Mekong2Rio

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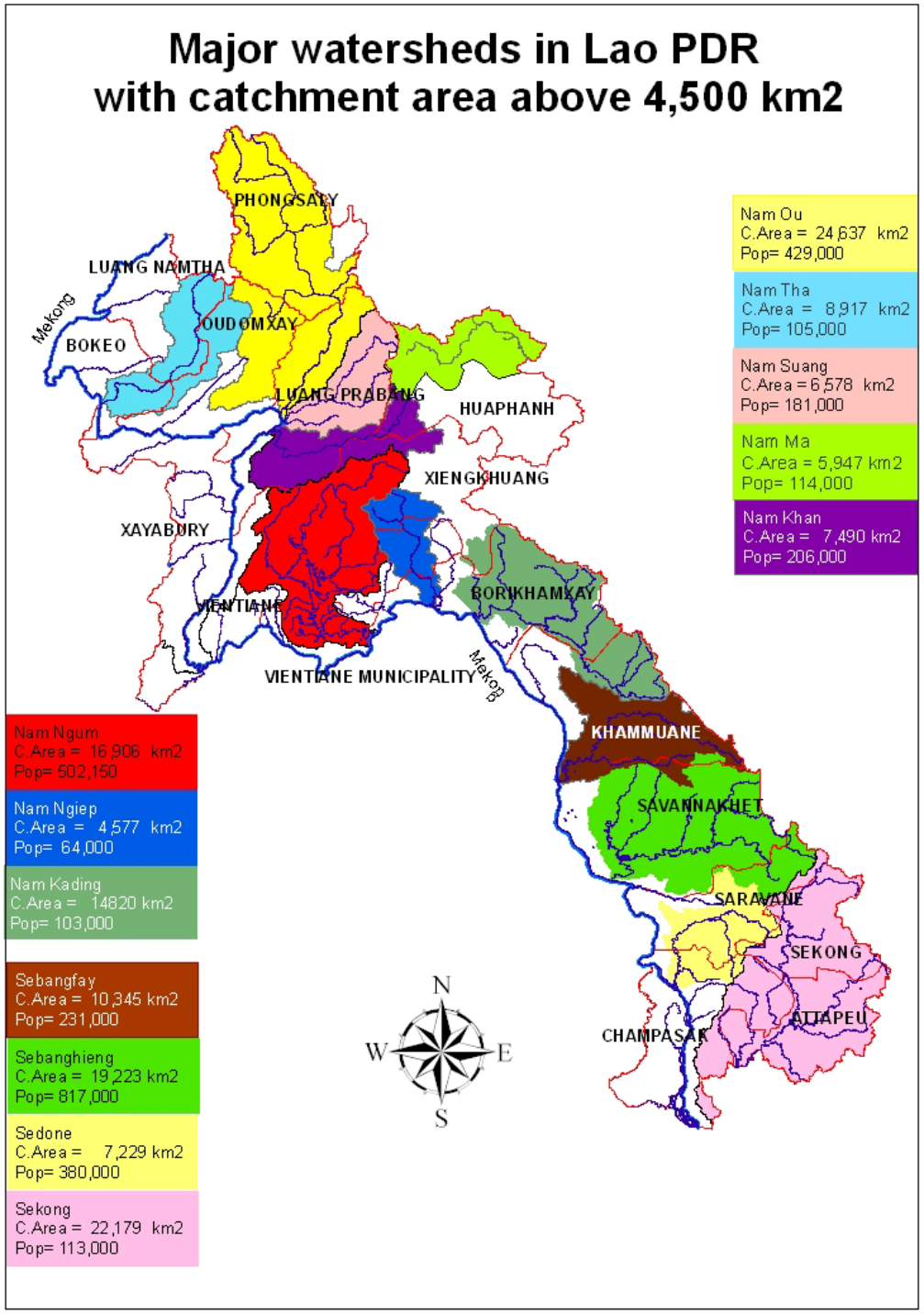
Water, food, and energy security: from a sector to a nexus perspective

