

添 付 資 料

MINUTES OF MEETING  
BETWEEN  
THE JAPANESE TERMINAL EVALUATION TEAM  
AND  
THE THAI TERMINAL EVALUATION TEAM  
ON  
JAPANESE TECHNICAL COOPERATION  
FOR  
THE PROJECT ON CAPACITY DEVELOPMENT  
IN DISASTER MANAGEMENT IN THAILAND

The Japanese Terminal Evaluation Team, organized by Japan International Cooperation Agency (hereinafter referred to as "JICA") and headed by Mr. Kazuo SUDO, visited the Kingdom of Thailand from June 1, 2008 to June 20, 2008 for the purpose of conducting the joint terminal evaluation on the Project on Capacity Development in Disaster Management in Thailand (hereinafter referred to as "the Project") on the basis of the Record of Discussions signed on July 17, 2006.

During its stay in the Kingdom of Thailand, the Japanese Team made field visits and had a series of discussions and exchanged views and opinions on the achievements and performance of the Project with the Thai Terminal Evaluation Team.

As a result of the discussions, the Joint Terminal Evaluation Team mutually agreed upon the contents referred to in the document attached herewith as ATTACHMENT.


Bangkok, June 19, 2008



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ATTACHMENT JOINT EVALUATION REPORT

**JOINT EVALUATION REPORT**

**THE JAPANESE TECHNICAL COOPERATION**

**THE PROJECT ON CAPACITY DEVELOPMENT  
IN DISASTER MANAGEMENT**

**JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)  
JAPAN**

**MINISTRY OF INTERIOR AND MINISTRY OF EDUCATION  
KINGDOM OF THAILAND**

**JUNE 19, 2008**



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## Abbreviations

C	C/P	Counterpart
	CBDRM	Community Based Disaster Risk Management
D	DIG	Disaster Imagination Game
	DMR	Department of Mineral Resource
	DWR	Department of Water Resources
G	GIS	Geographic Information System
	GISTDA	Geo-Informatics and Space Technology Development Agency
M	MOA	Ministry of Agriculture
	MOE	Ministry of Education
	ESAO	Educational Service Area Office
	OBEC	Office of the Basic Education Commission
	MOI	Ministry of Interior
	DDPM	Department of Disaster Prevention and Mitigation
	DPMA	Disaster Prevention and Mitigation Academy
	DPMRC	Disaster Prevention and Mitigation Regional Centre
	DPMPO	Disaster Prevention and Mitigation Provincial Office
	MOL	Ministry of Skills and Development in Ministry of Labour
	MSDH	Department of Gender in Ministry of Social Development and Human Security
J	JICA	Japan International Cooperation Agency
O	ODA	Official Development Assistance
	OTOS	One Tambon One Search and Rescue Team
P	PDM	Project Design Matrix
	PO	Plan of Operation
R	R/D	Record of Discussion
	RID	Royal Irrigation Department
T	TMD	Thai Meteorological Department
V	VDPM	Village Disaster Prevention Management Committee

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## 1. Purpose of the Evaluation

### 1.1 Objective of the Evaluation

The Project on Capacity Development in Disaster Management in Thailand (hereinafter referred to as "the Project") was launched on August, 2006 and will be completed on August, 2008. The Japanese Evaluation Team (hereinafter referred to as "the Japanese Side") dispatched by JICA visited the Kingdom of Thailand from June 1 to June 21, 2008 for evaluating the achievement of the Project. The Thai Evaluation Team (hereinafter referred to as "the Thai Side") and the Japanese Side had jointly undertaken the terminal evaluation.

The terminal evaluation of the Project was conducted with the following objectives:

- To verify the achievements and performance of the Project comparing the actual results of the Project with the project design summarized in the Project Design Matrix (hereinafter referred to as "PDM").
- To rate the Project based on the five criteria, namely relevance, effectiveness, efficiency, impact and sustainability.
- To make recommendations for the success of the Project and take note of lessons learnt from the implementation of the Project that may contribute to the planning and implementation of other future projects.

### 1.2 Members of the Joint Evaluation Team

The evaluation and the recommendations on the Project were made by the following members of the Joint Evaluation Team (hereinafter referred to as "the Team").

#### 【Thai Side】

Name	Designation	Position, Organization
Mr. Adthaporn Singhawichai	Leader	Director, Research and International Cooperation Bureau, Department of Disaster Prevention and Mitigation
Ms. Siriluksana Duangkeo	Member	Chief of Research and Development Sub-Bureau, Research and International Cooperation Bureau, Department of Disaster Prevention and Mitigation
Ms. Chatchadaporn Boonyawaha	Member	Plan and Policy Analyst, Research and International Cooperation Bureau, Department of Disaster Prevention and Mitigation
Mr. Somsong Ngamwong	Member	Chief of Bilateral Cooperation Unit, Bureau of International Cooperation, Ministry of Education

