

Country Name	Project on Capacity Development in Disaster Management												
Kingdom of Thailand													
I. Project Outline													
Background	<p>The Indian Ocean tsunami in December 2004 caused serious damage to Thailand. Under this circumstance, the Government of Thailand requested a technical cooperation project to Japanese government in 2006. It intended to strengthen the capacity of disaster management of the Department of Disaster Prevention and Mitigation (DDPM) of the central government, as well as the capacity of disaster management of the local government and communities.</p> <p>The Government of Thailand (Ministry of Education ; MOE) also focused its attention on the role of schools which can activate disaster preparedness programs at provincial and community levels and requested a technical cooperation project for school-based education for disaster preparedness. Thus, the Japanese government decided to conduct technical cooperation project combining two requests, aiming high efficiency and synergistic effect.</p>												
Objectives of the Project	<p>By (i) developing GIS database and hazard maps for two of the pilot provinces (Mae Hong Sorn, and Chumporn) for disaster management information collection and utilization, (ii) supporting DDPM to formulate “White Paper” and National Disaster Prevention and Mitigation Plan, and (iii) developing e-learning materials and formulating master plan on natural disaster of Disaster Prevention and Mitigation Academy (DPMA), the project aimed at enhancing capacity of DDPM (Project purpose 1 level) to thereby contribute to that DDPM becomes able to grasp situation and problems regarding disaster management and take or promote necessary countermeasures in cooperation with related organizations (Overall goal level).</p> <p>The project also aimed at enhancing capacity of local disaster management administration in three pilot sites and improving people’s capacity for disaster management (Project purpose 2 level) by (iv) supporting mainly two pilot project areas (Mae Hong Sorn, and Chumporn)¹ to develop community-based early warning system and mainly Community Based Disaster Risk Management (CBDRM), and (v) developing training curricula for teachers on disaster preparedness etc., to thereby contribute to improving disaster management administration and capacity of disaster management of community at other areas (Overall goal level).</p> <p>The project objectives set forth are as follows:</p>												
	<ol style="list-style-type: none"> Overall Goal: To enhance the capacity for disaster risk management against future disasters at central, provincial, district and community levels in Thailand. Project Purpose : (1) Capacity of DDPM is enhanced as a principal national government agency to carry out the tasks and responsibilities of disaster management, (2) People’s capacity for disaster management is improved through the enhancement of national and local educational services, as well as strengthening the regional organizations of DDPM and MOE. 												
Activities of the Project	<ol style="list-style-type: none"> Project site (Pilot province): Phuket (Tsunami), Mae Hong Sorn (Landslide) and Chumporn (Flood). Main activities: <ul style="list-style-type: none"> (1) The project develops GIS database and hazard maps for Chumporn province and Mae Hong Sorn province for disaster management information collection and utilization, (2)The project supports DDPM to formulate “White Paper” and National Disaster Prevention and Mitigation Plan, (3) The project develops e-learning materials and formulating master plan on natural disaster of DPMA, (4) The project supports mainly 2 pilot project areas to develop community-based early warning system and CBDRM, and (5) The project develops training curricula for teachers on disaster preparedness, supplementary reading and teachers’ guide for flood, landslide and tsunami for model schools in pilot project areas. Inputs (to carry out above activities) <table border="0" style="width: 100%;"> <tr> <td style="width: 50%;">Japanese Side</td> <td style="width: 50%;">Thai Side</td> </tr> <tr> <td>1. Experts: 25 persons</td> <td>1. Staff allocated: 94 persons</td> </tr> <tr> <td>2. Training in Japan: 23 persons</td> <td>2. Land and facilities: project offices at DDPM and Ministry of Education (MOE)</td> </tr> <tr> <td>3. Facilities and equipment: GIS software, transceiver, rain gauge and others</td> <td>3. Local cost: costs for travelling allowance for field surveys and training and workshops</td> </tr> </table> 					Japanese Side	Thai Side	1. Experts: 25 persons	1. Staff allocated: 94 persons	2. Training in Japan: 23 persons	2. Land and facilities: project offices at DDPM and Ministry of Education (MOE)	3. Facilities and equipment: GIS software, transceiver, rain gauge and others	3. Local cost: costs for travelling allowance for field surveys and training and workshops
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Ex-Ante Evaluation	2006	Project Period	August 2006-August 2008	Project Cost	260 million yen								
Implementing Agency	Department of Disaster Prevention and Mitigation (DDPM), Ministry of Education (MOE)												
Cooperation Agency in Japan	Earth System Science Co., Ltd.												