Environmental Perspectives: The Nam Ngum River Basin Committee in Lao PDR

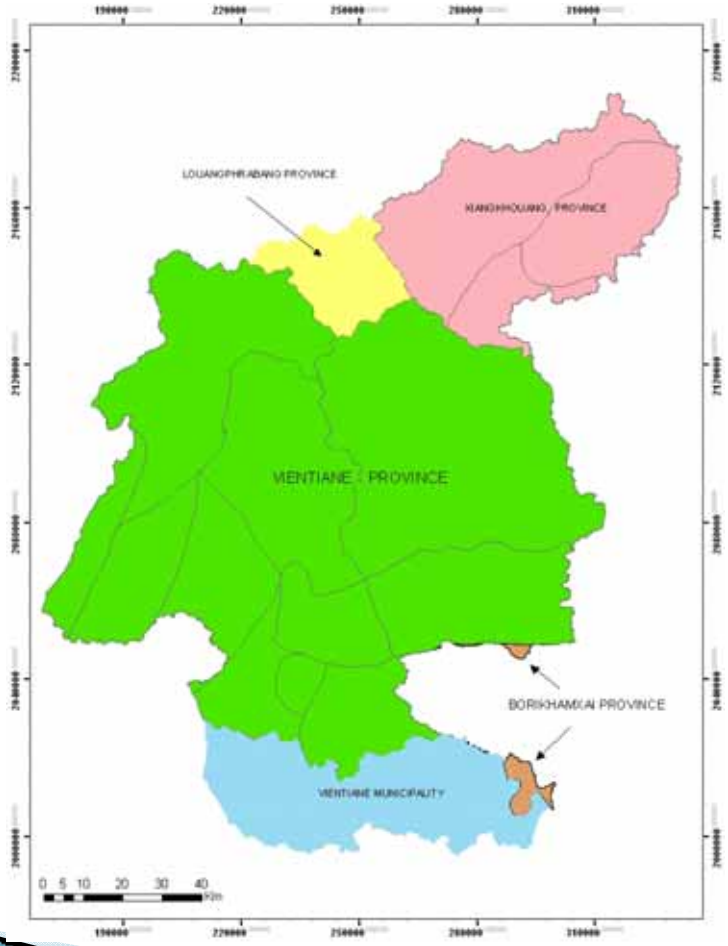
Wednesday 02/05/2012

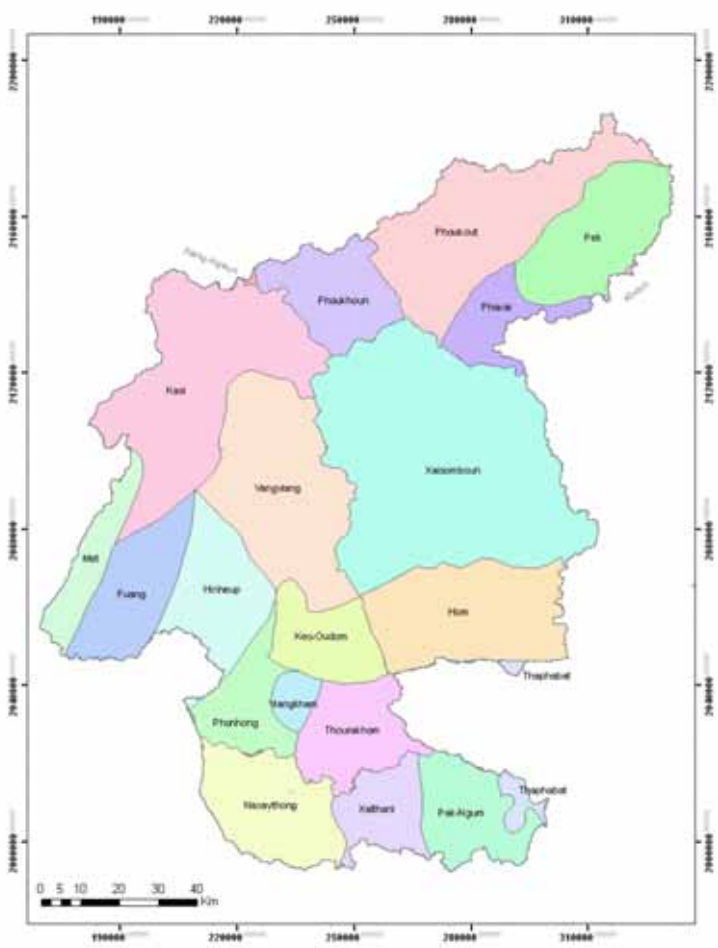
Major River Basins of Lao PDR



- **Source:** Nam Ngum River Basin Development Sector Project (June 2008) 'Basin profile'

The Nam Ngum Basin – Administrative Boundaries





Source: Nam Ngum River Basin Development Sector Project (June 2008) 'Basin profile'

The Nam Ngum Basin

- Lao PDR territory – contributes 35% to annual flow of Mekong River
- Nam Ngum Basin area is nearly 17,000 km2
- Average annual flow of 22 Billion m3 = 5% of total Mekong River flow
