

ENHANCING THE CAPACITY OF DISASTER MANAGEMENT COMMITTEES IN CAMBODIA

Developing and implementing flood preparedness programs

ABSTRACT

This case study focuses on the development and implementation of Flood Preparedness Programs (FPPs) at the province and district levels in two Cambodian provinces. It showcases how FPP programs were developed under the Mekong River Commission's Flood Emergency Management Strengthening (FEMS) project and how the approach protects lives while at the same time honouring the positive aspects of flooding. It features the gaps and needs existent in the previous flood management system, and the subsequent development of a Flood Preparedness Program. This program aims to fill these gaps by strengthening the capacity of the provincial and district disaster management committees.

The inside story

- ◆ A regional approach to flood management
- ◆
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Flooding is an annual event in Cambodia. While many local people reap the environmental benefits of these natural events, many more suffer from loss of human lives, infrastructure and livelihood. A comprehensive, cross-network flood response system focusing on appropriate preparedness aims to decrease this annual damage through capacity building and technical assistance.

INTRODUCTION

The Mekong River is a lifeline for the majority of Cambodian people. The Mekong and its tributaries, combined with local rainfall, annually flood 17,100 sq km (or 25 per cent) of the plain area of the Mekong Basin. Heavy rains during slow moving storms aggra-

vated by large-scale deforestation also result in periodic flash flooding.

In Cambodia, the Mekong River frequently flows overtop its banks in the Basin causing floods in the low lying provinces. The flood area around Phnom Penh and down to

the Vietnamese border encompasses approximately 7,000 sq km, regularly affecting Stung Treng, Kratie, Kampong Cham, Kandal, Prey Veng and Svay Rieng provinces.

In 2000, the flooding was reportedly the worst in more than 70 years. The National Committee for Disaster Management (NCDM) of Cambodia reported a death toll of 347, 80 per cent of whom were children. Of the 750,618 families affected by flooding in 21 provinces or municipalities, roughly 85,000 families had to be temporarily evacuated. Damaged houses numbered 317,975 while 7,068 were destroyed. Based on the NCDM report, the Cambodian government estimated the total physical and direct damage to be US\$157 million. The following year, 2001, the NCDM estimated flood damage of US\$36 million, and in 2002 nearly 1.5 million people and 60,000 ha of farmland were affected by flooding.

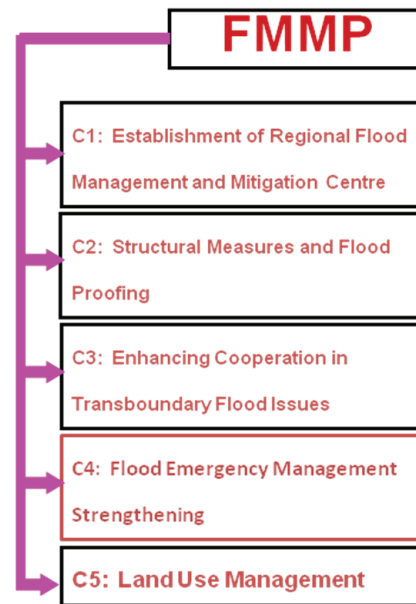
Yet while these floods cause such devastating damage, they are also welcomed. Flooding in the Lower Mekong Basin provides abundance of fish, a wealth of biodiversity to the region, water supply, navigation routes, and fertile sediment for agricultural land. Associated wetlands in the flood plain are important sources of livelihood for millions of people, providing such items as food and wetlands products.

A REGIONAL APPROACH TO FLOOD MANAGEMENT

To address the need for preventive measures against flooding in the Lower Mekong Basin area, the Mekong River Commission (MRC) developed an innovative, region-wide strategy whose goals are to improve "the preparedness and mitigation to the annual Mekong floods, while harnessing their environmental benefits."

As mentioned earlier, the Lower Mekong Basin experienced the worst floods in 70 years in 2000. In response to this environmental and humanitarian disaster, the MRC Secretariat established the Flood Management and Mitigation Program (FMMP). This program ensures that all people living in flood-prone areas in all four member countries of Cambodia, Lao PDR, Thailand and Vietnam (not just those most heavily affected) are better prepared for future floods. The strategy is particularly unique in that it acknowledges that floodplain management issues, based on the extent of their impact, can often be of a national, regional or trans-boundary nature. Thus, the program was determined to be transnational.

