

# **Flood preparedness and emergency management: people-centred approach in integrated flood risk management**

**Aslam Perwaiz  
Program Manager, ADPC**

## **MRC Flood Management and Mitigation Programme (FMMP) Component 4: Flood Emergency Management Strengthening**

### **Abstract**

*Key Words: Flood, Preparedness, Capacity Building, Emergency Management, Flood Awareness Mekong Delta,*

Flood preparedness and flood emergency management strengthening remain core elements of MRC's Flood Management and Mitigation Programme (FMMP), as these directly address the needs of flood vulnerable communities, and also indicate/guide the strengthening and operations of government agencies in the Member Countries (at different levels: national, provincial, district and commune) and of national and international NGOs. This is vital for enhancing communication, coordination and cooperation between these stakeholders, as well as the consistency of national disaster management and mitigation policy implementation.

Realising the goal of the MRC to '*more effective use of the Mekong's water and related resources to alleviate poverty while protecting the environment*', all the components of the Flood Management and Mitigation Programme (FMMP) focus on strengthening capacities of the riparian countries in flood forecasts, flood data dissemination, technical standards and training packages. This is a good example of how the MRC is adopting integrated water resources management at the basin level. Component 4 i.e., Flood Emergency Management Strengthening (FEMS) assists the Member Countries in strengthening their local and national authorities as well as selected relevant non-governmental actors in flood preparedness and emergency management in the Lower Mekong River Basin.

The paper outlines the overall strategy with working experiences on how the increased capacity of the key officials of the provincial, district and commune Disaster Management (DM) committees has led to a better flood preparedness in the selected provinces in the four Member Countries i.e., Cambodia, Lao PDR, Thailand and Viet Nam. The paper analyses the capacities of the selected provinces in the member countries for developing and implementing flood preparedness programs (FPP), community early warning systems, flood damage and needs assessment, and flood emergency response contributing the overall flood risk reduction initiative by the national governments. While the contributions from the German Government through GTZ and European Commission through ECHO are widely recognised by the Member Countries as time-bound "pilot" initiatives, covering some of the vulnerable provinces and districts, and improving the competence in dealing with the Mekong Floods. It also provides assessment-based solutions to how partnerships at various levels work in implementation of some of the important aspects of flood risk management. Be it public awareness or capacity building on community based flood management, Component 4 of FMMP takes a longer term programmatic approach to ensure that the flood management and mitigation policy objectives are solidly embedded into the national disaster management strategies of the Member Countries.

### **1. Flood Management and Mitigation (FMM) in Lower Mekong Basin**

The Lower Mekong River Basin (Cambodia, Lao PDR, Thailand and Viet Nam) is home to approximately 60 million people. Floods along the Mekong every year have the potential to directly endanger life; do millions of dollars worth of damage to property; destroy livelihoods and crops; and put people at increased risk of poverty, malnutrition and disease. At the same time, they are an important and essential natural process, bringing water, nutrients and other benefits to floodplains, wetlands and ecosystems. Climate, and particularly the Southwest monsoon, is the immediate cause of the annual floods. Most basin inhabitants are poor rural farmer/fishers although they may be resource rich. One third of the population lives on less than a few dollars per day. Being poor makes them more vulnerable to floods and flooding because the cheapest places to live are those which are mostly threatened by floods. Flood damage in the lower Mekong basin arises from a combination of direct losses due to the fact of inundation and secondary losses as a result of the suspension of normal

economic activities in the commercial and service sectors which can accumulate long after the end of the event itself and until such time as damage is repaired and stocks and inventory replaced. Assessing these figures in dollar terms reasonably accurately requires detailed surveys of pilot areas the results of which are then applied to the flood affected region on a loss per unit area basis. This is the methodology adopted in each country in the basin and from data available from the relevant National Disaster Management Agencies the losses that are estimated to arise in an average year amount to a regional total of US\$ 76 million. The most destructive regional flood conditions of recent decades occurred in 2000 in the south of the basin and in 2008 in the northern parts. By far the larger overall damages occurred in 2000 and amounted to US\$811 million, those of 2008 being much less at US\$135 million<sup>1</sup>.