- Divided into eighteen sub-basins
- Basin population: 520,000 (30 persons/km2)
- Vientiane Plain 180,000 ha: main food production area of the country (paddy, husbandry, maize, ...)

The Nam Ngum Basin

The feeling in the Past: "Plenty of water in the basin to accommodate everyone's needs for ever"

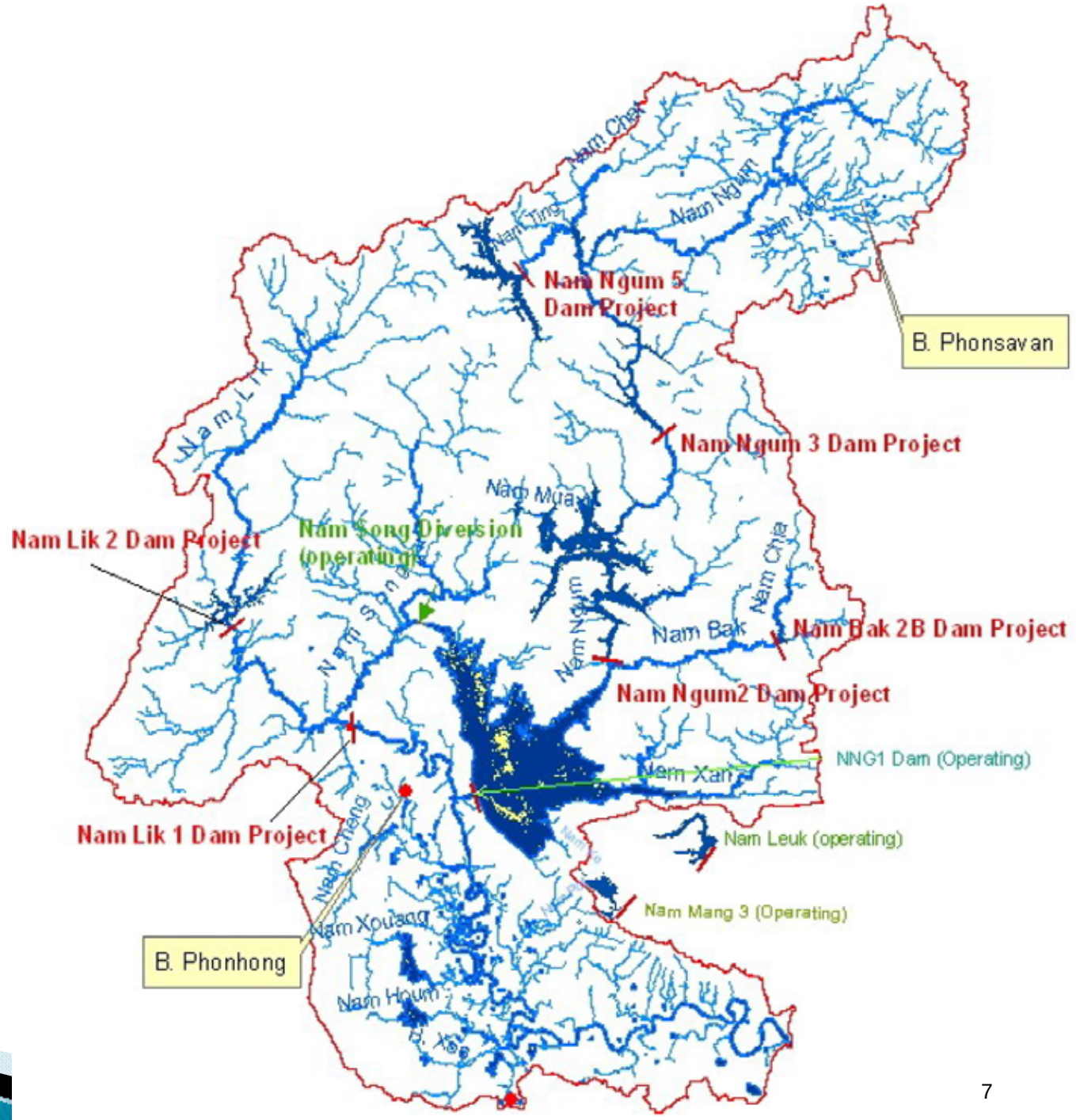
- Historical economy focused on food production for subsistence:
  - subsistence production of rice
  - collection of forest products
  - catching fish
  - handicrafts, using wood, bamboo, and rattan
  - in the mountains: slash and burn agriculture production systems

