



Outline of JICA Training Program “Local Emergency Operation Plan with Flood Hazard Map”

Public Works Research Institute (PWRI)
International Centre for Water Hazard and Risk Management (ICHARM)

1. Introduction

There are increasing tendencies of occurrence of flood disasters on a worldwide basis. Among them the Asian countries are suffered from it most severely. As about 80% of total casualties of the world are Asian people, further measures against the flood disasters are required in this area.

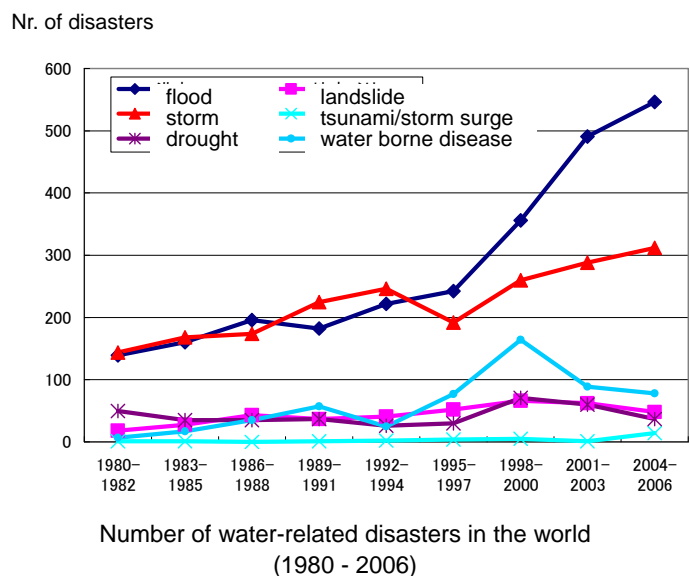
Recently the importance of a flood hazard map as a non-structural measure against flood disasters has been recognized and production and dissemination of them have become more urgent request.

However, just production and dissemination of flood hazard maps are not sufficient for the capacity building of communities that play a leading role and it is necessary to raise their capacity in the local disaster management through making a local disaster management plan.

International Centre for Water Hazard and Risk Management (ICHARM) of Public Works Research Institute (PWRI) has conducted the training course of "Flood Hazard Mapping in East/ Southeast Asian Region" for five years from 2004 and this training course has contributed to grow the understanding of the importance of hazard mapping in Asian countries.

Based on this training course that has finished in the FY 2008, a new course to further improve the result of the course has been prepared.

This new course, **targeting not only Asian countries but also all the regions suffered from flood disasters, aims to strengthen the resilience of the disaster management organizations and local communities against floods through making the local disaster management plan combined with disaster prevention facilities, flood hazard map and flood forecasting/warning system.**



2. Outline of the course

This training course will be conducted **in three years plan**.

The first year participants are executive officers who are expected to make an executing plan in each country and to select the suitable participants for the next two years. The second year participants are expected to acquire necessary skills for flood hazard mapping and the third year participants will make an action plan that draws the direction and schedule to make local disaster management plan. After finishing the three years of training courses the action plan will be revised through follow up programs.

The outline of the training course "Local Emergency Operation Plan with Flood Hazard Map"

Title: Local Emergency Operation Plan with Flood Hazard Map

Implementing agencies:

International Centre for Water Hazard and Risk Management under the Auspices of UNESCO (ICHARM), Japan International Cooperation Agency (JICA)

Overall Goal: Flood damages in their countries will be reduced by making local disaster management plan combined with FHM and flood forecast/warning system and strengthening local resilience against floods.

Training Goal: The direction and schedule to make local disaster management plan combined with flood hazard map and flood forecasting/warning system will be drawn.

Target Organizations: Organization that conducts operation of flood disaster management plan and has authority over related laws or has close relationship in a country with frequent flood disasters

Target Participants:

Year 1: Section heads of the Ministries or equivalent.

Year 2: Engineers who will be responsible on flood hazard mapping.

Year 3: Deputy-section heads of the Ministries who will promote the flood hazard mapping and flood disaster management programs.

