WWF Greater Mekong Programme

Agriculture Driver Study

Presentation to MRC BDP Workshop

12 March 2008

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Supported by The Coca-Cola Company

Outline

- Global trends in supply and demand and key players in the supply chain
- Investment Trends and Regional/bilateral integration
- Current and predicted cultivation in key parts of the Lower Mekong Basin
  - Sugar and rubber
- Biofuel Trends
- Poverty Alleviation, Environmental Considerations, and Recommendations for BDP

Supply and demand: SUGAR

- Major exporters: Brazil (cane sugar), EU (beet sugar), Thailand
- Highly distorted international market
- Mekong countries:
  - Thailand: major sugar producer and exporter (60-70% of production)
  - Vietnam: important sugar producer mainly for domestic consumption (sugar not competitive)
  - Laos, Cambodia: mainly domestic consumption, some export

Supply and demand: SUGAR

- Trends:
  - Continued increase in demand, driven esp. in Asia (China, India and others)
  - Some market distortions to be addressed
  - EU imports to increase after Sugar Reform esp. from LDCs (duty- and quota-free access from July 2009)
  - Sugarcane diverted for biofuel production (esp. Brazil), opportunities for other producers (e.g. Thailand)
  - Expected increase in price (due to EU sugar reform and biofuel production)

Supply and demand: SUGAR

- Key Players:

Sugar refineries (link growers and exporters, contract farming)

  - Thailand: refineries Thai private-owned
  - Vietnam: until recently state-owned, now some foreign investors (e.g. Bourbon, Tate & Lyle – joint ventures with locals)
  - Laos: Mitr Phol (Thai), Tate & Lyle
  - Cambodia: Thai-Cambodian joint venture

Supply and demand: RUBBER

- Major exporter: Thailand
- Mekong countries:
  - Thailand: by far the biggest rubber exporter, esp. to China
  - Vietnam: increasingly important exporter for rubber (esp. to China) and timber products, also major importer for processing/re-export
  - Laos, Cambodia: entire production exported to China, Thailand and Vietnam for processing

Supply and demand: RUBBER

- Trends:
  - Consumption expected to increase (esp. China with double-digit import growth until 2010, also India, EU and others)
  - Petroleum-based synthetic substitutes possibly less attractive with high oil price
  - High rubber prices until 2011/2012 due to tight market

Supply and demand: RUBBER

- Key Players: exporters
  - Thailand: central markets dominated by members of the Thai Rubber Association
  - Vietnam: State-run companies
  - Laos: Chinese, Vietnamese and Thai crossborder companies (e.g. Thai Hua Rubber Public Company, Dak Lak Rubber Company)
  - Cambodia: mainly state-owned plantations but changing, Vietnamese investors and buyers

Investment trends: Sugar and Rubber

- **Thailand:** overcapacity in sugar processing, emphasis on high-end rubber processing
- **Vietnam:** overcapacity in sugar processing, new (value-added) rubber processing factories planned
- **Laos, Cambodia:** virtually no rubber processing, new sugar refineries planned

Production trends: Biofuels

- **2006**: Global Bioethanol production
  = 40 billion litres (90% Brazil and US)
- **2006:** Global biodiesel production
  = 6 billion litres (75% EU)
- **2008:** 2nd January Oil= $100/barrel
- **2020:** WB predicts biofuels may account for 5% of global transport energy (now 1%)
- **2050:** FAO predicts 20% of the world's arable land may be used for biofuels
  (now 1%)

Production trends: Biofuels

- **Thailand:** developing bioethanol (sugarcane, cassava) and biodiesel (palm oil, jatropha), BOI approved 5 new ethanol plants in the North-east with 2 million litres/day capacity

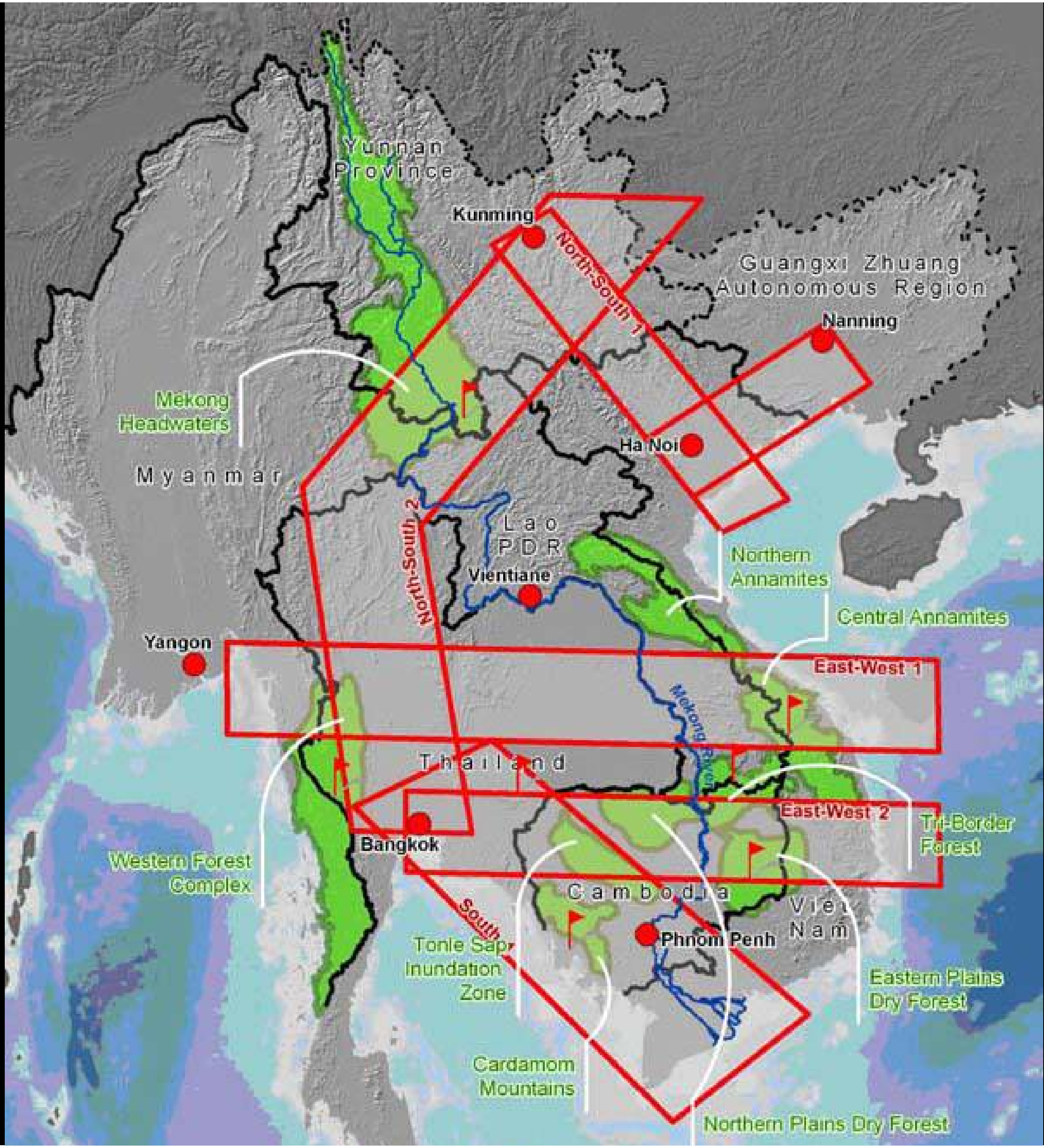
  (>$500 million investment incl. some overseas)
- **Vietnam:** plans for 1 mill ha jatropha on "unused" land
- **Cambodia:** Jatropha
  - up to 500,000 ha in Kampong Speu and Kampong Cham, Japanese investor
  - 100,000 ha in Stung Treng, foreign investor
- **Laos:** Investor interest (jatropha, others?)
- **GMS:** Biofuels & Rural Renewable Energy Initiative

