



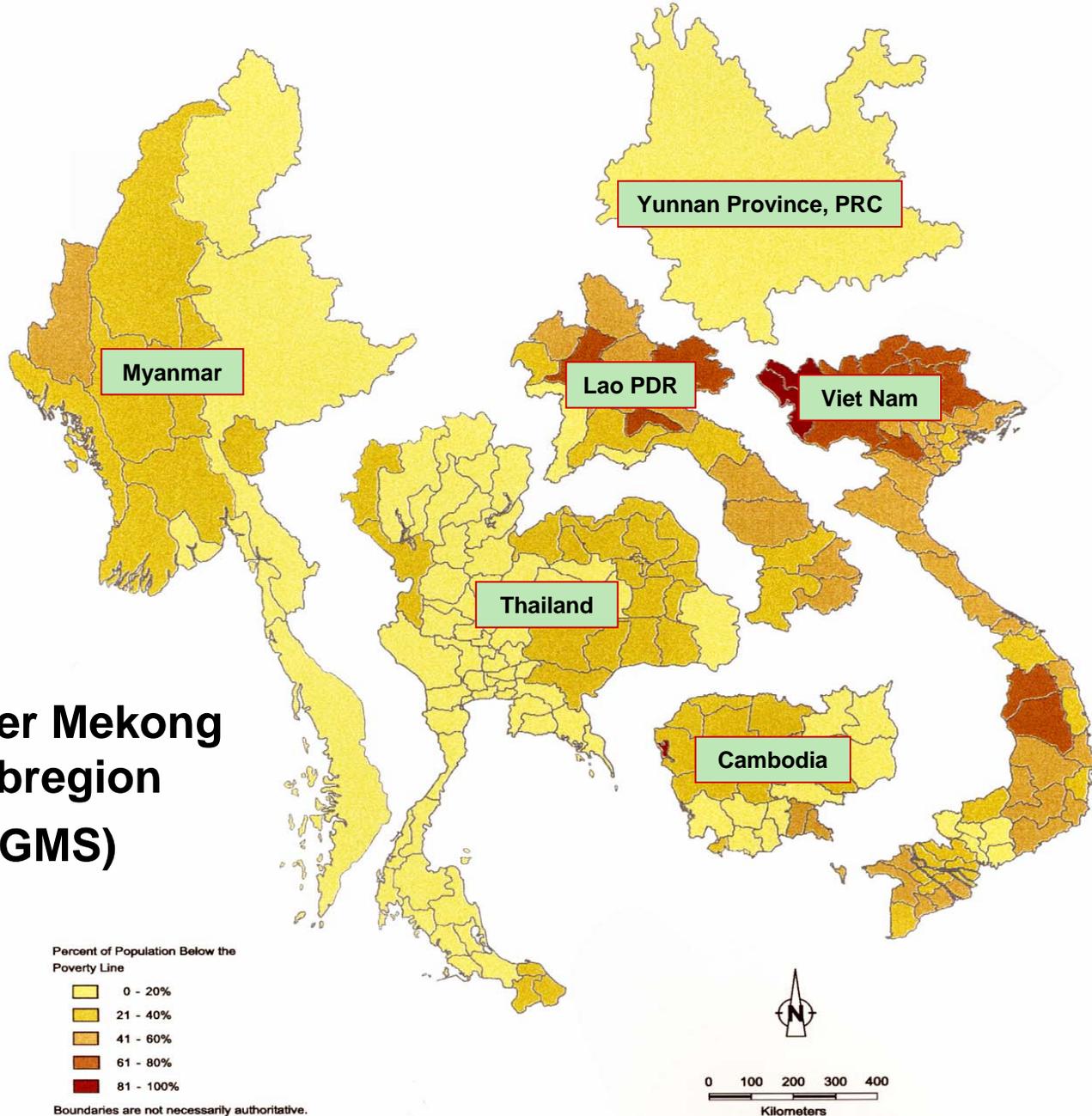
**e7 - UNDESA Seminar on  
Electricity Interconnection**