Due to the fact that there is a large number of flood-related needs among MRC member countries,



The 5 component projects of the Flood Management and Mitigation Program (FMMP)

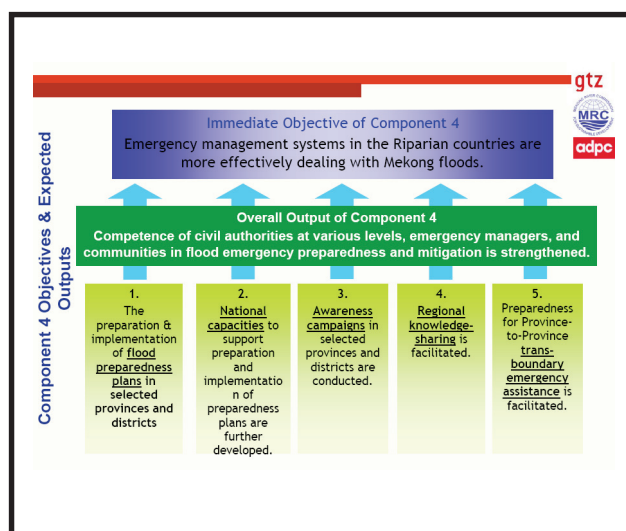
both domestically and from regional and transboundary points of view, each member country indicated its priorities so that MRC could identify roles for the new program. Based on each of the countries' common needs and priorities, five components of flood intervention were established within the FMMP.

Thus, a region-wide strategy was born. With the general purpose of preventing, minimizing, or otherwise alleviating people's suffering and economic losses due to floods, the FMMP specifically aims to reduce flood impacts while at the same time preserving the environmental benefits of floods and, consequently, people's livelihoods.

Component 4 of the FMMP: Flood Emergency Management Strengthening

The implementation of Component 4 of the FMMP, "Flood Emergency Management Strengthening" (FEMS), is being undertaken by the MRC with support from the Asian Disaster Preparedness Center (ADPC) and with funding support from the Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ).

The objective of the project is to ensure that "emergency management systems in the riparian countries are more effectively dealing with Mekong floods." The overall output of the project is to "enhance the competence of civil authorities at various levels, emergency managers and communities in flood preparedness and mitigation."



The project was launched in September 2004 and its Phase I was completed in April 2008. This Phase I was implemented in two of the most flood-prone provinces in Cambodia: Kandal and Prey Veng. Two districts within each province were selected for pilot implementation: PeamChor and Sithor Kandal districts in Prey Veng Province; Leuk Dek and Lovea Em districts in Kandal Province. The four districts are located on the floodplains of the Mekong River and are among the most flood-prone in their respective provinces.

National and Sub-national Institutions, Mechanisms and Capacities for Disaster Management

In 1995, as a result of the country's experience with regularly occurring disasters, the Royal Government of Cambodia established a National Committee for Disaster Management (NCDM) under the supervision of the Council of Ministers. It is chaired by the Prime Minister and the line Ministries are the members. Sub-national disaster management offices like Provincial, District and Commune Committee for Disaster Management were also established with their line departments as members.

FLOOD PREPAREDNESS PROGRAM: BUILDING CAPACITY AT THE PROVINCIAL AND DISTRICT LEVELS

One of the primary outputs of the project was the formulation and development of provincial and district Flood Preparedness Programs (FPP). The FPPs are essentially pre-identified steps of planning and prioritised implementing measures in anticipation of floods (before) to ensure that appropriate and effective protective actions are taken during and after the floods.

ADPC, with NCDM, facilitated the FPP development by providing technical assistance, necessary training to provincial and district level authorities, and support to implementation of flood risk reduction measures.

The PCDM and DCDM provided a vital coordination support by bringing together all the line agencies and other stakeholders at the province and district level. The Provincial and District Focal Persons became the catalyst in the development of the FPPs and later served as important resource persons for capacity building activities.

