Project Report on

“Local Emergency Operation Plan with Flood Hazard Map”

The trainees and organizers pose for photos after the opening ceremony.

ICHARM conducted a JICA training program, “Local Emergency Operation Plan with Flood Hazard Map,” during 9-27 November 2009.

This training program is planed for organizations meeting the following qualifications. They are in countries with frequent flood disasters. They are responsible for flood damage reduction and prevention. They have authority over regulations related to the field or are working closely with them.

The training program was developed as an extension of the Flood Hazard Mapping training course, which ended last fiscal year, and put into operation for the first time this November. The program is designed to enhance the institutional capacity of the participating organizations by recruiting trainees from the same organizations every year for three years including this year. In this past November, those who are section heads or in equivalent positions participated in the training. Through the training, they identified problems and issues in flood management in their countries and decided who should participate in the training next year to address them. In the second year, engineers who will be responsible for flood hazard mapping are expected to join the training to acquire knowledge and skills necessary for flood hazard mapping. In the third year, deputy section heads or in equivalent positions are expected to participate. They should be those responsible for promotion of forecasting and warning systems, flood hazard mapping, and disaster management. In the training, they will each develop an action plan that should include the direction for local disaster management planning and a roadmap to

achieve goals. After the three-year training program ends, progress in each country will be followed up, and the original plans may be adjusted as necessary. (See Figure 1.)

A total of ten trainees participated in the training this year – one each from Bangladesh, Bhutan, Laos, Myanmar, Pakistan, Sri Lanka, Thailand and Tajikistan and two from Indonesia. (The Asia Development Bank funded two of them to participate.).

Thirteen students of the ICHARM Master's program, "Disaster Management Policy Program Water-related Risk Management Course," also joined the training, making the total number of trainees as many as 23.