# The Interconnection of Power Systems in the Greater Mekong Subregion



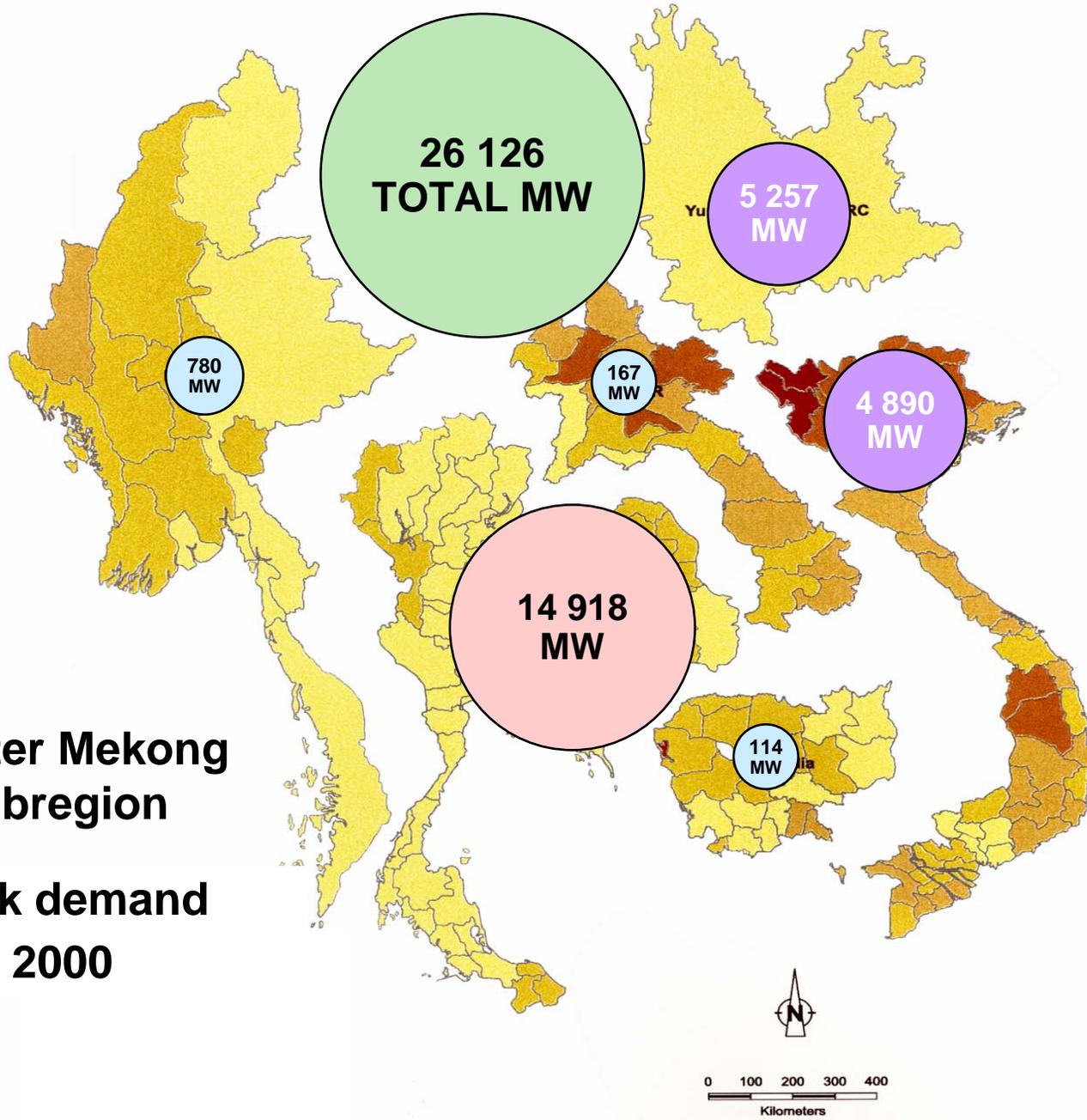
# Greater Mekong Subregion (GMS)





