

## **FY2010 Project Report on JICA training course “Local Emergency Operation Plan with Flood Hazard Map”**

ICHARM conducted a JICA training course, “Local Emergency Operation Plan with Flood Hazard Map,” from 12 January to 16 February 2011.

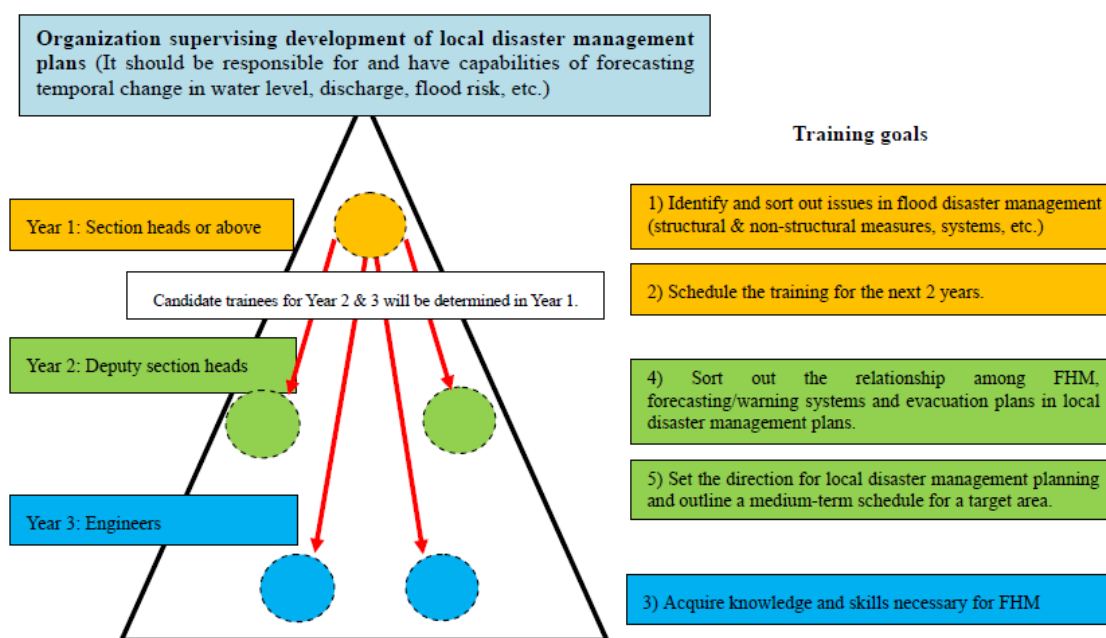
This course is an extension of another JICA training course on flood hazard mapping conducted for five years during 2004-2009. It has been set up to further strengthen local emergency operation based on the achievements produced in the previous training course.

Ultimately, this training is expected to contribute to increase local disaster preparedness and reduce flood damage in target countries. To this end, the course focuses on the enhancement of organizational capabilities in disaster management and is specifically designed for organizations in flood-prone countries in charge of prevention and reduction of flood-related disasters including river management. Target organizations are also required to be ones holding jurisdiction over laws and regulations related to flood disasters or working closely with those responsible for such legislation. Trainees who will participate in this training are expected to learn how to develop local disaster management plans coupled with flood hazard maps and flood warning systems.

This month-long training is scheduled to be provided for three years. In the first year (fiscal 2009), senior personnel were strategically recruited from the target organizations. They were asked to make a training plan and select appropriate training candidates from their organizations for the next two years. In the second year (fiscal 2010, this year), according to the plans created by the senior personnel of each organizations, the selected trainees learned knowledge and skills necessary for flood hazard mapping. In the final year (fiscal 2011), another group of the selected trainees will attend the training to learn how to set a direction and draw a roadmap for development of a disaster management action plan for their organizations. They are expected to develop an action plan by the end of the training.

