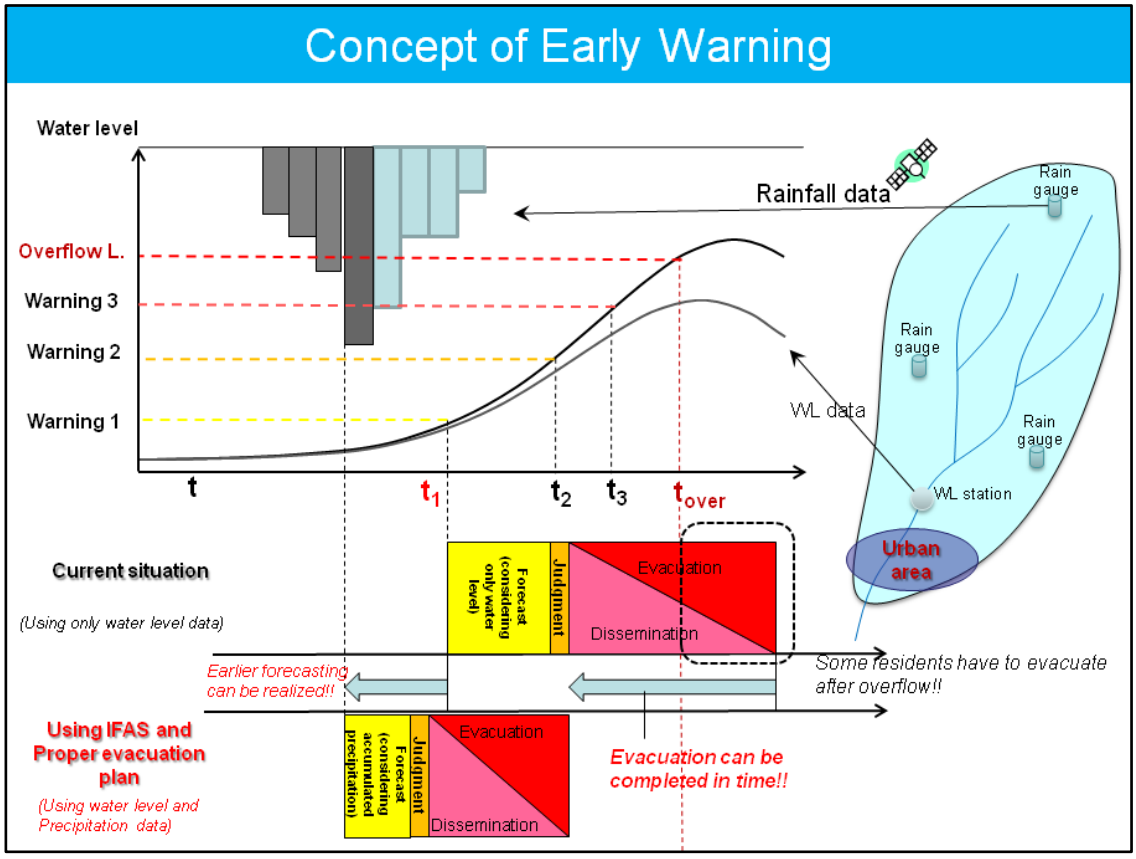
FY2011 Project Report
on
JICA training course
"Local Emergency Operation Plan with Flood Hazard Map"

ICHARM conducted a JICA training course, "Local Emergency Operation Plan with Flood Hazard Map," from 4 July to 2 August 2011.

