

MINUTES OF MEETING  
ON  
JOINT COORDINATING COMMITTEE  
FOR  
THE PROJECT  
ON  
CAPACITY DEVELOPMENT IN DISASTER MANAGEMENT  
IN THAILAND (PHASE-2)

AGREED UPON BETWEEN  
THE AUTHORITIES CONCERNED OF THE GOVERNMENT  
OF THE KINGDOM OF THAILAND  
AND  
JAPAN INTERNATIONAL COOPERATION AGENCY

Bangkok, February 15, 2013

前原 規利

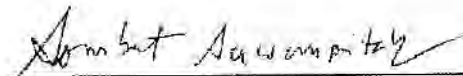
---

Mr. Noritoshi MAEHARA  
JICA Expert  
Japan International Cooperation Agency  
Japan



---

Mr. Pornpoth Penpas  
Deputy Director -General  
Department of Disaster Prevention and  
Mitigation,  
Ministry of Interior



---

Mr. Sombat Suwanpitak (Ed.D)  
Deputy Permanent Secretary of Education  
Ministry of Education

In response to the request of the Government of the Kingdom of Thailand, the Government of Japan has decided to conduct the technical cooperation concerning the "Project on Capacity Development in Disaster Management in Thailand (Phase 2)" (hereinafter referred to as "the Project"). The Japan side and the Thai side came to an agreement on the Record of Discussion (hereinafter referred to as "R/D") which was signed on March 9, 2010 between the Department of Disaster Prevention and Mitigation, Ministry of Interior (hereinafter referred to as "DDPM") and the Ministry of Education (hereinafter referred to as "MOE"), and Japan International Cooperation Agency (hereinafter referred to as "JICA"). Based on the R/D, JICA dispatched the Expert Team (hereinafter referred to as "the Team") headed by Mr. Noritoshi MAEHARA from June 7, 2010.

The Team and Thai Side (DDPM, MOE and other authorities concerned of the Project) discussed on the following matters:

- (1) Report on progress of the project activities of each task force
- (2) Report on results of monitoring survey to measure effectiveness of CBDRM
- (3) Report on Counterpart Training 2012,
- (4) Explanation of Progress Report 2 of the Project, and
- (5) Plan of the project activities in the fourth year, and
- (6) Other

The list of attendants is attached as Annex-1. As a result of the discussion, the Team and the Thai Side agreed upon the matters as follows:

1. Report on progress of the project activities of each task force  
Representatives from all the task forces reported on the progress of the project activities to the JCC members.
2. Report on results of monitoring survey to measure effectiveness of CBDRM  
The monitoring survey to measure effectiveness of CBDRM was conducted by Research and Development Sub-Bureau of DDPM on an autonomous basis for the model communities of Ban Chawfa & Ban Jokfa, Lampang and Ban Koomong, Lamphun in November 2012. The results of the monitoring survey have been presented to the JCC members.
3. Report on Counterpart Training in Japan 2012,  
Results of the 4th Counterpart Training in Japan 2012 have been reported to the JCC members by representatives of DDPM and MOE.

Representative of MOE suggested that most of the curriculum and contents of disaster education of Japan were about earthquake and tsunami, and were different from major disasters in Thailand (flood and flash flood).

Representative of Department of Water Resources (DWR) suggested that it is also important to address the issues of evacuation, such issues as people do not want to evacuate, standard of evacuation place, etc. Representative of DPMA replied that DPMA is planning to train 40 master trainers to manage evacuation shelters in collaboration with International Organization for Migration (IOM). The trained master trainer will train 400 trainers for shelter management. Participation of MOE will be important.

4. Explanation of Progress Report 2 of the Project by the Team

JICA expert team submitted the Progress Report 2 in January 2012 in accordance with TOR of the Project. JICA expert team explained to the JCC members about outline of the Progress Report 2.

5. Plan of the activities in the fourth year by the Team

JICA expert team explained to the JCC members about activity plan in the 4th Year of the Project and minor adjustment has been made on the schedule based on suggestion from task force members as shown in Annex-2. Tentative assignment schedule of JICA experts is presented in Annex-3.