Regional & Bilateral Integration

- **Greater Mekong Subregion (GMS) Program**
  - Cambodia, China, Laos, Myanmar, Thailand and Vietnam
  - supported by the Asian Development Bank (ADB) and other donors
  - Focus on economic cooperation, incl. infrastructure and trade facilitation
  - Core Agriculture Support Program
  - Economic corridors (north-south, east-west and south)

ACMECS, ASEAN

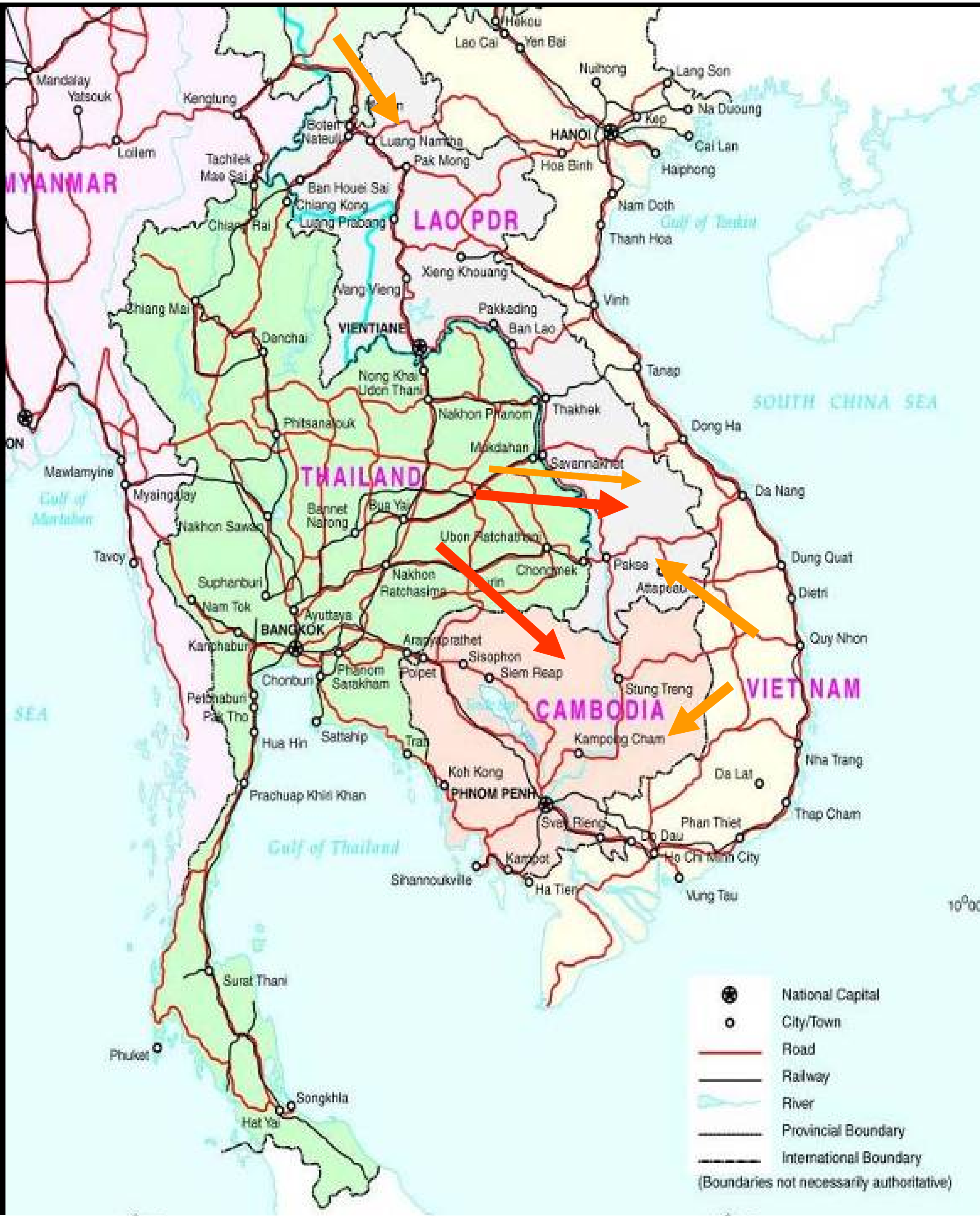
Bi-lateral: China!



