Integrated Water Resources Management in Lao PDR

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Minister of Natural resources And Environment
Overview

- Lao PDR is located in South-East Asia with Area of 236,800 km², approx. 7 Mil. People (2015);
- 90% of the country are in the Mekong Basin
- Water resources per capita is around 55,000 m³ per year;
- 35% of annual flow (or equal 270,000 mil. m³) in Mekong is from Lao tributaries;
- The monthly rivers flow by the pattern of rainfall is around 80% (flood season) during the rainy season and 20% (drought season) in the dry season.

Lao PDR has abundance of water resources which there are total 62 sub-river basins.
# IWRM Series in Lao PDR

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<tbody>
<tr>
<td>- Traditional management/practice</td>
<td>- Water and water resources law, 1996</td>
<td>- IWRM principle introduced</td>
<td>- Ministry of Natural Resources and Environment established 2011 (Department of Water Resources)</td>
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<td>- No clear institutions</td>
<td>- Mekong Agreement 1995 (MRC was established in 1957)</td>
<td>- Water Resources Coordination Committee and its secretariat established</td>
<td>- Water Resources Sub-Sector Working group established</td>
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<td>- Water Resource Coordination Committee (1997)</td>
<td>- Water Resources and Environment Agencies established 2007 (including Department of Water Resources)</td>
<td>- Expand IWRM into 10 priority river basins</td>
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<td>- Integrated River Basins Planning</td>
<td>- Technical guidelines developed</td>
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<td>- Local knowledge + regional + international experiences</td>
<td>- Up scale local knowledge + regional + international experiences</td>
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## IWRM application in different scales in Lao PDR

<table>
<thead>
<tr>
<th>Geography</th>
<th>IWRM instruments</th>
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<tbody>
<tr>
<td>Mekong Basin</td>
<td>Mekong IWRM Strategy 2020</td>
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<td>Mekong IWRM-based BDP</td>
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<td>Nam Ngum RB</td>
<td>Nam Ngum IWRM Plan 2016-2020</td>
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<td>Nam Ngum sub-basins</td>
<td>Nam Ngum sub-basin plans (as e.g. Nam Xong and Nam Lik)</td>
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<td>Watersheds/Catchment</td>
<td>Integrated Watershed Management Plans (e.g. Nam Po)</td>
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Water Use

- City, drainage, urban water supply
- Farm, Irrigation, aquaculture
- Dam
- Reservoir
- Rural water supply
- Forest
- Industry
- Wetlands
Achievement and Progress

Policy:
- Revising Water law and legislations
- Water strategy 2025 and action plan 2020

- Developing technical guidelines, e.g., River basin planning

IWRM applied in 6 river basins and 13 sub-basin (profiles & integrated plans, WR modeling being developed & implemented)

Groundwater:
- Conduct GW assessment
- Action plan 2020 developed
- Pilot in 4 basins

Financial mechanism:
- Water use fee put in the Presidential Ordinance

Water quality monitoring – 158 sample points

Training and awareness raising on IWRM

IWRM Demonstration Site

River basin atlas 62 basins

IWRM Curriculum developed – Bachelor and Master degree

- Conduct GW assessment
- Action plan 2020 developed
- Pilot in 4 basins

- Water use fee put in the Presidential Ordinance

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River basin atlas 62 basins

IWRM Curriculum developed – Bachelor and Master degree
Challenges

Institutional arrangement & establishment – need to strengthen cross sector collaboration;

Limited financial support & sustainable mechanism –

Legislations, guidelines need to enforce and implement

Limited capacity of concerned staff on RB planning & management + public awareness & local participation on IWRM. – thus need to strengthen staff

Lack of efficient & accurate WR data & information
Our Natural Resources and Environment Sector Vision towards 2030

“Keeping Lao PDR Green, Clean and Beautiful based on green economic growth, to achieve sustainable development toward industrialization and modernization and to ensure the resilience to climate change impacts and disaster risks”

National Water Resource Strategy 2025

Manage, utilize and develop water resources for the outmost benefits and sustainability, while ensuring environment protection, effective climate change adaptation and livelihood improvement
Action Plan 2016-2020

1. Formulate/update and implement legislations – such as water law, meteorology and hydrology law, related regulations, technical guidelines.

2. Develop/implement river basin management plans in the 10 priority basins (plus 52 RBs)

3. Water quality monitoring and management – 200 sample points


5. Flood control and drought/water scarcity mgt. & mitigation (all basins).

6. Continue to develop water resources database, network, inventory, and modeling; - link national to local levels.

7. Establish a national IWRM demonstration site and a training center

8. Develop and implement wetland management plans and RAMSAR convention;

9. Update IWRM (Bsc & Msc) and Meteorology and Hydrology curriculums in cooperation with the university;

10. Capacity building and awareness raising with gender mainstreaming and participation of all stakeholders;
Water Quality Management

Water quality is one of the priority of the government of Lao PDR in order to ensure water use and management. Therefore, in order to achieve its national goal by 2025, the government of the Lao PDR has

1) Strictly implement the Water Law and its relevant regulations;
2) Enhance regional cooperation such as MRC, ASEAN and international cooperation.
3) Issue of notification on prohibit of the use of pesticide and herbicides and other dangerous chemicals under international convention (Basel, Stockholm, Rotterdam).
4) Enhance public awareness on water use.
5) Enhance Public-Private-Partnership (PPP) for water management.
6) To implement green growth (water management is one priority) from 2017-2020.
7) President Bounyang Vorachit and President Obama has signed bilateral agreement.
8) Laos was the first ASEAN country to sign the Paris Agreement in September 2016 during the ASEAN Summit held in Vientiane 6-8 September, Lao PDR.
Thank You Very Much!

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