6. Other

DDPM suggested JICA expert team to consider increase of number of participants of the Counterpart Training in Japan 2013 to 20 persons from 13 persons to attain maximum effects. JICA expert team explained the basis of 13 persons and took note of the suggestion of DDPM

DDPM proposed JICA expert team to support DDPM to establish comprehensive disaster information system like Phoenix Disaster Management System in Hyogo Prefecture. JICA expert team explained a system like Phoenix that provides immediate damage estimation is a specially developed system and it is not commercially available software. It will need extensive amount of data and analysis based on past disaster events. Development of such system needs certain time and cost, and is difficult to complete in the remaining period of the Project. JICA expert team will support Flood Risk Management Task Force (TF-FRM) to study on it as a model.

Annexes:

- Annex 1 The list of the attendants for the fifth (5th) JCC
- Annex 2 Plan of the activities in the fourth year
- Annex 3 Tentative assignment schedule of JICA experts

### List of Attendants

1. Mr. Pornpoth Penpas  
Deputy Director General,  
Department of Disaster prevention and mitigation
2. Mr. Arun Pinta  
Chief of Foreign Relations Sub-Bureau Research and International  
Bureau, Research and International Relations Bureau
3. Ms. Kamolwan Chitpakdee  
Plan and Policy Analyst, Professional Level  
Disaster Prevention Promotion Bureau
4. Ms. Oranut Lo-Ounlum  
Plan and Policy Analyst, Professional Level  
Disaster Prevention Promotion Bureau
5. Ms. Duangnapa Uttamangkpong  
Plan and Policy Analyst Professional Level  
Research and International Cooperation Bureau
6. Ms. Kornisan Wilawan  
Plan and Policy Analyst Professional Level  
Research and International Cooperation Bureau
7. Ms. Sippaka Bimol  
Plan and Policy Officer  
Research and International Cooperation Bureau
8. Ms. Chachadaporn Boonpreerarat  
Director of Natural Disaster Policy Section  
Disaster Prevention and Mitigation Policy Bureau
9. Mrs. Woraphak Hreerjaiwang  
Plan and Policy Analyst, Professional Level  
Research and International Cooperation Bureau
10. Mr. Sitthigon Kwandee  
Plan and Policy Analyst Professional Level  
Disaster Prevention and Mitigation Policy Bureau
11. Mr. Banyat Yaingoolueam  
Civil Engineer, Professional Level  
Disaster Prevention Criteria Bureau
12. Mr. Monchai Manosuwan  
Civil Engineer, Senior Professional Level  
Disaster Prevention Criteria Bureau
13. Ms. Luckana Manimmanakorn  
Technical Deputy Director  
Disaster Prevention and Mitigation Academy
14. Mr. Kittikon Thepyuamnuay  
Chief of Technical Support Section, Technical Sub-Bureau  
Disaster Prevention and Mitigation Academy
15. Mr. Wattana Sakorn  
Plan and Policy Analyst Professional Level  
DPMRC 10 Lampang

16. Mr. Amnuj Raktam	Plan and Policy Analyst Professional Level DPMPO Lampang
17. Mr. Thanawat Ruangdetch	Plan and Policy Analyst Professional Level DPMPO Nakhon Si Thammarat
18. Mr. Boonjet Buite	Mechanic, Experience level DPMPO Lampang
19. Mr. Supon Sodsun	Acting for Chief of Water Crisis Prevention Center Department of Water Resources
20. Mr. Somkit Sapaokam	Hydrologist, Professional Level Royal Irrigation Department
21. Mr. Pasakorn Kantasub	Geologist, Senior Professional Level Department of Mineral Resources
22. Mr. Anon Thamasiri	Geologist Department of Mineral Resources
23. Ms. Sukanya Yawichan	Director of Central Weather Forecast Division Thai Meteorological Department
24. Mr. Somsong Ngamwong	Foreign Relations, Senior Professional Level Office of the Permanent Secretary Ministry of Education
25. Ms. Chantada Hunsawad	Foreign Relations, Professional Level Office of the Permanent Secretary Ministry of Education
26. Ms. Yaowaluk Tienabanjong	Educational Officer, Senior Professional Level Office of the Basic Education Commission Ministry of Education
27. Mrs. Boonruang Puksawad	Educational Officer, Senior Professional Office of the Basic Education Commission Ministry of Education
28. Ms. Utin Juangwisetpong	Educational Officer, Professional Level Office of the Basic Education Commission Ministry of Education
29. Mrs. Somsuan How	Social Development Official, Professional Level Thailand International Development Cooperation Agency (TICA)
30. Ms. Siwalee Wongkanti	Social Development Official, Professional Level Thailand International Development Cooperation Agency (TICA)
31. Mr. Ponlapak Aekthanaponkorn	Computer Technical Officer, National Disaster Warning Center
32. Ms. Hataya Sarinta	Warning Technical Officer, National Disaster Warning Center

