

Water Resources Management in Lao PDR



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Country Background:

- Land-locked country - 236,800 square kilometers
- Mountainous and about 47 % is forested.
- The estimated year 2000 population is 5,218,000.
- Average population density of 21 people per square kilometre.
- 80% of the country's area lies within the Mekong River Basin.
- The total annual flow = 270,000 million cubic meters, equivalent to 35% of the average annual flow of the whole Mekong Basin.



- **The monthly distribution of the flow closely follows the pattern of rainfall:**
 - 80% in the rainy season (May-October)
 - 20% in the dry season, from Nov - April.
- **The abundant water sources have the potential to support socio-economic development (hydropower and irrigation sub-sectors).**
- **The hydropower potential is great and providing an opportunity to earn foreign income.**

The government has given high priority to investment in the irrigation sub-sector:



- **Agriculture is the foundation of national economic development**
- **About 85% of the population lives in rural areas.**

The water source development is still at a low level:



- Irrigated area is only 20% of the national paddy area
- Hydropower production is still at 2% of its potential.
- Development in other sectors is still at a low level compared to hydropower and irrigation.

Remaining problems:



- Unusual rainfall patterns in some years
- High evaporation
- Flood and drought
- The impact of shifting cultivation on water resources although this activity has been significantly reduced

- **Water quality is not yet a problem but it needs to be monitored closely.**
- **The basin's upper watersheds are critical for sustainable development and human welfare:**
 - important biodiversity
 - home to a variety of ethnic minority groups who are among the poorest in the country.

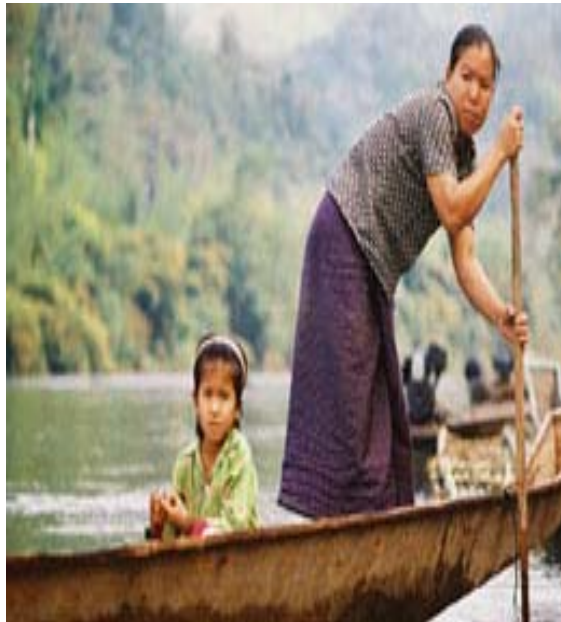




- **Many watersheds are already under pressure:**
 - From shifting cultivation
 - From exploitation of forest products.
- **To ensure long-term sustainability of the watersheds and livelihood opportunities, an integrated development approach ought to be fostered.**



- **Optimal use of water resources is a critical factor in realizing:**
 - The strategic objectives of poverty reduction
 - Sustainable economic growth plans.
- **The Government has introduced various legislative and institutional measures to manage water resources more efficiently and effectively.**



- To foster the adoption of an IWRM approach, the Government has focused on key areas in agriculture and hydropower to optimize the water resources.
- The most significant institutional problem is the inadequate coordination.
- There are 12 central agencies that are directly involved in water sector management.



- **IWRM system needs to be developed at the community, district and provincial levels to make water resources management more efficient and equitable.**
- **The 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.**



The long-term goal of the project:

- Optimal use of water resources.**

Two immediate objectives are to:

- Foster and institutionalize the IWRM approach in the mainstream management process.**
- Support investment interventions in relatively degraded parts of NNRB to ensure sustainable watershed management and to provide livelihood opportunities for the poor and communities of ethnic groups.**



II. Integrated Water Resources Management in the Context of the Lao PDR:



- **The philosophy of IWRM is based on the Dublin Principles**
 - **water as a finite and vulnerable resource**
 - **the importance of a participatory approach involving users, planners and policymakers**
 - **recognition of the special role of women as water users, and**
 - **water as an economic good with economic value in competing uses and as having key social and environmental roles.**

Integrated Water Resources Management in the Context of the Lao PDR: (Cont.)