Institutional Analysis of Roles and Responsibilities

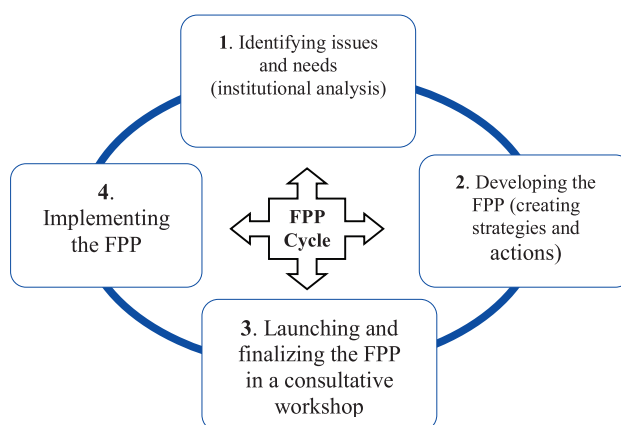
In the beginning of the project, ADPC, with its national partner NCDM, conducted a study on “

” The participants in this study were the members of PCDM who are involved in planning and implementation of flood related issues.

This study was conducted in Kandal and Prey Veng provinces in 2005. Its purpose was to thoroughly understand the existing disaster management system in order to appropriately support the provincial and district authorities. By examining the roles and responsibilities of the PCDM and the District Committees for Disaster Management (DCDM), the study was able to clarify where the challenges lay in the flood management system and where to begin in building the capacity of the disaster management committees so that they could be more effective.

The traditional roles of the PCDM and the DCDM were to inform both the communities and the government of impending floods and to provide assistance.

Once flooding had occurred, the PCDM's main responsibility was to coordinate the communication and contact with the line departments and other cooperating agencies, as well as to inform the government of the events. Once at the national level, the



NCDM worked with other line departments and non-governmental organizations (NGOs) in order to respond to the PCDM/DCDM with relief and resources.

With this kind of reporting system, it became evident that the disaster management system in Cambodia was not only heavily dependent on the government for instruction and resources, but it was also limited to emergency response and relief. With insufficient support and a limited understanding of other line departments' responsibilities, the existing structures had a weak communication system with little collaboration.

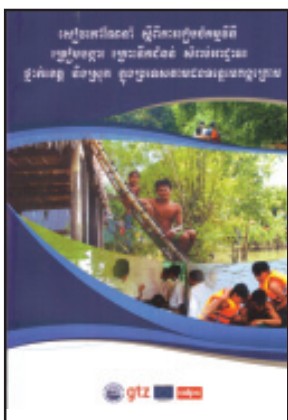
Though coordination between PCDM and DCDM member line departments had previously existed, the system was clearly weak and/or limited. Mr. Lim Kim Ny of PCDM-Kandal, noted that there was often an overlap of activities with little information being shared. Moreover, outdated flood data and flood records, as well as a lack of flood maps, contributed to poor access to flood information.

Finally, and perhaps most importantly, the committees for disaster management greatly lacked vital resources such as transportation, equipment, finances and skilled personnel.

Development of a Flood Preparedness Manual

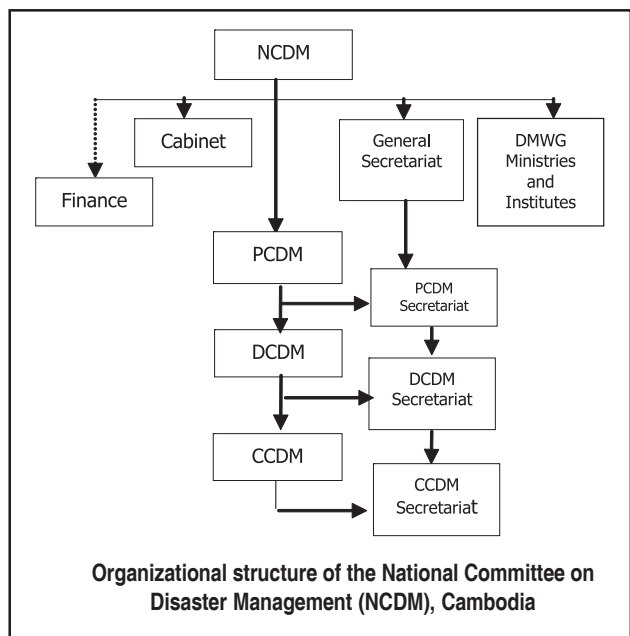
Developing the “

” (inset) aimed at two objectives: to help the provincial and district level disaster management (DM) committees of the riparian countries to develop and implement their flood preparedness programs, and assist the national and local disaster management authorities in their capacity-building activities for their DM officials, practitioners and NGOs.



This manual captures the process of flood preparedness planning and steps in implementation of the flood preparedness program with examples of preparedness, mitigation and response measures. Examples and lessons learnt from the FPP exercises conducted at the province and district level are also incorporated in the document.

