# INDIVIDUAL ASSIGNMENTS

First training program on IWRM and Strengening of river basin Committees 26 July- 6 August 2004, Bangkok and Chiang Mai, Thailand NARBO in collaboration with Thailand Water Resources Association (TWRA)

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#### I. Introduction

The cousse is first training program on Integrated water resources management (IWRM) and Strengening of river basin Committees, hold from 26 July to 6 August 2004 in Bangkok and Chiang Mai, Thailand. Though the course was carried out in a shrot time but it was covered a lot of contens, including concept of IWRM, process of integrating IWRM into the management procedure, evolving process in establishing RBOs/RBCs and sharing experiences of variety fields and the one week field trip programme in Chiang Mai.

#### II. The lessons learned from the course

The course provided me the good chance to gain field experiences to implement IWRM projects, as following.

### 2.1 Policy and Legislation

• Policy and secondary legislation under the LWR is not complete. Important issues which should be addressed include such things as water allocation and rights, financial sustainability of hydraulic works, flood management, and others.

The capacity to develop strong policy and secondary legislation under the LWR is limited. This will require better coordination between ministries, agencies and provinces as well as training in strategic approaches to integrated water resources management.

Awareness of the LWR, secondary legislation shoud be improved.

#### 2.2 Institution Arrangement

• MARD has not yet clearly reflected its mandate for state management of water resources in a new organizational structure. Issues such as i) the need for separation of state management of water from irrigation and hydraulic works management, and ii) strengthening and coordination of water-related functions across departments should be addressed.

• The Department of Water Resources does not have adequate staff, finances, organization and other requirements to carry out the necessary integrated water resources management functions at the national level. The coordination between ministries and agencies is still weak. Some ministry mandates overlap, causing waste of resources and lost opportunities.

• The capacity of the NWRC should be improved. Members need awareness-raising. The Office of the NWRC should be strengthened in terms of organization, staff, inter-ministry working arrangements.

The role of RBOs is still somewhat unclear. The degree to which they will be involved in decision-making, the control of RBOs by MARD and representation of multiple ministries / sectors as well as provinces are matters which should be resolved, based on both international models and local experience.

Institutional strengthening and capacity building is needed for different staff levels on management, planning, and other issues. This is particularly true at the provincial level. The private sector is relatively weak and participation of water users in management, operation and maintenance of water infrastructure is still limited. Private sector participation could and should involve investment opportunities, provision of specialized services.

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Aid management has tended to focus on allocation and channeling of funds, rather than deeper partnerships based on real sectoral priorities.

• I know that IWRM is a process which ensures the sustainable development and management of water and other related resources. It emphasizes on operationalizing a system which puts importance on collaboration and coordinated mechanisms among various stakeholders to development water resources sustainability.

• Hence, the efficient, equitable and sustainable management of water and other related resources following an IWRM necessitates a major institutional change. These changes vary from country to country and according to prevailing socio-economic, political and cultural conditions.

• As a process, the goal of IWRM can only be achieved if the approach is institutionalized, that is, if it becomes a part of regular work procedures and the daily routine of everyone in general. As such, IWRM should permeate into every concern affecting water resources which includes policies, structures, processes, strategies, etc.

• In Vietnam, the capacity of the National Water Resources Committee should be improved. Members need awareness-raising. The Office of the NWRC should be strengthened in terms of organization, staff, inter-ministry working arrangements.

• I find that the RBOs/RBCs are necessary to be strengthened to manage water resources at the basin level with the involvement of stakeholders.

## 2.3 Information Management

A large amount of water resources data and information is still scatted in different agencies and ministries. Access to this data and information is difficult, costly and time consuming. Data is not compiled and edited in an easy accessible format.

The water resources monitoring network was established at a fairly broad scale; it does not cover all rivers and groundwater adequately. The number of monitoring stations is far behind the recommended standard and data quality is poor.

Flood warning and preparedness does not have an adequate action plan.

Information on the linkage between surface and groundwater needs to be improved.

## 2.4. Integrated Water Resources Planning - National, Basin and Project Level

There is no single, official water resources development and management strategy at the national level. Also, there are no integrated river basin development and management plans for major river basins.

Planning has not been carried out in a strategic manner or at a professional level. There is a lack of advanced tools and resources for planning, including software, well trained and experienced staff, guidelines, etc. Technical aspects and consultation and conflict resolution aspects of basin water resource planning need to be strengthened.

Standards and criteria for downstream flood protection have not been developed throughout the region through careful economic and technical justification.

## 2.5.Infrastructure

The level of hydraulic works financial sustainability is relatively low. As a result there has been poor operation and maintenance of hydraulic works and their operational efficiency is therefore low.

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Irrigation and drainage systems need to be modernized and upgraded. Geographic coverage of water supply system for irrigation is still limited and has not reached the required level especially in mountainous areas. The dyke system is inadequate in some areas.

Policy is needed on the sharing of capital costs for multipurpose reservoir development. The level of hydraulic works development, management is relatively low. Climate change has caused both severe flooding and reduced low flow, resulting in greater need for water storage and regulation. Major investment needs exist in the area of water supply and sanitation.

# 2.6 Financing

A long-term financing strategy, including State funds, international assistance, private sector investment and user fees should be prepared. The ability of Government to directly finance water sector investment, particularly for medium and smaller works, or to decentralize responsibilities and transfer systems and / or to place them on a financially sustainable basis is poor. Government subsidy plus user fees are not adequate to meet operation and maintenance requirements.

Budget responsibilities between the central and local level need to be clarified. Lack of financial capacity at the local level means that some local investment can not be carried out.

## 2.7 Resources Regulation and Conflict Resolution

Further secondary legislation is required to put the necessary resource regulation activities into effect. Considerable work will be required to prepare and test the necessary details, define institutional roles, train staff, build awareness, etc.

Inspection and enforcement and conflict resolution activities need to be strengthened and coordinated.

## 2.8 Training and Human Resources

The level of awareness, skills and technology for integrated water resources management and new functions for its implementation is fairly low at both the national and provincial level. Clearer understanding and commitment regarding IWRM at senior levels in Government is also needed.

Training is needed in integrated river basin planning and management. New techniques, methods and models are needed, as well as public consultation, negotiation and conflict resolution skills.

Training and technical assistance should be provided to encourage the application of integrated water resources management to areas such as flood management and mitigation.

Professional training is based on traditional approaches. New advanced concepts and techniques should be added to the curriculum. Training at the local level (provincial, district and commune) is poor.

## 2.9 Education and Awareness

• Consultation and coordination between ministries and agencies and between the central and local level needs to be improved. MARD should take a strong role in building up this consultation and coordination.

Awareness raising on water resources has been limited. Most awareness activities have been in project areas and under project funding. People's participatory activities should be build up as a public movement.

• I was then exposed to successful community-based management projects as well as a new initiative of a small watershed management project in the Northeastern part of Thailand for one week. I had much the opportunities to discuss and exchange views with the local leaders and water users groups.