

Water Resources Management in Lao PDR

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I. Water resources potentials and challenges

- The abundant water resources in Lao PDR have the potential to support socio-economic development, especially hydropower and irrigation.
- Hydropower potential is great : providing an opportunity to earn foreign income and has the ability to develop rapidly.
- High priority to investment in irrigation since agriculture is the foundation of national economic development.
- However, water development is still at a low level

Water resources potentials and challenges (Cont.)

- Although some advances have been achieved, problems still remain :
 - unusual rainfall patterns in some years
 - high evaporation
 - Flood and drought in some of the main agriculture areas
 - The impact of shifting cultivation on water resources
 - conflict of interests for management since most water sub sector are still responsible for multiple role of regulator, manager and service provider.

II. Overall socio-economic development context of priority areas

- Irrigation and hydropower remain the most important in terms of investment
 - In the short term :
 - In dry season, small pumping irrigation schemes has been given highest priority because of several consecutive years in which rice production was seriously affected by droughts and floods
 - Hydropower development will focus on medium, small and micro schemes for remote urban centers and rural areas

Overall socio-economic development context of priority areas (cont.)

- Irrigation contributes to self-sufficiency in food, to agricultural production and reduces shifting cultivation.
- Hydropower contributes thru export power project and also by reducing migration to urban centers.
- Navigation improves transport links (Thailand, Myanmar and China).
- Fisheries are a major source of food and contribute to foreign earnings
- Urban water supply meets industry and urban population's needs.
- Rural water supply and sanitation improvements increase the health and living standards of rural communities and assist tourism.
- Water also maintains the natural environment and enhance the welfare of people by providing fish and animal protein and aquatic plants.

III. Opportunities and threats for water resources development.

- There is presently little conflict over water use : land use changes appear to be altering the pattern of stream flows and some supply shortages are occurring.
- Increased water storage will be needed to support development.
- Additional storage will need careful management to prevent unwanted effects.
- The trend is to increasing pollutant loads : increasing agricultural production thru the application of high phosphate fertilizers

Opportunities and threats for water resources development (cont).

- There is a little information on the extent and capacity of groundwater systems : some use is already being made for water supply.
- Flooding is a major issues with damage occurring in both urban and rural areas
- Flood bring some benefits in building rich floodplains and replenishing soil moisture.
- Fisheries employ significant numbers of people and contribute economically.
- Fish population decline and this is becoming a serious issues. Changes in land use, declining water quality, construction of dam and other barriers to migration and high levels of capture are likely to be involved.

IV. Legal and institutional framework

- Water resources law (1996) set out a legal framework for development in the Water Sector.
- Urgent need for the development of further legislation or decrees for sub-sectoral activities, as well as necessary legal documents to accompany the Law and make it effective.

Legal and institutional framework (cont.)

- The 1999 Mandate of WRCC : Provide advice to the GOL on matters relating to water resources and coordinate the planning, management, follow-up, inspection and protection of the water resources. Indicate an important role in all of the IWRM function.
- The 2001 Decree to implement the Water Resources Law : WRCC responsible for coordinating in drafting strategies & action plan, programs & regulations necessary for the planning, management, use & protection; monitoring, control, promotion and reporting on the implementation of activities related to water

Strengths and weakness of the current legal and institutional framework

- Some agencies have conflicting role : regulator & service provider. This could result in ineffective implementation of policies & enforcement of rules & regulation.
- Decentralization policy ensure that the local conditions and needs are appropriately considered and gaining greater community participation.
- The current institutional problem: lack of coordination.

Strengths and weakness of the current legal and institutional framework (cont.)

- WRCC establishment aims at :
 - improving the coordination of multi-sectoral activities involving various water uses;
 - defining and managing water allocations.
- The first step :
 - Assess the present institutional set up and conduct a diagnostic study of each targeted river basin;
 - Design a river basin management bodies.
- Capacity building efforts should :
 - consider and promote the capabilities of women;
 - To be correct the imbalance of women's involvement

V. Pilot river basin management

- IWRM will be a unifying theme of the project.
- NNRB has been selected as the first river basin to initiate these activities.
- This Project is the culmination of the Government's ADB's and AFD's continuing efforts to establish and strengthen water sector institutions for their closer and more effective coordination;
- The design of this Project will afford a first real opportunity to implement the IWRM approach through hand-on activities that are closely interlinked;

Pilot river basin management (cont.)

- The long term goal of the Project :
 - Optimal use of water resources.
- Two immediate objectives :
 - Foster and institutionalized the IWRM approach in the mainstream management process;
 - Support investment interventions in the relatively degraded parts of NNRB to ensure sustainable watershed management and to provide livelihood opportunities for the poor and communities of ethnic groups.