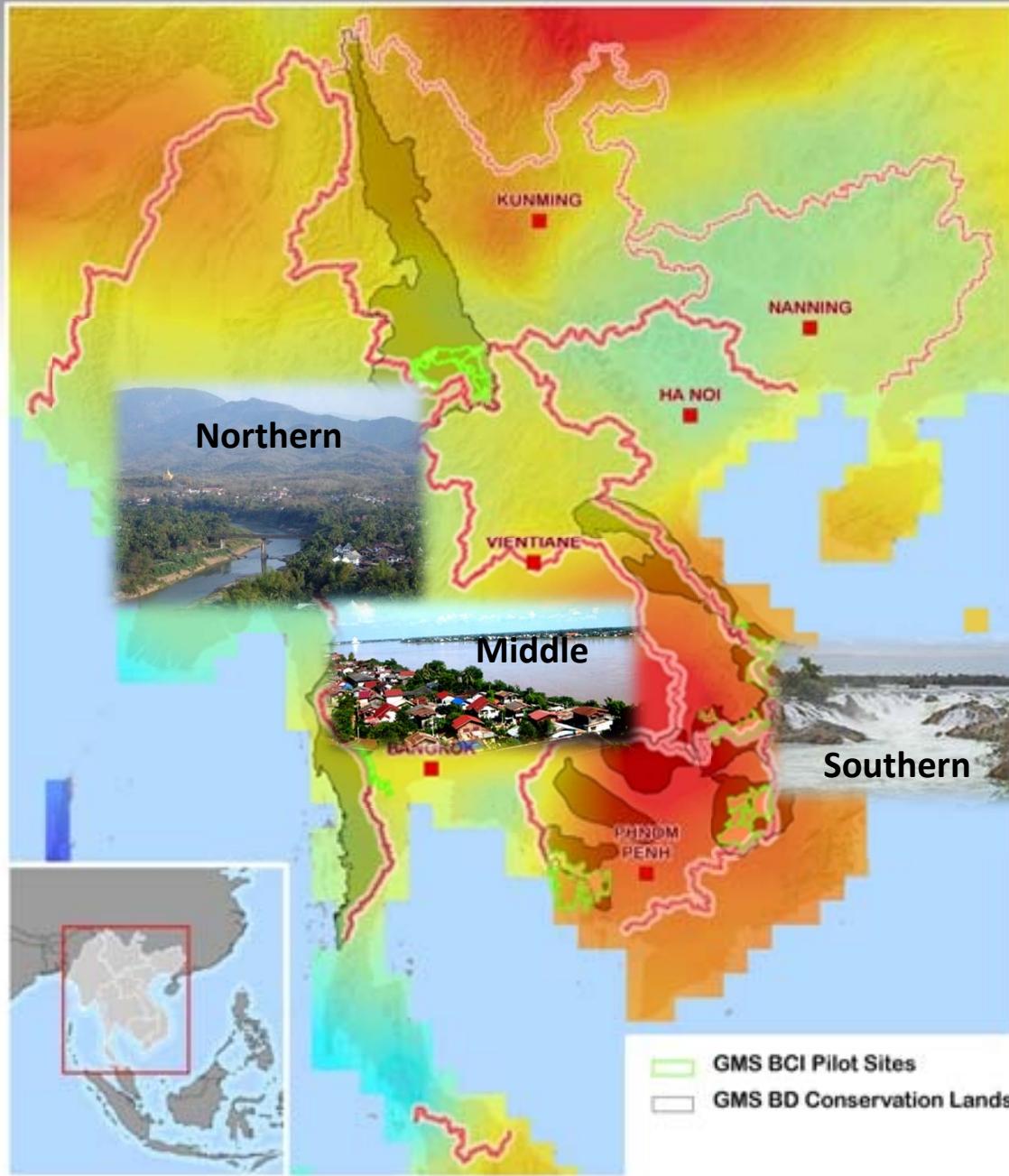


Natural resources and Land use in Lao PDR

Bae PHEAXAY
National university of Laos

Joint International Conference on:
“Sustainable Low Carbon Emission Development in Asia”
ICLCA 2017& 6Th LoCARNet Annual Meeting
1-3 Nov, 2017. Bangkok, Thailand

Laos is hub of GMS's biodiversity hotspot



Important Biodiversity Hotspots and Increase in Maximum Temperature (1901 - 2002)

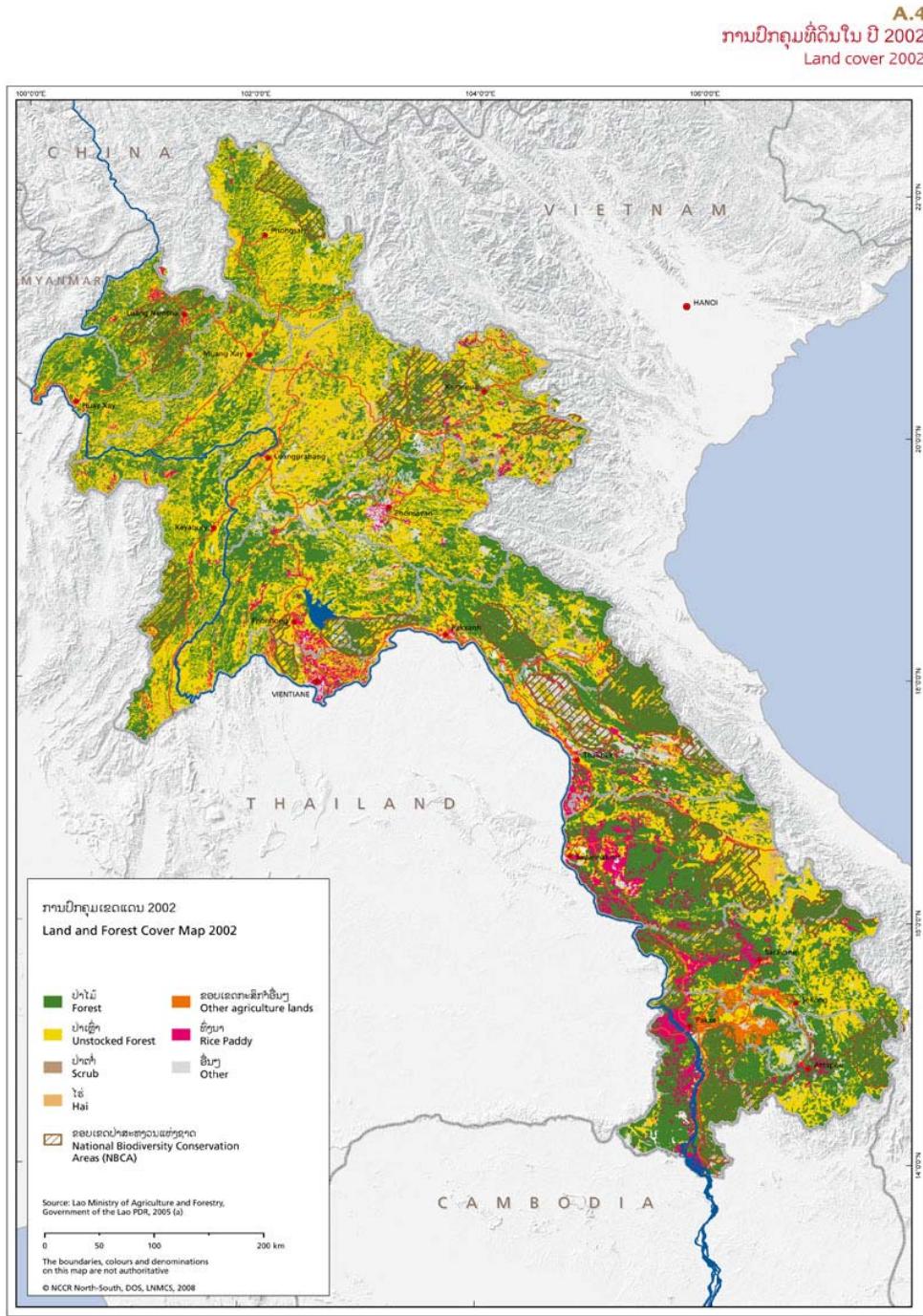
GMS Core Environment Program and Biodiversity Conservation Corridors Initiative - ADB TA 6289



Local livelihoods are often based on a large variety of forest products. With increasing temperature and heat stress, ecosystem services and NTFP based livelihoods will be affected.

