Capacity Development on Disaster Management in Developing Countries

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1. What is “Capacity Development”?

The Japan International Cooperation Agency (JICA) has recently reviewed and re-defined technical cooperation that Japan had traditionally promoted for developing countries by introducing the idea of “capacity development.” JICA defines capacity development as “the process to improve the capacities to set and achieve goals and to find and solve local issues they are facing at individual, organizational and social levels and ultimately by integrating all those levels.”

ICHARM, which has been working on various activities to reduce flood damage worldwide, has recognized that it is more important and essential to strengthen and develop not only individual but also organizational capacity in disaster management. Well aware of that fact, ICHARM has designed and conducted its training courses for organizational capacity development.

2. JICA “Flood Hazard Mapping” training course and its follow-up seminars

In the above context, ICHARM conducted a regional training course on “Flood Hazard Mapping” for East and Southeast Asian countries from 2004 to 2008 as a JICA technical cooperation project to enhance the capacity of developing countries in flood management. The training course aimed to reduce flood damage by improving the technical aspect of flood management, including the promotion of flood hazard mapping, in eight Southeast Asian countries (China, Cambodia, Indonesia, Laos, Vietnam, Thailand, the Philippines, and Malaysia). Two trainees from each country were accepted every year for five years, and a total of 76 trainees completed the training.

Over the five years of training, the trainees were often sent from the same organizations. In the case of Cambodia, eight out of nine were from the Ministry of Water Resources and Meteorology; China sent eight out of 10 from the Ministry of Water Resources; Malaysia sent all eleven from the Ministry of Natural Resources and Environment. In these cases, it is expected that those individuals will help their organizations develop the capacity to cope with water-related disasters. It will also help them expand a trainees’ network within their organizations more easily, which will in turn contribute to the promotion of flood hazard mapping.

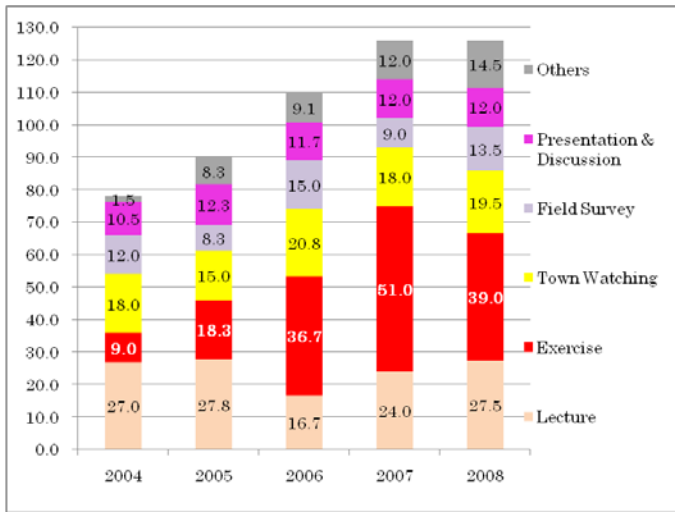

Figure 1 Annual change in time allocation

3. Improvements in capacity development training

To enhance capacity development in those Asian countries, ICHARM thinks that it is important to firstly train officials to learn the fundamentals of flood hazard mapping in Japan, where it is widely put into practice. Moreover, improvements were made every year by accommodating trainees’ requests and feedbacks, as described below.

3.1 Time alocation

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In this course, a considerable training time was allocated to exercises such as inundation analysis and GIS exercises. As shown in Figure 1, the total amount of time allocated to the technical aspect of the training increased on an annual basis, and the time spent on exercises also increased. This time-allocation change resulted from trainees' feedbacks in the course evaluation meeting held every year at the end of the training period. They often commented that more time should be spent on exercises.

3.2 Flood Hazard Mapping based on data of individual countries

From fiscal 2006, the course trainees were required to produce flood hazard maps based on sample data of an area in Japan (i.e. Ise City, Mie Prefecture) by applying knowledge and skill acquired in the training. Further, in fiscal 2008, which was the final year of the five-year training, the trainees were required to produce flood hazard maps based on hydrological and topographical data of their own countries. This attempt was very effective in providing an opportunity for the trainees to apply what they had learned to actual cases in their countries rather than the mere acquisition of book knowledge from resources prepared by ICHARM. It also contributed to the promotion of "problem-solving oriented training."

3.3 "Town-watching exercise"

This training course introduced field investigation called "Town-watching exercise" from the first year under the supervision of Professor Yujiro Ogawa of Fuji-tokoha University. In this investigation, trainees were advised to check disaster prevention facilities and possibly dangerous spots (narrow alleys, street gutters, obstacles, etc.) while walking around the mapping area. After that, they discussed investigation findings and produced maps showing dangerous spots and evacuation sites based on the investigation. The purpose of this investigation was for trainees to become able to pay due attention to critical points for flood hazard mapping and also to learn the importance of raising and enhancing community awareness towards disaster preparedness, which is the foundation of disaster management. Town-watching exercise was highly evaluated by trainees every year. ICHARM understands that the exercise is one of the main pillars in the problem-solving oriented training and more suitable for disaster management practitioners.

3.4 Comprehension assessment

ICHARM also made efforts to objectively measure the effectiveness of the training course. More specifically, a comprehension test was made in reference to a manual for designing teaching materials[3)] and given to trainees the "same" test before and after the training to assess their comprehension of the course. This test procedure is very simple, but very effective for improvement of the course because we can easily estimate the understanding level of the trainees.

4. Conclusion

Over the five-year training period, many trainees of each country were sent by the same organizations. Since ICHARM was not in the position of selecting them, the situation could not be helped. It is certain that trainees of each year had a good understanding of the importance of flood hazard mapping and its practical knowledge and skill. However, to promote capacity development more effectively, it is necessary to plan and implement a training course from a long-term point of view. Based on the achievement and feedbacks from this course, ICHARM is planning to a new three-year JICA project called "Local Disaster Management Plan with Flood Hazard Map" from November 2009 to develop organizational capacity to cope with floods. ICHARM is intended to contribute to the sustainable development of developing countries by the systematic implementation of capacity development projects for flood management organizations.

References

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