33. Mr. Naporn Paksan	Plan and Policy Analyst, Professional Level Department of Local Administration
34. Mr. Ryotaro Hayashi	First Secretary , Embassy of Japan in Thailand
35. Mr. Masanori Takenaka	Senior Program Officer, JICA Thailand Office
36. Mr. Noritoshi Maehara	Leader, JICA Expert , PCDDM Phase 2
37. Mr. Noboru Jitsuhiro	JICA Expert, PCDDM Phase 2
38. Mr. Makoto Kodama	JICA Expert, PCDDM Phase 2
39. Mr. Jun Onodera	JICA Expert, PCDDM Phase 2
40. Mr. Arata Sasaki	JICA Expert, PCDDM Phase 2
41. Ms. Lolita C. Garcia	JICA Expert, PCDDM Phase 2
42. Ms. Tanita Niltae	Program Officer, JICA Thailand Office
43. Ms. Penpisut Sriprasert	Secretary to JICA Expert Team, PCDDM Phase 2

**The Project on Capacity Development in Disaster Management in Thailand (Phase-2)**  
**Plan of Activities in the Fourth Year**

As of February 15, 2013

Task Force	Date	Activity	Outline
1. Common Activities	July 2013	C/P Training in Japan	Participants: JCC, TF, Sub-TF members (tentatively 13 persons) Venue: Tokyo, Aichi and Hyogo Objective: To acquire extensive knowledge on DM especially on flood and sediment disasters.
	Oct-Nov 2013	Final Review of the Project and JCC	Participants: JICA, DDPM, MOE, concerned agencies' officers and JICA experts Venue: DDPM, MOE and concerned agencies Objective: To evaluate the degree of attainment and achievement of the Project objectives
	Feb 2014	Final Seminar	Participants: DDPM, MOE and concerned agencies' officers (100 persons) Venue: a hotel in Bangkok Objective: To report the outputs of the Project and provide knowledge from academic experts
2. TF Disaster Management Planning	Jun. 2013	Table-top exercise in Nakhon Si Thammarat	Participants: Staff of DPMPO, DPMRC, and local authorities. Venue: in Nakhon Si Thammarat Objective: to examine DPM-AP and manual of the local authorities, and to improve the plan and manual based on the results of the exercise.
		Formulation of DPM-AP at LAO level across the country, promoting and monitoring progress	
3. TF CBDRM	Feb. 18-21, 2013	CBDRM Facilitator Training	Participants: DPMPO and DPMRC officers Venue: in Bangkok Objective: to train more facilitators to accelerate promotion of CBDRM in Thailand
	Jun 2013	CBDRM Facilitator Training	Participants: DPM officers, retired teachers, volunteers, etc. Objective: to train more facilitators to accelerate promotion of CBDRM in Thailand
	Oct 2013	Revision of CBDRM facilitator's guide	Objective: to improve CBDRM facilitators' guide to accelerate promotion of CBDRM in Thailand
	Jan-Feb 2014	CBDRM Facilitator Training	Participants: DPM officers, retired teachers, volunteers, etc. Objective: to train more facilitators to accelerate promotion of CBDRM in Thailand
4. TF Disaster Management Training	2013/ 2014	Training of DDPM Staff for Natural Disaster Management	Participants: DDPM, DPMRC, DPMPO officers Venue: DPMA Objective: to train DPM officers on management of natural disasters
	2013/ 2014	Analysis of the post-evaluation of the Trainings	Target: Participants and supervisors Objective: to improve training curriculum based on the results of the post evaluation
	2013/ 2014	Training needs assessment	Target: DPM officers Objective: to improve training curriculum