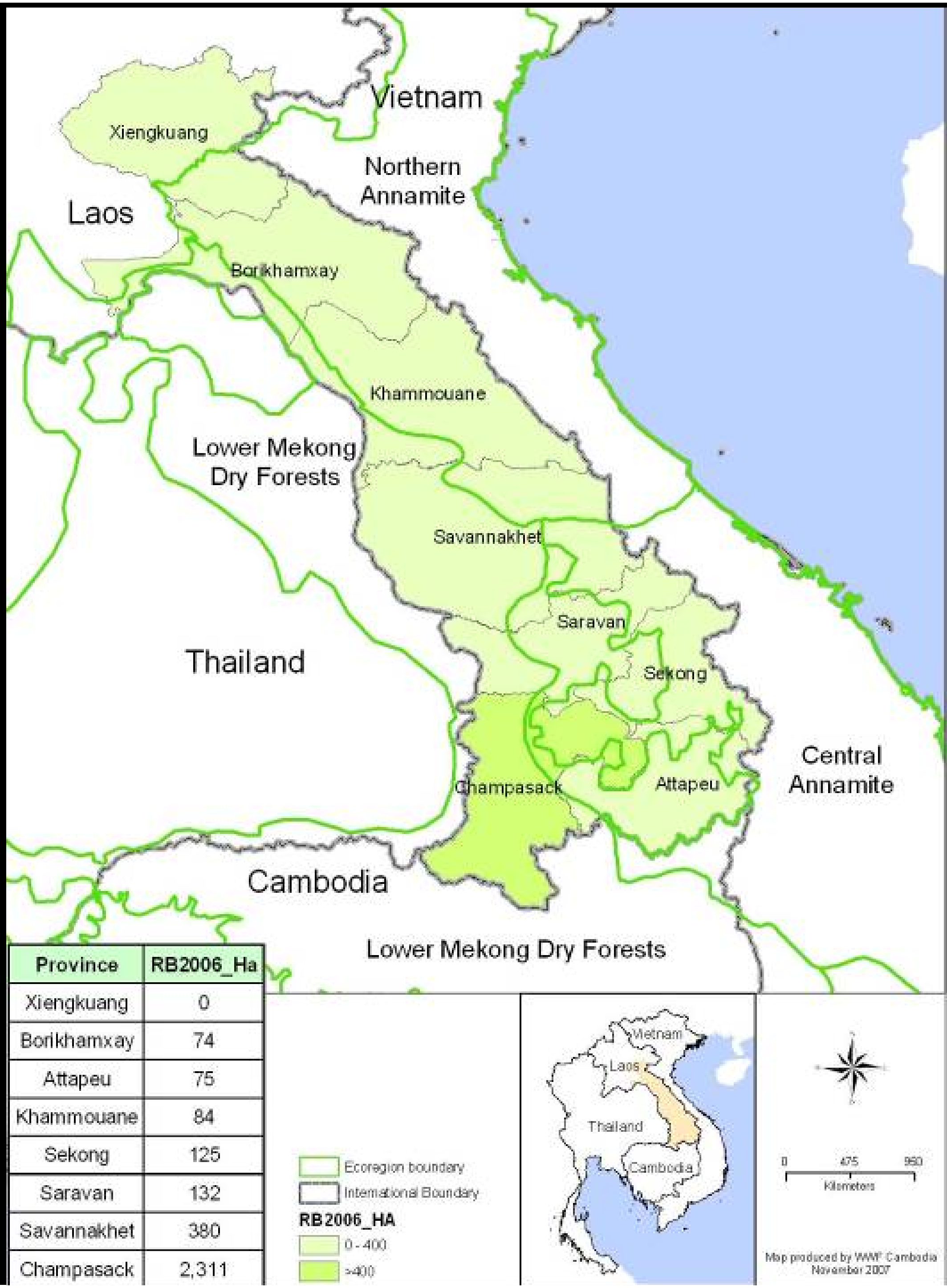
Yunnan Province
Kunming
North-South 1
Guangxi Zhuang Autonomous Region
Nanning
Mekong Headwaters
Ha Noi
Myanmar
North-South 2
Lao PDR
Vientiane
Northern Annamites
Central Annamites
Yangon
East-West 1
Mekong River
Thailand
East-West 2
Tri-Border Forest
Bangkok
Western Forest Complex
Cambodia
Viet Nam
South
Phnom Penh
Tonle Sap Inundation Zone
Eastern Plains Dry Forest
Cardamom Mountains
Northern Plains Dry Forest