II. Result of the Evaluation**I Relevance**

<Consistency with the Development Policy of Thailand at the time of ex-ante and project completion>

The project was consistent with development policy of Thailand both at the time of ex-ante evaluation and project completion. At the time of ex-ante evaluation, National Disaster Management Strategic Plan for the year 2005 was drawn up to take measures for disaster management. At project completion, the 10th Socio Economic Development Plan of Thailand (2007-2011) indicated the necessity of the

¹ In Phuket province, Disaster Imagination Games (DIG) and some activities on CBDRM were conducted, but activities on community-based early warning system were not conducted as the warning system based on National Disaster Warning Center was already established in Phuket.

establishment of a natural disaster management and prevention system. In addition, National Education plan of MOE clearly states that education for disaster management should be promoted, especially in disaster-prone areas.

<Consistency with the Development Needs of Thailand at the time of ex-ante and project completion>

The project was consistent with the development needs of Thailand for disaster management as the tsunami in 2004 highlighted the needs for taking measures for disaster management. In accordance with the National Disaster Prevention and Mitigation Act of 2007, which stipulates that DDPM is a responsible core organization for disaster prevention and mitigation in Thailand, continuous capacity enhancement of DDPM was needed.

<Consistency with Japan's ODA Policy at the time of ex-ante evaluation>

The project was consistent with Japan's ODA policy, as after tsunami in 2004, a basic policy document "Cooperation plan for reconstruction after tsunami disaster in Thailand (draft)" was drawn up, and natural disasters was regarded as one of the areas for cooperation under Japan's Economic Cooperation Program for the Kingdom of Thailand (2006).

<Evaluation Result>

In light of the above, the relevance of the project is high.

2 Effectiveness/Impact

<Status of Achievement for Project Purpose at the time of Project Completion>

The project purpose was achieved by the time of project completion, as the following indicators set to measure the project purpose were attained: (i) Disaster Management Annual Report "White Paper" is published, (ii) Village people know the appropriate response to emergency situation, and (iii) Workshops and lectures are conducted by teachers at each model school.

<Continuation Status of Project Effects at the time of Ex-post Evaluation>

After the project completion, although there are project outputs which have not been directly continued after the completion of the project, such as publication of the annual White Paper, knowledge, skill, and knowhow transferred to DDPM during the project have been utilized to enhance the capacity of DDPM. Disaster Annual Reports which contain the techniques and content transferred have been issued by DDPM in cooperation with other concerned agency. Some of the outcomes of this project were also further improved and/or utilized during the implementation of the succeeding project (Phase II, 2010-2014) to enhance the capacity for disaster management of DDPM. For example, GIS database development has been applied in the pilot projects under the Phase II project.

The project has improved the capacity of the target people on disaster management. Disaster Prevention and Mitigation Provincial Offices (DPMPOs), Village Disaster Prevention Management Committees (VDPMs), and model schools of the pilot project areas recognized the benefits and have continued to utilize the methods/ tools/ activities introduced by the project after the project completion. For instance, DPMPO Chumporn has conducted CBDRM at 206 of total 703 villages in the province by 6 resource persons of DPMPO who were involved with the project and also joined the training conducted by the Phase II project. In Phuket Province, DPMPO holds CBDRM trainings at least once a year. At school level, in Chumporn and Mae Hong Sorn Provinces, workshops and lectures on disaster preparedness have been regularly conducted after project completion. School disaster education plans have been developed annually.

The community-based early warning system and VDPM are still functional in pilot provinces. However, in Mae Hong Sorn Province, both of two rain gauges provided by the project have not been utilized as the persons in charge (house owners where the gauges were installed) did not pay much attention, though the rain gauge is still an effective tool to monitor the flood risk, according to DPMPO.

<Status of Achievement for Overall Goal at the time of Ex-post Evaluation>

Capacity for disaster risk management against future disasters has been enhanced at national, provincial/district, and community level through the development of disaster management plans, utilization of analytical and planning systems/methods/ tools, promotion of disaster preparedness education at schools, and other approaches. Outcomes of the phase I project have contributed to the achievements combined with the outcomes of the phase II project. For example, introduction of CBDRM and the table-top-exercise have been applied to develop the plans. However, the percentage of the communities with CBDRM accounts for approximately still 30% of communities with high disaster risk.

<Other Impacts at the time of Ex-post evaluation>

The positive impact was observed. Participatory and/or logical thinking process/tools, such as table-top-exercise, and Disaster Imagination Game (DIG), have provided chances to improve the capacity of each target group of the project beyond the disaster management issue. For instance, the model school at Chumporn Province reported that students enhanced their awareness to consider the outcome of the activities more systematically through the practice of DIG.