DRAFT 25.03.2008
Boundaries are not necessarily authoritative.
The information shown is approximate.





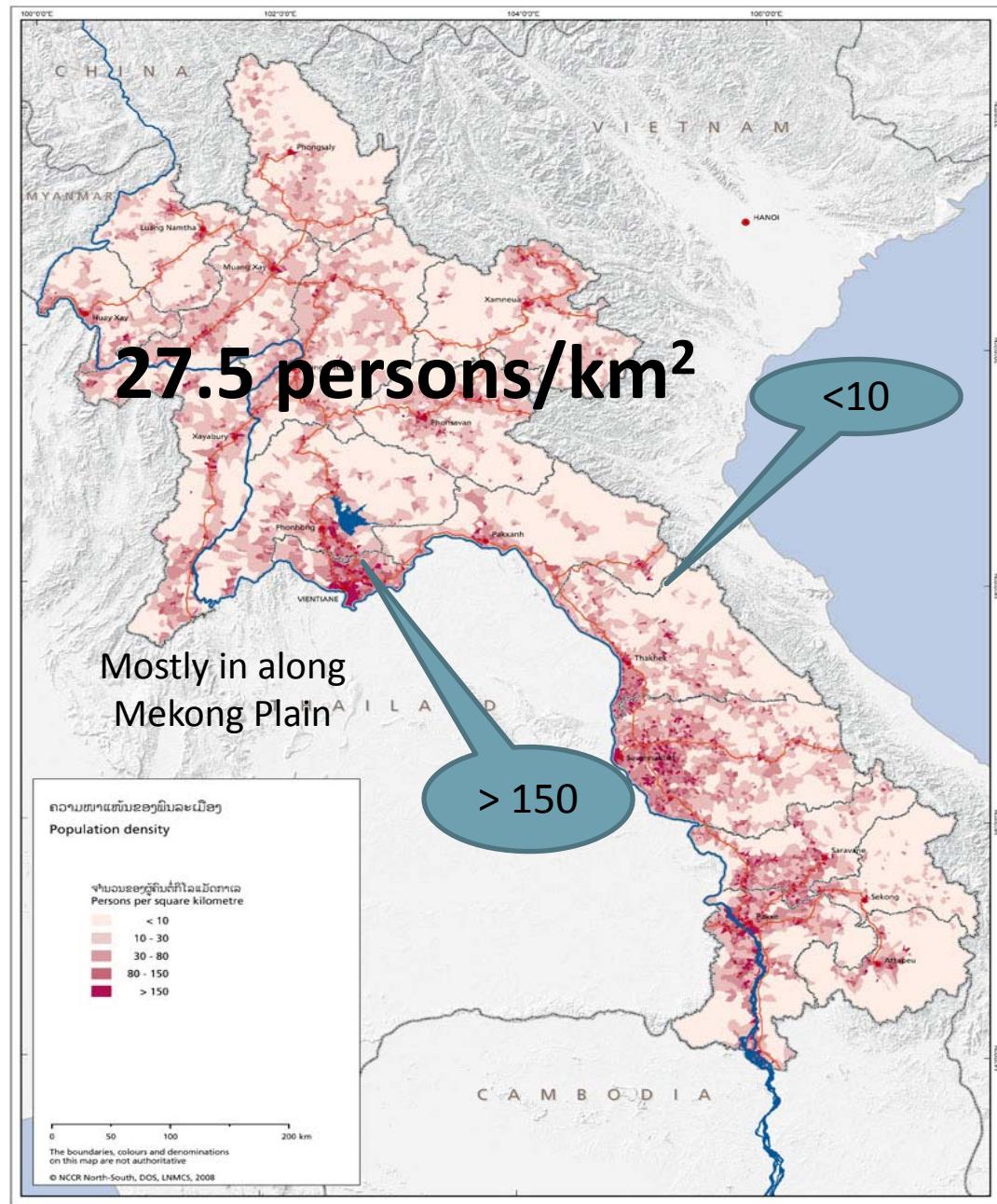
Brief Information

- **Area:** 236,800 km²
 - 80% mountainous area
- **Altitude:** 150-1820m (MSL)
- **Climate:**
 - Tropical monsoon
- **Population:**
 - 6.5 Mil. (LNSC,2015)
 - 49 ethnic groups, in four main linguistic families (Lao-Tai, Mone-Khmer, Tibeto-Burmese and Hmong-Ioumien)
- **Status:**
 - Most least develop in region

Distribution of Population

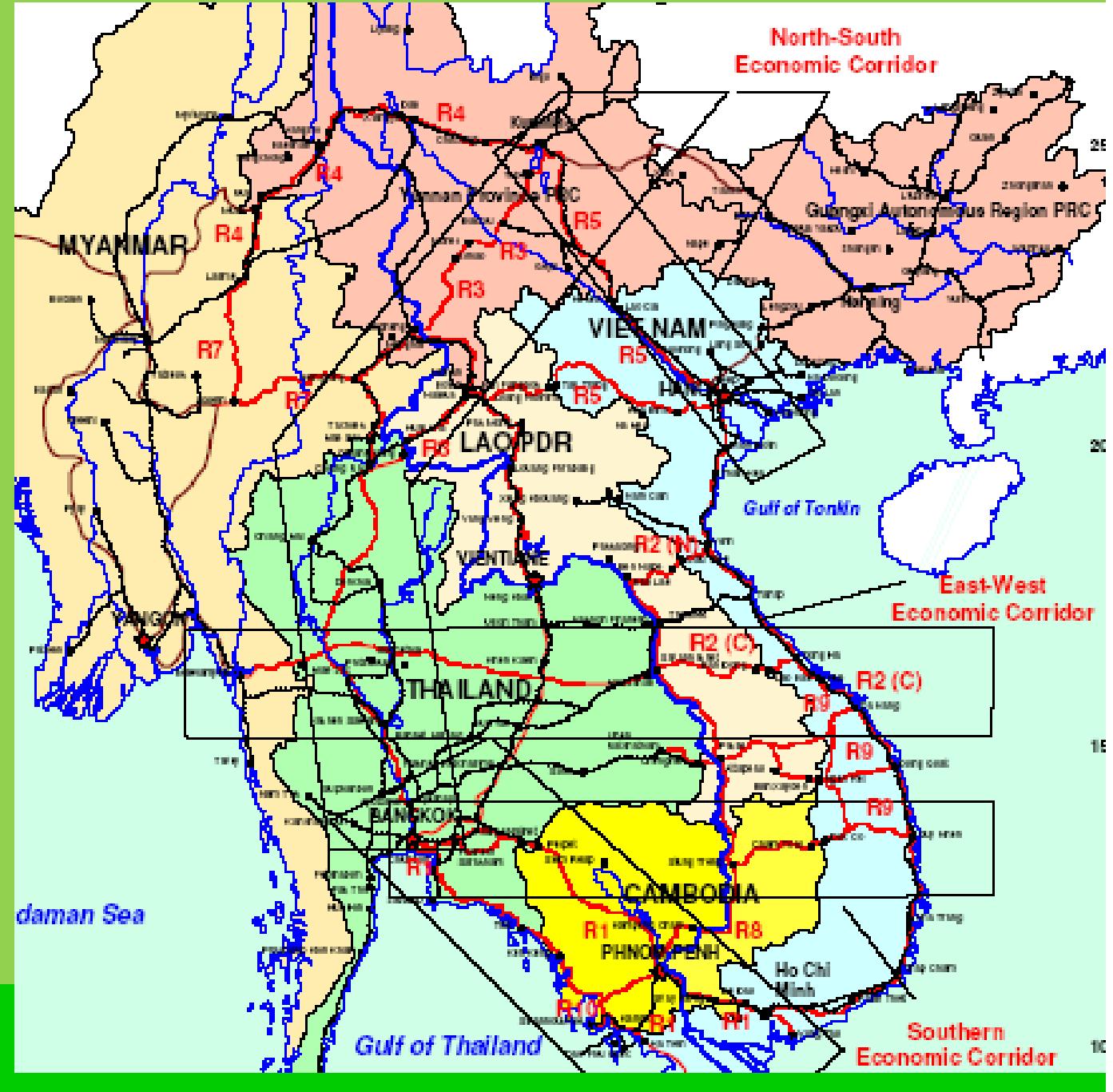
B.1

ຄ່າມກາແຫຼນພິນລະເມືອງ
Population density



Lao PDR is in the center of 3 Major Economic Corridors

- North – South:
Yunnan, PR China -
Laos - to N. Thailand
 - East – West:
Thailand - Laos - Viet
Nam
 - Southern: Thailand
- Laos - Viet Nam