Mainly sugarcane

Mainly rubber

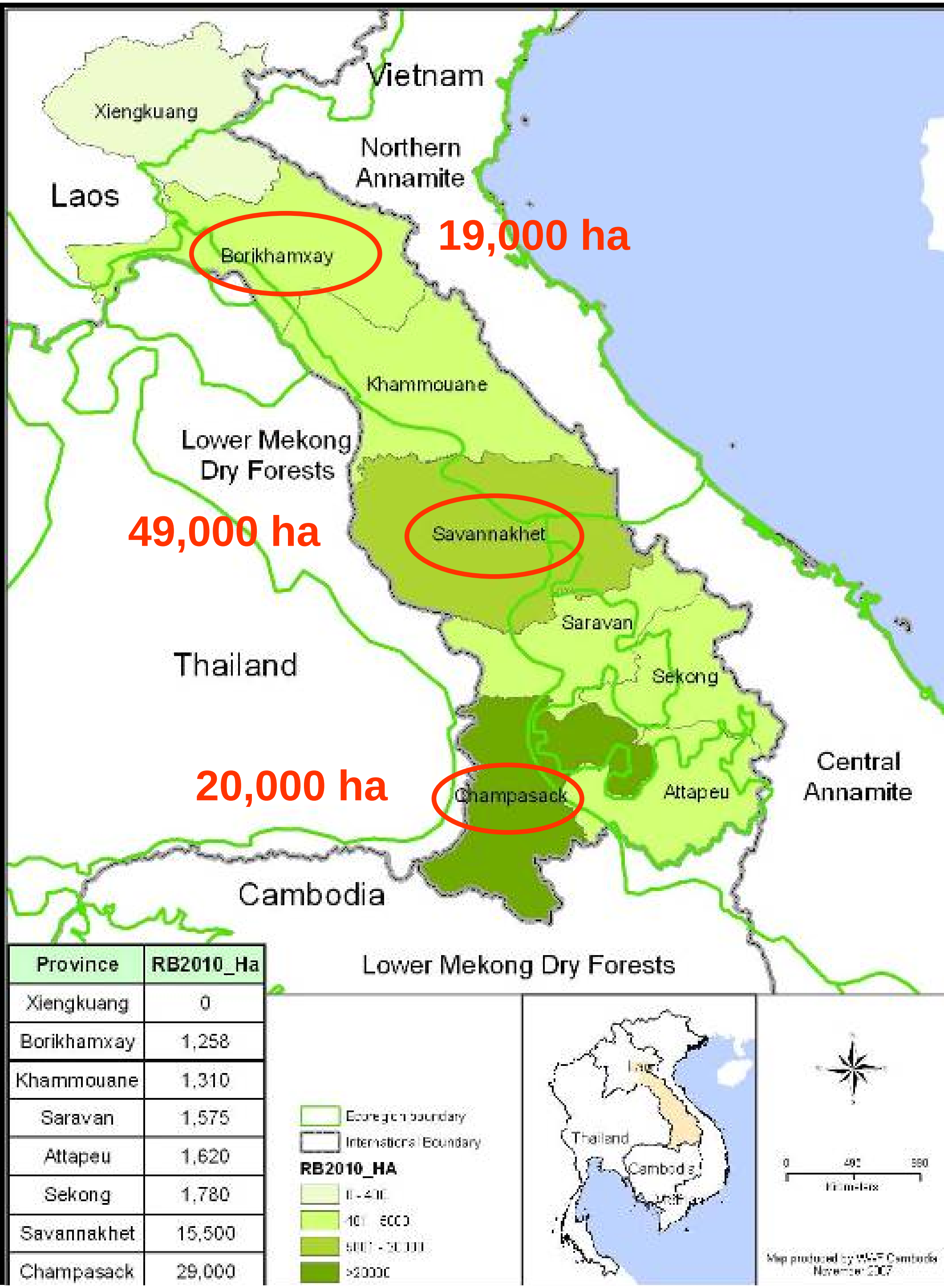


Laos Rubber 2006



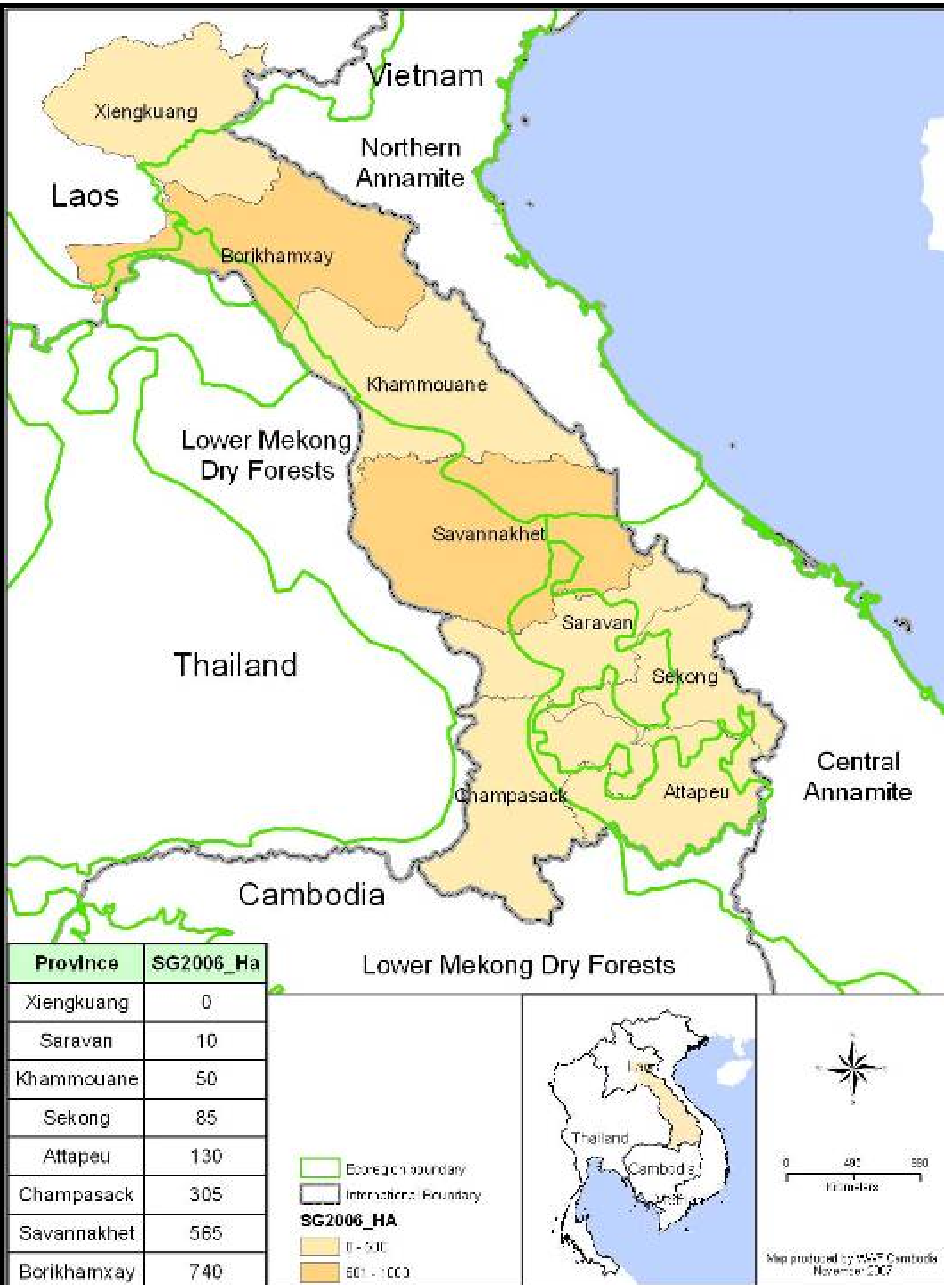
Province	RB2006_Ha
Xiengkuang	0
Borikhamxay	74
Attapeu	75
Khammouane	84
Sekong	125
Saravan	132
Savannakhet	380
Champasack	2,311