Knowing the causes and the impacts of the Mekong floods, an important issue remains to be solved which is “how to get people ready for floods before they come” and “how to help people cope with floods”. The current status of flood management and mitigation in the Member Countries has improved considerably from “response to floods when they occur” rather than to prevent major damage or to be prepared in the forehand. However, the preparedness level backed with institutional coordination is yet to be fully achieved. To deal with the Mekong floods more effectively there is a need for continued support to strengthen the capacity of local disaster management authorities in flood preparedness and disaster risk reduction activities.

The Flood Management and Mitigation Programme (FMMP) of the MRC is a rolling programme that commenced operation in January 2005 and is funded to the total value of around US\$20 million. The FMMP provides technical and coordination services to the four countries in the Lower Mekong Basin to prevent, minimise or mitigate the civil and socio-economic losses due to floods and flooding, while preserving the environmental benefits of floods. Forecasts, flood data, technical standards, capacity-building and training packages are key outputs of the programme. The programme has five components:

1. Establishment of a Regional Flood Centre
2. Structural Measures and Flood Proofing
3. Mediation of Transboundary Flood Issues
4. Flood Emergency Management Strengthening
5. Land Management

The Component 4 focuses on flood preparedness and strengthening flood emergency management in the four MRC Member Countries such as Cambodia, Lao PDR, Thailand and Viet Nam. The emphasis is on capacity building, knowledge sharing and public awareness campaigns at the provincial, district and community levels. With the continued support from the Government of the Federal Republic of Germany (FRG) represented by the Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) and the European Commission (EC) under the European Commission Humanitarian Aid department (ECHO), the major focus has been to strengthen practical skills of key officials at provincial, district and commune disaster management committees to develop and implement the Flood Preparedness Programs (FPP). The core objective of the component 4 is to enhance technical capacities of relevant authorities and other stakeholders in all riparian countries (at the province, district and commune levels) in flood preparedness and emergency management, thus creating an enabling environment for a people centred approach towards integrated flood risk management. The component 4 with funding support from GTZ (2004-2010) and with different DIPECHO South East Asia funding cycles of ECHO (2003-2010) has covered a total of 11 most flood provinces in the LMB with flood preparedness programs in 30 vulnerable districts. The overall coverage is presented below in the table 1;

---

<sup>1</sup> Annual Flood Report 2008, MRCS

**Table 1: Geographical coverage (Component 4 -Flood Preparedness and Emergency Management Strengthening)**

<b>Member Countries</b>	<b>Provinces</b>	<b>Districts</b>
<b>Cambodia</b>	1. Prey Veng 2. Kandal 3. Kratie 4. Svay Rieng	<ul style="list-style-type: none"> <li>• Peam Chor, Sithor Kandal, Peam Ro</li> <li>• Lovea Em, Leuk Dek, Kien Svay</li> <li>• Kratie, Sambour and Chhuloung</li> <li>• Svay Chrum</li> </ul>
<b>Lao PDR</b>	5. Khammouane 6. Savanakhet	<ul style="list-style-type: none"> <li>• Nong Bok , Xebangfai Hin Boun, Mahaxay, Nhommalath</li> <li>• Xayboully</li> </ul>
<b>Thailand</b>	7. Nakhon Phanom	<ul style="list-style-type: none"> <li>• Nakhon Phanom</li> <li>• Tha Utehn</li> </ul>
<b>Viet Nam</b>	8. An Giang 9. Dong Thap 10. Tien Giang 11. Ben Tre	<ul style="list-style-type: none"> <li>• Chau Thanh, Tan Chau, An Phu</li> <li>• Thanh Binh ,Tan Hong, Tam Nong</li> <li>• Chau Thanh, Cai Be and Cai Lay</li> <li>• Cho Lach</li> </ul>

The core activities carried out under the Component since 2004 were to develop and implement innovative flood preparedness and emergency management activities at the sub-national level by addressing directly the needs of the flood vulnerable communities. This has increased communication, coordination and cooperation between these stakeholders, as well as the consistency of national disaster management and mitigation policy implementation of Member Countries. The overall activities are summarised in Table 2;