This year’s training was the second of the three-year course. The participants were given lectures and practical exercises for a month to become aware of various issues in relation to data collection for hydrological and flood analysis needed to produce flood

hazard maps. They include Project Cycle Management, hydrological subjects (runoff analysis, frequency analysis, etc.), flood hazard mapping skills, Town Watching, and flood analysis.



Conceptual image of this training course

This year's trainees consisted of two each from Bhutan and Indonesia, one each from Lao PDR, Myanmar, Nepal, Pakistan, Sri Lanka, Tajikistan, Thailand, Bangladesh, including two trainees funded by the Asian Development Bank (ADB).

The following reports on the training course this year.

On 12 January, the opening ceremony was held in the auditorium located on the second floor of the PWRI main building. Mr. Sato, director of JICA Tsukuba Center, and Dr. Uomoto, chief executive of PWRI, made a welcoming speech. The trainees introduced themselves and Mr. Ramay Muhammad Aleen Ul Hassan of Pakistan spoke on behalf of the training group.



Dr. Uomoto welcomes the trainees.

At the opening ceremony

Most of the lectures were given in the first week of the training to increase the participants' understanding of disaster management. ICHARM staff including the director delivered the following lectures: "Principles of disaster" by Dr. Takeuchi (director of ICHARM), "Introduction of flood hazard modeling" and "Fundamentals of rainfall-runoff models" by Dr. Sayama, "Outline of disaster prevention countermeasures in Japan" and "Outline of flood hazard map and local disaster management plan" by Dr. Tanaka, "River information and early warning system in Japan" and "Flood fighting law and some water levels for evacuation criteria" by Mr. Nabesaka. Some experts were also invited to give lectures in this training. Associate Professor Frank van der Meulen of UNESCO-IHE gave a special lecture titled "Water, Climate Change and Adaptation with Special Attention to EU" as the 32nd ICHARM R&D Seminar. In another case, the participants visited a local river office and were given a lecture on a communication system practiced in Japan during floods by officials who are experienced and knowledgeable in disaster management at the Disaster Prevention Division of the Upper Tone River Office, Kanto Regional Development Bureau, MLIT.



At the Tone Upper River Office

Special Lecture by Asso. Pro. Meulen

In addition to the lectures, practical exercises were also provided. The trainees engaged

in the Project Cycle Management (PCM) exercise for three days from the second day of the training to learn how to analyze problems and objectives. In doing this, they had to think about activity plans after returning home. The four-day IFAS exercise began with Mr. Fukami's lecture outlining the IFAS system, and Mr. Nabesaka, Mr. Ozawa and Mr. Kawakami conducted the main part of the IFAS simulation by using data collected in Japan and the trainees' home countries. During the following five days after the IFAS exercise, Dr. Huang conducted another exercise on inundation simulation.



Discussion in the PCM exercise



Exercise by Dr. Huang

The trainees also participated in on-site exercises. They visited a levee breach point in Otone Town, which suffered severe damage by Typhoon Cathleen in 1947. On this trip, they also had a close look at flood information signs placed in the Kurihashi area in Kuki City, such as “Marugoto-machigoto Hazard Map” signs at many locations in Kurihashi, a river information board at Kurihashi Station, and the tower indicating the Tone River water level at the Kurihashi public office. They were also given pre Town-Watching instructions by ICHARM staff as preparation for the full Town-Watchin exercise they had to conduct toward the end of the training. Two weeks after this trip to Kurihashi, they visited the area again to conduct a full Town-Watching exercise, in which they were divided in three groups and set out to walk around Kurihashi with a blank area map while checking evacuation sites and dangerous spots that may pose a risk during evacuation. Based on the results, each group produced a flood hazard map of the area. The groups also had discussions based on the maps and presented the discussion results in class.