Ms. Suthanone Fungtammasan	Member	Senior Programme Officer, Technical Support and Evaluation Unit, Thailand International Development Cooperation Agency, Ministry of Foreign Affairs
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**【Japanese side】**

Name	Designation	Position, Organization
Mr. Kazuo SUDO	Leader	Senior Advisor Global Environmental Department, JICA
Mr. Hiroyuki WATABE	Disaster Management Administration	Senior Researcher Asian Disaster Reduction Centre
Ms. Saki NAKAZAWA	Cooperation Planning	Program Officer, Disaster Management Team , Group III, Global Environmental Department, JICA
Ms. Yukiko SUEYOSHI	Evaluation and Analysis	Consultant, Global Link Management

**1.3 Mission Schedule**

The Team conducted documentary reviews, data collection, interviews and site visits from June 1 to June 20, 2008. The detailed schedule is attached in **Annex 1**

**1.4 Stakeholders Consulted/Interviewed**

The participants who were consulted or interviewed for the evaluation consisted of the following. The detailed list of the parties consulted by the evaluation teams is included in **Annex 2**.

- C/Ps of the Project
- Japanese Experts assigned to the Project
- Teachers at model schools and associate schools in three Pilot project sites
- Villagers in three Pilot sites
- Relevant local administrative officers in disaster prevention

**1.5 Methodology of the Final Evaluation**

In accordance with the JICA Project Evaluation Guidelines of January 2004, the Final Evaluation of the Project was conducted using the following process.

Step 1: The Project Design Matrix (PDM) for evaluation was adopted as the framework of the evaluation exercise, and the Project achievements were assessed vis-à-vis the benchmarked levels of respective Objectively Verifiable Indicators.



Step 2: Analysis was conducted on the underlying causes that promoted or inhibited the levels of achievement including both the project design and project implementation processes. Attention was given to discover whether the Project-relevant interventions are attributable to the current situation.

Step 3: Examination of the Project was conducted based on five evaluation criteria: “Relevance,” “Effectiveness,” “Efficiency,” “Impact,” and, “Sustainability,” the descriptions of which are stated below.

The evaluation was conducted based on the following five criteria, which are the major points of consideration when assessing JICA-supported development projects.

#### Definition of the Five Evaluation Criteria for the Final Evaluation

Five Evaluation Criteria		Definitions as per the JICA Evaluation Guideline
1.	Relevance	Relevance of the Project is reviewed by the validity of the Project Purpose and Overall Goal in connection with the Thai Government’s Disaster Prevention Sector Policy and the needs of the target group and/or ultimate beneficiaries in Thailand.
2.	Effectiveness	Effectiveness is assessed to what extent the Project has achieved its Project Purpose, clarifying the relationship between the Project Purpose and Outputs.
3.	Efficiency	Efficiency of the Project implementation is analysed with emphasis on the relationship between Outputs and Inputs in terms of timing, quality and quantity.
4.	Impact	Impact of the Project is assessed in terms of positive/negative, and intended/unintended influence caused by the Project.
5.	Sustainability	Sustainability of the Project is assessed in terms of institutional, financial and technical aspects by examining the extent to which the achievements of the Project will be sustained after the Project is completed.

Both quantitative and qualitative data were gathered and utilized for analysis based on an Evaluation Grid. The evaluation result was shown in Annex 3. Data collection methods used for the evaluation were as follows:

- Literature/Documentation Review
- Questionnaires (C/Ps, Experts)
- Key Informant Interviews (C/Ps, Japanese Experts, Officials of the Ministry of Interior and the Ministry of Education, relevant partner institutions, etc)
- Direct Observation

## 2. Background and Summary of the Project

### 2.1 Background of the Project

In Thailand, the Tsunami on December 2004 took a huge damage more than 8,500 casualties. The government of Thailand has Established Department of Disaster Prevention and Mitigation (hereinafter referred to as "DDPM") on 2002 as the umbrella organization which has the overall responsibility for the disaster mitigation from disaster prevention to emergency response. Further, the government of Thailand has established Disaster Prevention and Mitigation Academy (hereinafter referred to as "DPMA") which is in charge of human resource development for the disaster on 2004 before tsunami disaster. After the tsunami, the government of Thailand is strengthening the organization to cope with disasters. The establishment of National Disaster Warning Centre (hereinafter referred to as "NDWC") is one example of organization strengthening. However, each organization has not fully activated because of shorter period from the establishment. Especially, the capacity of DDPM such as ability of information accumulation, ability of coordination between many organizations, ability of execution of the plan, had to be developed urgently. Further, the system to cope with disasters at provincial to community level has to be developed urgently.

From the back ground above, the government of Thailand requested the technical cooperation project to Japanese government. Further, the government of Thailand recognized that the role of school is important to enhance the disaster prevention capacity of provincial and community level. Therefore the government of Thailand requested disaster prevention education project based on schools to Japanese government. The Japanese government assessed these requests and decided to conduct technical cooperation project combining both request aiming high efficiency and synergistic effect.