**Table 2: Activities of Component 4 -Flood Preparedness and Emergency Management Strengthening**

	<b>Core Area of intervention</b>	<b>Key Activities</b>
1	<b>Flood Preparedness Programs (FPP) Development</b>	Annual and Multi-year Disaster Risk Reduction Plans at Province and District , Clear roles and responsibility for each line ministries, Multi-Hazard risk profile and identification of flood focused measures
2	<b>FPP Implementation</b>	Innovate partnership and cost-sharing implementation of flood risk reduction measures i.e., Emergency Kindergarten, Safe Area, Search and Rescue etc.
3	<b>Capacity Building for Flood Risk Reduction</b>	Enhanced capacity of provincial, district, commune level disaster management authorities on Planning for Flood Preparedness and Emergency Management , Community Based Flood Management, Search & Rescue, Swimming Lesson and Teachers Training
4	<b>Flood Awareness and Education</b>	Partnership and capacity building of relevant line ministries such as Education and Training and Information and Culture on flood awareness activities i.e., Posters and Information Booklet, Cultural Shows, Flood Information Billboards etc
5	<b>Flood Knowledge Sharing and Documentation</b>	Regional and National Workshops/Forums , Safer Communities series Case Studies on innovative flood risk reduction practices
6	<b>Integration of Flood Risk Reduction into local development planning process</b>	Sectoral Plans and implementation of Flood Risk Reduction through commune development planning. National and Provincial consultation and development of Approach and Strategy paper on integration of flood risk reduction into development planning process.
7	<b>Trans-boundary Cooperation</b>	Province to Province cooperation meeting (Viet Nam - Cambodia and Thailand-Lao PDR), Joint-Planning for flood Information and resource sharing

## 2. Flood Preparedness and Emergency Management Activities in the Lower Mekong Basin

### 2.1: Flood Preparedness Programs: Building Capacities of Local Authorities in Flood Risk Reduction

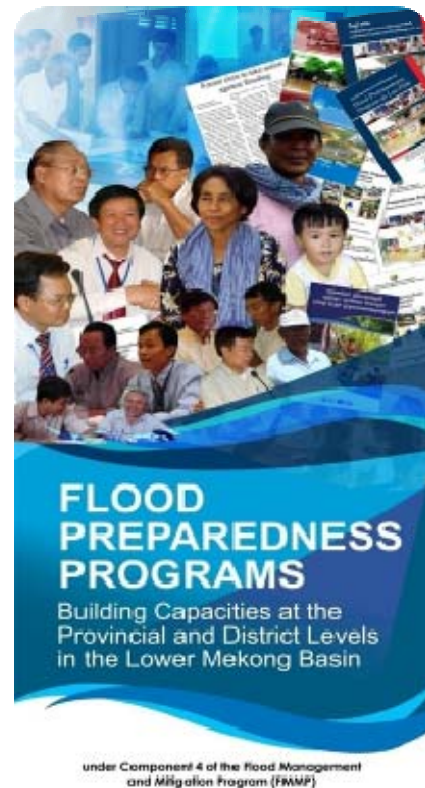
MRC through its FMMP is providing assistance to its Member Countries in adopting holistic flood management initiatives that address the interaction between beneficial aspects of floods and the risks posed by the annual flood events to the basin communities through development and implementation of flood preparedness programs (FPP). The FPP assign equal emphasis on both preparedness and emergency interventions of flood management. They also promote participatory approach in order to enhance the consensus and ownership among the provincial and district level stakeholders. Additionally, it defines clear roles and responsibilities of the member line agencies who are member disaster management committees and detail out the requirements for implementing preparedness, mitigation, response, recover and rehabilitation tasks.

The FMMP has played a key role in facilitating the development and implementation of flood preparedness programs (FPP) through the most participatory process by the national, provincial and district disaster management committees to improve the coordination of member line departments with clearly defined roles and responsibilities and to reduce flood risks by implementing priority action areas identified in the FPP.

The engagement of the Provincial and District Disaster Management (PCDM and DCDM) focal points in the FPP development process offered them exclusive opportunities to enhance their ability in other aspects of flood risk reduction beyond the emergency response phase and to utilise their knowledge obtained from the trainings. Following the successful development of FPP, further capacity building activities (*see table 2*) to the PCDM and DCDM were supported to implement the priority actions of FPP, as a progressive movement towards building of local capacities.