The manual was developed using subject matter in training curricula used in earlier training activities, and information generated in the development of provincial and district flood preparedness programs in Cambodia and Lao PDR. It contains 10 chapters that provide basic understanding of and describe



implementation arrangements required for flood preparedness planning. The material has already been used by national agencies and the provincial committees in their FPP and training activities.

The English version of the manual was widely distributed at the regional workshop held in Khon Kaen, Thailand in October 2007. The manual was also translated into Khmer language and distributed at the National Lessons Learnt Workshop organized in Prey Veng in November 2007.

Participatory Processes of Flood Preparedness Program Development and Implementation

In June 2005, two consultative workshops were organized, one in Kandal province and one in Prey Veng province. In these workshops, all PCDM members were presented with the results of the

study All agreed that there was a need for a consolidated plan at the provincial level that would clearly spell out the roles and responsibilities of each department before, during and after floods. Following the workshops, a format for a flood preparedness program was developed by the PCDM and DCDM with technical assistance from the FEMS team and the NCDM.

According to the 2005 study, key gaps were identified in the existing Cambodian system of flood preparedness. The lack of a systematic, participatory flood preparedness planning process at the provincial and district levels was the central challenge to the PCDM and DCDM. Disaster management in Cambodia appeared to be restricted to responding only when flooding had already occurred, with no preventive measures undertaken.

After a series of meetings, consultations and plan-

"In the past, we created a temporary committee made up of representatives from each line department. The committee would help in time of disaster."

Dr. Soth Kimkolmony
Assistant to the
Deputy Secretary
General of
NCDM

Mr. Lim Kim Ny, a workshop participant, stated that this initial collaboration set the tone for "helping us understand what [each line department] actually did."

ment and Assessment Team; and Emergency Relief Operation Team; and, a list of priority actions to relieve flood risks, each linked to specific associated team or unit within the disaster management committee.

Benefits

One of the key successes in the development and implementation of the FPPs has been in strengthening the capacity of the PCDM and DCDM using a collaborative approach. By participating in the definition of clear roles and responsibilities line departments are more confident contributors to flood management. Moreover, through capacity building at the community level, people feel more in control of their futures.

His Excellency Ponn Narith, Deputy Secretary General of NCDM, said: "Before, the people in the communities did not know about disaster management. This participatory approach has equally improved the vertical and horizontal cooperation between member line agencies. More clearly defined roles have contributed to departments having a better understanding of each other's responsibilities and increased information sharing. There is no longer any confusion over the appropriate action to take. His Excellency added that there is also more opportunity to mobilize resources at the national level.

Due to the process of development of the FPP, departments have recognized the need for permanent representatives.



The consultative workshops facilitated agreement from the participants that a consolidated provincial flood preparedness plan must be developed.

ning workshops, all provincial and district flood preparedness programs were finalized in February 2006. This represented a milestone in the history of flood preparedness and emergency management in the targeted provinces and districts as they had finally formulated flood preparedness programs for the very first time

The participatory approach to developing the FPPs was central to the capacity building of provincial and district disaster management teams and their subsequent success.

Inside the FPP Process

Each flood preparedness program includes background information on the province or district; the existing activities (Standard Operating Procedures) of all member departments before, during and after floods; the Terms of Reference for four operational teams, namely the Search and Rescue Team; Health, Hygiene and Sanitation Team; Information Manage-



H.E. Ponn Narith, Deputy Secretary General of NCDM: "In the past, the PCDM would receive flood forecast information from the Department of Hydrology and River Works (DHRW) and inform the DCDM. The DCDM would alert the necessary villages that a flood was coming. Then we would have meetings in the district with commune representatives regarding the flood."



Mr. Dy Piseth, Deputy Chief, Agriculture Office, Peam Chor District: "We learned how to create an impact table in which we can fill information directly such as number of schools, safe areas, family members... after this training, we understood the work itself more systematically."

After the disaster was over, then the committee was dissolved. "We focused only on emergency response, not on community-based disaster reduction," said H.E. Ponn Narith, "Now this is no longer the case. They thought it was about receiving rice and waiting for food distribution. After the FPP, they know how to make a plan and how to prepare before, during and after the flood."

ACHIEVEMENTS

The FEMS project has successfully completed six FPPs: two provincial FPPs in Kandal and Prey Veng provinces, and four district FPPs in Lovea Em, Leuk Dek, Peam Chor and Sithor Kandal Districts.