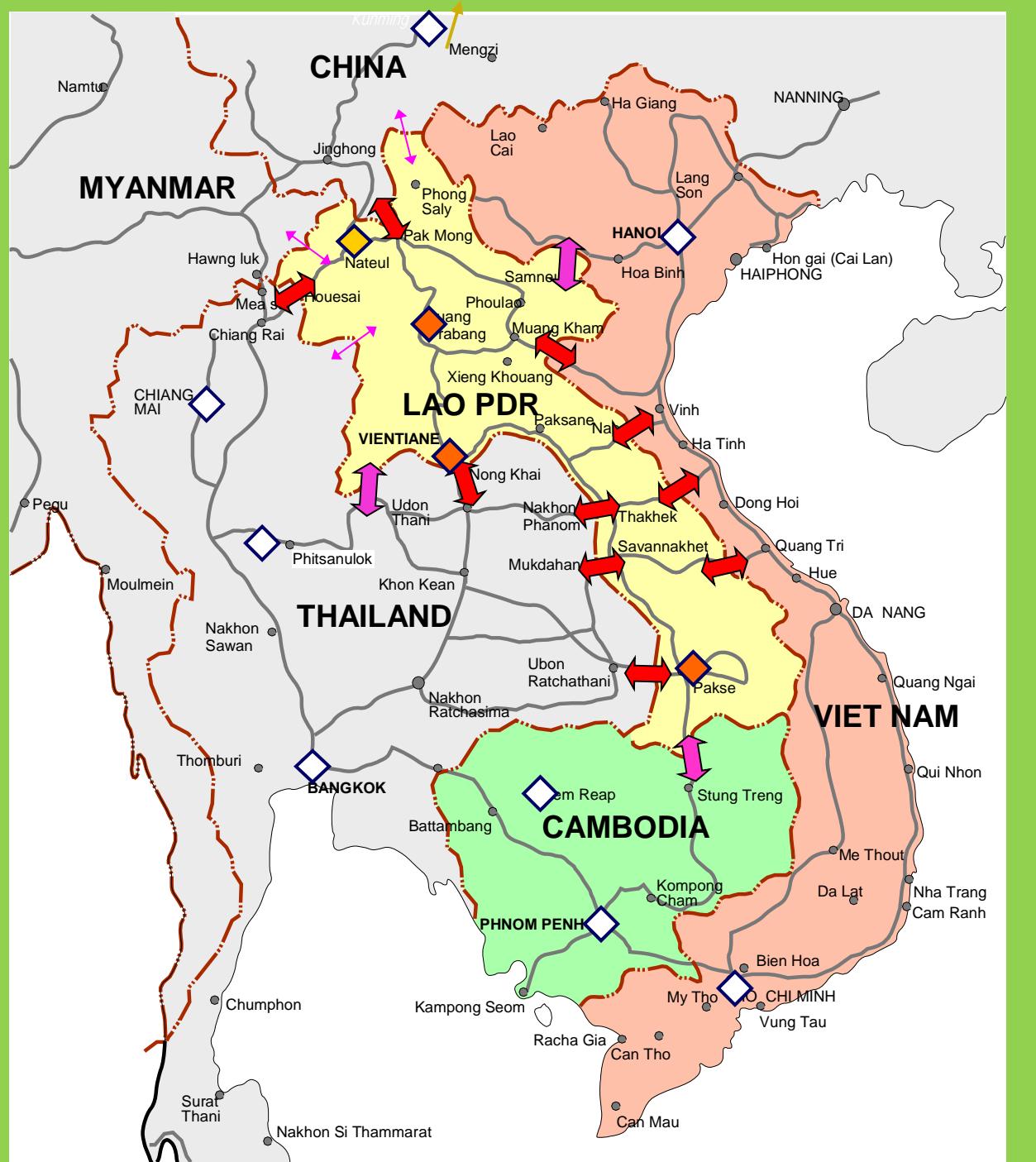
Transport Linkages and Border Posts

Border Posts issuing:

- ↔ Visas on Arrival (existing)
- ↔ Visas on Arrival (planned)
- ↔ No Visas on Arrival

International Airport:

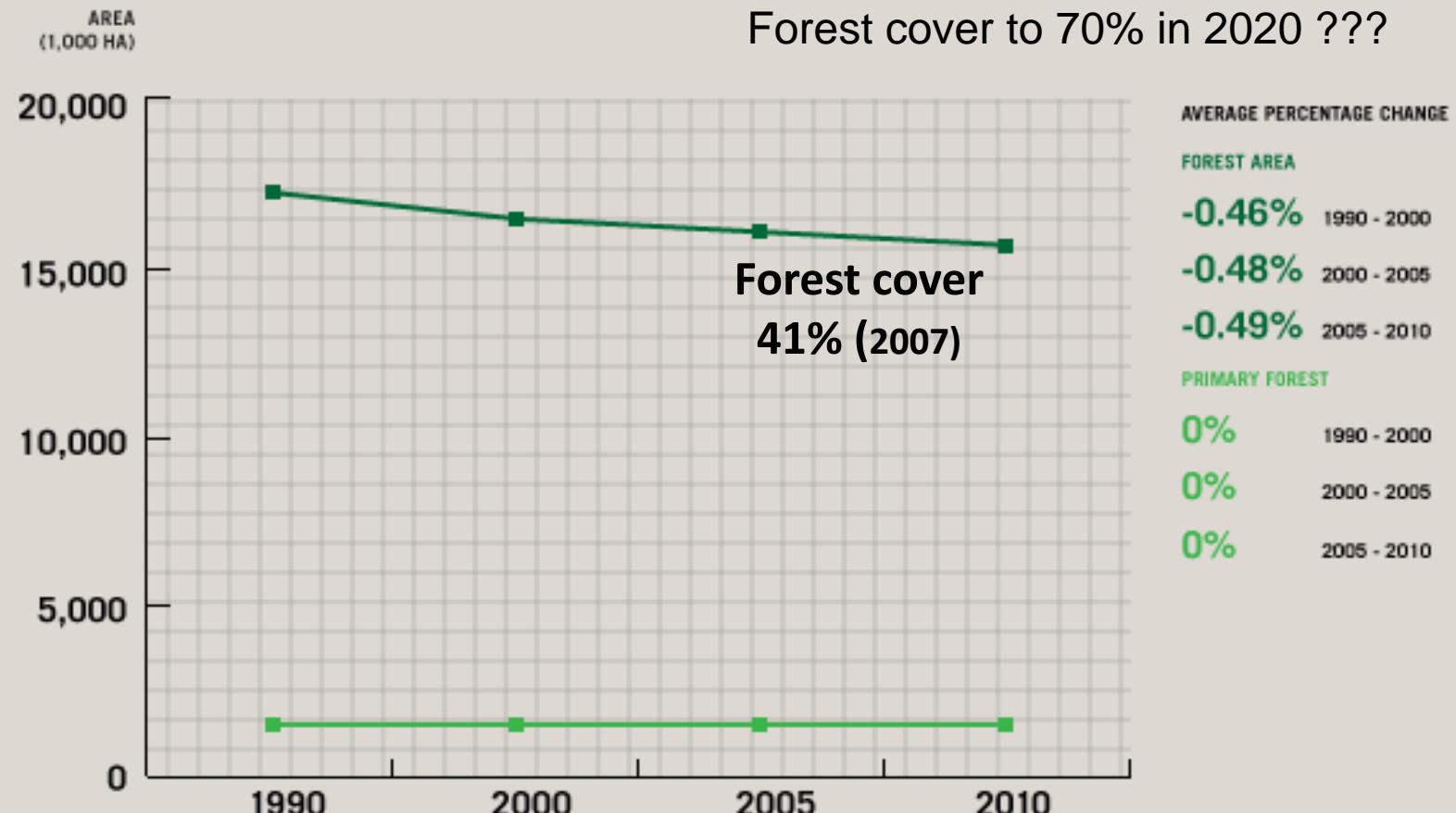
- ◊ Airport connecting with Laos
- ◊ International Airport in Lao PDR (existing)
- ◊ International Airport in Lao PDR (planned)