Laos Rubber 2010



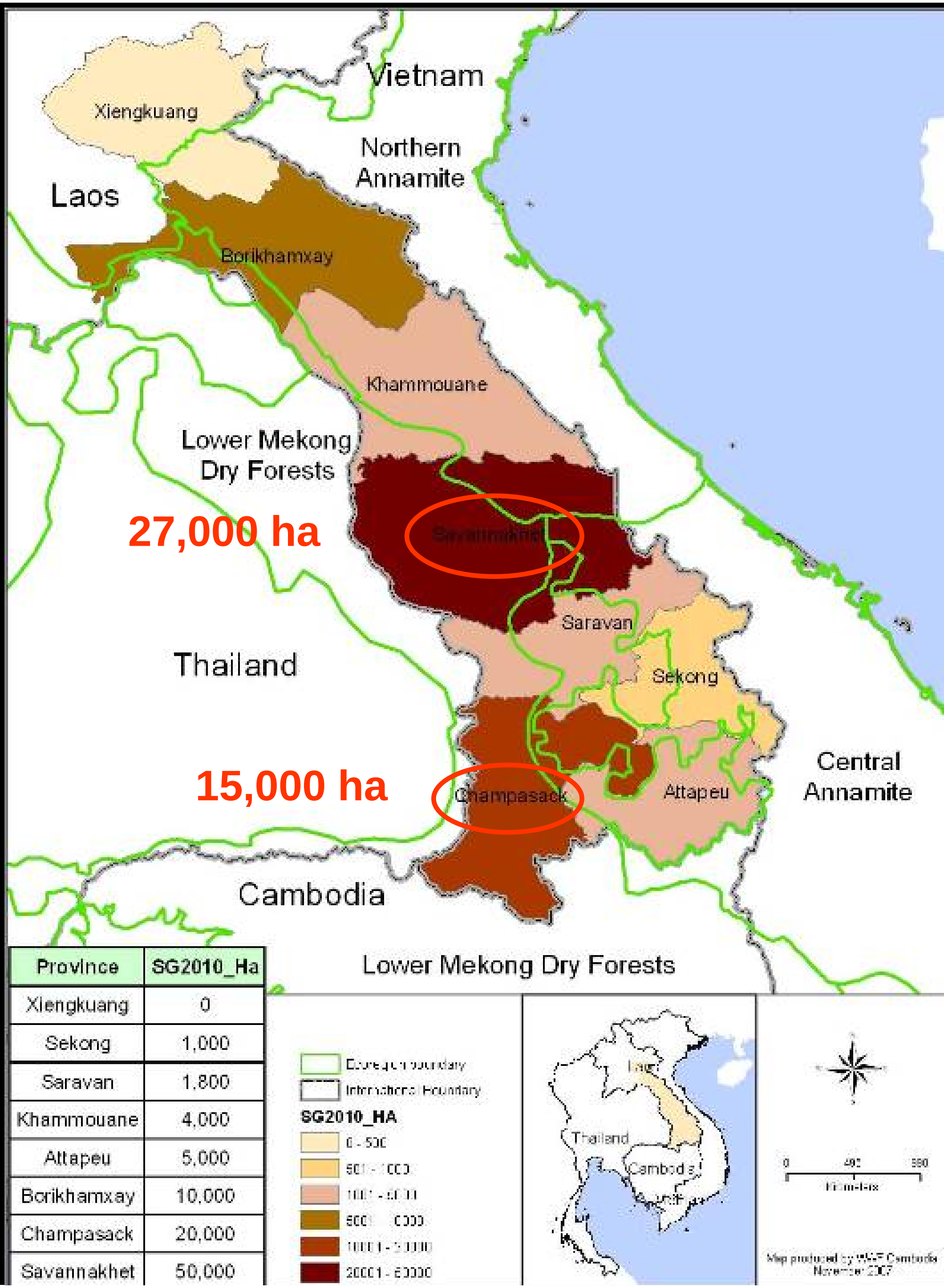
Province	RB2010_Ha
Xiengkuang	0
Borikhamxay	1,258
Khammouane	1,310
Saravan	1,575
Attapeu	1,620
Sekong	1,780
Savannakhet	15,500
Champasack	29,000

Laos Sugar 2006



Province	SG2006_Ha
Xiengkuang	0
Saravan	10
Khammouane	50
Sekong	85
Attapeu	130
Champasack	305
Savannakhet	565
Borikhamxay	740

