

# MRC SEA FOR HYDROPOWER ON THE MEKONG MAINSTREAM

Economics theme paper:  
Baseline

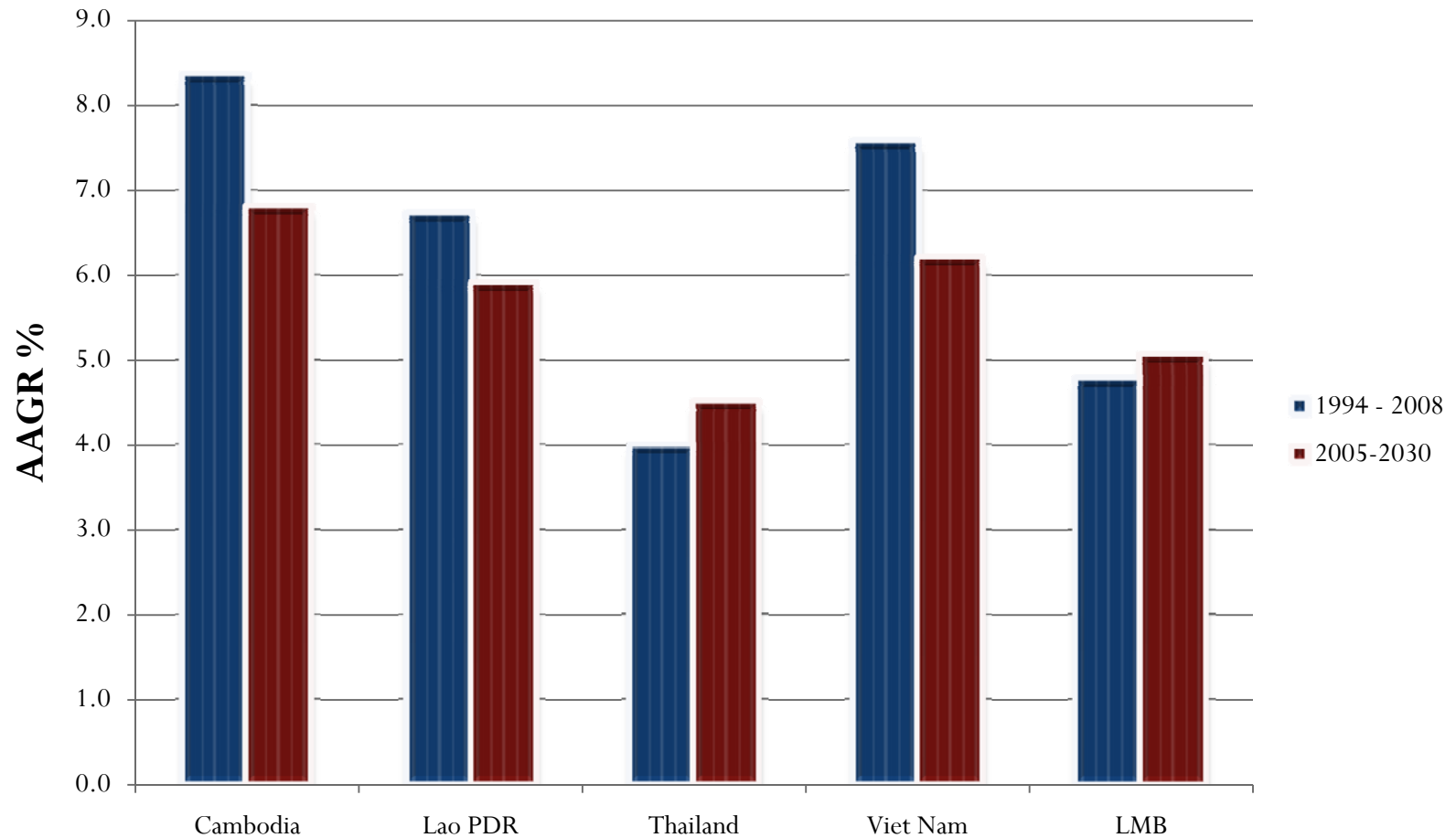
# Key issues in the economics theme

- What are the distributional impacts on local and national economies?
- What are the economic costs and benefits to other development sectors?
- What are the effects on the economic contribution of non-monetized environmental goods and services?
- What are the FDI and foreign exchange implications?
- What are the economic costs and benefits of avoidance, enhancement and mitigation?