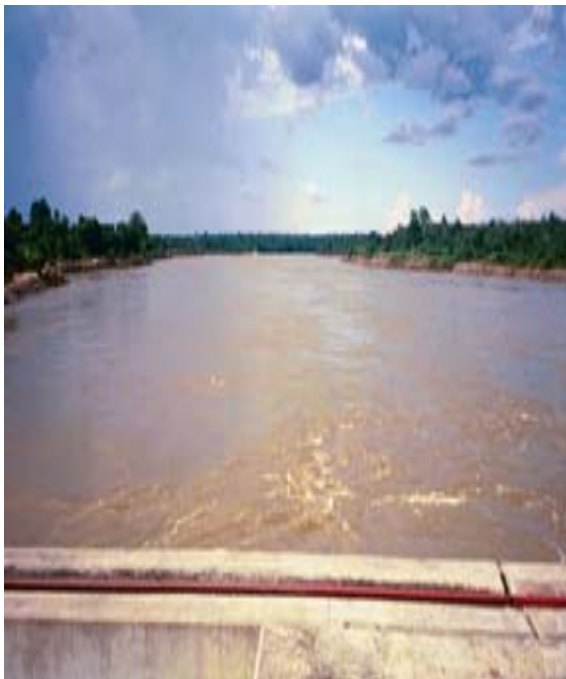
- **IWRM looks at the entire hydrological cycle and the interaction of water with other natural and socio-economic systems.**
- **The sustainable use of the resource calls for the creation of institutions and systems that involve a variety of users and other stakeholders. Keynotes are integration, participation, consultation, gender awareness and consensus.**

Integrated Water Resources Management in the Context of the Lao PDR: (Cont.)

- **Integrated and coordinated water resource management imply a concern with upstream-downstream relations :**
 - land use, a unified management of surface and groundwater,
 - a shift to management at a river basin level,
 - harmonising water management with other sectoral policies.
- **Water quantity and quality issues need to be reviewed in conjunction.**



Integrated Water Resources Management in the Context of the Lao PDR: (Cont.)



- IWRM also involves a new and more balanced treatment of sectoral water perspectives.
- Traditionally the more powerful sectors in terms of water development and management have been irrigation and drainage, hydropower generation and, in some cases, flood control.
- IWRM means treating the interests of sectors such as water supply, fisheries, tourism, transportation and public health more seriously, in line with their importance in national goals and objectives.

III. Legal, Institution and Policy Frameworks:



- **Government's development strategy emphasizes poverty reduction and economic growth through improved management of water resources, application of the IWRM approach is necessary to reinforce links and synergies between water and land use, the environment, and sustainable development.**
- **Water Resources Law approved on 1996 - Article 22 expresses a number of principles which are in accordance with the IWRM approach.**

Cont.

- **The Government has also documented issues relevant to river basin planning and management and developed a strategy by preparing a 1998 National Water Sector Profile (NWSP) and 1998 Water Sector Strategy and Action Plan (SAP).**
- **The SAP, addresses cross-sectoral issues by emphasizing appropriate policy, community education and data management.**

Cont.

- **As a first step to build capacity to implement these policies and plans, the Government established Water Resources Coordination Committee (WRCC) in February 1998.**
- **The 1999 Mandate defines the rights and duties of the WRCC which is mainly directed to actions such as “study, monitor, coordinate and advise.” It also clearly indicates an important role for the WRCC in all of the IWRM functions.**

Cont.

- **The 2001 Decree to Implement the Law on Water Resources, issued by the Prime Minister, defines the structure of water resources planning and management at the national and river basin levels.**

Cont.

- **Water management agencies also need support to fully understand and internalize IWRM concepts and functions.**
- **Senior decision makers, water users and other stakeholders also need to be assisted to gain a fuller awareness of the vital nature of water resources and new approaches for their sustainable management.**

Cont.

- Lao PDR has made good progress in developing water resources policy, legislation, regulations and guidelines.
- Some of the policy remains at a general level, without sufficient detail and corresponding legal documents to allow full implementation.
- The Draft Policy on Water Resources is in the final approval stage and may serve as a “framework policy” under which more detailed policy topics can be developed.
- The 2001 Decree and the 1999 WRCC Mandate give the WRCC a role in developing policy and regulations.

Cont.

- **Development of sound policy, legislation, regulations and guidelines is one of the primary means by which the WRCC can play its coordinating role.**
- **The process used must be open and consultative, involving stakeholders at all levels.**
- **The WRCC/S already has experience in this respect but further capacity building for policy analysis and development is needed.**

IV. Proposed NARBO Action Plans:



- **Assessment of the current status of IWRM activities;**
- **Conduct capacity building needs analyses;**
- **Develop strategy and action plan;**
- **Develop, promote and disseminate training curricula appropriate to the region;**
- **Establish an information system and database for IWRM;**
- **Facilitate the training of trainers at all levels;**
- **Facilitate the exchange of experts/trainers in the region;**

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- **Support mechanisms for trans-boundary cooperation in shared water resources;**
- **Publish IWRM training & educational materials;**
- **Identify, assess & prioritize collaborative research needs ;**
- **Establish funding mechanisms for promoting the implementation of IWRM in selected country;**
- **Establish pilot projects for IWRM;**

Cont.

- **Establish small grant funds/seed money to encourage cooperation between countries members.**
- **Organize regional symposia, conferences and meetings to meet the objectives of NARBO;**
- **Set up a database of best practices and case studies in IWRM;**
- **Organize study tours to best practice sites;**
- **Facilitate the translation of information and training materials to local languages.**



Thanks