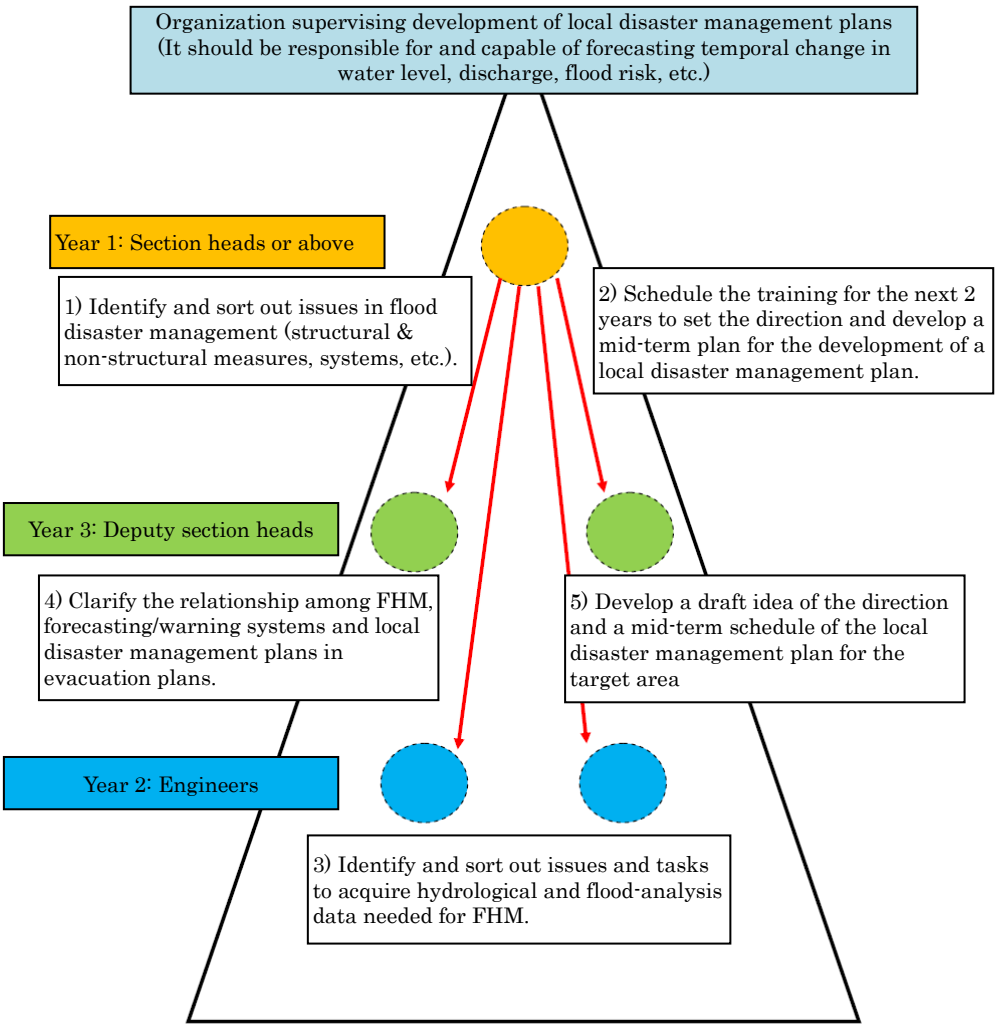
The ultimate goal of this course is to increase local flood resilience through the development of local emergency operation plans combined with flood hazard maps (FHM) and flood forecasting and warning systems and thereby reduce flood damage in the project-target countries. To achieve this goal, the training is designed for course trainees to learn how to set directions and create schedules to draft local emergency operation plans combined with FHM and flood forecasting and warning systems in disaster management organizations in the target countries.

This year, the primary focus of the training was set on public evacuation at emergency. More specifically, lectures and study tours were arranged for the trainees to think about what is lacking in their countries to provide emergency information that promotes timely evacuation and also about what they can do to fill such gaps in local emergency operation plans. The figure below is a conceptual illustration showing four stages of forecasting, judgment, dissemination and evacuation. Throughout the training, the trainees were always encouraged to come up with ideas to reduce the time spent at each of the four stages.



This training course is originally scheduled to be offered for three consecutive years. In the first year (FY2009), senior personnel were strategically recruited from the target organizations. Their assignment was to make a training plan and select appropriate training candidates from their organizations for the following two years. In the second year (January-February 2011), according to the plans prepared by the senior personnel of each organization, the selected trainees learned knowledge and skills needed for flood hazard mapping, such as flood analysis and Town Watching. This year (FY2011) was the final year of this course. Another set of selected trainees worked on the development of action plans that include the direction and schedule of local emergency operation planning for the target area of their countries.