# Indicators used in SEA and BDP analysis

- Net incremental economic value of
  - Irrigation
  - Power production
  - River transport
  - Flood damage
  - Fisheries production
  - Forests around Tonle Sap
  - Salinity intrusion
  - Erosion
  - Value of habitats
- SEA will emphasize economic linkages and trade-offs between power sector and other sectors
- The SEA will not be valuing the effects of mainstream dams on all those sectors
- The SEA will value effects on sectors and systems where data is available

# Macro-economic growth in LMB

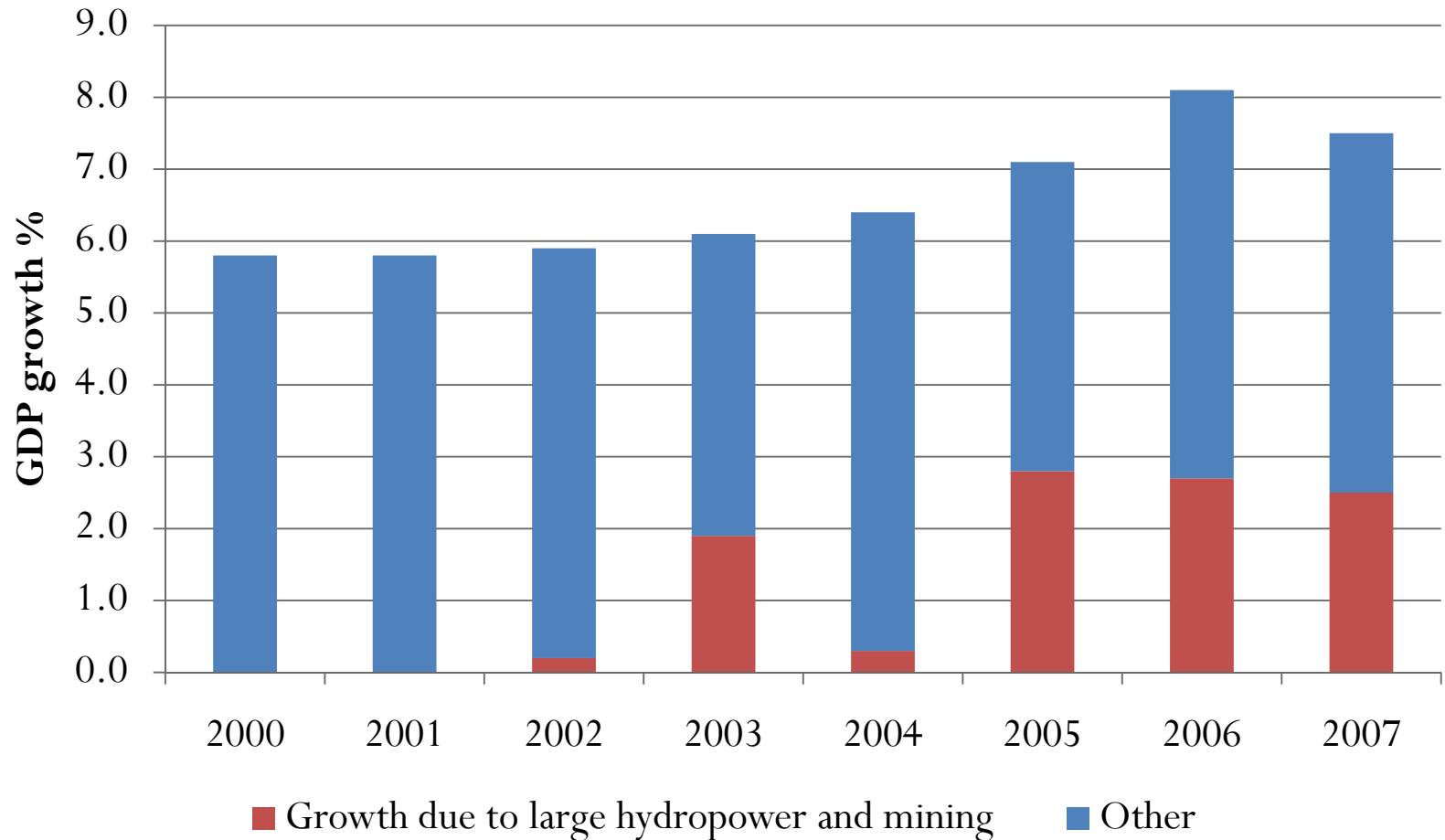


Source: ADB / APERC 2009, WDI, World Bank 2009

# Industrial growth

- Industrial growth in the region is the main driver
- Cambodia, Thailand and Vietnam export –oriented manufacturing industry most important
- In Lao PDR natural resource based industries most important (mining, plantations and hydropower)
- Industrial sector (especially manufacturing) is energy intensive