There is no negative impact on natural environment. No land acquisition and resettlement occurred under this project.

<Evaluation Result>

The project achieved its project purpose as the capacity of DDPM as well as local administration and communities was enhanced, which has continued after the project completion. The overall goal was partially achieved as the project contributed to expanding the capacity development on disaster management in other areas of Thailand to a certain extent. Therefore, effectiveness/impact of the project is high.

Achievement of Project Purpose and Overall Goal

Aim	Indicators	Results
(Project Purpose) (1) Capacity of DDPM is enhanced as a principal national government agency to carry out the tasks and responsibilities of disaster management,	(Indicator 1-1) Disaster Management Annual Report "White Paper" is published	<u>Status of achievement: Achieved</u> (Project Completion) The white paper was published under the cooperation of Task Force Member organizations, DDPM working group and the JICA expert team. (Ex-post Evaluation) Although new editions of the White Paper have not been published since the completion of the project, techniques and contents transferred during the project for making the White Paper have been integrated into the formulation of Disaster Annual Report, which has similarities with the White Paper.
	(Indicator 2-1) Village people know the appropriate response to emergency situation.	<u>Status of achievement: Achieved</u> (Project Completion) According to the village chief and Tambon officers, there are some behavioral changes which suggest the villagers understand appropriate activities against
(2) People's capacity for disaster		

management is improved through the enhancement of national and local educational services, as well as strengthening the regional organizations of DDPM and MOE		emergency situations. For example, villagers themselves became voluntarily prepared for the evacuation based on the information from radio or TV after the project implementation. (Ex-post Evaluation) Community-led early warning system and VDPM have been functional at Chumporn and Mae Hong Sorn Provinces.
	(Indicator 2-2) Workshops and lectures are conducted by teachers at each model school.	<u>Status of achievement: Achieved</u> (Project Completion) Teachers at model school have acquired know-how to conduct workshops and lectures on disaster preparedness. (Ex-post Evaluation) In Chumporn and Mae Hong Sorn Provinces where the field visits were conducted during the ex-post evaluation, workshops and lectures on disaster preparedness have been regularly conducted
(Overall Goal) To enhance the capacity for disaster risk management against future disasters at central, provincial, district and community levels in Thailand.	(Indicator 1) Disaster management plans at central, regional and community levels are developed.	<u>Status of achievement: Partially Achieved</u> (Ex-post Evaluation) Disaster Management Plans have been developed at central, provincial and community levels. - The latest National Disaster Prevention and Mitigation Plan was issued in 2015. - The disaster management plans have been developed in all 76 provinces. The templates developed by the project are utilized and JICA experts gave suggestions for improvement during the implementation of Phase II. - At the community level, disaster management plan was formulated at 10,510 communities as a part of CBDRM. This number of the communities with CBDRM accounts for about 30% of communities with high disaster risk.
	(Indicator 2) DDPM becomes able to grasp situation and problems regarding disaster management and take or promote necessary countermeasures in cooperation with related organizations.	<u>Status of achievement: Achieved</u> (Ex-post Evaluation) - Disaster database was developed in cooperation with related organizations to integrate and share disaster information at all provinces. - Hazard maps have been also prepared for all provinces.
	(Indicator 3) Each related organization at central, regional and community levels becomes able to prepare and respond to disasters based on the disaster management plan at each level.	<u>Status of achievement: Achieved</u> (Ex-post Evaluation) Disaster Management Plans have been developed, reviewed, and revised at each level and implemented to prevent and mitigate disaster impacts. The project outcomes, such as CBDRM Manual, CBDRM Facilitator's Guide, and Guidebook for the utilization of hazard map, have been utilized and contributed to preparing and responding to disasters.

Source : JICA internal documents, questionnaire survey, interviews with the counterparts

3 Efficiency

Although the project period was as planned (ratio against the plan: 100%), the project cost slightly exceeded the plan (ratio against the plan: 104%). Therefore, efficiency of the project is fair.

4 Sustainability

<Policy Aspect>

There are effective policies on disaster prevention and mitigation at the national level to support expansion and sustainability of the project effects, such as the 11th Socio Economic Development Plan (2012-2016), National Disaster Prevention and Mitigation Plan (2010-2014) (completed) and National Disaster Prevention and Mitigation Plan 2015.