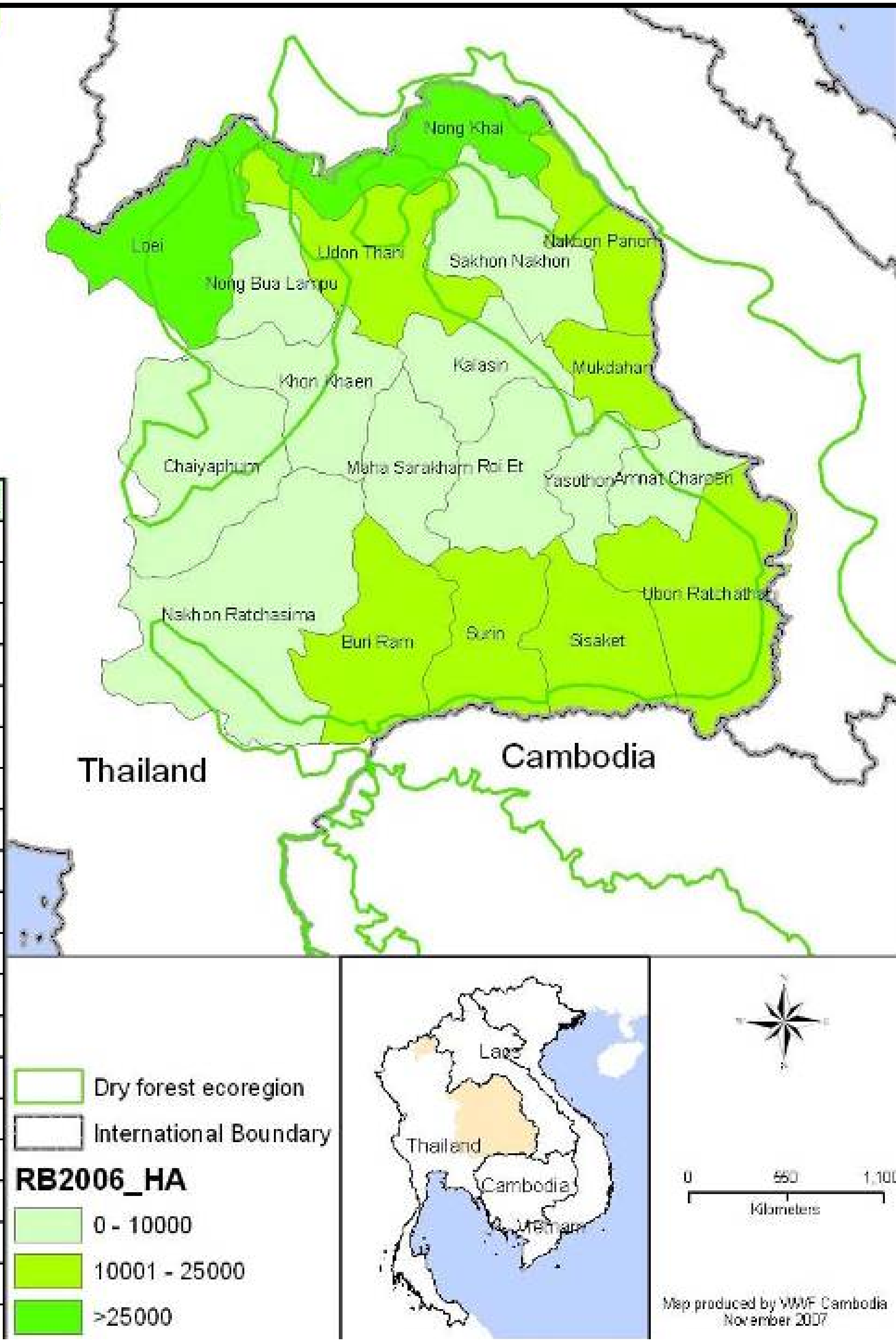
Laos Sugar 2010



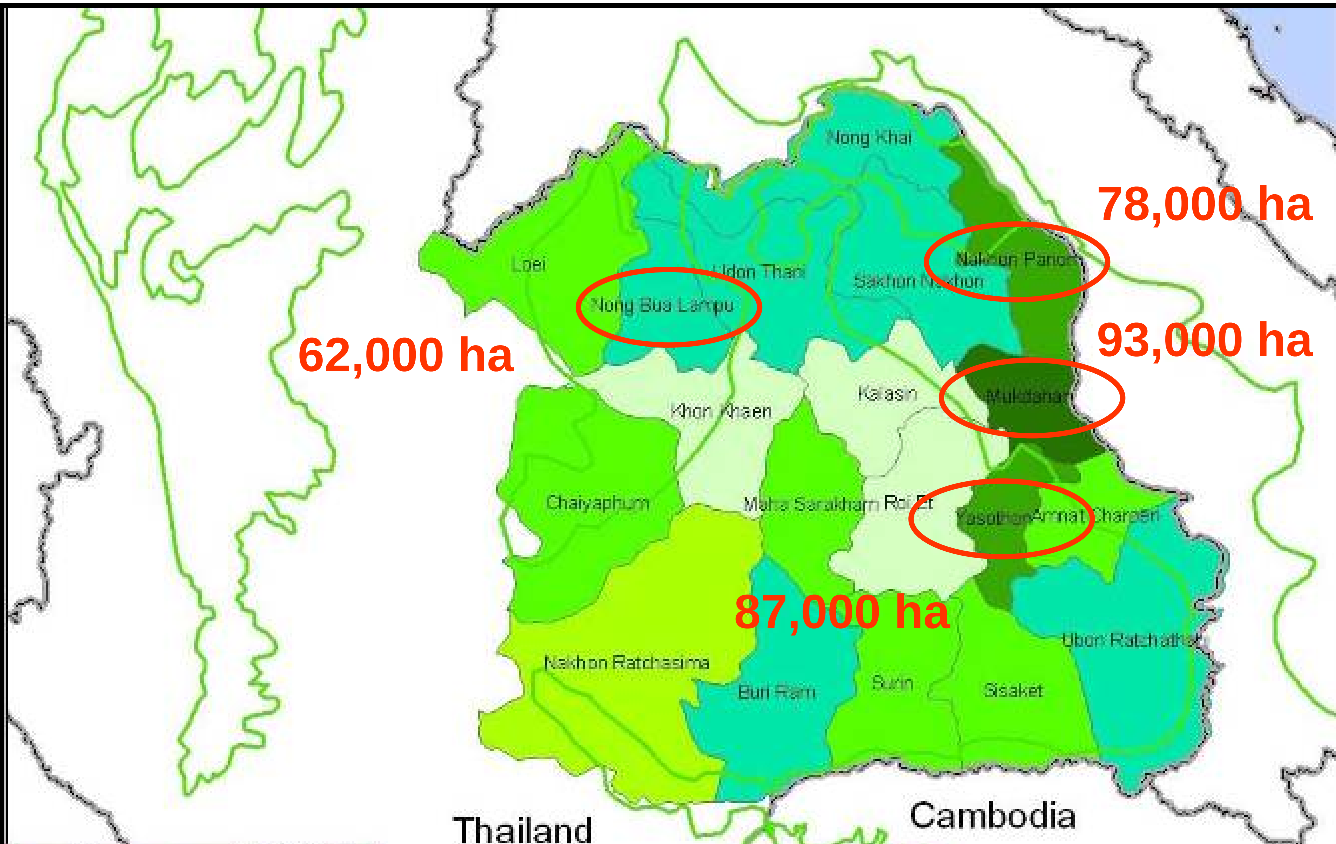
Province	SG2010_Ha
Xiengkuang	0
Sekong	1,000
Saravan	1,800
Khammouane	4,000
Attapeu	5,000
Borikhamxay	10,000
Champasack	20,000
Savannakhet	50,000