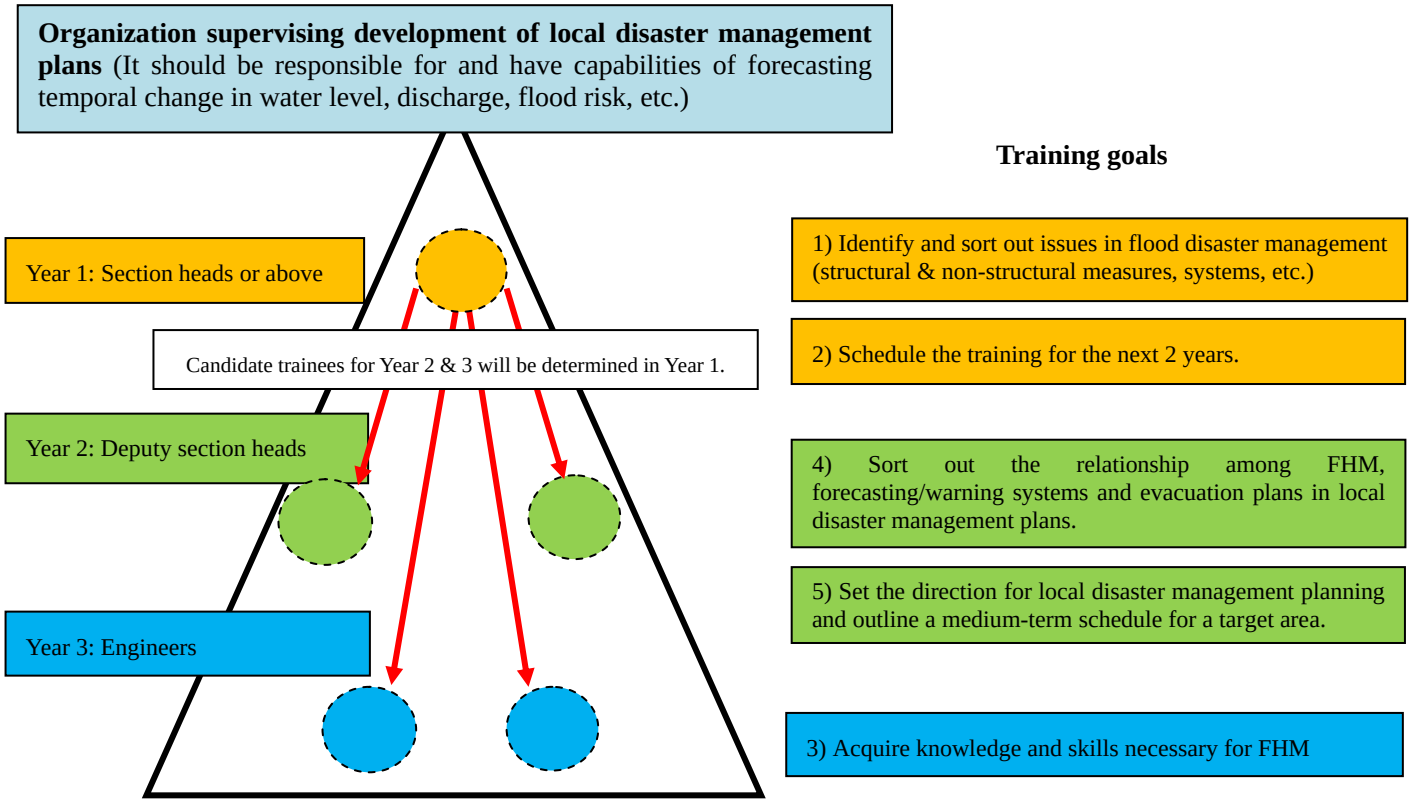


Figure 1 Target population and training goals for each year

On the first day of the training, the opening ceremony was held at JICA Tsukuba. The trainees were greeted by Mr. Takeaki Sato, director of JICA Tsukuba, Dr. Tadahiko Sakamoto, PWRI chief executive, and Prof. Kuniyoshi Takeuchi, ICHARM director. Mr. Pema Singye of Bhutan spoke on behalf of the trainees and expressed his determination for successful training.

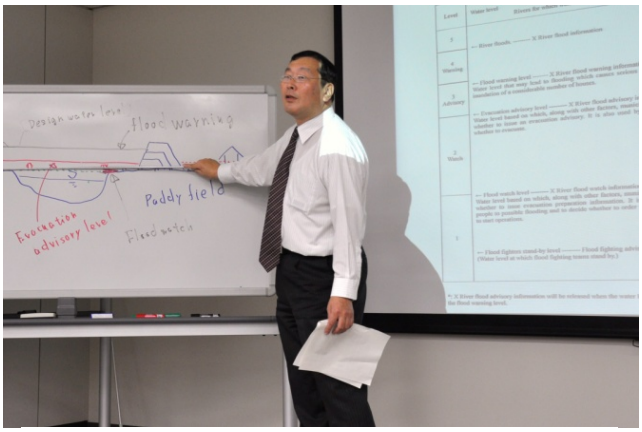
This three-week training mainly consists of lectures, exercises, field trips and discussions.

Recognizing “How is it possible to lead residents to safe evacuation during flooding?” as one of the important goals in local disaster management planning, the curriculum was designed to have the trainees think about issues and solutions for their countries.

Lectures: Some of the lectures were done by executive and senior researchers at ICHARM: “Principles of Disasters” by Director Takeuchi; “Disaster prevention countermeasures in Japan,” “Flood Hazard Maps and Evacuation Plans” and “Local Disaster Management Plans” by Deputy Director Shigenobu Tanaka; “River Information and Early Warning System in Japan” and “Flood Fighting Law and Water Levels for Evacuation Criteria” by Team Leader Kei Kudo; “Introduction to GFAS/IFAS” by Team Leader Kazuhiko Fukami.

Lecturer: Director Takeuchi

Lecturer: Deputy Director Tanaka



Lecturer: Team Leader Kudo

Lecturer: Team Leader Fukami

University professors were also invited as lecturers. Prof. Haruo Hayashi of Kyoto University lectured on “Human Behavior and Social Psychology,” and Prof. Masatomo Umitsu of Nagoya University on “Geomorphology Around Rivers and Alluvial Plains.” Two foreign lecturers, Associate Professor Frank van der Meulen and Project Manager Rien van Zetten, were also invited from UNESCO-IHE to give special lectures.

Lecturer: Professor Hayashi

Lecturer: Professor Umitsu

Lecturer: Associate Professor Meulen

Lecturer: Project Manager Rien

The trainees were also given lectures on methods and issues in information dissemination during flooding, use of flood hazard maps in Japan, and how to cope with those who require assistance during disasters by experts at other organizations, including the Japan Meteorological Agency (JMA), the River Division of the MLIT Kanto Regional Development Bureau, the Tone Upper Reach River Office, the Disaster Risk Management Division of Mie Prefecture, Ise City Office, Adachi Ward of Tokyo, and Kiyosu City of Aichi Prefecture. When visiting Ise City, they were greeted with warm applause by city office workers, and the mayor made a welcome speech for them.

Lecturer: Mr. Fukamachi of Forecast Division, Forecast Department at JMA

Tour of Disaster Management Headquarters at Kanto Regional Development Bureau guided by Mr. Yamamoto, director for water-related disaster forecasting of River Bureau

Lecturer: Mr. Kobayashi, head of Disaster Management Section, at Tone Upper Reach River Office

Lecturer: Mr. Takasu, head of earthquake disaster management, at Mie Prefecture Risk Management Division

Lecturer: Mr. Kudo, chief of Planning and Coordination Section, at Adachi Ward Office

Deputy Mayor Sumio Nagata of Kiyosu City Office greets the trainees.