The Nam Ngum Basin

Economic Development Since 1970:

- **Irrigation:** development of irrigation in downstream Vientiane Plain, to support national food security (large schemes, pump lift)
- **Hydropower:** basin area is suitable for hydropower devopment in the upstream areas
  - Nam Ngum 1, with a large storage reservoir on Nam Ngum River, commenced in 1971
  - Five more plants have come on line
  - Two plants outside the basin discharge into the basin
  - Construction of Nam Ngum 3 to start next year

Nam Ngum River Basin: Hydro-power Plants



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The Nam Ngum Basin

Economic Development Since 1970:

- **Important contributors:**
  - Mining - large scale gold mining
  - Cassava processing
  - Steel making (melting scrap metals, etc.)
  - Potash mining and fertilizer production
  - Plantations
- Other developments:
  - Residential and industrial area development

Recent stakeholder views

- 1. “Fish catches decline”
- 2. “Some production activities in one sector affect production activities in other sectors”
- 3. In 2011, severe flooding occurred in the Vientiane plain, causing serious material losses to the communities (crops, cattle, houses,…)

The Nam Ngum Basin

The feeling now: "Water in the basin is not enough to accommodate everyone's needs if there are no water management system in the proper way!"

- **Welcome:**
  - Integrated planning
- **Not-so-welcome negative effects:**
  - Deterioration of the river's service as a community source for natural protein and drinking water
- **Worries and concerns about the future:**
  - New business propositions include potential heavy polluters, such as paper industry
  - Function of the river to supply water to residential areas & industries in rapidly expanding.