## 2.2 Summary of the Project

Project Name	The Project on Capacity Development in Disaster Management		
Implementing Agencies (C/Ps)	Department of Disaster Prevention and Mitigation(Ministry of Interior), Ministry of Education		
Target Group/Pilot Sites	<ul style="list-style-type: none"> <li>• DDPM staff, MOE staff, Central and local authorities</li> <li>• Villagers at 3 pilot project sites</li> <li>• Teachers at model schools and associate model schools</li> </ul>		
	Three pilot sites are shown as below.		
	Province/Cooperation Field	Village	Model school
	Chumporn/ Flood	Nong Rieng	Hat Hong Primary School
Mae Hong Sorn/ Landslide	Nam Hoo	Nam Hoo Primary School	
Phuket/ Tsunami	Thachat Chai	Thachat Chai Primary School	
Date of Signing (R/D)	July 17, 2006		
Cooperation Period	From 2006.8 to 2008.8 (2years)		
Cooperation Scheme	Technical Cooperation Project		

### Overall Goal

To enhance the capacity for disaster risk management against future disasters at central, provincial, district and community levels.

### 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

### Outputs

1. A system which enables the collection, accumulation and utilization of information on disaster and disaster risk management is established in DDPM.
2. Relationship and communication between DDPM and other relevant organizations are strengthened through the publishing of a White Paper and formulating a National Disaster Prevention and Mitigation Plan.
3. System for enhancing the capacity of DDPM staff on natural disaster management is strengthened.




4. Capacities of DDPM staff and village people are enhanced to promote disaster management activities at village level.
5. Capacities of MOE staff and teachers at model schools are enhanced to promote education for disaster preparedness at schools.

PDM2 is attached as **Annex 4**, and the Plan of Operation is shown in **Annex 5**. It has been revised twice by the Project and is being implemented. The list of products developed by the Project is shown in **Annex 6**

### **3. Achievement of the Project**

#### **3-1 Inputs**

##### **3-1-1 Japanese side**

###### **a) Dispatch of JICA Experts**

A total of 14 experts (43 visits, totaling 70.03 man months) have been dispatched to the Project. The detailed list of the experts is shown in **Annex 7**.

###### **b) Training of C/Ps Personnel in Japan**

As of June 2008, a total of 12 C/P received training in Japan. The detailed list of trainees and training period is shown in **Annex 8**.

###### **c) Operational Expenses**

As of April 2008, a total of 44,319,000 yen was allocated for Project operational expenses by the Japanese side. The detail of the operational expenses is shown in **Annex 9**.

##### **3-1-2 Thai side**

###### **a) Appointment of C/P**

A total of 75 persons, including a representative from the DDPM and MOE, were assigned to the Project. The detailed list of the C/Ps is shown in **Annex 10**.

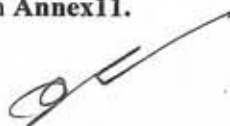
###### **b) Provision of facilities, support staff, and other operational expenditure.**

The necessary facilities for the Project activities, including a Project office at the DDPM and MOE, and administrative officials have been provided.

In addition, the Thai side made the necessary contribution for the Project implementation including the C/Ps salary, electricity and water bills of the Project office, as well as other consumables.

###### **c) Cost-sharing of Operational Expenses**

Operational cost-sharing with the Thai side has been promoted from the beginning of the Project. As of June 2008, a total of 3,983,000 yen has been provided by the Thai side for the travelling allowances for field surveys and training /workshops. In addition to this amount, the salaries for the C/Ps and supporting staff, the maintenance fees for equipment and relevant utility costs were paid for by Thai side. The detail on cost sharing in direct operational expenditure by the Thai side for the Project is shown in **Annex11**.



### 3-2 Activities Implemented

Most of the Project's activities, as specified under the PDM and Project's Plan of Operations (PO), have been implemented. The achievements for each of the activities are summarized in Annex 12.

### 3-3 Achievement of Output

<b>Output 1: Information Management on Disaster</b>
A system which enables the collection, accumulation and utilization of information on disaster and disaster risk management is established in DDPM.
<b>Indicators</b>
<ul style="list-style-type: none"><li>■ Hazard maps of Chumporn Province and Mae Hong Sorn Province which indicate disaster vulnerability and other information on disasters are developed.</li><li>■ Manual for developing provincial hazard maps including analysis method is prepared.</li><li>■ Community hazard maps for the pilot areas (flood, landslide) are developed based on the provincial hazard maps.</li><li>■ GIS database including meteorological data, topographic data, disaster record and relevant projects for Chumporn Province and Mae Hong Sorn Province are developed.</li><li>■ Procedure for updating GIS database is documented.</li><li>■ Guide book for the utilization of hazard maps and GIS database is prepared.</li></ul>

The achievement level of Output 1 is Excellent (A).