4. Brief of Forest management

- **1989**, First National Forestry Forum
- **1993**, Legally establishment of Lao NBCA system
- **1996**, Forestry Law
- **1998**, National Land use and Land allocation Program
- **2003**, Regulation on the Management of National Biodiversity Conservation Areas, Wildlife and Aquatic Animals
- ...**2015**, Prime minister degree No 15. eradication timber product export
- ...**2017**, During feasibility study of land use allocation

Change in Forest Cover



Forest Area

TOTAL COUNTRY LAND AREA (1000 HA)

23,680

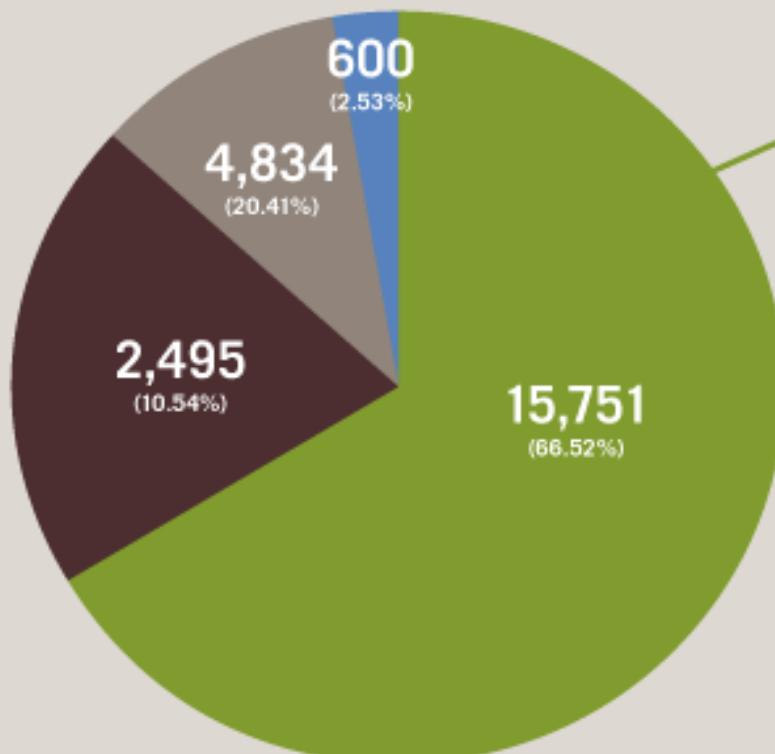
TOTAL FOREST COVER

TOTAL OTHER WOODED LAND

TOTAL OTHER LAND

TOTAL INLAND WATER

UNITS: 1000 HA



BREAKDOWN OF TOTAL FOREST COVER



PRIMARY FOREST
1,490
(9.46%)



OTHER NATURALLY
REGENERATED FOREST
14,037
(89.12%)



PLANTED FOREST
224
(1.42%)