It has additionally already begun implementation of selected priority activities. These include: the establishment of an Early Warning System in Peam Chor and Sithor Kandal districts; community-based flood management training and orientation for the CCDM; Damage And Needs Assessment (DANA) training; public awareness activities; the development of a program to meet the needs of women as heads of households; taking resource inventory; and making improvements on safe areas.

The experience and practices of the FPP are being extended to other non-targeted areas in order for other districts and provinces to be exposed to its successes. Provinces such as Kratie, Kompong Cham, Takeo and Svay Rieng have expressed interest, and the replication process has already begun in Pream Ror district, Prey Veng province and Kien Svay district, Kandal province.

Long Term Sustainability

In collaboration with the Ministry of Planning, the Program for Social Development and Deconcentration (PSDD, formerly Seila) has begun

implementing the Commune Development Plan (CDP) and the Commune Investment Plan (CIP). A CDP is a development plan generated by local authorities.

It takes into account the local situation and constraints on such things as the economy, natural resources and environment, administration and security, and social and gender issues. Its aim is to develop a framework of needs, goals and strategies, and their cost, in order to more independently meet the socio-economic needs of the commune. In November 2006, the process of integrating flood/disaster risk reduction into the CDP began. The linking of the FPPs with the CDPs is vital to their sustainability.

In September 2007, the PSDD began facilitating the CDP. NCDM, with technical assistance from ADPC, provided Training of Trainers (ToT) to PSDD facilitators regarding disaster risk reduction (DRR) concepts in order to ensure the appropriate integration of a DRR plan into the CDP.

LESSONS LEARNED/FUTURE CHALLENGES

There have been several lessons learned in the planning and implementation of the project:

- The institutional analysis has helped to define clearer roles and responsibilities for each department.
- Joint planning has improved the information sharing, understanding and cooperation (both horizontally and vertically) between the line departments at the provincial and district levels going from the commune up to the NCDM and back.
- The lead role of PCDM/DCDM in the planning process helps them realize their capacity is not limited only to response.
- Planning and follow-up implementation enables the line departments to recognize their extended roles in Disaster Risk Management and the possibility of mobilizing internal resources.
- The involvement of NCDM is significant as it helps to ensure the sustainability of the process. Challenges to be faced in the continued implementation of the project are:
 - Linking the FPP process at different levels.
 - Integrating the FPP into the development planning process, particularly in the Commune Development Planning process initiated under the SEILA program.
 - Sustaining the momentum of the FPP, especially following the years with no serious floods.
 - Regular allocation of resources for the FPP.
 - The expansion of the planning process to other districts and provinces.
 - The inclusion of gender issues into the FPP.