# Greater Mekong Subregion

## Peak demand 2000

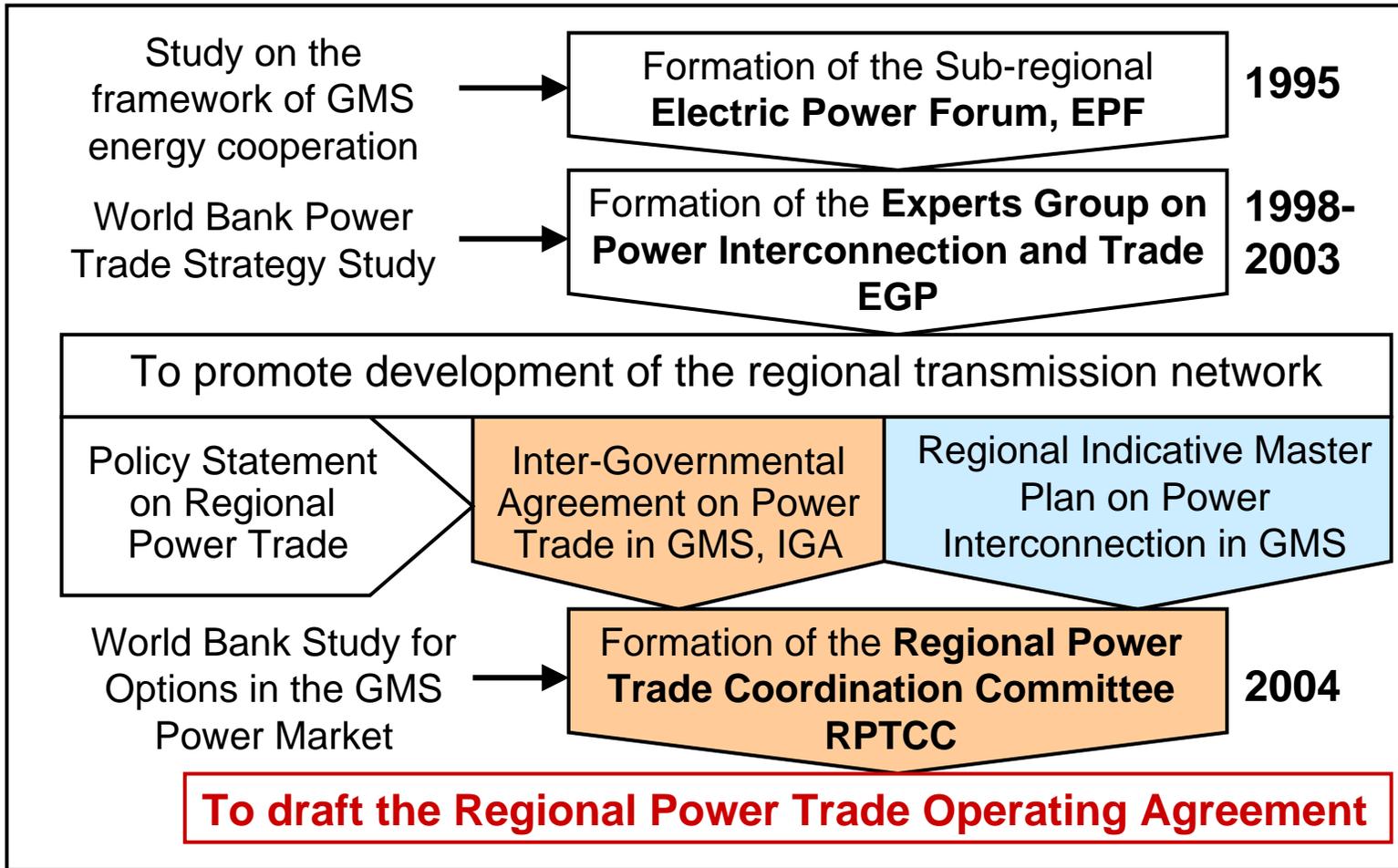




# Development of GMS Energy Cooperation



## GMS Economic Cooperation Program - ADB





## Energy Cooperation Milestones



- Endorsement of the **Policy Statement on Regional Power Trade in the GMS** - January 2000
  - By the GMS Ministerial Conference
    - Major commitments by GMS members toward integrating national systems into a regional grid
- Completion and adoption of the **Regional Indicative Master Plan on Power Interconnection in the GMS** May 2002
  - Confirmed the economical benefits of regionally harmonizing the development of power systems in GMS
  - Recommended the interconnection grid capable of providing the power transfer capacities to fully benefit from the pooling of resources with a least-cost solution



## Energy Cooperation Milestones



- Signing of the **Inter-Governmental Agreement on Regional Power Trade in the GMS** - November 2002
  - Represents the highest commitment by GMS members
    - To promote regional power trade
    - Toward a competitive electricity market
  - Establishes the authority and broad framework to implement power trade
  
- Setting up of the **Regional Power Trade Coordination Committee** - 2004
  - To coordinate implementation of regional power trade
  - To draft the **Regional Power Trade Operating Agreement** - to be approved by the end of 2005