A total of 11 trainees participated in the training this year; two each from Bhutan, Indonesia and Laos and one each from Myanmar, Pakistan, Sri Lanka, Tajikistan and Bangladesh. Two of them were funded by the Asian Development Bank to join the training.



Conceptual Image of the training course

The following reports on the training conducted this year.

On 4 July, the trainees and the personnel from ICHARM and the Japan International Cooperation Agency (JICA) met at JICA Tsukuba Center. The trainees were first given the outline of the training and its objectives to start the training with a clear sense of what they were expected to do. The opening ceremony followed, in which the representatives of JICA and PWRI made a welcoming speech, and Mr. ONEMANISONE Thongsamlid spoke about the hope to complete fruitful training on behalf of this year's training group.

Dr. Uomoto, the chief executive of PWRI

Trainees and training organizers at the opening ceremony

This year, less lectures and exercises were planned in the training. Instead, more time were spent for study tours to visit flood management facilities and structures around Japan and for report writing after such events. This arrangement was intended to have more opportunities for the trainees to think about issues they are facing back at home and work out solutions and schedules to carry them out.

On the second day of the training, the trainees were first given lectures and exercises on the Project Cycle Management (PCM), which continued for three days. This management method is a useful tool to analyze problems and project goals. Once learned properly, the method will help the trainees a great deal when they develop budget plans and project schedules after returning home. Other lectures included the fundamentals of disasters and countermeasures for disasters in Japan and the Integrated Flood Alert System (IFAS) by ICHARM staff and satellite observation by a researcher of the Japan Aerospace Exploration Agency (JAXA).

Ms. Itagaki and Ms. Iseki demonstrating the PCM management method

Dr. Tanaka, the deputy director of ICHARM, lecturing on disaster countermeasures in Japan

On 12 July, the trainees visited the Tone Water Supply Office of the Japan Water Agency to study the role of the Tone Large-scale Weir and the Tone Water Supply Channel in irrigation over the Kanto Region. The trainee group then moved to a Murakimi elementary school in Hanyu City. The school has been promoting English language learning, and the teachers and students there gave the trainees a warm welcome. They had a great time to remember, playing games and having lunch together with the students. After the school, they paid a visit to the Hanyu City Hall, where they received another warm welcome by the mayor and city officers at the entrance hall. Following a welcome speech by the mayor, the chief of regional development section explained about the city's local disaster management plan including the criteria to issue evacuation advisories and orders and problems related to local disaster management planning. The trainees were attentively listening to the presentation.

Visiting the Tone Large-scale Weir

Warm welcome at a Hanyu City elementary school

Warm welcome at Hanyu City Hall

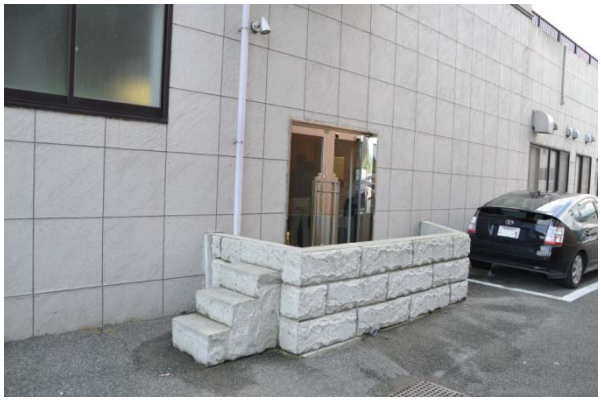
Mayor Kawata making a welcome speech

From 13 to 15 July, the trainees stayed in Shikoku to visit flood management facilities and structures there. At the Ozu City Hall, an officer of the risk management section demonstrated the city's disaster information system. Showing various data on a monitoring display, he explained about disaster information provided to the city, particularly information updating frequency and rainfall forecasting. After listening to the presentation on flood countermeasures in the Hijigawa River basin by the deputy director and the section chief of the Investigation Section of the Ozu River and Highway Office of MLIT, the group moved to Mt. Tomisu to have a panoramic view of the Hijigawa basin. They then took an observation tour along Hijigawa down to the Nagahama district located at the river's mouth. In the meantime, the hotel they stayed at was very close to the previously inundated area in Ozu. Because of that, it has built a flood barrier at the entrance as a countermeasure, which impressed the trainees very much.