TEMPLATE OF A PROVINCIAL FLOOD PREPAREDNESS PROGRAM IN CAMBODIA

Preface	5.2	Public awareness raising in the target areas
Working Group	5.3	Early warning system establishment and flood marks installation in target villages and communes
1. INTRODUCTION		
1.1 Background		
1.2 Flood disaster and its impacts	5.4	Management of stockpiling
1.3 Goal and strategy	5.5	Development of search and rescue strategies
a. Why flood preparedness planning is needed	5.6	Establishment and management of safe areas before flood season
b. How flood preparedness planning can help		
c. Who is responsible for developing the plan	5.7	Information management
d. Planning mechanism	6	EMERGENCY RESPONSE OPERATIONS (DURING FLOOD)
e. Target audiences		
1.4 Responsibility and authority	6.1	Monitor potential of hazard and risks (situation monitoring)
1.5 Duration and updating of the Plan		
2. PROVINCIAL PROFILE		
2.1 Geography and land area	6.2	Dissemination of flood forecasts and early warning information among communities in vulnerable areas
a. Detailed information of the Province		
b. Number of districts, communes and villages	6.3	Strategies for search and rescue and evacuation operations (July-November)
c. Land area		
d. Schools	6.4	Safe area management
e. Health centers and hospitals	6.5	Health, sanitation and clean water program
2.2 Population	6.6	Impact assessment and estimation of resources needed
a. Key occupations		
b. Incomes	6.7	Emergency response
c. Population by district	7	RECONSTRUCTION AND REHABILITATION AFTER DISASTER
d. Education		
2.3 Main rivers and other water sources	7.1	Estimation of damage and needs
a. Main rivers	7.2	Development of plan and strategy for rehabilitation and reconstruction based on impact and need assessment
b. Other water sources		
c. Irrigation System	7.3	Implementation of "Reconstruction and Rehabilitation Plan and Strategy" after flood
3. HAZARD, VULNERABILITY AND CAPACITY ANALYSIS		
3.1 Hazards	8.	RISK REDUCTION MEASURE (BEFORE FLOOD)
3.2 Vulnerability analysis	A.	Structural reduction measure (dam, canal, safe area, etc)
3.3 Provincial resources		
a. Number of safe areas and location	8.1	Establishment of operation and maintenance committee at district and commune levels
b. Transportation	8.2	Identify and assess hazard, vulnerability, and community capacity
c. Communication system	8.3	Prepare plan for risk reduction projects
d. Human resources	8.4	Action plan implementation
e. Organizations	B.	Non-structural risk mitigation measure (policy development, resources and fund mobilization)
4. INSTITUTIONAL MECHANISM AND MANAGEMENT		
4.1 Provincial Committee for Disaster Management (PCDM)	8.5	Mobilize resources and technical support from government agencies
a. Composition	8.6	Mobilize resources and technical support from NGOs and donors to support the Plan
b. Role of Provincial Committee for Disaster Management	8.7	Prepare and develop policy for disaster management at all levels
c. Structure of Provincial Committee for Disaster Management	9.	ANNEXES
4.2 Provincial Disaster Management Teams	a.	Existing resource inventory (human resources and other resources)
4.3 Standard operation procedures for preparedness, response and rehabilitation	b.	List of important institutions or organizations
5. FLOOD PREPAREDNESS (BEFORE FLOOD)	c.	Provincial map
5.1 Capacity building of PCDM members at all levels (province, district, commune and village)		

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Safer Communities is a series of case studies that illustrate good practices of disaster preparedness and mitigation undertaken by either the government or non-government agencies with the goal of reducing the vulnerabilities and risks on the communities living in hazard-prone areas.

The series aims to provide decision makers, development planners, disaster management practitioners, community leaders and trainers with an array of proven ideas, tools, policy options and strategies derived from analyses of real-life experiences, good practices and lessons learned in Asia and the Pacific region, with a specific focus on reducing community risks and vulnerabilities and building more disaster-resilient and better prepared societies.

The first few case studies under the series have been developed under the Component 4 "Flood Emergency Strengthening" (FEMS) of the Flood Management and Mitigation Programme (FMMP) of the Mekong River Commission Secretariat (MRCS). Therefore, the focus of these studies will be on flood risk management and their geographical coverage is limited to four MRC member countries of Cambodia, Lao PDR, Thailand and Vietnam. However, good practices from other countries and other natural disasters are to be added over the years.

The Mekong River Commission Secretariat implements a Flood Management and Mitigation Programme (FMMP) designed to prevent, minimize, or mitigate people's suffering and economic losses due to floods, while preserving environmental benefits. FMMP has five components:

1. Establishment of Regional Flood Management and Mitigation Centre
2. Structural Measures and Flood Proofing
3. Enhancing Cooperation in Trans-boundary Flood Issues
4. Flood Emergency Management Strengthening
5. Land Management

The Component 4 "Flood Emergency Management Strengthening (FEMS)," of the FMMP has been implemented by the MRCS with technical assistance from the Asian Disaster Preparedness Center (ADPC) and funding support from the Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ), started from September 2004 to April 2008. The project target areas are in Cambodia and Vietnam, namely two provinces and four districts each in Cambodia and Vietnam. The project partners are the National Mekong Committees, National Disaster Management Offices and their local authorities at provincial, district and commune levels, concerned line agencies, mass organisations, Red Cross Societies, international organisations, local and international NGOs, etc.

Since 2004, FEMS has achieved the following:

1. Flood Preparedness Programs (FPP) in the target districts and provinces developed and implemented.
2. Local and national capacity in support to the FPP development and implementation process built through training at local levels on community based flood management, damage and need assessment, search and rescue, emergency kindergarten management, swimming lessons for children, etc. and involving/participating in the project implementation.
3. Public awareness on household safety measures at local levels raised, including school teachers' orientation and School Flood Safety Program for schools, identification of special needs of women-headed households, cultural performances, folk songs, distribution of flood booklet, posters, etc.
4. Local and regional knowledge sharing conducted through national and regional workshops as well as distribution of good practice documents.

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