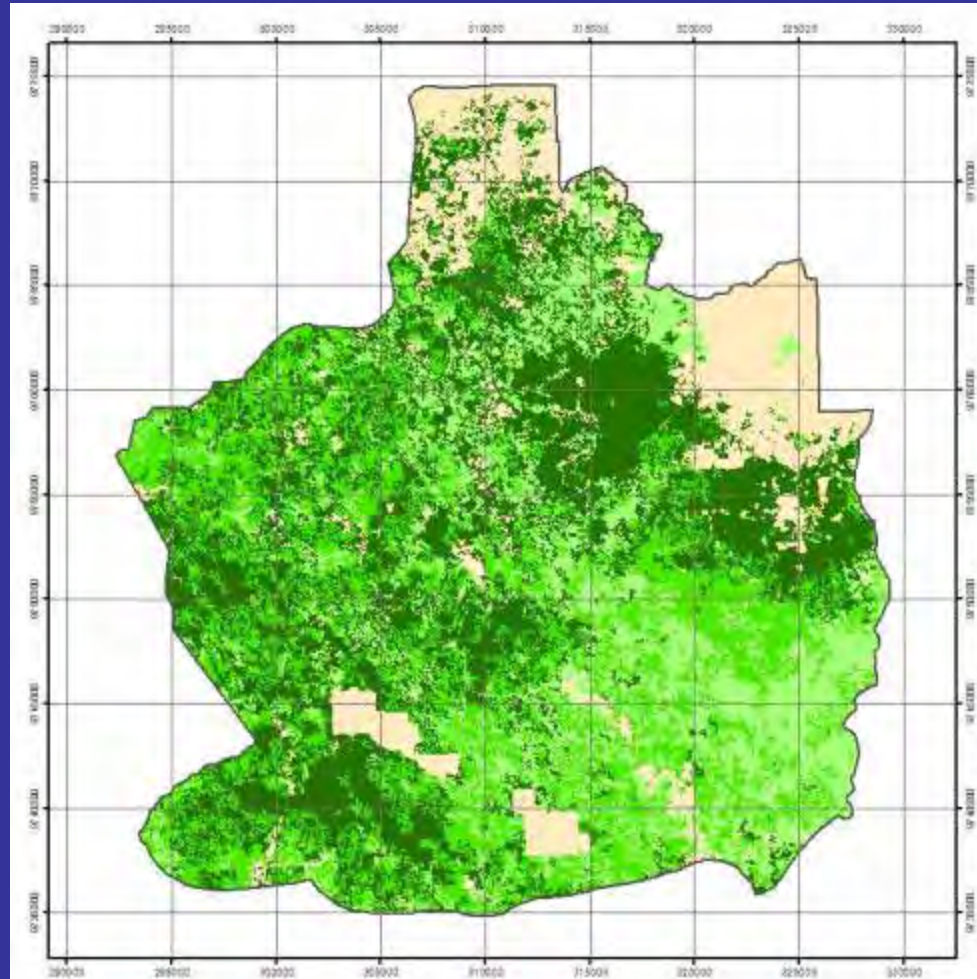
23%
Short Secondary



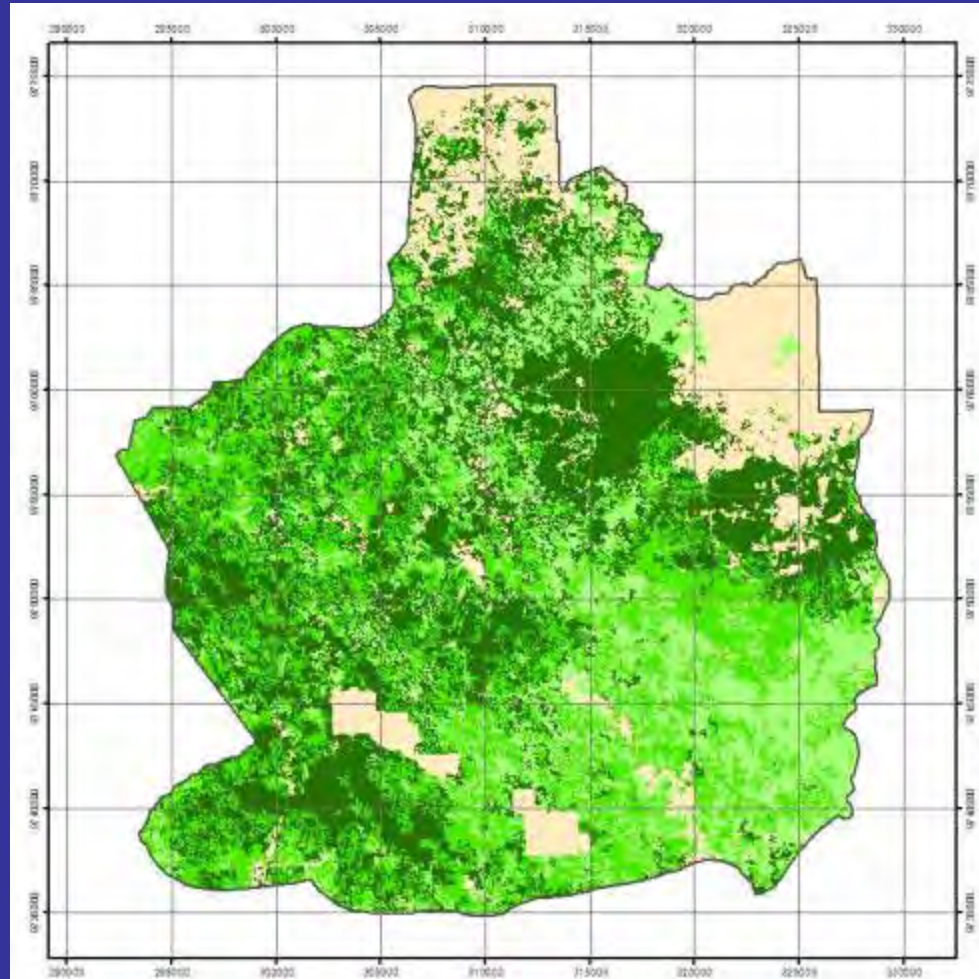
Forest baseline situation 2009



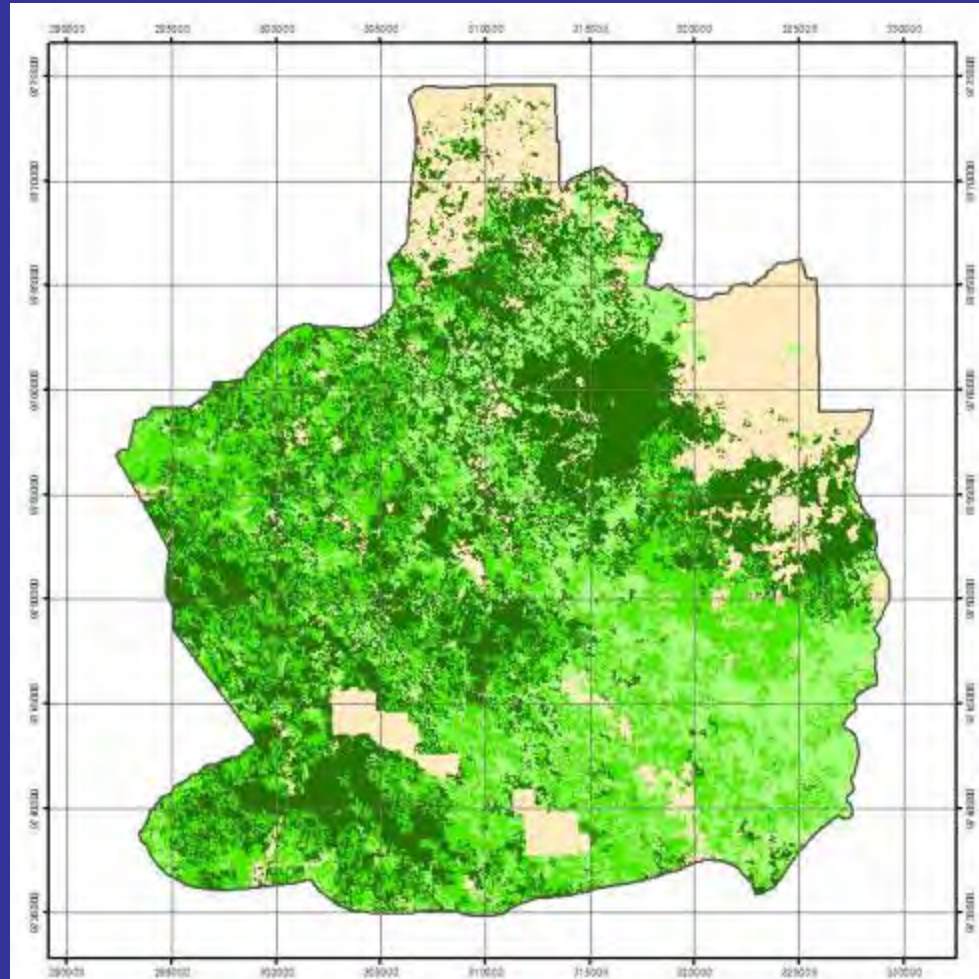
Deforestation Quarter 1, 2011



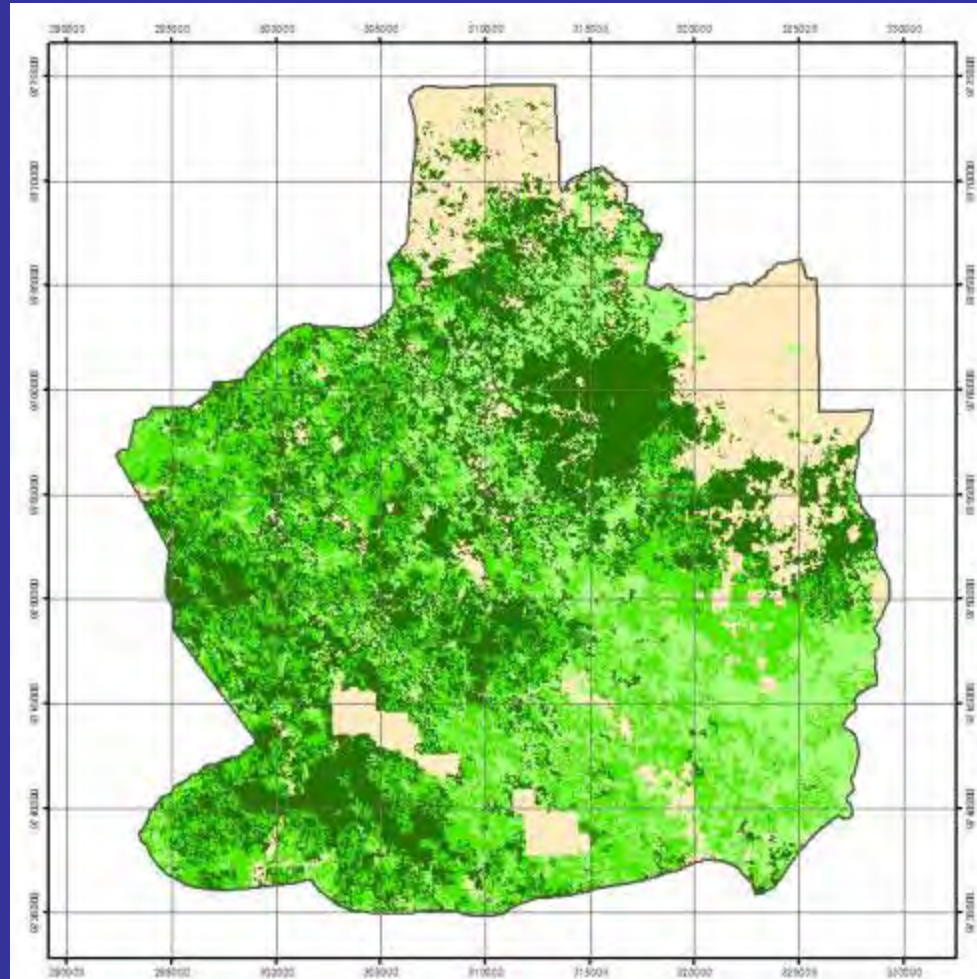
Deforestation Quarter 2, 2011



Deforestation Quarter 3, 2011



Deforestation Quarter 4, 2011



Sumatran Tiger Conservation ZSL-Indonesia, PHKA & LIPI



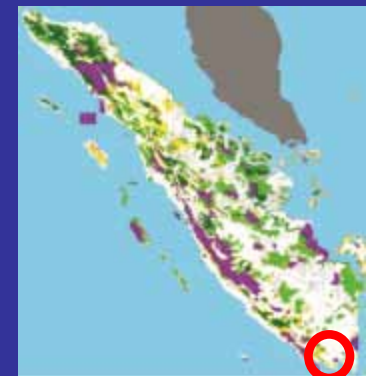
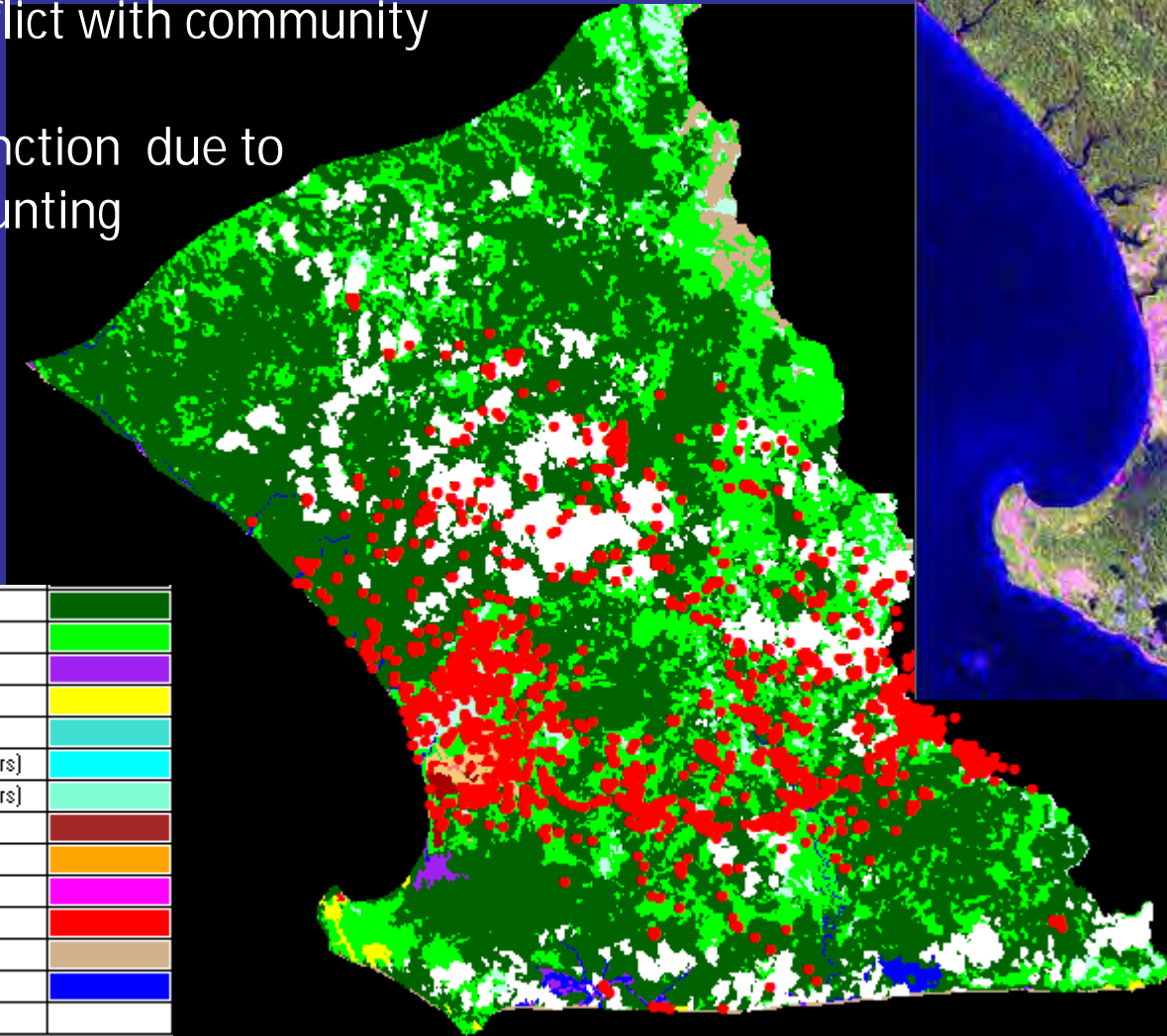
Sumatran Tiger was captured
GPS collar was set up