Lecturer: Mr. Noguchi, staff of Disaster Management Section, at Kiyosu City Office

Many city workers welcome the trainees at the entrance of Ise City Hall.

Ise City Mayor Kenichi Suzuki greets the trainees.

Lecturer: Mr. Nakamura, Ise City

In Ise City, the trainees visited Enza and Ominato Districts and met community leaders there. Talking with them, they learned the importance of the underlying philosophies – self-help and mutual support – in disaster management. They also learned the importance of community as well as the strengthened unity among the residents built through disasters. It was meaningful experience for them.

Lecturer: Mr. Ueda of Enza District, Ise City

Lecturer: Mr. Kanamori of Ominato District, Ise City

Exercise: The trainees participated in the “Town Watching” exercise in Ominato District of Ise City, Mie Prefecture, under the supervision of ICHARM Senior Researcher Daisuke Kuribayashi. In this exercise, they walked around the city in groups to check the district for potentially dangerous places during disasters. Afterwards, each group discussed the findings from the exercise and produced a safety map based on the discussion results. Ise City provided great cooperation to this exercise. They sent city personnel with each group when conducting Town Watching. The exercise was an opportunity for the trainees to re-realize the effectiveness of flood hazard mapping in promotion of public disaster awareness.

The trainees experience Town Watching at Ominato District of Ise City.

The trainees practice using the Project Cycle Management.

The trainees also had a chance to use the Project Cycle Management (PCM). They identified issues during flood evacuation in their home countries and objectively sort out solutions to them by using PCM. After that, they each developed an action plan to execute after returning to their countries.

Field trips: The trainees took several field trips to learn current flood countermeasures in Japan. They visited the Shonai River Office of the MLIT Chubu Regional Development Bureau to see flood control measures in the Shonai River basin, which suffered tremendous damage from the Tokai heavy rain in 2000. They also visited the Kiso-sansen Park for the Kiso Three Rivers Separation Project and the livelihood within a ring levee, the Kumozu River for a *Kasumi-tei*, or open levee, and the Shimodate River Office for a water-level and rainfall gauging station on the Kokai River near PWRI.

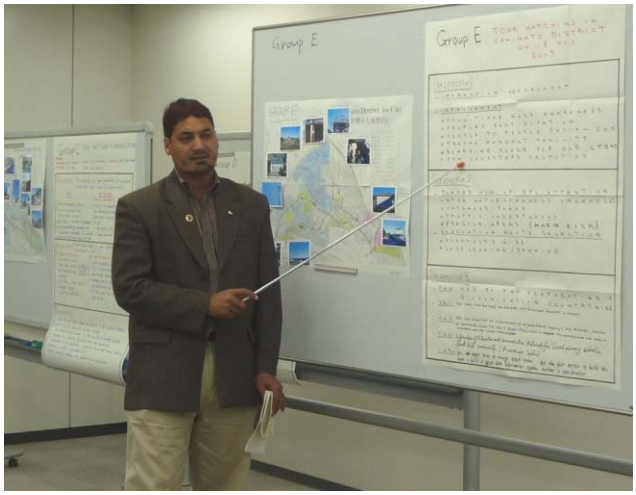
Mr. Kojima, office head, outlines an on-going project to the trainees at Shonai River Office.

Mr. Mizoguchi, project manager, outlines an project under way at Kiso-sansen Park.

Mr. Fujita, chief of Research Section I, outlines *Kasumi-tei* levees by Kumozu River.

A station officer outlines activities of Kokai River Kurogo Gauging Station.

Discussion: The trainees were divided into groups. Each group discussed and presented findings from Town Watching and key points to develop an effective evacuation plan.



The trainees have a group discussion and present the results.

The trainees also visited the Ministry of Land, Infrastructure, Transport and Tourism and met the deputy director-general of the River Bureau.

To conclude the training, each trainee developed and made a presentation on an action plan to develop a local disaster management plan combined with use of flood hazard maps and flood forecasting and warning systems.

In the closing ceremony, Mr. Takeaki Sato, director of JICA Tsukuba, and Mr. Takuya Seo, research coordinator of PWRI, congratulated the trainees on completing the training. Mr. Siddiqui Qasi Tallat Mahmood of Pakistan was chosen as the best trainee and awarded the *Sontoku* Award for his excellent achievement.

The trainees went back home with a broad range of knowledge and experience they acquired during the short training period of only three weeks.

As explained at the beginning, this training is scheduled to be held every year for three years including this year. Each country will send a trainee for the 2010 training according to the training plan developed by its trainee for this year's training.

Mr. Sato, director of JICA Tsukuba, spoke at the closing ceremony.

Mr. Seo, research coordinator of PWRI, spoke at the closing ceremony.

Mr. Mahmood of Pakistan receives the *Sontoku* Award for his excellent achievement.

The trainees pose for photos with the training organizers after the closing ceremony.