# Lao PDR contribution of mining and hydropower to economic growth 2000-2007

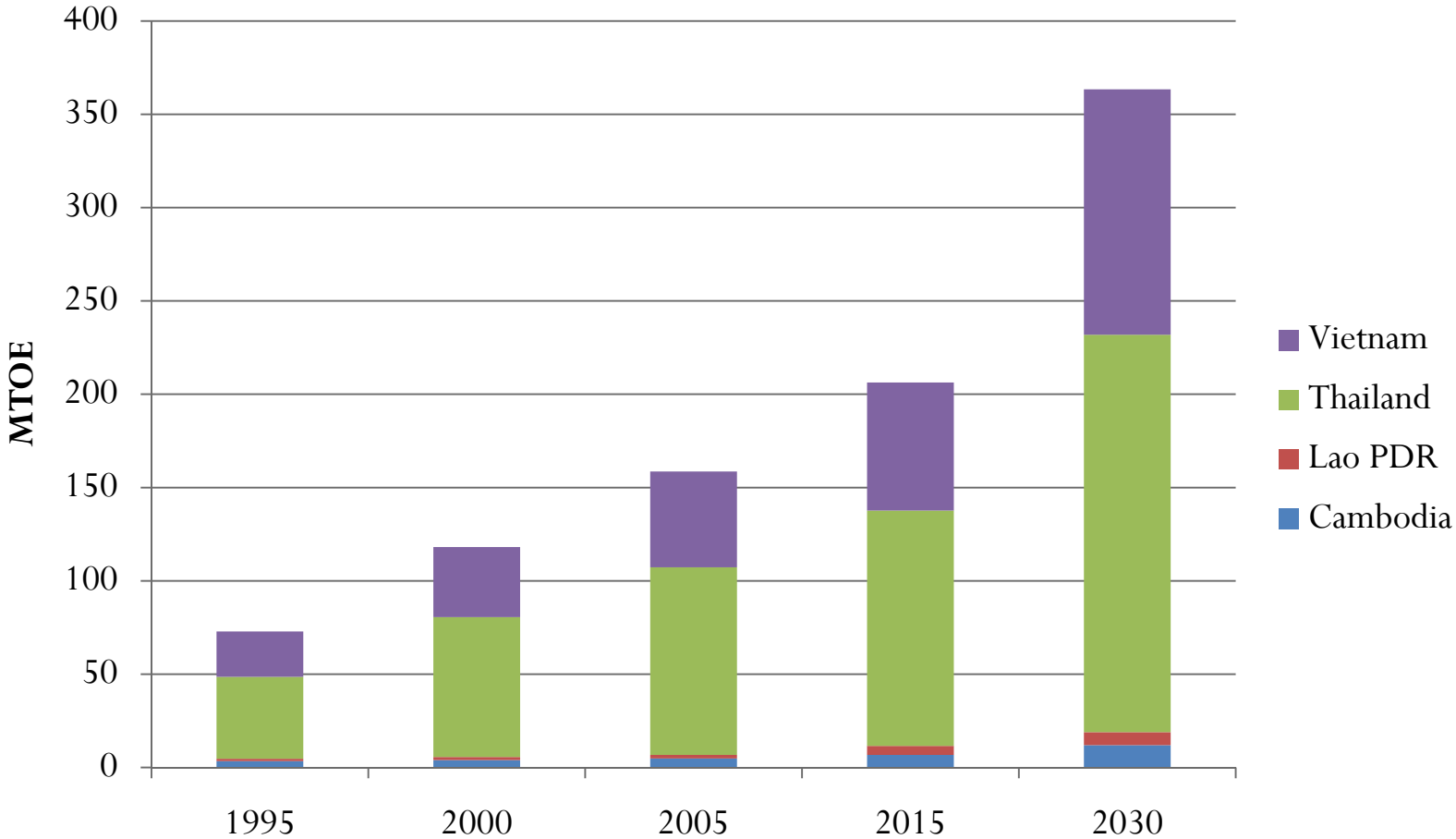


Source: Lao Economic Monitor, World Bank 2008

# Urban growth

- Rapid urbanization
    - Industrial growth concentrated in and around urban areas
    - Increased employment opportunities in urban areas coupled with continuing rural underemployment and poverty
    - Rapid urbanization trend will continue in LMB countries from 47 million in 2005 (28%) to 90 million in 2030 (43%)
  - Implications
    - Higher energy consumption, and in particular, power consumption (through increased electrification)
    - Smaller rural populations (decline of 0.15% annually between 2005 and 2030 in LMB countries)
- (Cambodia and Lao PDR still expected to see rural population growth but at a low level)

