

# FLOOD CONTROL AND WATER RESOURCE MANAGEMENT

THE FLAGSHIP PROGRAM ON FLOOD MANAGEMENT AND MITIGATION (FMM)

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(as of 26 June 2005)

## **Summary**

### **Rationale**

Perennial flooding is a problem in many areas of the Lower Mekong Basin, in some years reaching disastrous proportions and resulting in severe losses in lives, in food production, infrastructure, among others. Destructive floods have visited the Lower Mekong in 1961, 1966, 1996, 2000 and 2002. Especially occurring with increasing regularity and severity, floods negate economic development and poverty reduction efforts. It was especially severe in recent years- with record damage and production losses in Cambodia and Viet Nam, and to lesser extents in Thailand and Lao PDR in 2000, and in 2002 in Cambodia.

In the light of the severe flood problem in 2001, the Mekong River Commission (MRC) Council has asked the MRC Secretariat to develop a strategy for dealing with floods in countries along the Lower Mekong Basin, specifically Cambodia and Viet Nam. Employing a participatory process involving consultations with relevant line agencies, national Mekong Committees, international organizations, and civil society, MRC developed a strategy for flood management and mitigation that was approved by the MRC Council in November 2001. The strategy proposes four major groups of management measures to reduce flood-related risk and hazards across the Mekong floodplains:

- a. Land use planning measures, aimed at keeping people away from flood-prone areas;
- b. Structural measures, aimed at keeping floodwaters at bay, away from people;
- c. Flood preparedness measures, aimed at organizing people to be ready for the floods, and
- d. Flood emergency measures to help people cope when the floods inevitably occur.

Under the strategy, MRC envisaged three strategic roles for flood management and mitigation:

- a. Providing technical products and services by acting as repository of flood data and providing analysis for flood issues;
- b. Dispute resolution, arriving at mutually-agreeable solutions on dispute issues; and
- c. Capacity building and technology transfer through training and provision of equipment.

Flood mitigation and management (FMM) is a priority flagship initiative under the GMS Strategic Framework endorsed during the 10<sup>th</sup> GMS Ministerial Meeting held in Yangon, Myanmar in November 2001.

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### **Flagship Objectives**

The goal for subregional cooperation in flood management and mitigation is to prevent, mitigate or minimize social and economic losses due to floods through a combination of sustainable resource management actions and floodplain management measures.

Various floodplain management measures that complement MRC'S flood management and mitigation strategy will be added to the FMM flagship project. Following the four major groups of management measures for reducing flood risk and hazard, the specific objectives of the FMM initiative are as follows:

#### *Land Use Planning*

- a. To strengthen land use planning in GMS countries in order to minimize risks to people living in vulnerable floodplain areas;

#### *Structural Measures*

- b. To develop and implement a strategy for minimizing flood hazards to people living along the floodplains, such as by building platforms for dwellings, and making roads flood-proof to minimize need for repairs every flood season;
- c. To strengthen structural measures through development and building controls and reduce flood damage to urban settlements;
- d. To finance the construction of flood mitigation structures such as dams, embankments, flood retention basins and floodways, and drainage and pumping stations to minimize damage caused by flood on people and settlements of the subregion;

#### *Flood Preparedness*

- e. To strengthen institutional capacities for flood preparedness;

#### *Flood Emergency*

- f. To build the capacity of people, communities, and institutions to respond to flood emergencies.

### **Key Components and Priority Activities**

Collectively, the projects are expected to yield substantial benefits in terms of preventing floods, and damage to people's lives and to infrastructure and other investments.

Under the flagship initiative, integrated water resource measures with flood control components (Group 5 projects) are the largest in terms of cost. The projects consist of both project preparatory technical assistance (PPTA) and investment in water resource development – already included in ADB country strategy programs (CSPs) for Viet Nam and Cambodia. The projects were designed mainly for irrigation and urban water supply, but flood control structures are among their important components.

Group 2 projects include the GMS Flood Management Project, the sole loan investment project dedicated to flood management and mitigation. The project will mostly involve developing flood control and flood mitigation structures. While included only in the standby 2007 loan pipeline of the CSP updates for Cambodia, Lao PDR and

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Viet Nam, the preparatory technical assistance for the project is already in the 2005 technical assistance pipeline of the aforementioned CSP updates. Other Group 2 projects include two technical assistance proposals from Cambodia, specifically advisory components on riverbank protection, and planning for flood control structures.

ADB will rely on MRC for technical inputs in developing the FMM flagship initiative. To facilitate this, ADB will rely on an existing partnership arrangement with MRC, which was signed in October 2000; this has since progressed from project-specific to a more programmatic collaboration. Work on flood management and mitigation will commence cooperation efforts between ADB-MRC in the water resource sector.

Five technical assistance projects fall in the area of flood preparedness (Group 3 projects), mostly involving improvements in flood forecasting and warning systems. The only flood emergency project (Group 4) is an MRC project on emergency response and recovery that will provide training to emergency managers on technical services available from MRC. Cost of the project will still be determined.

### **Risks**

Across Mekong countries, possible negative externalities, especially in the environment sector, make cooperation in the management and mitigation of floods even more critical. In some cases, a number of options, including resettlement, may be explored in order to free populations from flood-prone areas. Key here is greater sensitivity to affected groups and implementation of a participatory approach to flood management and mitigation.