Forest Ownership and Management Rights

OWNERSHIP PATTERN IN LAO PDR



Carbon Stock in Living Forest Biomass

MtCO₂

1200

1000

800

600

400

200

0

1186

1133

1106

1074

1990

2000

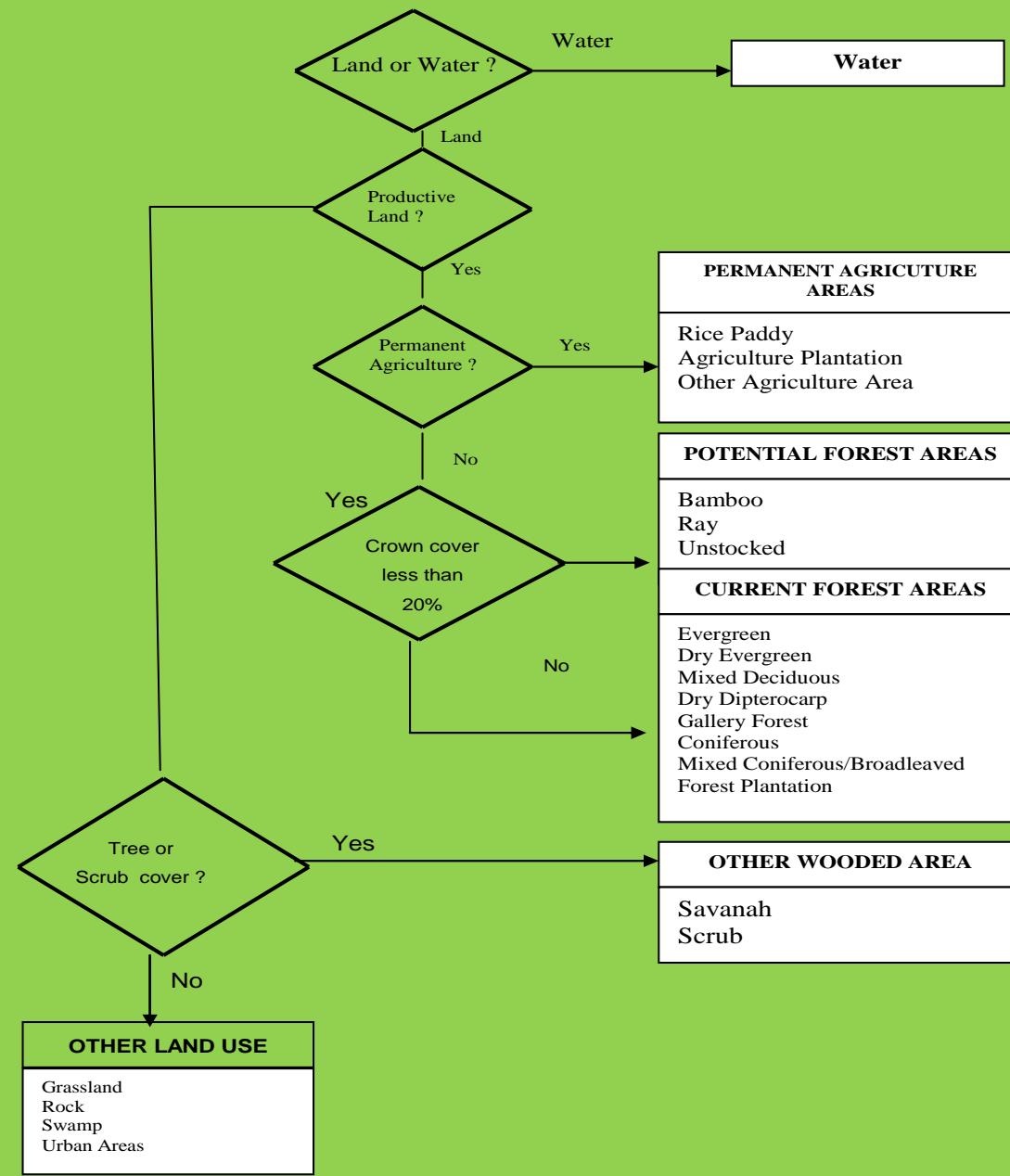
2005

2010



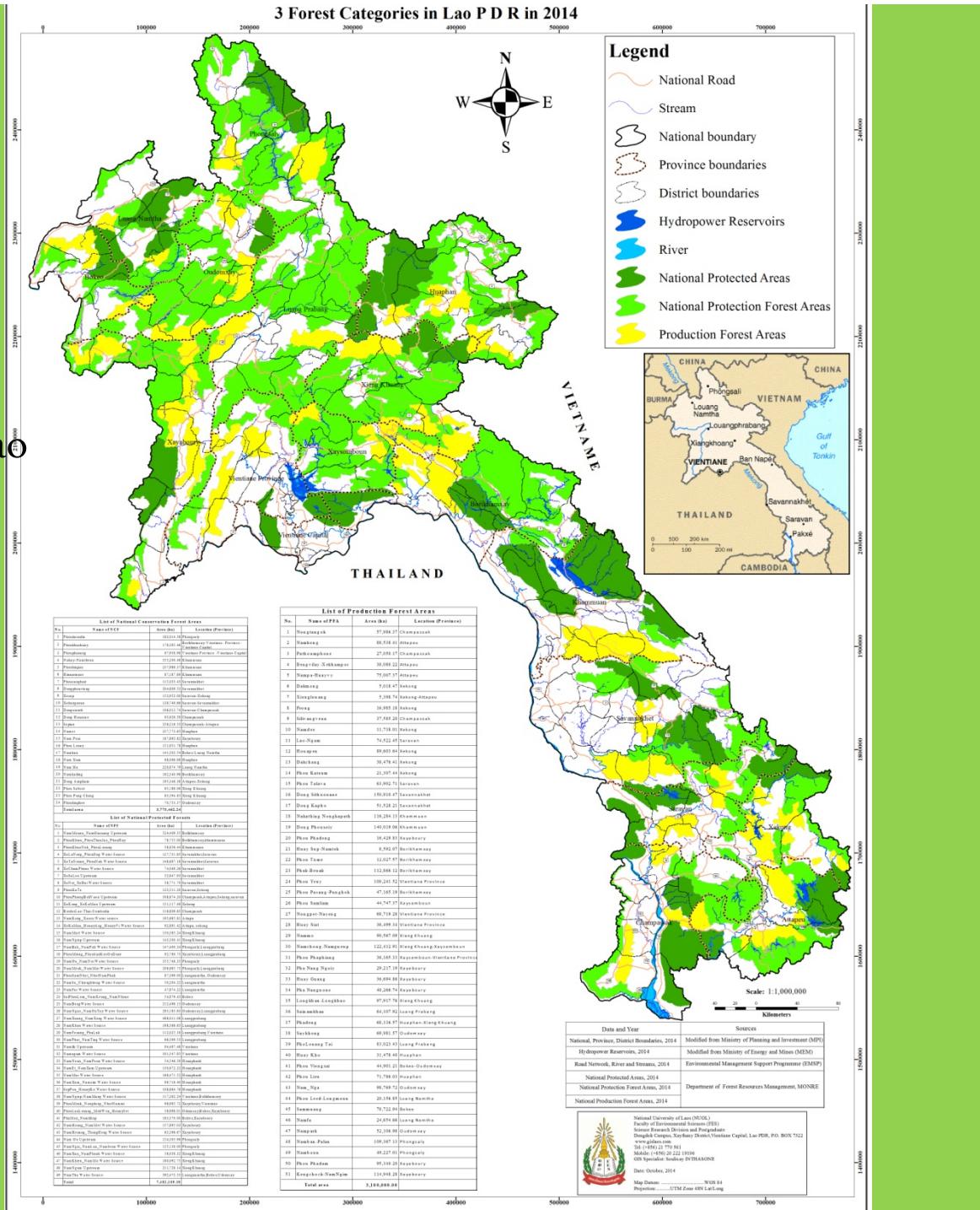
CARBON STOCK IN LIVING FOREST BIOMASS
PER HECTARE IN 2010 (TONNES)

Classification of Land Use and Forest Types in Lao PDR



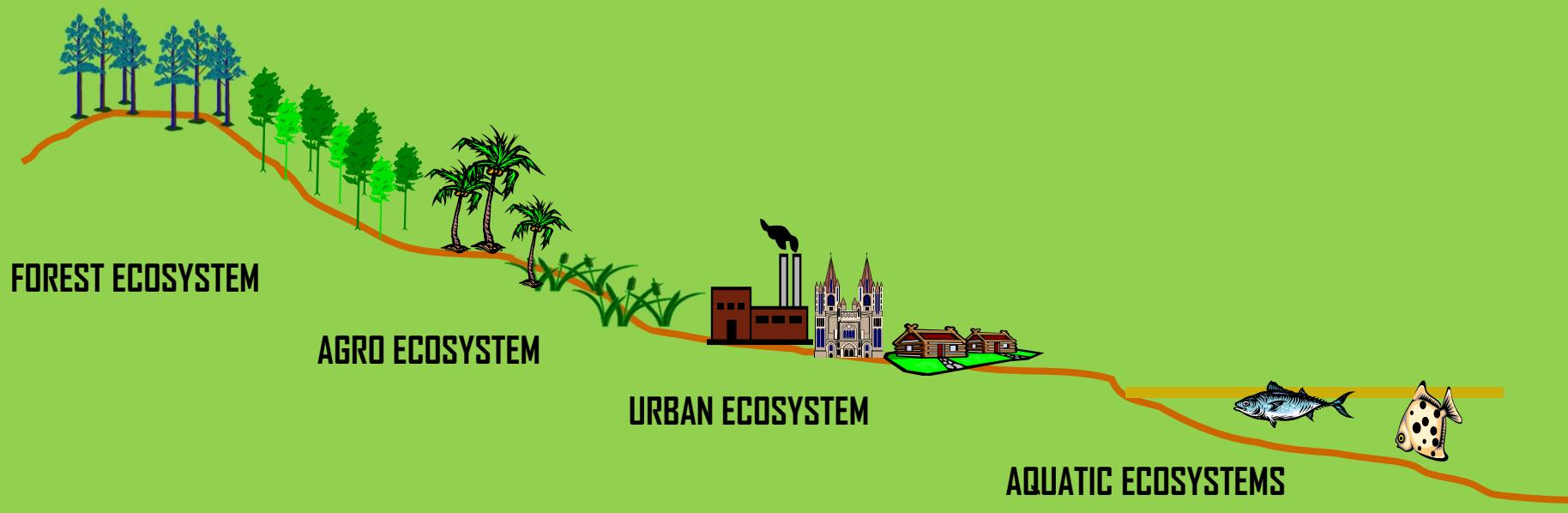
3 types forest categories in Lao

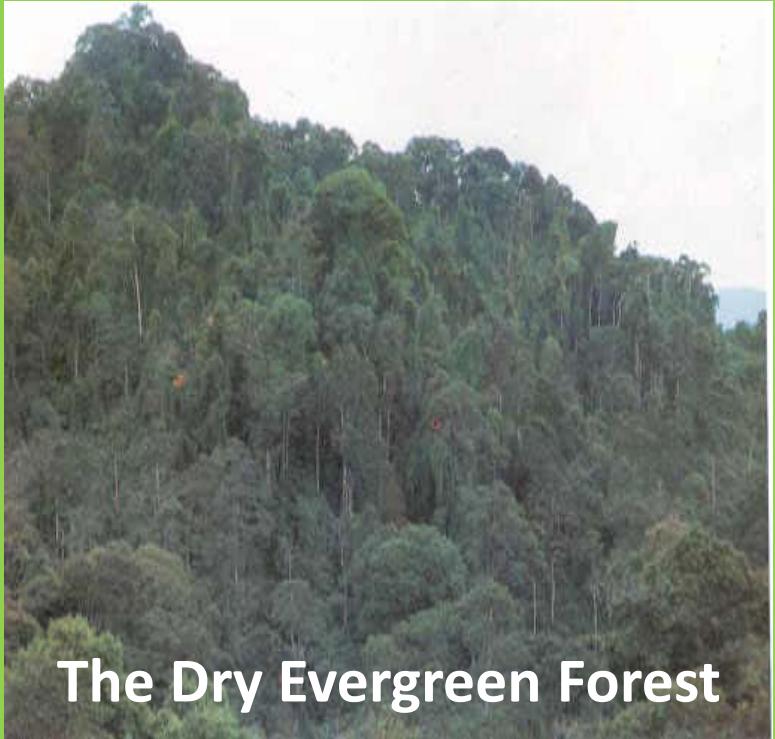
- 24 National Conservation Areas with 3,8 mil. Ha
 - 49 National Protected Areas with 7,5 mil. Ha
 - 51 National Production Forest Areas with 3 mil. Ha