<Institutional Aspect>

DDPM and MOE have remained key players for further expanding/ sustaining the project effects at central, provincial, and community levels in cooperation with other ministries/ organizations and local resources, such as VDPM, schools, and civil defense volunteers.

<Technical Aspect>

DDPM and MOE have technical establishments for disaster management through the development and utilization of manual, guideline, and other tools to sustain the project effects. These tools for disaster management have been disseminated and utilized nationwide. However, DDPM is required to enhance technical capacity on information technologies against disaster management plan further. At the pilot project sites, VDPMs and model schools have gained sufficient skill to sustain the project effects.

<Financial Aspect>

Budgets on the disaster management and education for disaster management at the central and local levels are provided with increasing trends. However, the budget for DDPM is limited relative to the overall budget the Ministry of Interior or the national budget, and actual allocated budget is much smaller than the applied budget. Therefore, the budget is still insufficient to conduct effective and efficient disaster risk reduction. Local financial sources, such as budgets from local administrations, are available for conducting activities on disaster management. On the part of MOE, Office of the Basic Education Commission (OBEC) has been undertaking its roles and responsibilities to promote education for disaster preparedness in accordance with the allocated budget. However, the budget for education for disaster preparedness is limited.

<Evaluation Result>

Some problems have been observed in technical and financial aspects to support and expand disaster management. Therefore, sustainability of effects of the project is fair.

5 Summary of the Evaluation

The project achieved its project purpose as the capacity of DDPM as well as local administration and communities was enhanced, which has continued after the project completion. The overall goal was partially achieved as the project contributed to expanding the capacity development on disaster management in other areas of Thailand to a certain extent. As for sustainability, some problems have been

observed in technical and financial aspects to support and expand disaster management. As for efficiency, the project cost slightly exceeded the plan.

In light of the above, this project is evaluated to be satisfactory.

III Recommendations/Lessons Learned :

<Recommendations for Implementing Agency>

1. CBDRM Manual and CBDRM Facilitator's Guide, which were developed during this project (Phase I) and revised with the support of Phase II, have been effectively disseminated and utilized especially in provinces that have faced natural disasters such as flood. However, CBDRM has been conducted at only about 30% of villages with high disaster risk. It is recommended that DDPM should conduct CBDRM at the remaining high risk areas to promote disaster prevention and mitigation in these areas by allocating more budget and facilitators. Cooperation with JICA technical cooperation utilizing a follow-up cooperation scheme can be also considered for the further implementation of CBDRM.

2. Model schools at the pilot project sites in Chumporn Province and Mae Hong Sorn Province have been conducting education for disaster preparedness since the completion of the project. These schools have also improved and expanded activities on the education for disaster preparedness based on teachers' active involvement, and strong collaboration between schools and communities and disaster prone areas. It is recommended that OBEC should re-acknowledge these schools as good models for school disaster education and learn from their practices for dissemination.

<Lessons Learned for JICA>

1. Rain gauges installed at the pilot sites of Mae Hong Sorn Province have not been properly utilized/ maintained by the households where the rain gauges were installed. The evaluation team understood that the house owners, mostly village key persons, did not keep their interests to monitor the equipment regularly for the disaster risk which they have not faced often. At the same time, as recognized by DPMPO staff, the rain gauge is still considered as a useful tool for the community to provide early warning for flood and other rain related disasters in the high risk area. For provision of equipment to a community, it is necessary for a project to carefully select candidate sites for installation as well as prospective personnel who will be in charge of operation and maintenance of the equipment. Accordingly, capacity building should be appropriately designed and provided to those personnel, in order to enable them to efficiently and effectively operate and maintain the equipment in a sustainable manner. Moreover, closer communication and dialogue among stakeholders should be promoted.

2. It is considered the outputs of the project on the education for disaster preparedness have contributed to the nationwide expansion of the education with the policy of MOE. The education for disaster preparedness at the model schools in the pilot project areas has been also continued. However, the outputs and effects of the project, not only those of the project phase I but also those of the project phase II which was just completed last year, are not well recognized by OBEC. Key persons involved in the project phase I as well as the project phase II from OBEC have been retired or transferred, and their experience with the projects including training in Japan has not been left in the organization. In the case of Chumporn and Mae Hong Sorn Province, the model schools in the areas have been conducting disaster management education by using their own ideas and utilizing the assets of the project. The selection of candidates for training in Japan could have been carried out more carefully and effectively, targeting more at officers from local government and school teachers, unless mainstreaming of disaster management education is adopted as the ministry's policy.



Meeting with officials of DPMPO at Chumporn Province



Meeting with villagers at Mae Hong Sorn Province