A GIS database was developed in the Information Technology Centre of DDPM with close cooperation and data provision from relevant organizations and agencies, namely the Department of Mineral Resources (DMR), the Department of Water Resources (DWR), the Thai Meteorological Department (TMD), and the Geo-Informatics and Space Technology Development Agency (GISTDA). The discussions in Task Force 2 highlighted the important role of hazard maps in formulating disaster prevention plan in the future. Hazard maps at provincial and community levels were also developed in two pilot sites. To utilize the database and hazard maps properly, 'Manual for developing provincial hazard maps' and 'Guide book for the utilization of hazard maps and GIS database' were also developed as originally planned. CPs are on their own initiative planning to conduct seminars for regional and provincial officers to demonstrate the use of the database and hazard maps in daily operations in accordance with these technical materials. However, a lack in the number of engineers who mastered GIS technology may hinder the effective utilization of the GIS database in formulating disaster prevention and mitigation plans nationwide.

<b>Output 2: National Disaster Management Plan and White Paper</b>
Relationship and communication between DDPM and other relevant organizations are strengthened



through publishing a White Paper and formulating National Disaster Prevention and Mitigation Plan
<b>Indicators</b>
<ul style="list-style-type: none"> <li>■ White Paper is published.</li> <li>■ Regular meetings and communications between DDPM and relevant organizations</li> <li>■ Outline of National Disaster Prevention and Mitigation Plan is formulated.</li> </ul>

For Output 2, the primary focus of the Project, the achievement level is Excellent (A).

Some activities under Output 2, have been delayed. This delay was brought about through difficulties in collaboration among the relevant organizations and agencies in the disaster management sector, especially at the beginning of the Project. However, the White Paper will be published by August 2008 due to combined efforts of both Thai C/Ps and Japanese experts. There is a plan to publish the White Paper annually by the National Disaster Policy Division in DDPM.

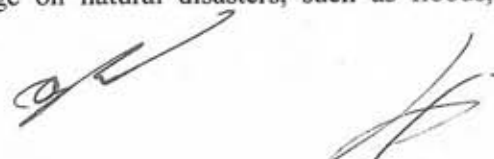
Since the National Disaster Prevention and Mitigation Act was approved in November 2007, the Project has supported DDPM in the formulation of the National Disaster Prevention and Mitigation Plan and the Provincial Disaster Prevention and Mitigation Plan. This activity has been affected by external conditions such as the policy change in regard to the National Disaster Prevention and Mitigation Plan.

In the middle of the Project, the concept of gender integration on disaster management was introduced by the Project, which had not been reflected in the PDM. At the time of the terminal evaluation, it seems that it needs more time for DDPM to adopt the concept of gender into their operation, such as integrating gender sensitive perspective into the National/Provincial Disaster Prevention and Mitigation Plan. A working group has been set up under the Personnel division for information sharing among related agencies, namely, the Department of Gender in Ministry of Social Development and Human Security (MSDH), the Royal Department of Irrigation in Ministry of Agriculture (MOA) and the Department of Skills and Development in Ministry of Labor (MOL).

<b>Output 3: DDPM Staff Capacity Improvement</b>
System for enhancing capacity of DDPM staff on natural disaster management is strengthened.
<b>Indicators</b>
<ul style="list-style-type: none"> <li>■ E-learning materials for natural disaster management course targeting flood, landslide, tsunami and earthquake are developed.</li> <li>■ Utilization plan of e- learning materials is formulated.</li> <li>■ Master plan of DPMA on natural disasters is formulated.</li> </ul>

The achievement level of Output 3 is Excellent (A).

Under the collaboration among the working group for e-learning system, e-learning materials have been developed properly to improve knowledge on natural disasters, such as floods,



landslides, earthquakes and tsunamis. A utilization plan for e-learning was formulated as planned. According to the plan, materials will be distributed nation-wide, not only to the DDPM, but also to other departments and agencies by the end of the project period. At the same time, a questionnaire survey will be conducted to investigate the needs of end-users, which will be reflected in further improvement of e-learning materials.

A working group was organized in DDPM to formulate a master plan for DPMA. A chapter on natural disasters, which is one part of DPMA's master plan, was prepared with knowledge sharing among C/Ps and Japanese Experts, and subsequently submitted to DPMA.

<b>Output 4: Regional Disaster Management</b>
Capacities of DDPM staff and village people are enhanced to promote disaster management activities at village level.
<b>Indicators</b>
<ul style="list-style-type: none"> <li>■ Community-based early warning systems are functional in two pilot sites.</li> <li>■ Manuals for CBDRM are developed.</li> <li>■ Facilitator's guide is developed.</li> <li>■ Village level disaster preparedness plans are formulated at two pilot project sites.</li> <li>■ Village Disaster Prevention and Mitigation Committee is organized at two pilot sites.</li> <li>■ Templates for provincial, district and tambon disaster prevention and mitigation plan are developed</li> </ul>

The level of the achievement is judged as Excellent (A).