Land slope classification MRC' categories

NO.	CLASS	SLOPE CLASSES (%)	LAND USE PREFER
1	Class I	>46	Protection & conservation forest
2	Class II	37-45	Production forest
3	Class III	13-36	Fruit plantation and agroforestry
4	Class IV	6-12	Upland farming
5	Class V	<5	Lowland farming





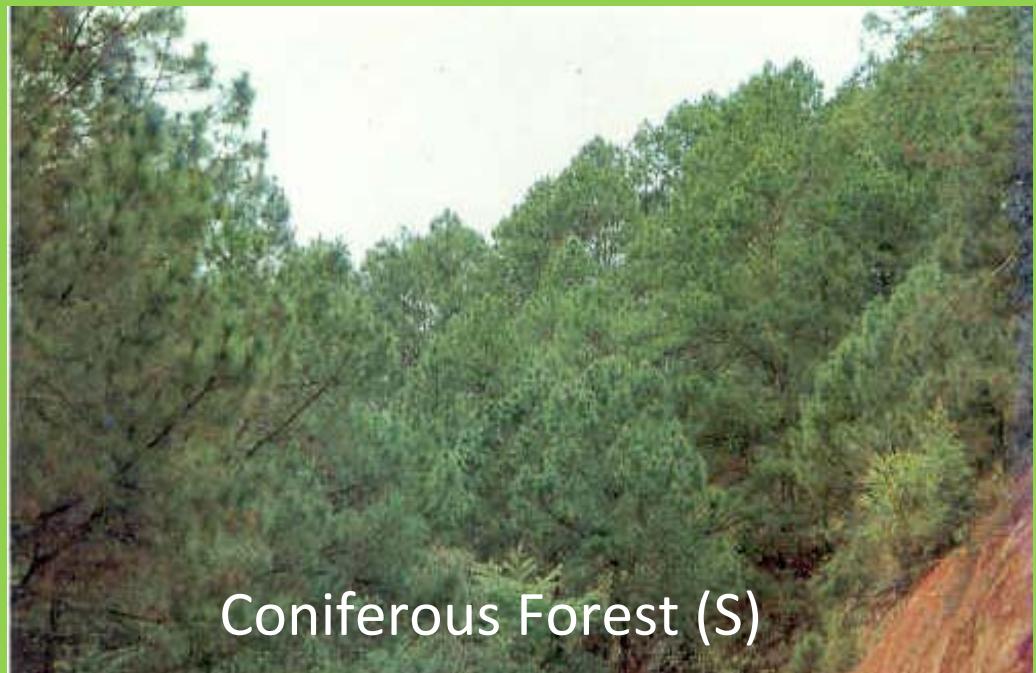
The Dry Evergreen Forest



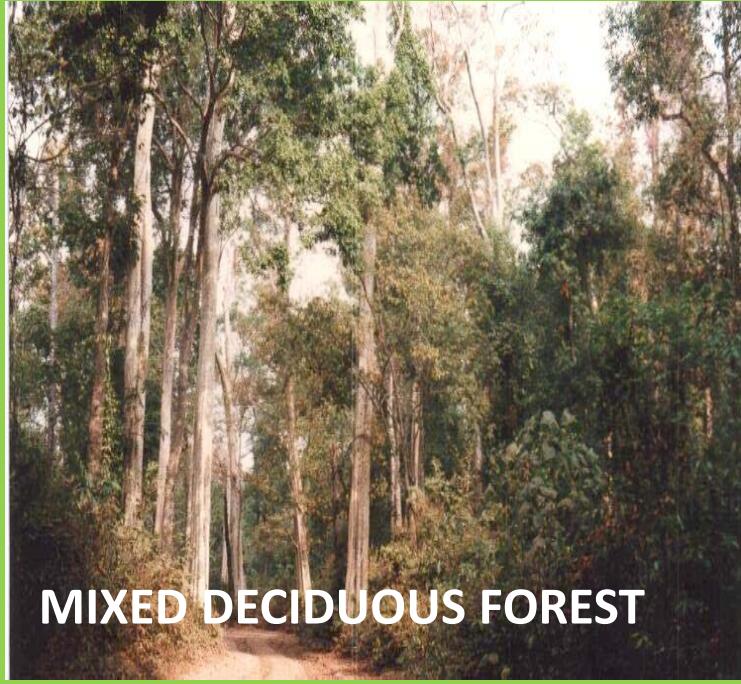
Dry Dipterocarp Forest



Gallery Forest



Coniferous Forest (S)