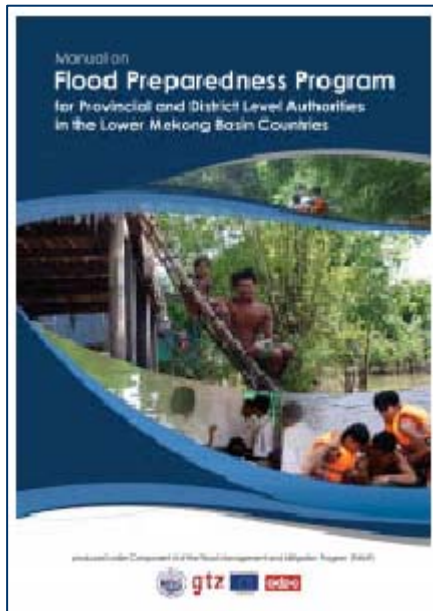
The provincial and district level FPP process also facilitated in collecting and compiling information on existing resources in their vicinity such as location and number of health centres and safe areas and related facilities, existing number of boats and communication equipment, etc., in their provinces and districts. These resource inventories were used in the existing provincial and district maps with help from Regional Flood Management and Mitigation Center (RFMMC) facilities situated at Phnom Penh, Cambodia. These maps incorporated information required for planning such as national, provincial and district road and railway networks, rivers and streams, district and commune boundaries, etc. PCDM and DCDM were provided with final products, and the information was also kept at the RFMMC for further use by other interested users.

The provincial and district level disaster preparedness planning process by the DM committee members has helped in institutional capacity and confidence building in the local DM officials to deal with the Annual Mekong Flooding. The experiences of the provincial and district levels officials show that they were able to demonstrate their built capacities and coordinate better than before in recent disasters including the Ketsana Typhoon that struck Cambodia, Lao PDR and Viet Nam. The FPP manual and the template on which they have prepared the Plans have been useful to performed their roles and responsibilities in coordinated manner.



## 2.2: Developing the Local Capacity Base on Flood Risk Reduction

A manual on Flood Preparedness Program Planning and Implementation for provincial and district level authorities in the Lower Mekong Basin countries has been developed by each of the Member Countries in local language. The manual serves as an effective guide for local disaster management



authorities for planning and implementing appropriate measures at all stages; from flood preparedness to flood mitigation to response to recovery and long term rehabilitation. The manual highlights essential elements including detailing of roles and responsibilities of all stakeholders to ensure that preparedness and response activities are undertaken and assigned to avoid duplication or oversight of any activities and maintaining a resource inventory for rapid deployment of resources in case of emergency. It also underlines such cross cutting issues as livelihood planning, environmental conservation, flood plain management and mainstreaming of flood risk reduction into local development planning process. The manual stresses the importance of accountability within the process of disaster management and risk reduction and the need for the presence of a nodal agency in charge of overall supervision of implementation arrangements. Although the manual was intentionally developed to address flood preparedness in the Lower Mekong Basin countries, it can easily be adapted to suit other country contexts and alternative

hazard events.

A pool of trained human resources in all the 30 target districts has been created at the national and sub-national levels while implementing the flood preparedness and emergency management project activities. These key officials (government staff from relevant line department, officials from training resource institutions, officials from provincial Red Cross Societies and civil society organisations) play an important role as “Trainers” in further training and capacity building activities at local levels.

The Community Based Flood Management (CBFM) trainings for selected commune level disaster member officials aimed to improve the practical skills in flood management and to strengthen their capacities in flood preparedness planning and implementation, enabling them to manage and mitigate the negative impacts of floods. These trainings were carried out across the 11 target provinces in the four Member Countries.

To meet the challenges of drowning during flooding season, Search and Rescue (S&R) trainings in Viet Nam were provided to the officials and youth organisations in collaboration with the Viet Nam Red Cross (VNRC) and the District Military Office. These on the job trainings improved human skills and strengthen the Rescue Posts<sup>2</sup> at strategic locations at the confluence of rivers/canals and along the waterways (i.e. at locations identified as dangerous during flood season), usually manned by Red Cross Volunteers and Youth Union members.

In Cambodia, district level capacity building on generating reliable and timely data in the immediate aftermath of any disaster were carried out through Damage and Needs Assessment (DANA). The focus was on the optimal usage of existing formats on damage and need assessment (DANA) developed by the national authorities and systematic reporting to the NCDM on immediate needs after disaster. Such capacities in the target provinces played crucial roles during the typhoon Ketsna and the flooding of 2009.