DDPM staff and village people providing disaster prevention services in pilot sites have improved their knowledge and practice on natural disaster prevention through participation in the activities carried out by the Project. 'Manuals for CBDRM' and 'Facilitator's guide' were developed for the DDPM, DPMPO staffs and village chiefs to carry out CBDRM activities and expand its activities to other villages in disaster-prone areas. Templates for the disaster prevention and mitigation plan have been formulated in three levels, which covers province, district and Tambon, and will be distributed with said CBDRM materials. Interviews undertaken on DDPM staff involved in activities under Output 4 confirmed that they gained not only the basic concepts, but the know-how to carry out the CBDRM and the experience in the activities in pilot sites.

Based on the community hazard maps and disaster preparedness plans, the Village Disaster Prevention and Mitigation Committees in two pilot sites were organized in Nong Rieng and Nam Hoo villages, respectively. Since a participatory approach was adopted in the village disaster prevention plan, villagers have well recognized the countermeasure for natural disaster and necessity of having a disaster prevention system, such as Village Disaster Prevention and Mitigation Committee.

During the field interview with villagers conducted by the evaluation team, the difficulty in the decision making for an evacuation was pointed out due a lack of analytical skills in regard to



early warning.

<b>Output 5: Education for Disaster Prevention</b>
Capacities of MOE staff and teachers at model schools are enhanced to promote education for disaster preparedness at schools.
<b>Indicators</b>
<ul style="list-style-type: none"> <li>■ Supplementary reading and teacher's guide for flood, landslide and tsunami at primary and secondary schools are developed.</li> <li>■ Training curriculum for teachers on disaster preparedness are developed.</li> <li>■ More than one teacher from each model school is able to conduct workshops and lectures.</li> <li>■ Action plans are formulated at each model school</li> </ul>

The achievement level of Output 5 is Excellent (A).

Throughout the Project duration, the planning and formulation process of a supplementary reading and a teacher's guide have been prepared by many participants, namely OBEC, ESAO, the three model schools and so on. These materials will be distributed to all public schools as originally planned, and MOE is additionally planning to distribute them to all private schools as well. The final workshop will be conducted by teachers at a model school at the beginning of July 2008. Neighboring school teachers, relevant education officers and DDPM staff were invited to the workshop with the aim of disseminating the concept and practice of disaster preparedness education. The action plan on disaster preparedness education will be formulated during the workshop at schools. However, interviews undertaken with teachers confirmed support of MOE for school should be strengthened to continue conducting disaster preparedness education at their schools.

### 3-4 Achievement of the Project Purpose

<b>Project Purpose:</b>
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
<b>Indicators</b>
<ul style="list-style-type: none"> <li>■ Disaster Management Annual Report "White Paper" published</li> <li>■ Village people know the appropriate response to emergency situation.</li> <li>■ Workshops and lectures are conducted by teachers at each model school</li> </ul>

As of June 2008, the evaluation team conclude that the Project Purpose has been achieved to an



Excellent (A) level.


- *Capacity on disaster management of DDPM:* Capacities on disaster management on DDPM have been enhanced through the Project implementation. The Evaluation Mission observed that; (1) Having acquired skills on information management through the activities regarding GIS data base and the White Paper, (2) Capacity development in coordination and team work among various organizations (3) Having acquired knowledge on natural disasters and countermeasures through preparing e-learning materials, (4) Enhancement of skills to formulate policy through formulating the National Disaster Prevention and Mitigation, the Provincial Disaster Prevention and Mitigation Plan and the DPMA's Master Plan under Output 2.
- *Capacity on disaster management in pilot sites:* DPMPO and ESAO in three pilot sites also gained knowledge and skills in disaster preparedness by participation in CBDRM activities. Furthermore, the horizontal networks among related agencies have also been established. The villagers' knowledge for disaster preparedness has shown a dramatic improvement. According to the village chief and Tambon officers, there are some behavioral changes which suggest the villagers understanding of appropriate activities against emergency situations. For example, villagers themselves became voluntarily prepared for the evacuation based on the information from radio or TV after the Project implementation.
- *Capacity on implementation of disaster preparedness education:* Since a participatory approach was adopted in the planning and formulation process of the action plan and various educational materials, MOE and ESAO staffs, teachers at model schools and associate schools have gained the knowledge and skills to conduct a disaster preparedness education.

### **3-5 Issues Concerning Project Implementation Process**

#### **3-5-1 Matters regarding the Project Plan**

The Project implementation process was influenced considerably by the following issues stemming from the design of the Project plan.

- *Project Purpose:* The ambiguity on the Purpose of the Project, especially with its reference to the 'disaster management' or 'education service', initially invited uncertainty in terms of what the intended outcomes of the Project should be. In addition, Capacity development is a widely accepted concept, however, when translating such needs into specific Project inputs and activities, careful consideration is imperative in defining which specific capacities the interventions should cater to, and what outputs to expect.