			based on the results of the training needs assessment
5. TF Disaster Education	Feb 20-21, 2013	Disaster Education Workshop	Participants: Officers of MOE and ESAOs. Venue: Bangkok Objective: to upscale the outputs of the Project to practice, and to prepare AP for future.
	Feb 26-28, 2013	Disaster Education Seminar	Participants: Officers of OBEC and pilot ESAOs. Venue: Bangkok Objective: to exchange experience and knowledge on DE among participants and to disseminate the new materials.
		Up scaling DE to ESAOs based on the guideline	
		Monitoring and follow up the activities of mode schools	
6. TF Flood Risk Management	May 2013	Training on collection and analysis of hydrological observation data	Target: TF-FRM members Site: Model site in Lampang and Lamphun
	May 2013	Training for flood analysis and hazard mapping	Target: TF-FRM members Contents: how to develop channel flow analysis by use of actual cross section data, and how to input and assess structural measures.
	May-Jun 2013	Training for river planning incl. structural measures	Target: TF-FRM members Contents: river alignment, cross-section, longitudinal profile, embankment, bank protection, etc.
	Sep-Oct 2013	Training on flood management	Target: DPMRC officers Objective: to enhance knowledge and skill of DPMRC officers on flood analysis, hazard mapping, river planning incl. structural measures.
7. GIS Data Base	Jun-Jul 2013	GIS Data Base and Inventory Map Training	Target: DDPM and MOE officers Objective: To improve inventory mapping to monitor DPM-AP, CBDRM and Disaster Education
	Dec 2013	GIS Data Base and Inventory Map Follow-up Training	Target: DDPM and MOE officers Objective: To monitor progress of inventory mapping to monitor DPM-AP, CBDRM and Disaster Education



Discipline	Name	4th year (Tentative)													
		FY 2013						2014							
		Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	
Chief Advisor/ Disaster Management Institution	Noritoshi MAEHARA			30(1.00)					30(1.00)	5(0.17)				15(0.50)	
Co-Chief Advisor/ Disaster Management Plan	Noboru JITSUHIRO			30(1.00)					30(1.00)					15(0.50)	
Sediment Disaster Management	Toru KOIKE			15(0.50)					30(1.00)						
Flood Management	Makoto KODAMA			60(2.00)					30(1.00)						
CBDRM	Arata SASAKI					45(1.50)			30(1.00)					30(1.00)	
CBDRM	Lolita Caparas GARCIA					45(1.50)			30(1.00)					30(1.00)	
Disaster Education	Jun ONODERA								45(1.50)					15(0.50)	
Disaster Management Exercise	Tsuyoshi KOYABU			12(0.40)									12(0.40)		
GIS/ Data Base	Tomoyuki WADA			30(1.00)										30(1.00)	
Project Coordination	Makoto KODAMA/ Shinichi TAKAO														

■ Assignment in Thailand    □ Assignment in Japan

Tentative Assignment Schedule of JICA Experts in the Fourth Year



**MINUTES OF MEETINGS**  
**BETWEEN**  
**THE AUTHORITIES CONCERNED OF THE GOVERNMENT**  
**OF THE KINGDOM OF THAILAND**  
**AND**  
**THE JAPANESE TERMINAL EVALUATION TEAM**  
**OF THE JAPAN INTERNATIONAL COOPERATION AGENCY**  
**ON**  
**JAPANESE TECHNICAL COOPERATION FOR**  
**THE PROJECT ON CAPACITY DEVELOPMENT IN DISASTER MANAGEMENT**  
**IN THAILAND (PHASE II)**

The Japanese Terminal Evaluation Team (hereinafter referred to as “the Team”), organized by the Japan International Cooperation Agency (hereinafter referred to as “JICA”) headed by Mr. Masafumi Nagaishi , Senior Advisor to Director General of Global Environment Department, JICA visited the kingdom of Thailand from January 7 to 30, 2014 for the purpose of conducting the terminal evaluation for the technical cooperation project for “Capacity Development in Disaster Management in Thailand (Phase-2)” (hereinafter referred to as “the Project”).

During its stay, both the Team and the Thai side formulated the Joint Evaluation Team, exchanged views and had a series of discussions, and compiled the Joint Terminal Evaluation Report (hereinafter referred to “the Report”) with the Thailand authorities concerned such as the Project’s counterparts of the Department of Disaster Prevention and Mitigation (DDPM) and the Office of the Basic Education Committee (OBEC).

As a result of the discussion, both the Team and the Thailand authorities agreed on the matters referred to in the document attached hereto.

Bangkok, January 30, 2014

---

Mr. Masafumi Nagaishi  
Leader,  
Terminal Joint Evaluation Team  
Japan International Cooperation Agency

---

Mr. Chatchai Phromlert  
Director-General,  
Department of Disaster Prevention and Mitigation  
Ministry of Interior

---

Ms. Churairat Sangboonnum  
Deputy Permanent Secretary of Education  
Ministry of Education

## ATTACHMENT

### **1. Recognition of the Joint Terminal Evaluation Report**

Both sides recognized the Report to be proper, and accepted the recommendations mentioned in the Report.