---

<sup>2</sup> Rescue Posts are emergency response points managed by the VNRC volunteers

The initial results of the newly established result based monitoring at FMMP shows that the FEMS Component has created a receptive environment for the implementation of a range of dedicated flood risk reduction interventions at the Province, District and Commune level. It looks now on mainstreaming the flood risk reduction activities in line with the national Disaster Risk Reduction (DRR) strategies into local development planning processes.

### ***2.3: Improving Access to and Dissemination of Flood Early Warning***

Under Flood Management and Mitigation Programme (FMMP), the MRC is widening its reach to the community level through praiseworthy early warning initiatives while incessantly working to improve its forecasting system. Between 2003 and 2008, the MRC and its project implementing partner ADPC, in collaboration with Department of Hydrology and River Works (DHRW), supported the implementation of community based early warning initiatives in Cambodia, spreading over six provinces along the Mekong: Stung Treng, Kratie, Kampong Cham, Prey Veng, Kandal and Takeo. The initiatives were executed as part of FMMP priority activities<sup>3</sup> by Action contre La Faim (ACF), Cambodia Red Cross, American Red Cross and Asian Disaster Preparedness Center (ADPC) except for Takeo province where OXFAM GB operated out of FMMP context but the basic modalities applied were more or less the same. Supported by U.S. Foreign Disaster Assistance (OFDA), European Commission Humanitarian Aid department (ECHO) and GTZ, the community based early warning activities provided crucial flood forecasting information to the communities.



The involvement of Cambodia Red Cross (CRC) in these projects, though in varying degree as key project implementer in one project and as project partner in others, was instrumental since it has far reaching network of provincial, district and village volunteer teams of volunteers that work closely with the disaster management structures at respective levels throughout Cambodia.

The EWS projects shared a common goal of “through improved warnings, vulnerable communities in Cambodia will reduce their risk to higher-than-normal floods” and the activities were implemented in three major phases: installation of flood reference tools, management enhancement and community empowerment as described below.

In addition to flood marks installed by the DHRW, community/ home flood marks were also created for easy access where flood level markings were painted on school walls, along the ladders of pagoda, pillars of the houses of women headed households, stilts of the houses of village chiefs and deputy chiefs and on the pole of the flood early warning billboards. To facilitate the information flow, the provincial hydrology departments, Provincial, District and Commune disaster management offices were equipped with two way communication devices. In some villages where houses were widely spread out, loud speakers were set up.

The village chiefs and village volunteers were trained to efficiently perform their tasks as flood mark operators to read and record flood water level in the log-sheets, to understand the flood information flow and how to take care of flood marks.

To feed into the two way communication system, the local authorities cooperated with the hydro met services to read and record the water level from the flood marks and communicate with DHRW regularly. DHRW then fed the data into the forecasting model and the flood bulletin for the next 3 days was prepared and transmitted to the local authorities. Such a system help build community owned “flood Information Billboards”. These billboards provide updated information on water levels and forecast for the next three days.

---

<sup>3</sup> The projects fell under the umbrella of FMMP in general and under Component 1 (Flood Referencing Project) and Component 4 in particular.

## ***2.4: Promoting Community Awareness and Strengthening Community Resilience***

In efforts to reduce the flood risks, well designed public communication campaigns contributed enormously to educating the public and to conveying the intended message over a large geographical area to a vast and diversified audience. Raising the awareness of communities on hazards and risks they are exposed to and what they can do at the individual household level to mitigate or minimise those risks can transform them from being passive to active participants of wider disaster risk reduction scenario. Since 2004, Component 4 has effectively implemented awareness raising initiatives in various forms; IEC (Information, Education and Communication) materials development and distribution, organising cultural shows and sector specific activities like school flood safety programmes. One of the key factors contributing to the wide acceptance of the public awareness campaign undertaken so far under Component 4 was the successful mobilization and collaboration of the key disaster management actors in the province. All major stakeholders from provincial government officials to community focal persons were involved in the process, encouraged more so by the fact that at both national and sub-national levels, the existing natural disaster management strategies of Lower Mekong Basin countries acknowledge the power of public awareness raising. In essence the awareness campaign was a product of a collaborative effort of local disaster management officials (i.e., the provincial, district and commune disaster management committees), provincial line departments (i.e., the departments for Education, Women's Affairs, Cultural, Information, etc.), national and provincial Red Cross officials and NGO partners. Involvement of the provincial line departments from inception to implementation of the awareness campaigns produces a strong sense of buy-in and ensures sustainability of such approaches.