At Ozu City Hall

Listening to an explanation of the area at Mt. Tomisu

Looking at a regulating pond completed recently



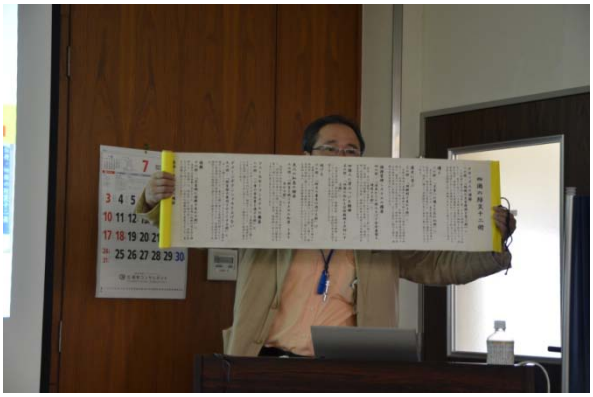
A flood barrier protecting a hotel entrance

On the 14th, the trainees went to the Sameura Dam in cooperation with the Sameura Dam and Kochi Water Diversion Office of the Japan Water Agency. The dam has been recognized as “Shikoku no mizugame,” or the reservoir for the Shikoku Region. At the office, the trainees listened to an explanation about the role of the Sameura Dam and the dam operation during flooding. After that, they went to the famous Kazurabashi Bridge to see landslide countermeasures implemented around the bridge location such as sabo dams and a tunnel to drain ground water. The group was accompanied by the personnel of The Shikoku Mountains Sabo Office of MLIT.

Listening to an explanation of Sameura Dam while looking at the dam through the windows

Taking a walk tour while observing landslide countermeasures in the area

The trainees also visited the sabo office and listened to another presentation by the director of the Shikoku Regional Center, a branch of the Japan Construction Information Center. In his presentation entitled “Low-tech Disaster Management Skills,” they were surprised by learning that Japan has not only implemented advanced structural flood countermeasures but also kept an old tradition of low-tech disaster management.



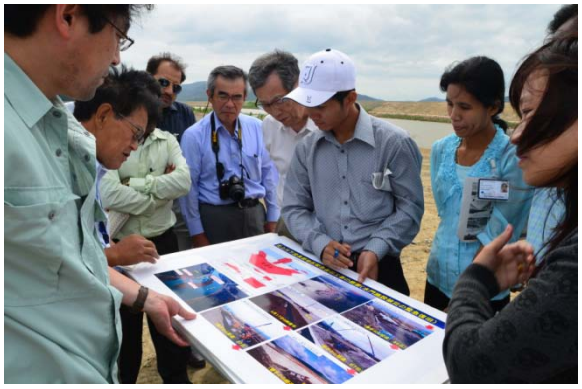
Mr. Matsuo, the director of the Shikoku Regional Center, showing tips for disaster management

Trainees asking questions

On 15 July, the trainees went to the Ishii Town Disaster Management Station to participate in a lecture by a disaster management officer of Ishii Town located along the Yoshinogawa River. They were accompanied with the personnel of the Tokushima River and Highway Office of MLIT. The lecture was very useful for the trainees in that they learned in detail about how to promote residents' early evacuation including the effective use of hazard maps and how and at what timing evacuation information should be provided to residents. The trainees also visited the Suminose Drainage Pump Station managed by MLIT and one of "Taka-jizo", stone statues sitting on high podiums. There are many Taka-jizo around the Yoshinogawa River basin from ancient times. Ancient people placed them on high podiums probably to protect them from flooding. It seemed that those statues have played an important role to pass on flood experience particularly as a warning of flood depth and to raise disaster awareness among local residents.