- *Project period:* , The Project purpose has been achieved to a great extent, however, the Project period should have been longer to establish mechanisms to expand project outcomes and further strengthen a collaboration network among relevant organizations and agencies.

### 3-5-2 Matters regarding Project Management

- *Project management:* All activities will have been achieved as planned by the end of the Project, August 2008. It required some time to establish close cooperation between two implementing agencies, DDPM and MOE, at the beginning of the Project. On the whole, however, the management of the Project implementation was appropriate in terms of communication, decision making and team work. During interviews, some C/Ps of both DDPM and MOE commented that the assignment of Japanese Experts should have been longer to receive technical guidance and advice.
- *Ownership:* The C/Ps of both DDPM and MOE, villagers and teachers showed a high level of ownership of the Project due to the appropriateness of transferred skills and various visible products such as hazard maps, e-learning materials, the White Paper, community disaster prevention plans and supplementary readings on disaster preparedness and so on.



## 4. Evaluation Results by the Five Evaluation Criteria

### 4.1 Relevance

The Project's relevance is Very High (A) vis-à-vis the national policies of the disaster management system in Thailand, the needs of the target groups, and the official development policies of Japan.

The 10th Socio Economic Development Plan of Thailand (2007-2011) indicated the necessity of the establishment of a natural disaster management and prevention system, and the priority on the formulation of a long-term disaster prevention plan. Under the Disaster Prevention and Mitigation Act of 2007, DDPM was designated as a responsible organization for disaster management, which requires: 1) the Formulation of a National Disaster Prevention Plan 2) the Development of a disaster prevention and mitigation mechanism among government agencies and local administrations 3) the Promotion of disaster prevention activities. In addition, the 'National Education Plan of MOE (2007-2011)' indicates that education for disaster management should be promoted, especially in disaster-prone areas. This Project aims to strengthen the capacity of disaster management of DDPM and MOE, which fully supports such national efforts in the country.

Furthermore, according to JICA's Country Assistance Strategy of 2007, which reflects Japan's Economic Cooperation Program for Thailand of 2006, assistance for natural disasters is included under the theme of human security. Additionally, because of the Project's objectives regarding capacity enhancement for disaster management, relevance is also high in the Japanese ODA policy for Thailand.

The Project aims to respond to the needs of the DDPM and MOE staff by identifying them as its main target group. The selection of target groups was appropriate because disaster management including disaster preparedness education would not be possible without an improvement of their skills and knowledge of this sector. Moreover, the three pilot projects for Tsunami, Flood and Landslide have contributed to the capacity development of disaster management for local officers and residents; mainly DPMPO, ESAO, villagers in pilot sites, VDPM, and teachers at model schools.

### 4.2 Effectiveness

The effectiveness of the Project is Good (B).



It can be concluded that the Project was successful in developing core disaster management skills and a sense of ownership and commitment by DDPM as the principal government agency. A strengthening of the provincial organizations of DDPM and MOE has been achieved to a reasonable extent despite of the relatively short implementation period.

Five outputs have directly contributed to the Project Purpose and the Project is heading in the right direction toward the Overall Goal. However, the application of improved knowledge and skills in disaster management is still at an early stage, which makes it difficult to assess its effectiveness. For the horizontal extension of project outcomes, it was needed to be further strengthening on the capacity for policy formulation and the coordination mechanism among relevant agencies. Further, questionnaire survey and interview with Japanese experts and Thai C/Ps indicated that information sharing and collaboration among the working groups under each Output should have been more effective in achieving the Project Purpose.

#### **4.3 Efficiency**

The Project's Efficiency is Very High (A), considering the conducted activities of each Output and planned input over the 2 years period. The quality, quantity and timing of the provision of most inputs were adequate, and were thus utilized to achieve project outputs. The expertise of the Japanese Experts is considered to be high in accordance with the C/Ps' response to the questionnaire survey. Utilization of the equipment provided during this Project is also reasonable. However, some further consideration is necessary regarding user's maintenance and analytical ability.

The Thai Government assigned appropriate C/Ps for carrying out project activities. Some of the activity, especially under Output 2, was negatively affected by the transfer of key personnel within DDPM. However, they are actively contributing to the project activities with a strong intent and accomplishment, and delayed activities have been recovered in the end.

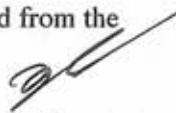
#### **4.4 Impact**

The Impact of the project is Good(B). The Achievement of Overall Goal is still limited considering the fact that the disaster management of DDPM and disaster preparedness education of MOE are in early stages. It requires more time to expand the outcome to enhancement the capacity of other relevant agencies

The positive impacts by the Project have been observed. For examples, 1) the disaster preparedness materials is planned to be distributed to not only public schools but private schools,



and 2) seminars for regional and provincial officers are planned voluntarily by C/P to demonstrate the use of the database and hazard maps. The high impact of the Project was confirmed at the provincial levels and pilot sites. Some of the positive aspects reported from the site visits are as follows;

- 
- Chumpon  
Pruket
- Utilizing experience from CBDRM activities conducted by the Project, DPMPO in Chumpon and Phuket have been conducted the series of disaster preparedness workshops in the 12 disaster-prone areas.
  - According to the Director of DPMPO in Chumpon province, Nong Rieng Village was nominated as a model village under the 'Disaster Resiliency Community Project' of DDPM.
  - Interviews undertaken with teachers confirmed that knowledge students obtained through the Project's activities was disseminated to their parents by the students.