The School Flood Safety Programmes (SFSP) is one of the innovative activities being implemented successfully in all four MRC Member Countries with the objectives of supporting the school authority, particularly the Education Department, in implementing flood preparedness programs in selected vulnerable schools and enhancing the vulnerable communities' capacity in dealing with floods via children as primary risk reduction communicators. The key role is played by the provincial Education Departments are given instrumental role in implementing SFSP activities under the guidance of provincial and district disaster management agencies. Provincial working groups are established comprising representatives from other member line departments of provincial and district disaster management committees to facilitate coordinate and monitor the implementing activities.

The initiative to educate the community on flood risk reduction through traditional art forms in Cambodia succeeded in enhancing the understanding of roles and responsibilities of these line agencies as well as supporting the communities in their understanding of and ability to respond to and mitigate flood situations. The Royal University of Fine Arts was the key institution in developing the scripts; the provincial officials played the key role in the conceptualisation and eventual conduct of the plays. IEC materials on flood risk management such as flood booklet and "Living with Flood" video were provided to the Royal University and the Department of Culture and Fine Arts for their preparatory works.



A similar initiative in changing the attitude of local communities on flood management using performance arts in Viet Nam has been quite successful utilising the capacities of the Office of Information and Culture (OCI) including the development of scripts, conducting performance rehearsal, charting the schedule and organising the shows. A similar initiative in Lao PDR and Thailand has also been initiated recently.

The availability of limited resources for public awareness has hampered the replication of awareness campaigns over wide area beyond the project geographical coverage. In order to broaden the pool of resources, the idea of public-private partnership has been initiated in Lao PDR, Thailand and Viet Nam. The advantages of the involvement of private agencies in public awareness raising are that they provide extended networking beyond disaster risk reduction sector and more efficient use of resources

and funds. It is envisaged that the roles of private sector can range from sponsorships of awareness raising activities to adoption of flood memorials installed in strategic places.

### ***2.5: Improving participation and addressing the needs of Children and Women in flood risk reduction***

In the Mekong Delta, where high water level during flood season can last up to two months in some areas, women have to bear more responsibilities during that time as even their daily household chores call for more concerted efforts; for instance securing food for the family might require travelling longer distances than usual and they have to be more alert to ensure the safety of the children. The burden is even heavier on women who do not have any male relatives to rely on; such as poor women-headed households.

Children, on the other hand, rely on adults to cope with any stressful situation including disastrous events like natural hazards. In most cases, the resulting deaths of children can be attributed to either negligence of adults or lack of knowledge on the parts of both children and adult to react in a disaster situation. One way to establish a sense of control and to build confidence in children before a disaster is to raise their understanding of hazards and their impacts and provision of life-saving programmes like free swimming lessons which includes knowledge sharing among adults on taking care of the children during floods.



Pioneered by agencies like Save the Children and World Vision, disaster risk reductions programmes that consider and incorporate perspectives of children and their needs during disasters have been in place in MRC Member Countries. Though the extent of such programmes is, limited both government and non-government agencies alike are working towards creating a safer environment for children.

Even though still in the infancy stages, the national disaster management plans of the Lower Mekong Basin countries concede the gains of child-focused disaster risk reduction. In Cambodia and Lao PDR, formal education sector has been involved in crafting a culture of preparedness by mainstreaming disaster risk reduction into school curriculum. Thailand on the other hand have developed guidelines for integrating disaster prevention and mitigation activities into schools activities. In Viet Nam, the establishment of emergency kindergartens heighten the child safety and the parents of poor families to be able to devote more time to income generating activities. The swimming programmes in the Mekong Delta provinces in collaboration with other stakeholders significantly reduce the child drowning. Kids between 6-14 years old considered most vulnerable in the districts were equipped with Life jackets and swimming lesson.

Under the FMMP, a specific flood risk reduction activity targeting the women-headed households was implemented in Kandal and Prey Veng provinces in Cambodia in partnership with the Ministry of Women's Affairs (MoWA). A common recommendation emerged was to build the capacity of the commune women and children focal points in two major areas: enhanced knowledge of flood risk reduction, mainly the community based flood risk reduction, and planning on how to disseminate the flood risk reduction information to the target groups of poor women-headed households. The goal was to enable the poor women-headed households to adopt proper and inexpensive flood mitigation measures in order to reduce the cost of recovery and stress thereby helping them to invest more time, money and efforts in income generation activities.