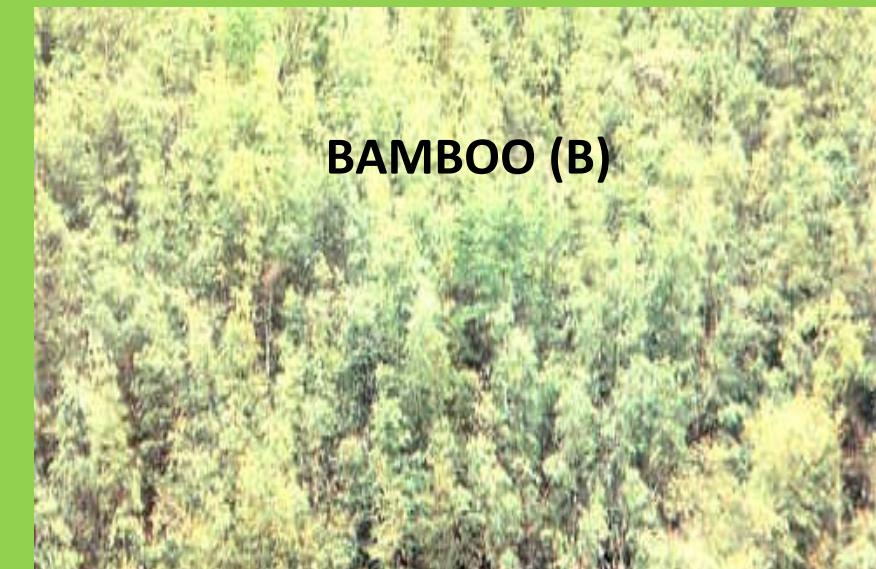
MIXED DECIDUOUS FOREST



MIXED BROADLEAVED & CONIFEROUS FOREST

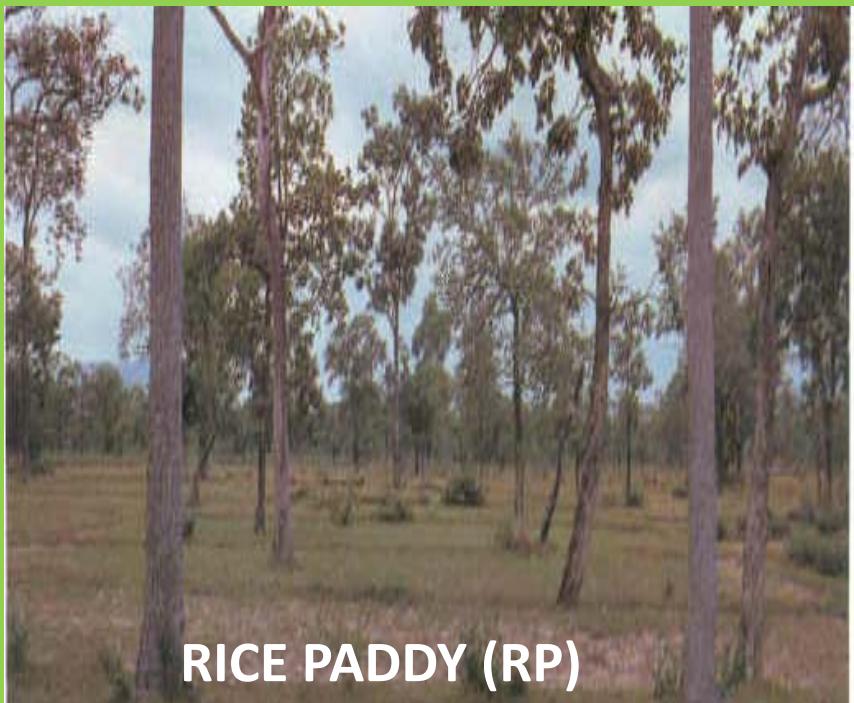


FOREST PLANTATION

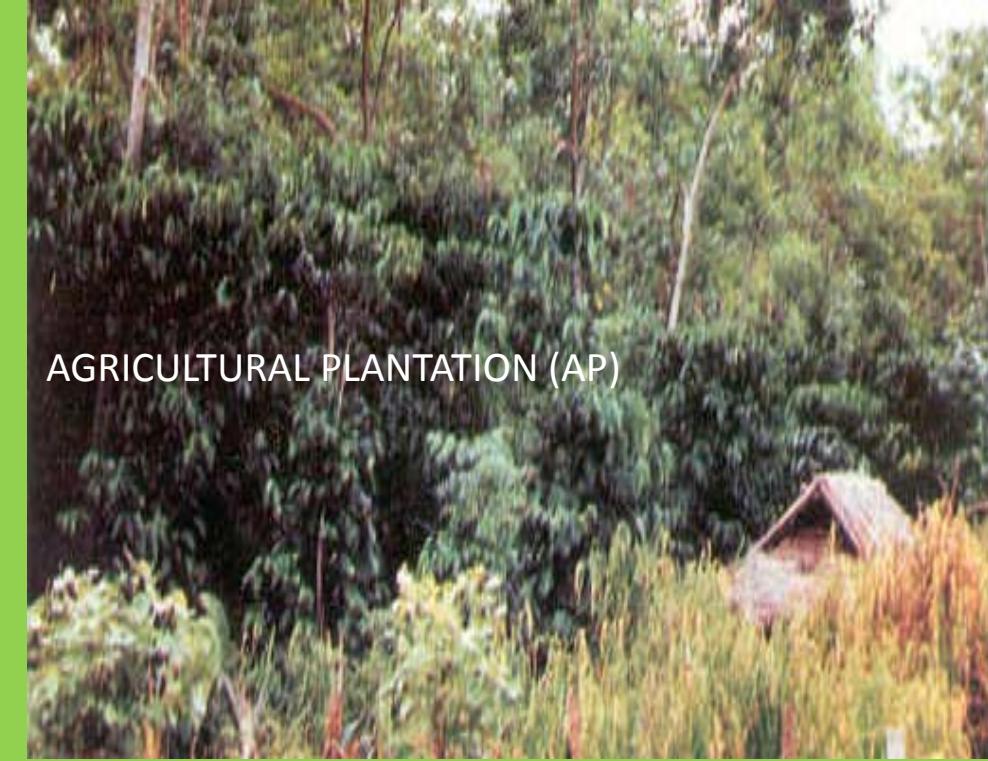


BAMBOO (B)

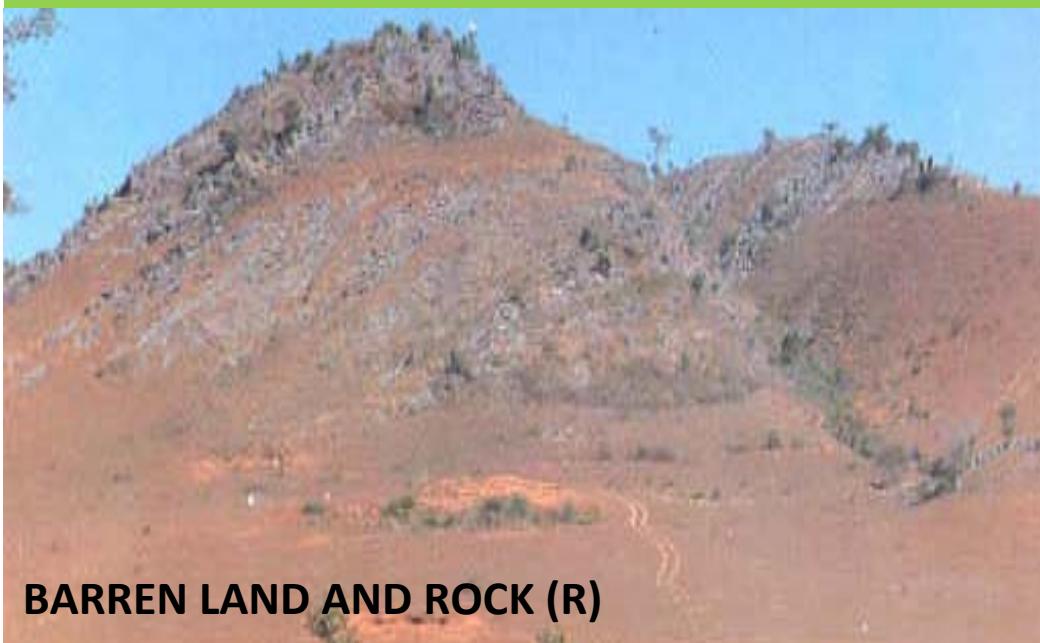




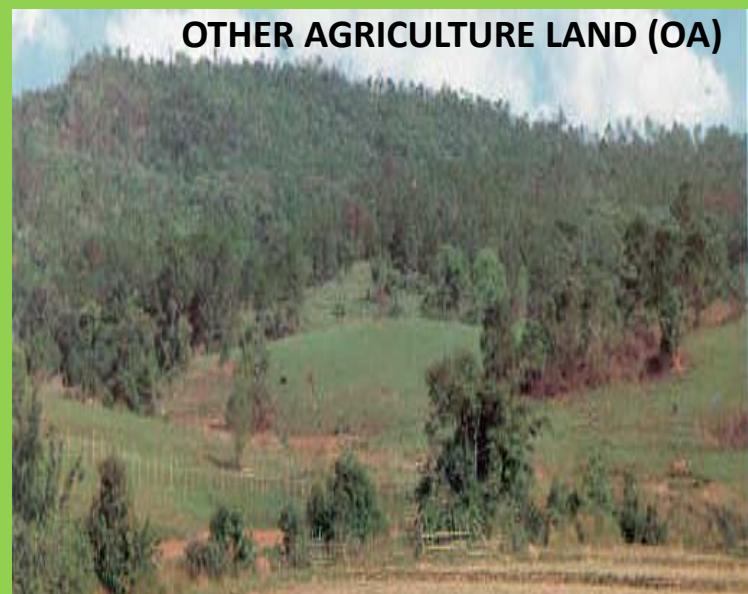
RICE PADDY (RP)



AGRICULTURAL PLANTATION (AP)



BARREN LAND AND ROCK (R)



OTHER AGRICULTURE LAND (OA)



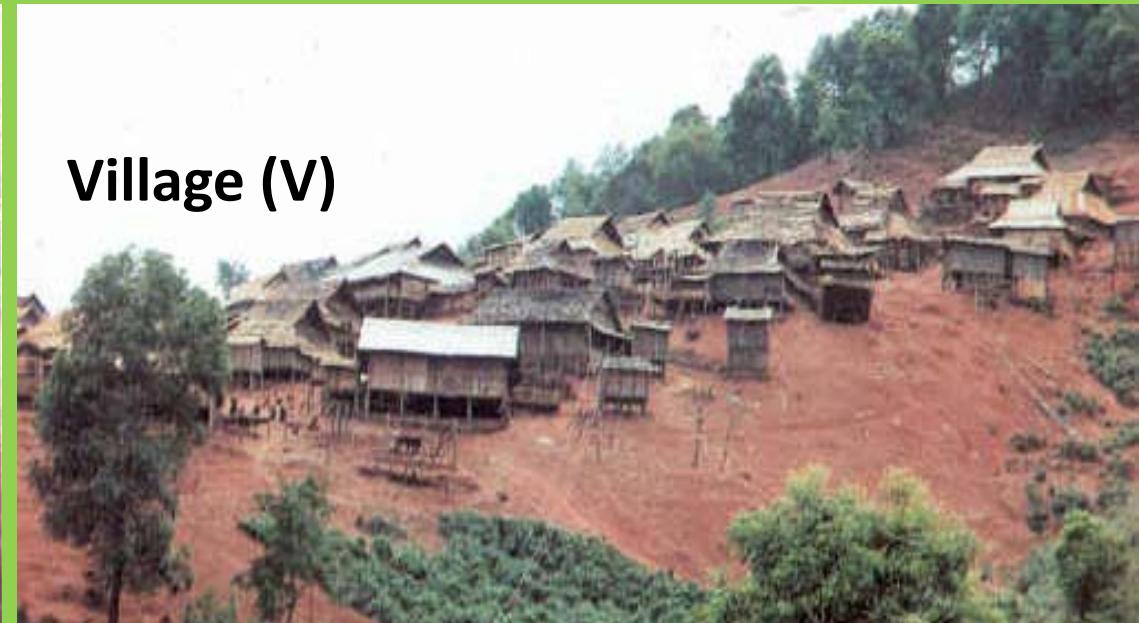
GRASS LAND (G)