There was no negative impact during the Project.

#### 4.5 Sustainability

Results for Sustainability of the Project after the completion of the Project are Good (B) based on the assessment from (1) the policy aspect, (2) the organizational and system aspect and (3) the technical aspect.

- *Policy Aspect:* According to the 'The 10th Socio-Economic Development Plan of Thailand (2007-2011)' and 'the Disaster Prevention and Mitigation Act of 2007' DDPM has been playing a principal role in disaster management. Therefore, a continuous policy on strengthen disaster management in the country support and sustain the Project outcomes is highly secured. Regarding disaster preparedness education, 'The National Education Plan of MOE (2007-2011)' indicates that the education for disaster management should be promoted, especially in the disaster-prone areas.
- *Organizational and System Aspect:*
  - ✓ DDPM and MOE; DDPM and MOE have mandates and responsibilities for disaster management and disaster preparedness education, respectively. The Project succeeded in establishing a vertical link between central, provincial and community levels, and also a horizontal link among DDPM, MOE and relevant organizations. Such links should be strengthened for an effective disaster management and disaster preparedness education after the Project terminates. Both DDPM and MOE seem committed to continue activities to fulfill their mandates. Serious financial constrain in applying

knowledge and skills obtained through the Project may hardly be faced with because of high commitments of both DDPM and MOE on the matter.

- ✓ Teachers' at model schools; Regarding disaster preparedness education at model schools and associate schools, teachers well recognized the role of schools in disaster preparedness. Some of the schools have already adopted disaster preparedness education into their curriculum. However, interviews undertaken with teachers confirmed the support of MOE for school should be strengthened to continue conducting disaster preparedness education at their schools.
  - ✓ Pilot site villagers; Under the CBDRM activities, VDPMs were organized in each pilot sites to conduct disaster prevention activities among villagers themselves. Interviews undertaken with VDPM members in three pilot sites confirmed that they have recognized their duties in the disaster prevention activities in a systematic way. To continue and extend its activities in other disaster-prone areas, it is essential to keep closer cooperation among DPMPO, Tambon officers and OTOS members.
- *Technical Aspect:*
- ✓ DDPM and MOE; Through the Project activities, the counterparts have learned various new knowledge and skills on disaster management and disaster preparedness education. The manuals and guidebooks for hazard map, GIS database and CBDRM have been formulated to secure its sustainability after the Project terminates. Regarding disaster preparedness education, OBEC has a concrete plan to disseminate knowledge and knowhow on disaster preparedness education to all schools through the Media Centre in MOE. They are willing to share those knowledge and skills with relevant stakeholders and also to develop their capability further.
  - ✓ Teachers' at model schools; The teacher's guide and the supplementary readings have been developed with active participation of teachers at the model schools and MOE staff. Therefore, they are relevant to the needs of stakeholders and are user-friendly. The teachers obtained a sufficient level of knowledge and skill to conduct a lecture on natural disaster, DIG and evacuation drill in their schools. However, interviews with teachers confirmed continuous follow-up activities for teachers should be conducted to improve their skills to conduct DIG and evacuation drill, in particular.
  - ✓ Pilot site villagers; Since a participatory approach was adopted in the village disaster prevention plan, villagers have well recognized the countermeasure for natural disaster and necessity of having a disaster prevention system. During the field interview with villagers conducted by the evaluation team, difficulty in decision making for on evacuation was pointed out due to lack of analytical skills on data collected by a rain

gauge. Some assistance from local administration may be necessary for villagers to regularly continue evacuation drills in the future.

#### 4.6 Conclusion of Evaluation

The Project has produced a variety of fruitful results for disaster prevention and mitigation in Thailand owing to the dedicated efforts of Thai counterparts in both DDPM and MOE, other relevant organizations and people concerned in the pilot sites, let alone JICA experts.

The five outputs of the Project have been achieved to a great extent, considering the indicators for achievements of each output. Various concrete products of the Project such as GIS database, hazard maps, White Paper, e-learning material, supplementary reading, teacher's guide and so on have been produced as a result of the Project's activities. Positive behavioral changes of villagers at pilot communities and teachers at model schools were also heard about disaster preparedness. The Project purposes have been achieved successfully because of strong sense of ownership and commitments of DDPM and MOE.

There are, however, many more issues for DDPM and MOE to deal with in order to further strengthen disaster management in Thailand.