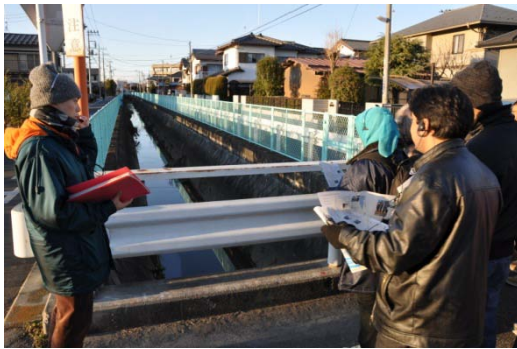




Explanation at the Cathleen Park



Hazard map of all the town in Kurihashi district



Pre Town Watching



Water level tower in Kurihashi administrative branch



Town Watching



Discussion

The trainees took another trip to northern Kyusyu on 8-10 February to study flood countermeasures in Japan. On the first day, they were given lectures on building disaster-resilient communities at the Takeo River Office of the MLIT Kyusyu Regional Development Bureau and then shown around disaster prevention facilities in the area. On the second day, after visiting the Azame-no-se wetland and the Mutabe retarding

basin, they were taken to the Saga City Office, where the head of a flood fighter group explained their activities to the trainees. On the last day, they received another lecture on the underground inundation in 2009 at the Fukuoka Prefectural Development Office, visited the Sanno rainfall regulating pond and were given a lecture on the disaster prevention plan of JR Hakata Station. The trip was an important opportunity to most of the trainees who had never had such chance before. They seemed to find many hints in Japan's flood countermeasures to improve those in their countries.

(For more information on the field trip to the area of Takeo Regional River Office, visit: <http://www.qsr.mlit.go.jp/takeo/html/eng.html> )



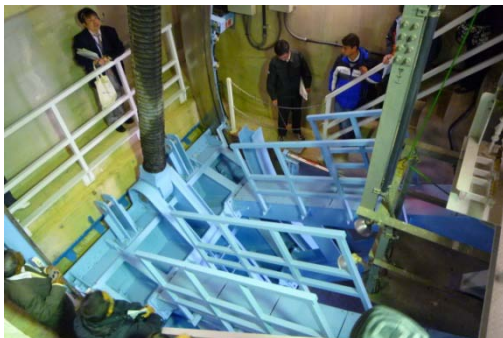
Explanation at the Takeo River Office



Azame-no-se



Mutabe retarding basin





Inside the Kyuragi dam



Explanation at Saga City Office



Explanation at the Fukuoka prefectural  
Development Office



Sanno rainfall regulating pond



Explanation at JR Hakata station

Water board set in the JR Hakata station

After the field trips, each trainee began to prepare an action plan as the final result of this training course. On the last day of the training, they presented their action plan at JICA Tsukuba.



Presentation

In the closing ceremony, Mr. Sato, director of JICA Tsukuba, and Dr. Takeuchi, director

of ICHARM, gave congratulatory speeches, and a training certificate was given to each trainee. The Sontoku Award, which is a recognition for the most outstanding trainee in the training course, was awarded to Mr. Dwinvedi Shreekamal from Nepal. He also made a speech on behalf of the group.



Giving a certificate



Responsive speech by Mr. Shreekamal



Group photo in the closing ceremony

The trainees learned the technology necessary for making FHM through lectures, exercises, field trips and discussions conducted during this five weeks. After returning to their home countries, they are expected to share the knowledge they have acquired in this training with fellow engineers and managers in the same organization. When that happens, this training can truly contribute to disaster management in their countries.

As mentioned in the beginning of this report, this training course is scheduled for three years and FY2011 will be the final year, when another group of selected trainees will



participate in the training to learn how to set a direction and draw a roadmap in development of a local disaster management plan.

At last, we would like to show our sincere appreciation to the Tone Upper River Office, Takeo River Office, Saga City Office, Fukuoka Prefectural Office, Fukuoka City Office and other organizations and individuals for supporting the training in field trips and lectures despite their busy schedules.