# Total primary energy demand in LMB countries 1995-2030



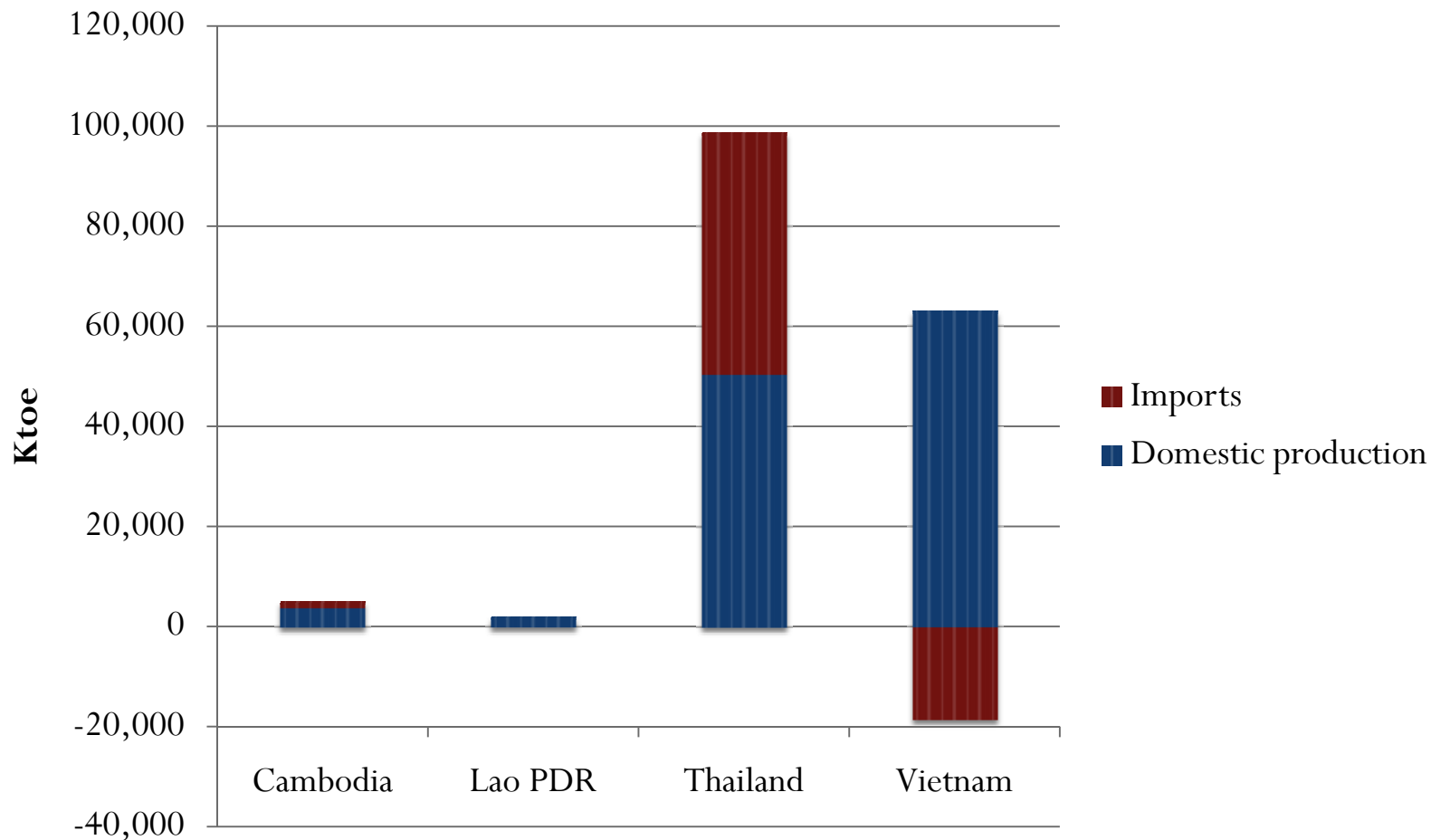
Source: ADB/APERC 2009a



# Energy/economics relationships

- LMB
  - Rapid growth in energy demand is driven by economic growth
  - Increasing emphasis on energy security underpinning economic development
- Cambodia
  - Some of the most expensive power in the world (22c/kwh) – meaning lower competitiveness in manufacturing industry
  - Need for inward investment and foreign exchange
- Lao PDR
  - Development of energy exports to support socio-economic development
  - Need for inward investment and foreign exchange
- Thailand
  - Heavy dependence on energy imports creates uncertainty in investment environment
- Vietnam
  - Current power shortages are inhibiting economic development
  - Current net exporter by 2015 expected to be a net importer

# Primary energy imports and domestic production 2006



# Higher volatility in energy markets



# Economic sector baselines

- **Fisheries**

- Important source of income for riparian communities
- GDP figures under-estimate importance of sector due to high subsistence consumption (in particular for Cambodia and Lao PDR)
- Employment contribution very important but also under estimated (if informal sectors some 30% of Cambodian population involved in sector)

- **Agriculture**

- Some productivity growth over last 10 years
- Declining share of GDP and employment across the LMB countries
- Still most important source of employment to 2030 in LMB (e.g. increased from 53.7 million in 1997 to 57.1 million in 2007)
- Critical in rural livelihoods and poverty reduction
- Future increases in productivity are linked to water availability

# Economic sector baselines

- **Transport**

- Road transport increasingly determinant of continuing economic growth
- Economically, river transportation is unable to compete with roads in UMB
- River navigation extremely important in Mekong delta up to Phnom Penh
- Substantial regional commitment to comprehensive GMS connectivity by 2030