Thailand Rubber 2006

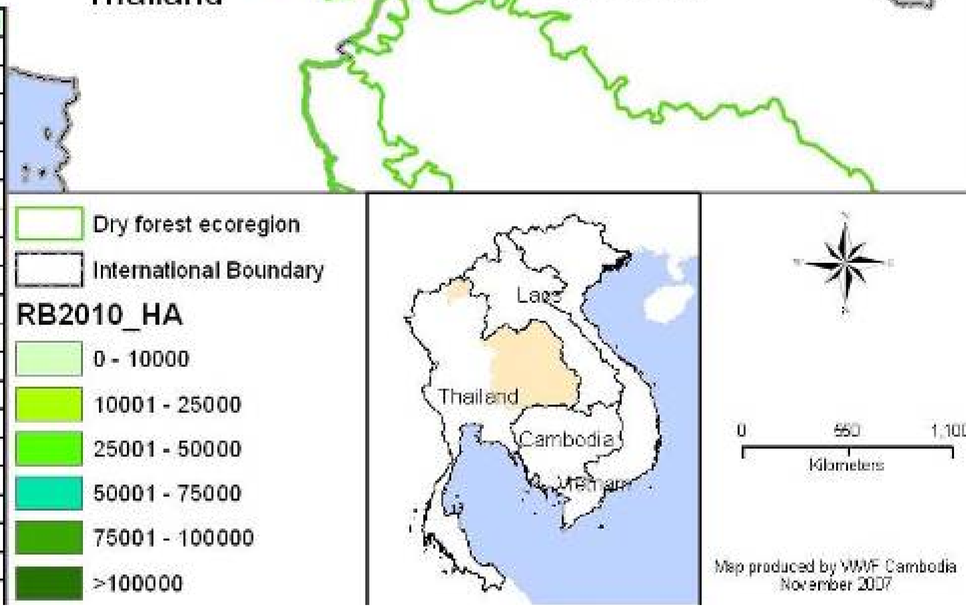
Province	RB2006_Ha
Amnat Charoen	3,712
Buri Ram	22,021
Chaiyaphum	2,946
Chiangrai	7,886
Kalasin	5,197
Khon Khaen	2,974
Loei	31,348
Maha Sarakham	444
Mukdahan	10,841
Nakhon Panom	13,172
Nakhon Ratchasima	1,940
Nong Bua Lampu	4,955
Nong Khai	68,035
Roi Et	2,741
Sakhon Nakhon	9,946
Sisaket	16,954
Surin	10,312
Ubon Ratchathani	17,264
Udon Thani	16,318
Yasothon	5,221