### **2. Remaining Activities**

(1) There are some remaining activities which should be completed by the end of the Project, such as facilitators orientation workshop, finalization of CD-ROM and PPT materials etc.

The Thai side ensured that the necessary measures are taken for the remaining activities.

(2) The Project has a plan to hold the final seminar in the end of February.

The Team recommended that all the important relevant organizations related to disaster prevention and mitigation should be invited to discuss how to respond to the recommendations made in the Report in addition to the presentation of the Project outcomes.

### **3. Sustainability of the Project**

Both sides recognized the importance on the sustainability of the outputs and/or outcomes of the Project.

The Thai side mentioned that they continue to make maximum efforts for ensuring sustainability of the Project outputs in addition to those of the previous project that is “the Project on Capacity Development in Disaster Management (Phase I)”.

### **4. Others**

As a host organization of the 6th Asian Ministerial Conference on Disaster Risk Reduction (AMCDRR), DDPM mentioned to make an effort to input the outcomes of the Project to the Conference.

Appendix : Joint Terminal Evaluation Report

# **ANNEX 1**

**TERMINAL EVALUATION REPORT  
ON  
THE PROJECT ON CAPACITY DEVELOPMENT  
IN  
DISASTER MANAGEMENT  
(PHASE II)**

**TERMINAL EVALUATION TEAM**

**JANUARY 2014**



## Table of Contents

<b>1. Introduction</b> .....	3
1.1 Background.....	3
1.2 Framework of the Project .....	3
<b>2 Terminal Evaluation</b> .....	3
2.1 Objectives of the terminal evaluation .....	3
2.2 Members of the terminal evaluation team .....	4
2.3 Method of terminal evaluation.....	4
<b>3 Achievements of the Project</b> .....	5
3.1 Inputs .....	5
3.2 Achievements of Activities .....	8
3.3 Achievements of Outputs.....	8
3.4 Implementation Process.....	18
<b>4 Evaluation by five criteria</b> .....	19
4.1 Relevance.....	19
4.2 Effectiveness .....	20
4.3 Efficiency .....	20
4.4 Impact .....	21
4.5 Sustainability .....	22
<b>5 Conclusions</b> .....	23
<b>7 Lessons learned</b> .....	25

### Annexes

Annex 1: Project Design Matrix

Annex 2: Schedule of Terminal Evaluation

Annex 3: List of Counterpart Personnel and JCC members

Annex 4: Plan of Operation (Planned and Actual)

## Abbreviations and Acronyms

CBDRM	Community Based Disaster Risk Management:
DDPM	The Department of Disaster Prevention and Mitigation
DLA	Department of Local Administration
DMR	Department of Mineral Resources
DPM	Disaster Prevention and Mitigation
DPMA	Disaster Prevention and Mitigation Academy
DWR	Department of Water Resources
ESAO	Education Service Area Office
GIS	Geographical Information System
JCC	Joint Coordination Committee
JICA	Japan International Cooperation Agency
LAO	Local Administration Organization (Including municipalities and sub-district offices)
LDPM	Local Disaster Prevention and Mitigation (action plan)
MOE	The Ministry of Education
MOI	The Ministry of Interior
OBEC	The Office of the Basic Education Committee
PLA	Provincial Local Administration
PDM	Project Design Matrix
PO	Plan of Operation
RID	Royal Irrigation Department
R/D	the Record of Discussions
RICB	Research and International Cooperation Bureau
TMD	Thai Metrological Department
TTX	Table-top exercise



## **1.Introduction**

### **1.1 Background**

The Department of Disaster Prevention and Mitigation (DDPM) was established in 2002 in the Ministry of Interior (MOI) in order to strengthen disaster prevention and mitigation. In 2006, the Government of Thailand made a request to the Government of Japan for technical cooperation with the objectives of the capacity development of DDPM and the strengthening of disaster education. The Project on Capacity Development in Disaster Management in Thailand (Phase 1) was implemented from August 2006 to August 2008. The main target groups of Phase 1 were DDPM and the Office of the Basic Education Committee (OBEC) under the Ministry of Education (MOE) at the national and community levels. In 2010, the Phase II of the Project was implemented in order to improve and scale up DPM activities from the national, provincial and municipal and community levels.