## **5.Recommendation of the Evaluation**

### **1. Issues to be tackled before the end of the Project**

#### **(1) Continuous Publication of White Paper**

The first Thai White Paper on disaster prevention and mitigation for 2007 is planned to be published soon as a result of hard work and collaboration between DDPM and relevant organizations. In order to continuously produce the White Paper, the annual work schedule for publishing it should be drawn up and shared with relevant organizations for close collaboration.

#### **(2) Dissemination of Project Achievements**

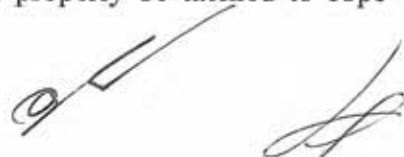
The Project's achievements and outputs should be made widely known to relevant organizations and the general public to avail themselves of the various products of the Project and the know-how acquired through it for disaster prevention and mitigation. The workshop planned to take place jointly by DDPM and MOE on July 21, 2008 will be one of such good opportunities to have people concerned know the achievements of the Project.

### **2. Issues to be tackled after the end of the Project**

DDPM has been strengthening its institutional and technical capacity to cope with various disasters since its establishment in 2002 and it was stipulated that DDPM is a responsible core organization for disaster prevention and mitigation in Thailand by the Disaster Prevention and Mitigation Act of 2007. MOE has also been trying to promote disaster preparedness education at schools.

The capacities of DDPM and MOE have been strengthened in regard to disaster management and disaster preparedness education through the implementation of the Project as described in the foregoing chapters. However, DDPM and MOE still have some more issues to deal with to further strengthen disaster management and disaster preparedness education.

Those issues such as formulation of the National Disaster Prevention and Mitigation Plan, further strengthening of the capacity of local governmental organizations and extension of disaster preparedness education should properly be tackled to cope with



natural disasters in the future.

(1) Strengthening Disaster Preparedness in Disaster-prone Areas

It is necessary to identify and delineate disaster-prone areas and to formulate strategic action plans for disaster prevention and mitigation for such areas focusing on specific frequent disasters so that countermeasures against natural disasters could be executed rapidly and effectively. The following are priority matters.

- (a) To formulate the National Disaster Prevention and Mitigation Plan.
- (b) To formulate disaster prevention and mitigation plans in high-risk areas at provincial level.
- (c) To draw province-scale hazard maps and identify high-risk areas on them.
- (d) To establish the early warning system and the disaster-related information dissemination system
- (e) To develop information materials to enhance people's awareness on natural disasters.

(2) Enhancing the Capacity of Local Officials Responsible for Disaster Management

The Project has focused on the capacity development of the central DDPM as well as pilot communities. The capacity of local administrative offices, particularly in disaster-prone areas, should be enhanced to cope with natural disasters in the future. The following matters should be dealt with.

- (a) To train local officials responsible for disaster management on such matters as formulation of disaster prevention and mitigation plans at various levels, utilization of a hazard map, establishment of an early warning system, CBDRM, etc.
- (b) To strengthen the capacity of local officials for collection, analysis and dissemination of disaster-related information.
- (c) To monitor and review disaster prevention and mitigation plans at various levels.

(3) Regular Conduct of Disaster Preparedness Education and its Extension among Schools

Regarding disaster preparedness education in school, supplementary readings and teacher's guides for primary and secondary schools have been completed, and practical capacity of teachers at three model schools has been well developed. MOE is expected to promote and extend disaster preparedness education in whole schools in Thailand,

especially in disaster-prone provinces.

In order to promote these activities effectively and efficiently, disaster preparedness education should be included in school activities as an important subject and a strategic action plan to extend disaster preparedness education should be formulated.

(4) Close Collaboration of DDPM and MOE, and with other Relevant Organizations

Cooperation between DDPM and MOE has advanced well as the Project progressed. This good relationship should be continued after the Project terminates and sharing supplementary readings and e-learning materials, joint workshops at community level and cooperation in disaster preparedness education should be promoted.

Furthermore, DDPM should continuously maintain close networks for disaster information and communication with Thai Meteorological Department, Department of Mineral Resources, Royal Irrigation Department and other relevant organizations.



## 6. Lessons Learned

1. Collaborative relationship upon trust between communities and local administrations is imperative in CBDRM activities. In selecting pilot sites and communities, various stakeholders such as volunteers and NGOs in the community and of local administrations were well consulted and their ideas were taken into account. The process itself contributed to building trust between people and local administrations. A sense of ownership for CBDRM activities were also fostered among stakeholders along with the training of CBDRM activities such as evacuation drills and the formulation of a village-level disaster preparedness plan. Continuous practice of CBDRM activities are planned at the village communities in pilot sites on the initiative of stakeholders in cooperation with provincial DDPM offices after the termination of the Project.
2. The Project developed a variety of visible products, which raised a sense of achievement of counterparts and other stakeholders. Subsequently, it enhanced their willingness to actively learn new knowledge and skills and participate in activities in disaster management and disaster preparedness education.