### ***2.6: Province-to-Province Trans-boundary Cooperation in Emergency Management***

The Mekong River Commission (MRC) offers such mechanism with its officially recognized role to address differences and to facilitate bilateral agreements between its Member Countries with respect to trans-boundary issues. For instance, the MRC is playing a role of neutral facilitator to the Member Countries on land-use or structural flood mitigation measures. MRC holds the unique position to build confidence among the neighbouring countries through its ongoing programmes such as Water Utilisation Programme, the Basin Development Plan and the Environmental Program and also assist in coordinating floodplain management aspects of national programmes.



In strengthening trans-boundary collaborations, existing mechanisms were utilised in creating an awareness between the neighbouring provinces between Cambodia and Viet Nam as well as Thailand and Lao PDR for exchange of flood information and cooperation in flood response. Between Kandal and Prey Veng provinces of Cambodia and An Giang and Dong Thap provinces of Viet Nam, prospect of promoting trans-boundary flood emergency assistance has been set in motion with bilateral meeting and initiation of a joint planning on flood preparedness and resource sharing. Building on this existing mechanism, the provincial disaster management authorities in conjunction with national counterparts worked on the inclusion of trans-boundary emergency assistance and flood preparedness into the regular meeting agenda.

A similar intervention of flood risk reduction cooperation between provinces of Lao PDR (Khamamoune) and Thailand ( Nakhom Phanom) has also been initiated under the component 4 of the FMMP. A preliminary activity for the development of a detailed joint plan has been initiated in the form of a provincial meeting. It is anticipated that the upcoming meeting will also address to a considerable extent the strategy for integration of trans-boundary issues into development planning at the provincial levels.

#### **4. Lesson learnt and Next Steps**

Flood preparedness and flood emergency management strengthening remain core elements of MRC's Flood Management and Mitigation Programme (FMMP), as these address directly the needs of the flood vulnerable communities, and also indicate / guide the strengthening and operations of government agencies in the Member Countries (at different levels: nation, provincial, district and commune) and of national and international NGOs. This is vital for enhancing communication, coordination and cooperation between these stakeholders, as well as the consistency of national disaster management and mitigation policy implementation.

The experiences clearly show that increased capacity of the key officials of the provincial, district and commune Disaster Management (DM) committees has led to a better flood preparedness in the selected provinces in the member countries mainly Cambodia, Lao PDR, Thailand and Viet Nam. Active involvement of national government and local authorities at provincial, district and commune levels in the formulation and implementation of the Flood Preparedness Programs (FPP) has been a major step to ensure consistency, ownership and sustainability, in addition to the activity of integrating Flood Risk Reduction (FRR) into local development plans. The flood preparedness and emergency management initiatives has helped target provinces better prepare for floods.

While the FMMP contributions is widely recognised by the member countries as time-bound "pilot" initiatives, covering some of the vulnerable provinces and districts, and improving the competence in dealing with the Mekong floods, a longer term programmatic approach and up-scaling to a wider geographical area is required to ensure that the flood management and mitigation policy objectives are solidly embedded into the national disaster management strategies of the Member Countries.

The role and mandate of the MRC, being an inter governmental regional organisation, provide the MRC the unique position and niche, which allows connecting the FMMP with national, provincial and district disaster management agencies, as the MRCS works through its Member Countries to implement programs at the national, provincial and district levels. The MRC has thereby created a receptive environment for the implementation of a range of dedicated interventions at the commune level. The flood management and mitigation tools developed by the MRC have a basin wide approach and can be applied to support local level interventions.

With the current FMMP phase ending in 2010, the formulation of the next FMMP phase would seek a long term partnership with national stakeholders from Member Countries as well as donor communities to continue its focus on enhancing capacities on solution based flood risk management to the vulnerable communities. The lesson learnt from the various components of FMMP and particularly from Component 4: "Flood Preparedness and Emergency Management Strengthening", points to continue innovative flood focussed activities are crucial to reduce the risk of negative impact by floods on the livelihoods of the people living in Lower Mekong River Basin.