On 22 July, the trainees took another trip north to a place in the lower Kitakamigawa River of Miyagi Prefecture which was hit hard by mega tsunamis immediately after the Eastern Japan Great Earthquake on 11 March. The group was helped by the personnel of the Lower Kitakamigawa River office of MLIT. In the affected site, they observed a part of a national road bridge over Kitakamigawa carried upstream from the original location and most homes washed out completely. The trainees were stunned at the tremendous power of the tsunamis, but they were also amazed at a fast pace of reconstruction projects underway around the area.

Visiting a tsunami-hit area



Listening to an explanation of progress at a reconstruction site

On 26 July, the trainees visited the Upper Tonegawa River Office of MLIT and listened to the officers in charge explaining about the role of MLIT's river offices during flooding. During the lecture, they showed a particular interest and asked many questions about how to provide flood forecasts and issues related to flood information dissemination to local municipalities through the "Hotline", direct telephone lines between the director of river offices and mayors. Other places they visited around the upper Tonegawa area include the levee breech point at Kazo City around which the area suffered serious damage from Typhoon Kathleen in 1947 and Kurihashi of Kuki City where the district practices the idea of "Marugoto-machigoto Hazard map" displayed on some utility poles and has installed a large public display tower for Tonegawa's real-time water level.

At the Disaster Management Headquarters of the Upper Tonegawa River Office

Looking at one of "Marugoto-machigoto Hazard map", the disaster awareness signs posted around Kurihashi

In the afternoon, the trainees visited MLIT's Kanto Regional Development Bureau and attended a lecture about hydrological and meteorological observation, data types collected from them and dissemination of disaster management information during emergency. They also had an opportunity for an institutional tour in the Water-related Disaster Forecasting Center.

At the Kanto Regional Development Bureau

At the Water-related Disaster Forecasting Center

This year, the training was carried out while repeatedly keep reminding the trainees of how the final training product (i.e., action plans) should be like. The expected image of an action plan including contents was explained step by step at several times so that they could go on with the training having a clear picture of what they need to achieve.

The orientation meeting was held on 4 July. The mid-term action-plan presentation was held on 21 July. This mid-term meeting was scheduled to help the trainees be clear about the focal issues they should address in the action-plan development. Each trainee was required to analyze issues over the target site for his or her action plan and visualize them by using a tree-diagram analysis method. They were repeatedly given brief advice on the action-plan development at several occasions while working on other reports they were assigned to write. Finally on 29 July, the first action-plan presentation was held, after which the trainees were instructed to discuss and find solutions for problems pointed out in the presentation. Based on that, they revised their initial action plans and presented them again in the second presentation meeting on 2 August. In the previous years, the presentation was held only once. This year, more workable action plans resulted from the discussion and revision after the first presentation. The trainees will continue working on their action plans with fellow officers in their organization at home and submit the final version to ICHARM.

Action-plan presentation

On 2 August, the last day of the training, the closing ceremony was held at PWRI. The representatives of JICA, PWRI and ICHARM made congratulatory remarks, and the training certificates were given to the trainees one by one. This year's "Sontoku Award", the award given by ICHARM to the most outstanding trainee, was awarded to Mr. Tashi TENZIN of Bhutan. At the end, Mr. ATIF Rana Muhammad of Pakistan expressed his gratefulness to all people involved in the training course on behalf of the trainees.

Ms. Umezaki, the deputy director of JICA Tsukuba

Prof. Takeuchi, the director of ICHRM, awards a training certificate to a trainee.

Mr. Atif Rana Muhammd of Pakistan speaks on behalf of the trainees.

The trainees completed the four-week intense training of lectures, exercises, study tours, discussions and presentations and acquired knowledge and skills needed to cope with flood-related problems they are facing at home. This year's training was arranged specifically to give the trainees many opportunities to think about what is lacking in their countries to provide emergency information that promotes timely evacuation and also about what they can do to fill such gaps in local emergency operation plans. The training organizers hope that the trainees will share the acquired knowledge and skills with fellow engineers and managers in their organizations at home and together contribute to solving flood problems.

Last but not least, the training organizers would like to express sincere gratitude to offices of MLIT, the Japan Water Agency and Hanyu City and lecturers for kindly accepting the trainees and providing tremendous support for this training.

Trainees and training organizers at the closing ceremony