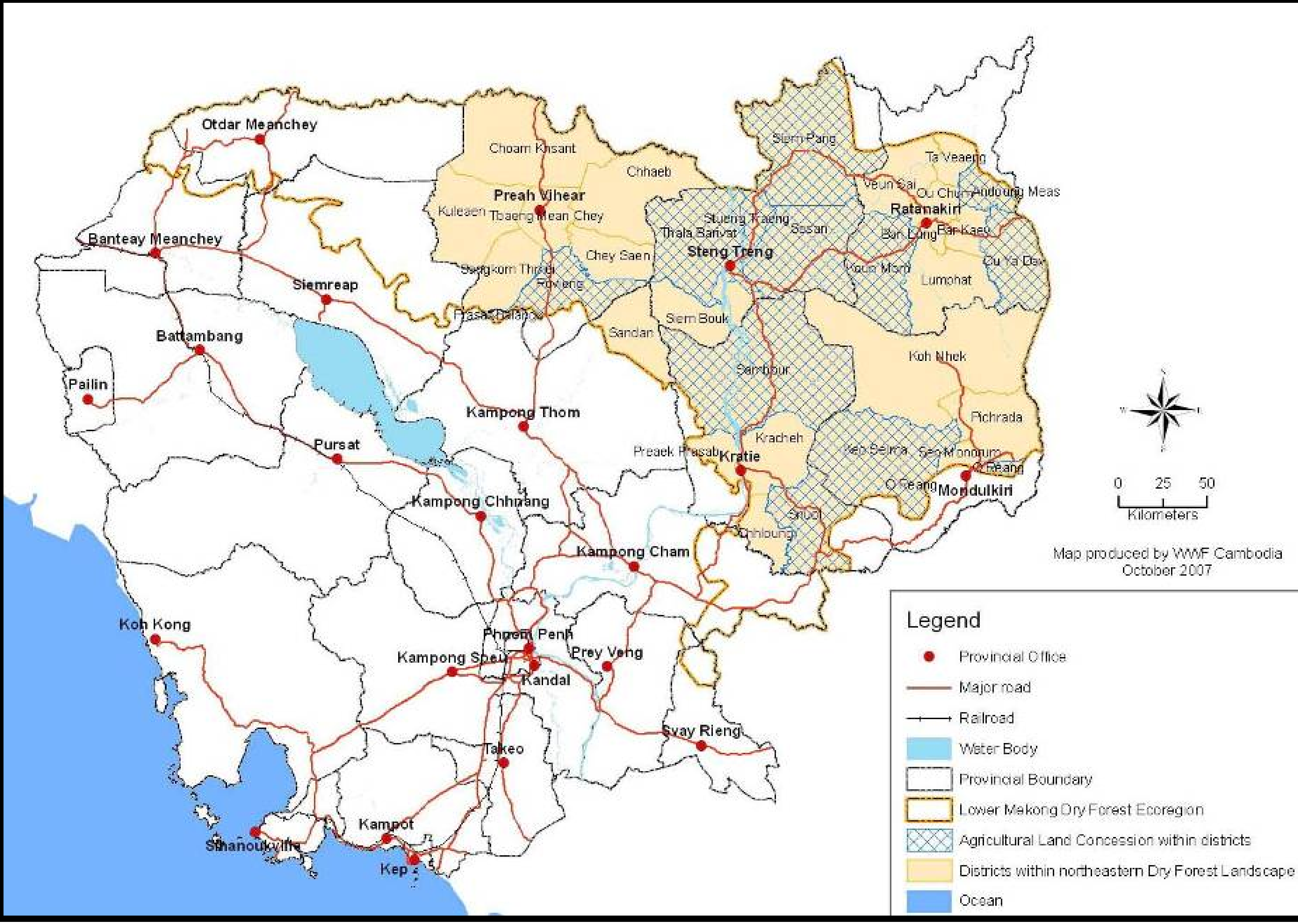
Thailand Rubber 2010



Province	RB2010_Ha
Amnat Charoen	36,716
Buri Ram	75,995
Chaiyaphum	38,079
Chiangrai	46,618
Kalasin	2,926
Khon Khaen	8,116
Loei	42,188
Maha Sarakham	30,750
Mukdahan	104,081
Nakhon Panom	90,729
Nakhon Ratchasima	24,947
Nong Bua Lampu	66,880
Nong Khai	68,265
Roi Et	2,677
Sakhon Nakhon	66,241
Sisaket	29,432
Surin	34,051
Ubon Ratchathani	61,150
Udon Thani	59,089
Yasothon	92,684



Economic land concessions in Northern and Eastern Cambodia



Where will the greatest changes be?

	Sugar	Rice	Rubber
Vietnam	Nghệ An. Gia Lai, Đắk Lắk 65,000 ha	Nghệ An, Hà Tĩnh, Đắk Nông, Lâm Đồng, Quảng Bình, Gia Lai 82,000 ha	Bình Phước, Đắk Lắk, Gia Lai, Kon Tum, Đắk Nông 94,000 ha
Laos	Savannakhet Champasack Borikhamxay 88,000 ha	Savannakhet Champasack Saravan 144,000 ha	Champasack Savannakhet 42,000 ha
Thailand	Limited	Limited	Mukdahan, Yasothon, Nakhon Panom, Nong Bua Lampu 319,000 ha
Cambodia	(Including Biofuels) Stung Treng, Ratanakiri, Mondulkiri , Kampong Speu, Kampong Cham		

Environmental Considerations

- **NE Thailand:** Need to consider implications of increase in rubber and some shift from sugar cane to cassava (some positive and negative) and plans for more irrigated rice
- **NE Cambodia:** Need to consider severe impacts of large-scale conversion of forest areas to large-scale plantations – especially in catchments of 3Ss major Mekong tributaries (e.g. impacts on hydrology)
- **Southern Laos:** Need to consider impacts of conversion of forest and wetlands to plantations (eg loss of floodplain fisheries productivity)

Poverty Alleviation

- **There will be winners and losers – e.g. biofuels**

  - biofuel craze is increasing commodity prices (but also increasing food prices)

  - farmers with enough land to grow biofuel crops and their own food can be winners, landless net-food purchasing rural households may be losers

  - Biofuel production is labour intensive, creating many new jobs

Poverty Alleviation

- **government support for smallholders to enable them to take advantage of opportunities**
  - credit schemes,
  - training and extension services
  - support in contract farming negotiations,
  - creation of marketing cooperatives

Poverty Alleviation

- **Overall poverty-alleviation aspects of plantation agriculture development could be improved by:**

  - ensuring plantations have minimal impacts on local peoples' access to NTFPs and aquatic resources on which their subsistence/livelihood depends (through LUP, Concession allocation processes and BMPs)

Some recommendations for BDP

- Consider agriculture scenarios for different sub-basins and their implications (more detailed than WWF studies – down to district/sub-district level)

  - conversion of forest catchment and impacts on hydrology and sediment flows (further implications for hydropower)

  - degradation of wetlands and implications for fisheries productivity, water supply and natural purification etc

  - increasing pollution of water courses by agricultural chemicals

  - increasing demand for irrigation

Some recommendations for BDP

- Communicate implications of scenarios in IWRM context to key development actors
- Engage large private sector players (Mitrphol, Thai Charoen Corporation, Tate and Lyle, etc) around consideration of reducing impacts in critical areas for ecosystem functions, and use of Best Management practices
- Support development of capacity for integrated sub-basin management

  - start with sub-basins where changes are happening fastest, or will be greatest (e.g. Xe Bang Hien, Xekong, Sesan, Srepok)