- **Tourism**

- Rapid growth in tourism numbers and revenue over last decade
- On a national basis tourism receipts account for between 7% -23% of export revenues in LMB countries
- Important sector in Cambodia and Thailand, increasingly important in Lao PDR and Vietnam (potentially important source of foreign exchange)
- Expected to be one of the most rapidly growing tourism destinations in the world
- River tourism closely linked to natural resources and landscapes

# Economic benefits from environmental goods and services

- Aquatic and riparian flora and fauna
  - Food, fibre and fuel
- Sand and gravel
  - Extraction for construction purposes throughout the basin
- Wetlands
  - Fisheries, flood control, ground water recharging, storm protection, fuelwood, water purification, nutrient recycling etc.
- Annual flooding and flood control
  - Benefits related to fisheries and nutrient replenishment (also costs related to flood damage)
- Saline intrusion control
  - River flow regimes are important in controlling saline intrusion in the delta
- Erosion control
  - Sediment loads linked to stability in river morphology

# Distributional baseline

Good/service/sector	Benefits	Main beneficiaries
Hydropower	Power, government revenue, export revenue, inward investment (FDI), employment	Governments (local and national) – Cambodia, Lao PDR Developers - regional Power consumers - Cambodia, Thailand, Lao PDR
Capture fisheries	Rural livelihoods/employment income, nutrition	Riparian communities across LMB (Ton Le Sap and Mekong delta in particular)
Agriculture	Rural livelihoods/employment Irrigation, saline control	Riparian communities across LMB, agricultural households across LMB (Mekong delta and NE Thailand in particular)
Transport	Employment, trade	Riparian communities across the LMB, local enterprises in UMB (Thailand and China)
Tourism	Export revenue, inward investment, employment	Local and international tourism operators, local communities

Thank you.