## Regional Indicative Master Plan



- Technical Assistance (TA) project funded by the Asian Development Bank
- Developed by a team of experts from an international consultant based in Norway
- Required a significant effort over a period of approximately 18 months
- Yielded a very comprehensive and detailed report on:
  - ▶ Regional power demand forecast
  - ▶ Generation expansion scenarios
  - ▶ Transmission and interconnection development plans
  - ▶ Institutional and regulatory arrangements

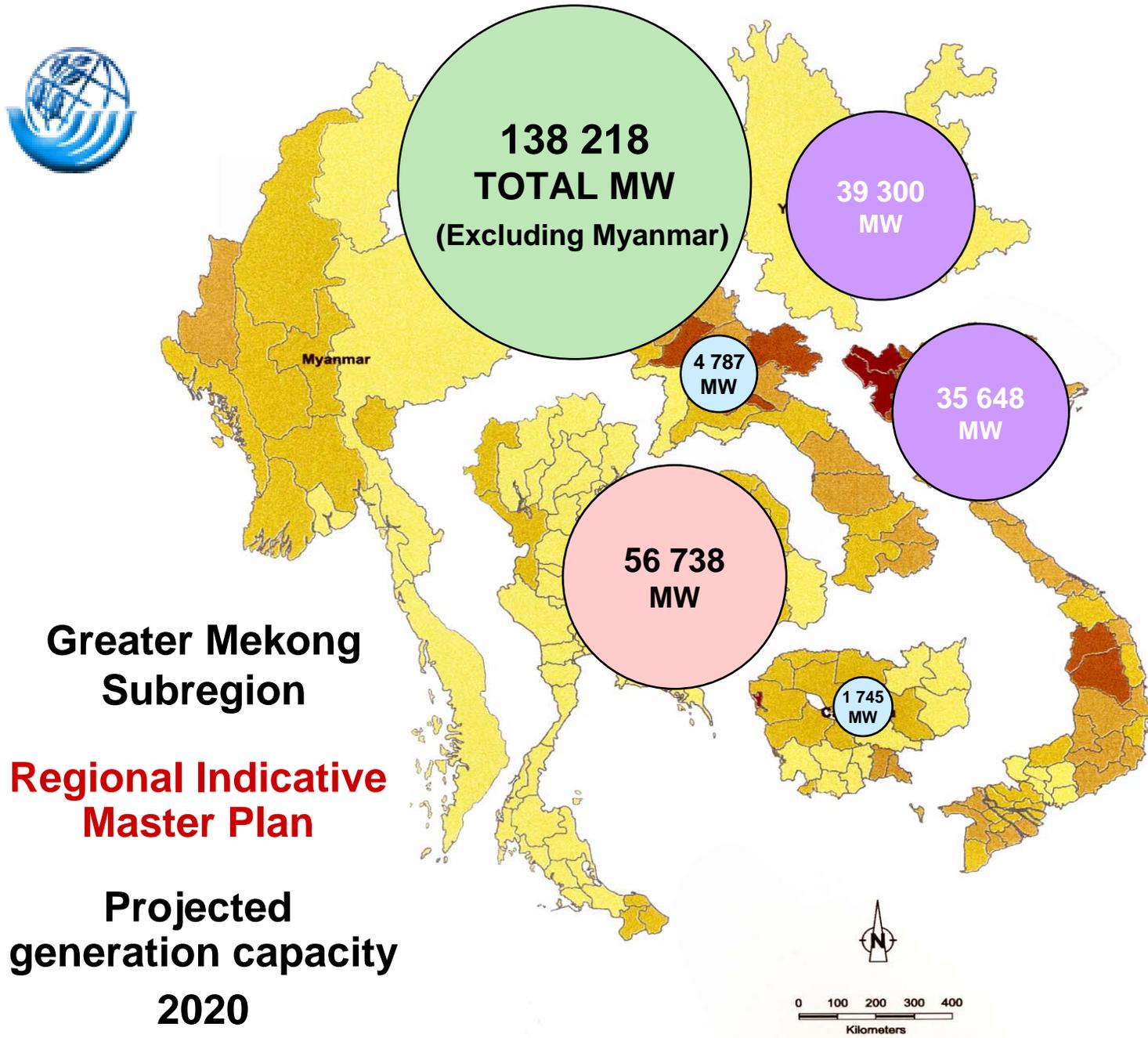


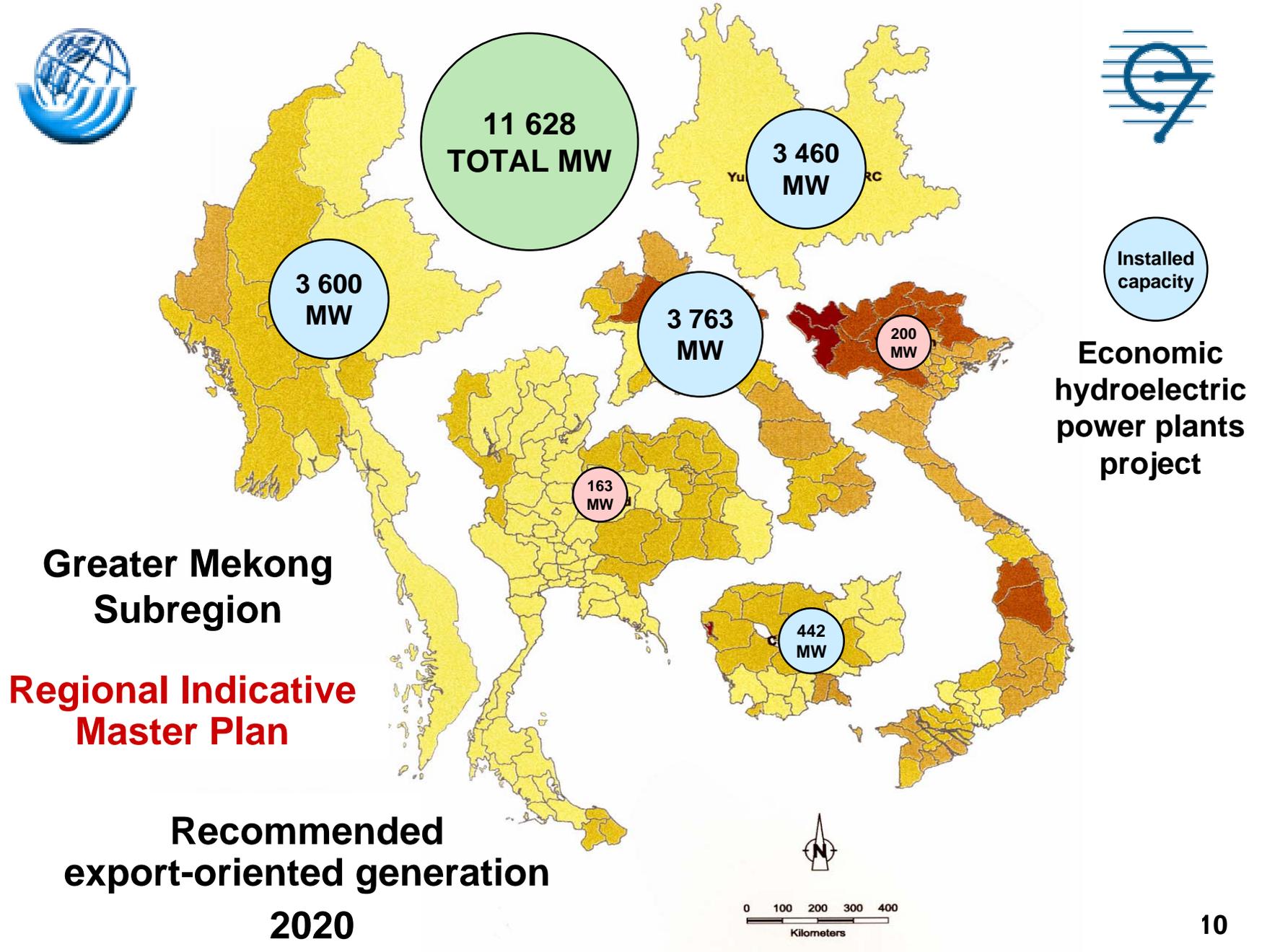
# Regional Indicative Master Plan



## Main findings and conclusions

- An Extended Power Cooperation Scenario would yield a discounted net gain of approximately 0,9 billion USD over the 2005-2020 period
- An additional gain of approximately 0,4 billion USD has been estimated in regard to reduced greenhouse gas emissions
- A 500 kV interconnection grid is required to provide the required power transfers to fully benefit from an Extended Power Cooperation Scenario
- An optimal interconnected grid has been identified and justified, with the list and characterization of specific projects to be realized along with their implementation schedule