Outputs:

Year 1: Report on flood disaster countermeasures comparing Japan with their country and 3-years' action plan.

Year 2: Sample anticipated inundation area map.

Year 3: Report on local disaster management plan using FHM and flood forecast/warning system.

Language: English

Lecture Site: Public Works Research Institute (PWRI), Tsukuba City, Japan

Lecturers: Researchers, engineers, and administrators from Japan and overseas who have the experience of general planning or practical experiences in the field of mitigating water related disasters. Most of them are the staff of MLIT, PWRI, and ICHARM, or Professors from universities.

"Local Emergency Operation Plan with Flood Hazard Map"

Expected module outputs and contents of the course

	Expected module outputs	Contents
Year 1	1) Identifying problems and issues on flood disaster countermeasures.	<p>General knowledge of flood disaster countermeasures (including structural and non-structural measures and the fundamentals of local disaster management planning)</p> <p>Lecture on the general knowledge on the flood disaster countermeasures in Japan (structural, non-structural, local disaster management plan, river administration, law system on disaster prevention and flood fighting) and introduce the system to share and confirm the information among concerned organizations such as flood forecasting coordinating committee or flood brigades.</p>
	2) Organizing a training plan for the second year on to set the direction for a local disaster management plan and to make a mid-term operation schedule.	<p>Awareness-raising of local residents' groups. Interviews with municipalities and local residents on disaster awareness.</p> <p>Site visits and interview with municipalities to discuss the current situation of awareness-raising of local communities and problems they are facing.</p> <p>Project Cycle Management (PCM) training, report of comparison, planning of training</p> <p>Learn the systematic ways of problem analysis and solution through the PCM training.</p> <p>Identify problems and issues on flood disaster countermeasures and report on flood disaster countermeasures comparing Japan with their country.</p> <p>Make a training plan and assign the suitable participants for year 2 and year 3.</p>
Year 2	3) Identifying problems and issues for obtaining data to conduct hydrological and flood analysis	<p>Fundamentals of hydrology (runoff analysis, frequency analysis, etc.)</p> <p>Understand the conversion process from rainfall to discharge by run off analysis.</p> <p>Learn the techniques to calculate the frequency of occurrence of rainfall and discharge and derive the scale of rainfall and discharge according to the probability of reoccurrence.</p>
		<p>Fundamentals of flood hazard mapping (Inundation analysis, GIS, Google Earth, etc.), "Town Watching" exercises, Production of a sample anticipated inundation map.</p> <p>Study GIS and Google Earth and learn how to utilize them to express the result of inundation analysis.</p> <p>Go for Town Watching, walk on the target area, and make sure the appropriateness of the sample anticipated inundation map.</p>
Year 3	4) Understanding of the relationship among flood hazard mapping, forecasting/warning systems and an evacuation plan in a local disaster management plan.	<p>General knowledge of flood disaster countermeasures (including structural and non-structural measures and the fundamentals of local disaster management planning).</p> <p>Evacuation plans, Disaster information communication.</p> <p>Learn the general knowledge of flood disaster countermeasures in Japan, including forecast/ warning system. Study how to make an efficient evacuation plan by combining forecast/ warning system and FHM.</p> <p>Learn the communication network that is necessary to operate such system.</p>
	Make a sample local disaster management plan that targets a model basin in each countries.	<p>Production of a sample local disaster management plan.</p> <p>Make a sample local disaster management plan that targets a model basin in each countries.</p>
		<p>Project Cycle Management exercise training, Interviews with municipalities on local disaster management plan,</p> <p>Learn the systematic ways of problem analysis and solution through the Project Cycle Management (PCM) training.</p> <p>Sort out the way of thinking how to make a local disaster management plan.</p> <p>Site visit and interview with municipalities to discuss the difficulties in making a local disaster management plan.</p> <p>Making an "Action Plan" for making a local disaster management plan</p> <p>Make an action plan for making a local disaster management plan in their own countries.</p>

The relationship between the participants of year 1, 2, and 3
and their expected outputs

