JICA Training Program:
Capacity Development for Flood Risk Management with IFAS

International Centre for Water Hazard and Risk Management under the auspices of UNESCO (ICHARM),

Public Works Research Institute

Japan International Cooperation Agency (JICA)

1.   Background

Water-related disasters, such as floods, have been on an upward trend throughout the world. Particularly in developing countries, it is urgent to take measures for flood disasters, which cause large-scale damage in many cases. The implementation of structural measures, such as levees, flood control basins and dams, is usually the first to come to people's minds; however, that of non-structural measures such as flood forecasting and warning systems and flood hazard maps is equally important, provided that developing countries often lack financial and human resources. In addition, to use the results of

Figure 1 Trend of natural disaster and water-related disasters (1900-2010)

flood forecasting effectively, efficient collaboration among meteorologists, river administrators and disaster management personnel who are in charge of evacuation by local residents is indispensable. In developing countries, this is also at issue, as those three bodies of responsible personnel are unfortunately not necessarily communicating well with one another.
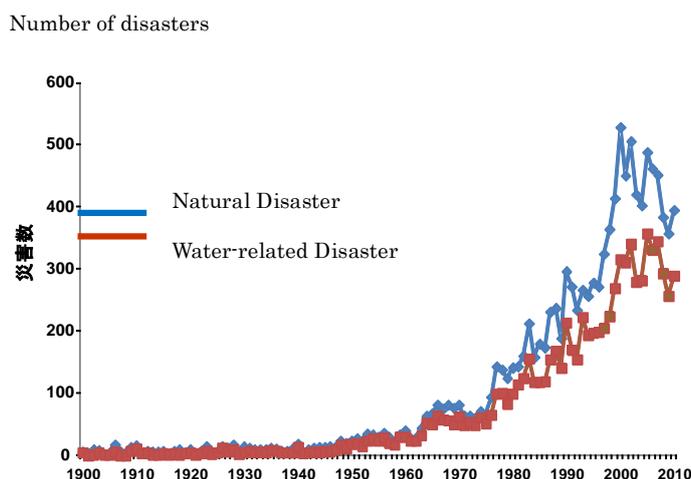
2.   Objectives and characteristics
2.1   Objectives

This training program was designed to provide opportunity for meteorologists, river administrators and disaster management officers in flood-vulnerable developing countries to learn the use of the Integrated Flood Analysis System (IFAS)[*1]. The other important purposes are to learn about disaster management and evacuation plans and flood response cases in Japan, and to develop an action plan for local flood management of flood-vulnerable areas in the participants' countries. These training activities aim to enhance individual flood-coping capacities and eventually to contribute to flood damage mitigation in the countries.

*1: The Integrated Flood Analysis System (IFAS) has been developed by ICHARM in a joint effort with private consultant firms to forecast river discharges and water levels by using automatically collected satellite data such as geographical, land-use and rainfall data as input. Currently, IFAS ver.1.3β is available free of charge at the ICHARM homepage.

2.2 Characteristics

The training program started from FY2012 year and will be provided for the next two years. To create as great synergy as possible with JICA's current and future local flood projects, the following conditions are considered:

- The target basins are those also selected for the JICA local projects.
- The target participants are to be selected from three categories of responsible personnel (meteorologists, river administrators, disaster management officers) who are currently working at organizations involved in the JICA local projects.

These conditions are considered for the following effects:

○ The participants will have clear visions of what they should do after the training in their countries, and thus be able to develop a detailed action plan.

○ Organizations sharing the same basin as their project target can increase collaboration among them.

These effects are also expected to increase the effectiveness of the training at ICHARM.

The figure below shows the outline of the training program. The program consists of four components: lectures, practices, study visits, and presentations and discussions.
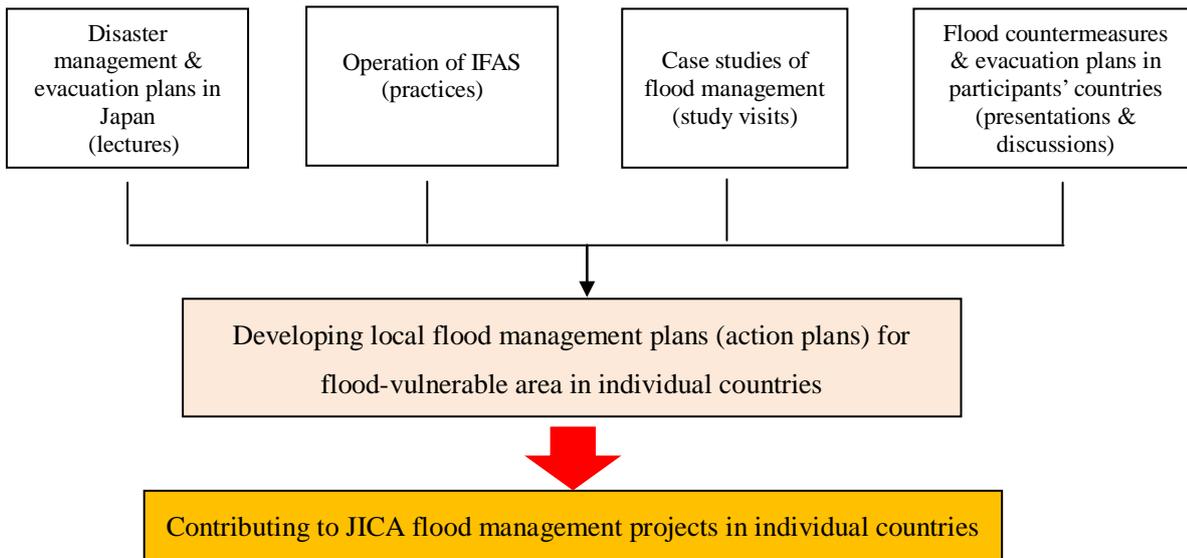
Outline of the "Capacity Development for Flood Risk Management
with IFAS" training program

3. Outline

- Title:

  Capacity Development for Flood Risk Management with Integrated Flood Analysis System (IFAS)

- Implementing organization:

  ICHARM, JICA

- Total Duration:

  FY2012 to FY 2014

- Schedule:

  From 10th July to August 7th, 2012

- Overall Goal:

  Flood damage is mitigated by the strengthened coping capacity of local level organizations for disaster management in each participating country

- Program Objective:

  Coping capacity for flood damage mitigation including appropriate flood forecasting and early evacuation of residents is strengthened in each participating country.

- Target Regions or Countries:

  Bangladesh, Kenya, Nigeria, Philippines, and Thailand

- Participant:

  13 (Max.3 from each country)

  Combination of national/ local governmental organizations responsible for flood forecasting, early warning system, flood risk management and evacuation of residents

- Language:

  English

- Venue:

  ICHARM (Tsukuba City, Ibaraki Prefecture)

- Lecturer:

  Researchers and practitioners who have practical experiences on planning and implementation for water-related disaster mitigation (Mainly ICHARM researchers, MLIT practitioners)