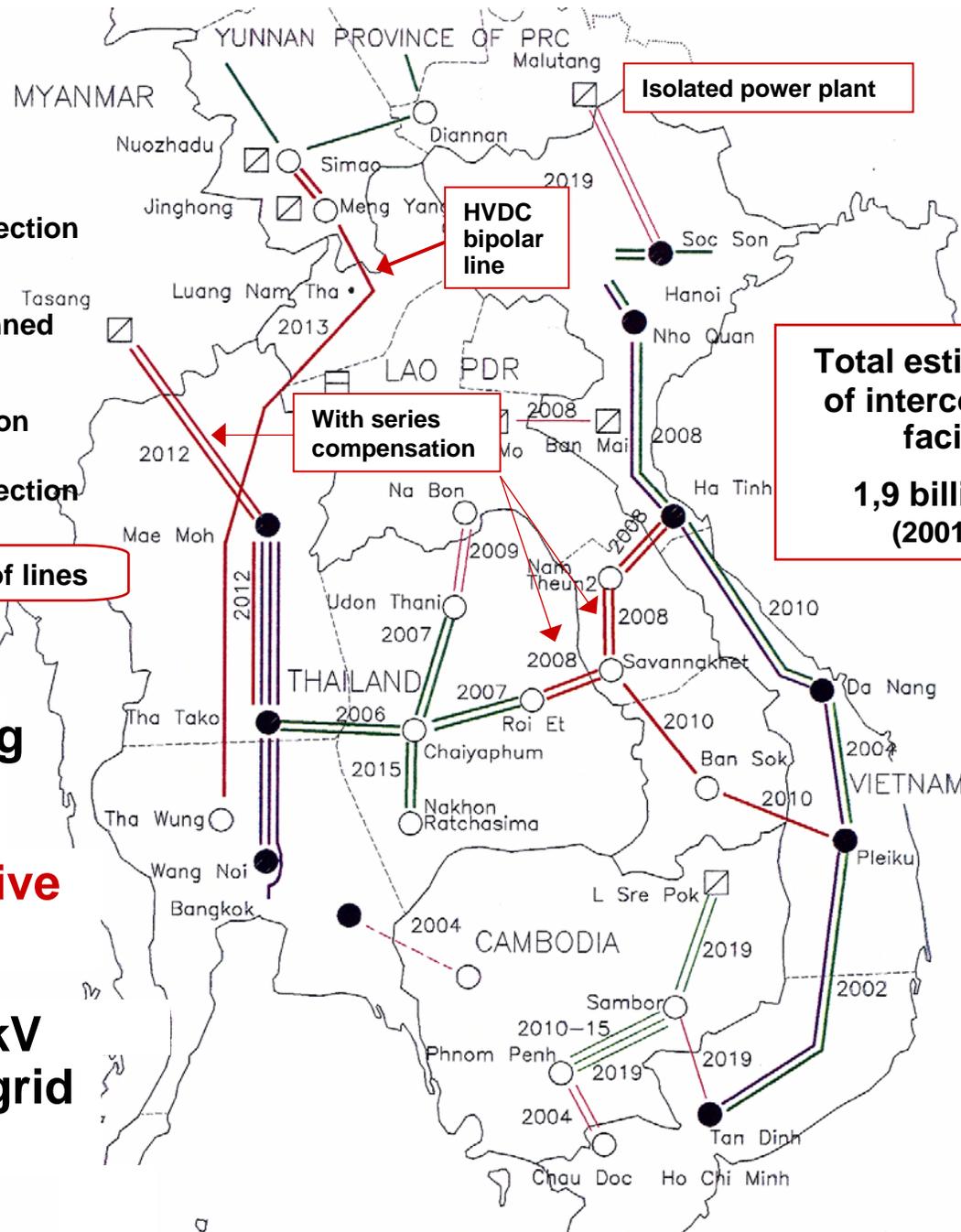


2745 km of lines

- 500 kV interconnection project
- Existing and planned 500 kV lines
- Existing substation
- 230 kV interconnection project

680 km of lines

**Greater Mekong Subregion**  
**Regional Indicative Master Plan**  
**Proposed 500 kV interconnection grid 2020**





## Conclusion - Systematic Approach toward RECI



### Features strategically important elements

- A strong support by important international institutions (Asian Development Bank and World Bank)
- Regional coordinating groups to foster and organize RECI (EPF, EGPT, RPTCC)
- Signing of an IGA confirming the highest political commitment to promote regional power trade and to set out principles (following a Policy Statement on Regional Power Trade)
- Establishment of a Regional Indicative Master Plan
- Development of a Regional Power Trade Operating Agreement