After several months was released in
To new habitat (second habitat)



ü Sumatran Tiger were spending more time in the forest edge (border between forest non forest, disturb forest)

ü Lead to conflict with community

ü Lead to extinction due to poaching/hunting



Every one hour the GPS information was received






INDICATIVE INDONESIA MORATORIUM MAP




Base on Ministry of Forestry and REDD+ Task Force Draft



LEGEND

AREA COVERED BY MORATORIUM		AREA (Hectares)
	Primary Forest	32.900.845
	Secondary Forest on Peat	2.410.253
	Peatland area (Non Forest)	6.504.188
TOTAL AREA		41.815.286

 Existing concessions 2010 (IUPHHK-HT, IUPHHK-HA, Plantations and Coal mining) on primary forest, secondary forest on peat and peatland area : EXCLUDE THE MORATORIUM

 State boundary
 Provincial boundary
 Shore line

Data source /

1. Forest cover from LandCover 2008 produced by Ministry of Forestry Republic of Indonesia
2. Peatland map from Wetlands International Indonesia Programme 2004
3. Logging concessions 2010 produced by Ministry of Forestry release on October 2010
4. Industrial plantation forest concessions 2010 produced by Ministry of Forestry release on October 2010
5. Plantation concessions, compile from Ministry of Forestry release on October 2010, National Land Agency, and Rawat watch Indonesia 2010
6. Coal mining concessions (Surabaya and Kalimantan Island) 2010 produced by Indonesian Coal Mining Association

Analysis and Map produced by Greenpeace SEA on February 2011

GREENPEACE

Conclusion

Mitigation effort to save biodiversity is rely on success of government to handle the underlying factors of deforestation

Thank you