SWAMPS (SW)



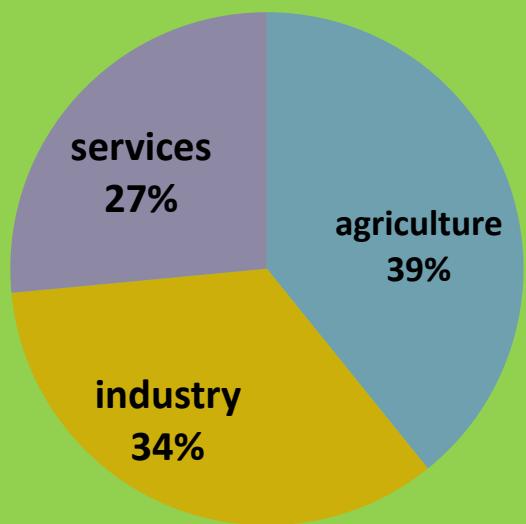
OTHER AREAS (O)



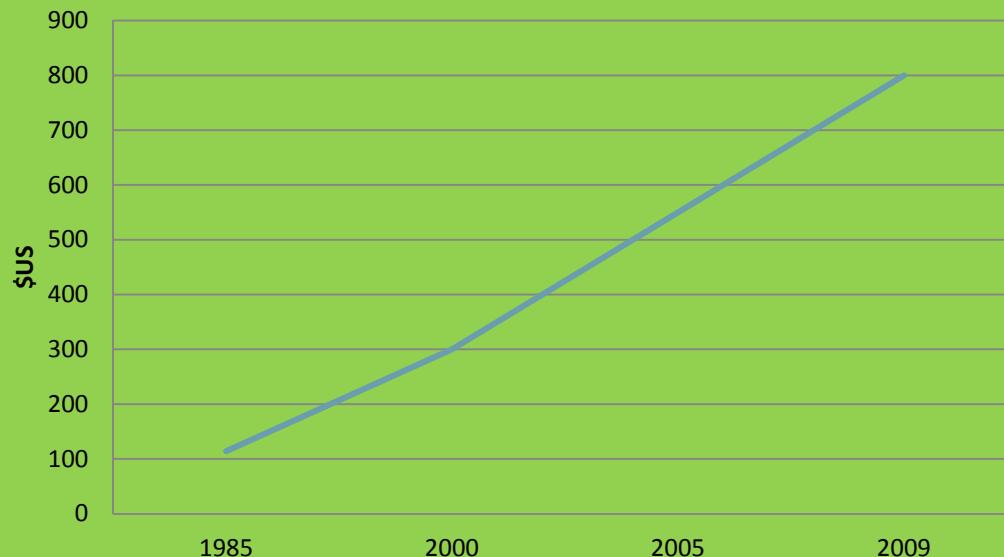
Village (V)

Natural resources and GDP

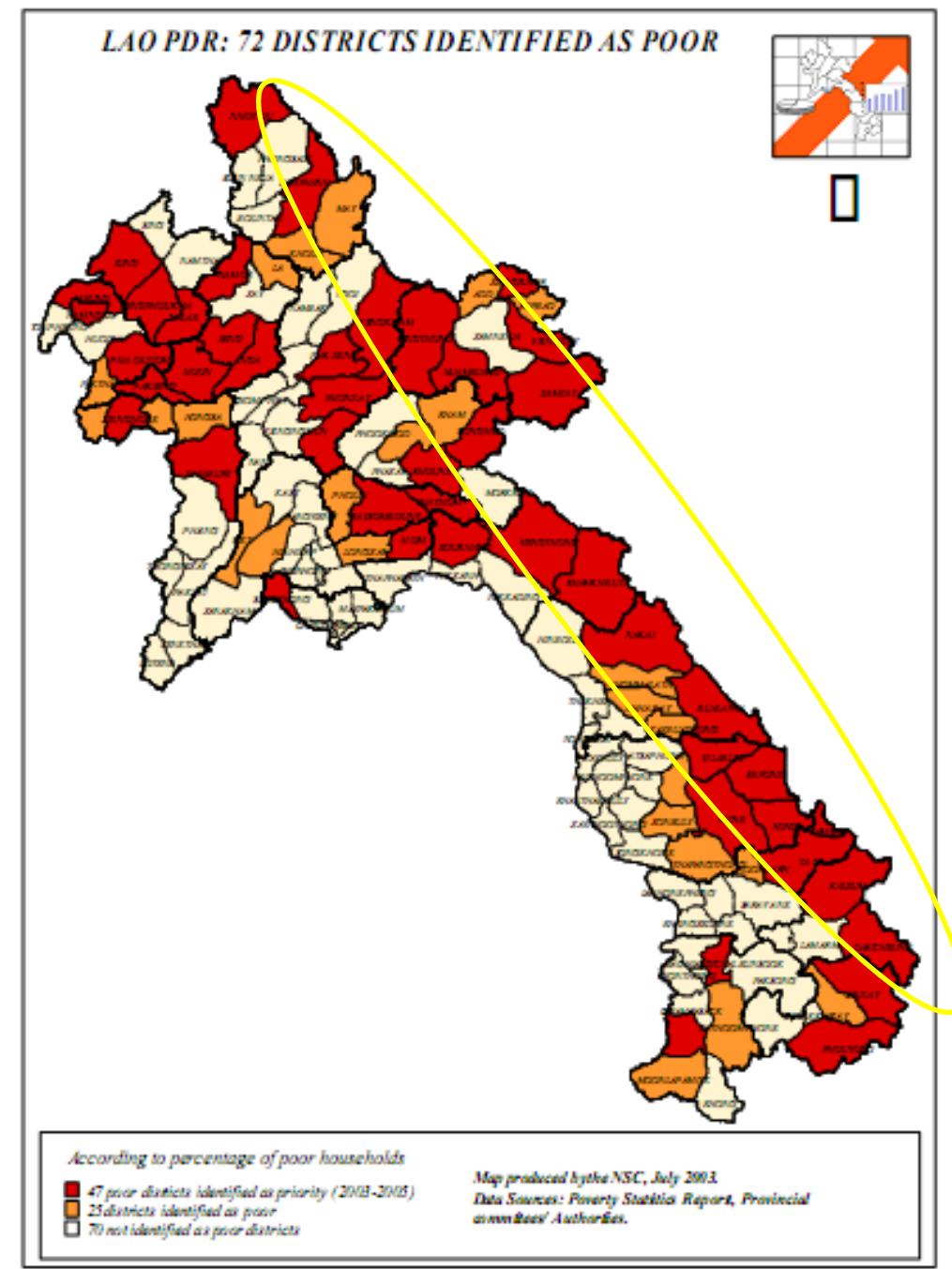
GDP (2008 est.)



GDP per capita, 2008 est.



- Agriculture and natural resources is main of GDP (1991-2002)
- Industry: mainly is hydropower (run off and dam), mining ...
- Services: mainly is tourism



Distribution of poor districts

- 47 identified poorest
- 25 identified poor
- 70 was not identified
- **> 50% under \$360 per capita**

Threats on natural resources and forest

Shifting cultivation & plantation concession



Population growth (2.3%)

Large livestock production



Infrastructure development



Over harvest of natural resources



Illegal timber harvesting



Khob jai

THANK YOU