Government Response

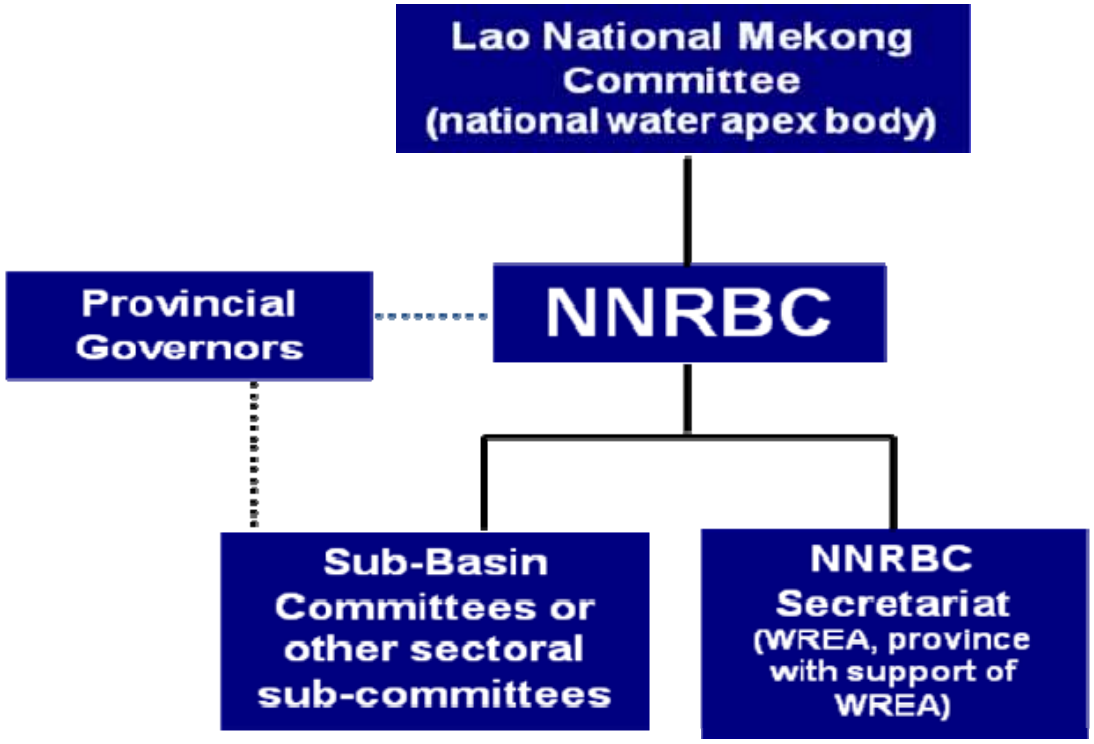
Intensify and integrate management:

- Prior to 2009: preparations: legal framework development, organisational restructuring, model development
- In 2009: set as formal target for 2015, to bring five large basins under IWRM
- In 2010: Issued Decree on Establishment and Activities of RBCs (and their secretariats) [Prime Minister 293]
  - Assigned Head of RBC Secretariat
  - Selected Nam Ngum Basin as pilot for Lao PDR IWRM mechanism
  - Launched the comprehensive National IWRM Support Programme (law review, capacity building, basin plan, groundwater, asset inventory, education)

The RBC Model

- The model: a multi-province River Basin Committee
  - Functions as platform for
    - 1) sharing information among stakeholders about the status and development of the basin
    - 2) recommend integrated action plans and programmes to the prime minister for endorsement, thus providing a basis for coordinated resource allocation.
  - Representatives of government, private sectors and communities.
  - Chaired by one of the provincial governors
  - Reports to Prime Minister
  - Overseen by Lao National Mekong River Committee
  - Supported by a Basin Secretariat under MoNRE

The RBC Model – Original concept



The RBC Model – Secretariat

- Permanent secretariat, lead by a MoNRE Director General
- Already initiated formation of sub-basin committees in Nam Ngum Basin
- Will establish a special forum to facilitate co-operation between the government and the hydro-power and mining companies
- Study the options to set up fund for financing water resources management.
- Realistic and practical action plan for management of the basin under preparation

The RBC Model – How it works

- Bring together representatives of different interests, and make information available to all about development initiatives and ideas
- Future risks will be better recognised, anticipated, and managed
- Principles of ‘user pays’ and ‘polluter pays’ can be more timely applied in permits and concessions

Thank you!