### **1.2 Framework of the Project**

The framework of the Project is as follows:

#### **(1) Overall Goal**

Implementation of disaster risk management activities is improved and scaled up.

#### **(2) Project Purpose**

Capacity of DDPM is enhanced to scale up Disaster Prevention and Mitigation Action Plans, Community Based Disaster Risk Management: CBDRM and disaster education, collaborating with concerned agencies, provincial and local levels.

#### **(3) Outputs**

1. Disaster Prevention and Mitigation Action Plans with considerations for vulnerable people are formulated for national, provincial and local authorities (in the model provinces; namely, Lampang, Lampun)
2. Capacity of DDPM staff as facilitators on implementation of Community Based Disaster Risk Management (CBDRM) is enhanced.
3. Training curriculum at DPMA is improved.
4. Based on the Natural disaster preparedness educational curriculum, schools have improved preparedness for disaster.
5. Knowledge and technical capacity of DDPM on hazard mapping, early warning system and design of structural measures are enhanced.

The Project Design Matrix (PDM) of the Project is shown in Annex 1.

## **2 Terminal Evaluation**

### **2.1 Objectives of the terminal evaluation**

The terminal evaluation was conducted from 7 to 29 of January 2014 for the following objectives:

- 1) To verify the level of achievements and performance of the Project based on the Record of Discussions (R/D), Plan of Operations (P/O), and PDM,
- 2) To evaluate the Project based on five evaluation criteria, and
- 3) To draw useful recommendations to the Project and lessons learned for future projects.

## 2.2 Members of the terminal evaluation team

### (1) Thai side:

	Name	Position/ Organization
1	Mr. Chainarong Vasanasomsithi	Director of Research and International Cooperation Bureau, DDPM
2	Ms. Duangnapa Uttamangkpong	Foreign Relations Official, Professional Level, DDPM
3	Ms. Kornisan Wilawan	Plan and Policy Analyst, Professional Level, DDPM
4	Mr. Somsong Ngamwong	Chief of Bilateral Cooperation Unit 1, Bureau of International Cooperation, MOE
5	Ms. Attaya Memanvit	Development Cooperation Officer, Planning and Monitoring Partnership Branch, Thailand International Development Cooperation Agency, Ministry of Foreign Affairs

### (2) Japanese side:

	Name	Field	Position/ Organization
1	Mr. Masafumi Nagaiishi	Leader/Evaluation Planning	Senior Advisor to the Director General, Global Environment Department, JICA
2	Mr. Kaneyasu Ida	Evaluation Analysis	Senior Consultant, Tekizaitekisho Organization

The schedule of the terminal evaluation is shown in Annex 2.

## 2.3 Method of terminal evaluation

The terminal evaluation was conducted in the following manner:

- (1) To review the project's achievements and implementation process, based on such documents as the detailed project design study report, mid-term review report, progress report and other documents produced by the Project.
- (2) To prepare questionnaires and receive the views of the counterparts on the performance of the project and critical issues for the successful completion of the project
- (3) To interview the counterparts of DDPM and OBEC-MOE, Joint Coordination Committee (JCC) member organizations, and stakeholders in the target provinces (regional centers and provincial offices of DDPM, Education Service Area Offices (ESAOs), LAOs, district and sub-district administration offices, model schools, the committee members of village DPM, etc.)
- (4) To evaluate the project from the following perspectives as shown in the table below, based on the collected information and findings:

Criteria	Viewpoints and definitions
Relevance	Relevance is referred to as the validity of the Project Purpose and the Overall Goal in terms of compliance with the development policy of the Thai Government as well as the needs of beneficiaries.
Effectiveness	Effectiveness is referred if the expected benefits of the Project have been achieved as planned and if the benefits were brought about as a result of the Project (not of the external factors).
Efficiency	Efficiency refers to the productivity of the implementation process and efficient conversion of the inputs of the desired output.
Impact	Impact refers to direct and indirect, positive and negative impacts caused by implementing the Project including the extent of the prospect of the achievement of the Overall Goal.
Sustainability	Sustainability refers to the likelihood of the Project output to be sustained and further developed by the recipient organization(s) after the project period. The prospect of

	project sustainability is judged by looking into the recipient country's policies, technical, financial and organizational aspects.
--	---

- (5) To draft and revise the terminal evaluation report through consultations and discussions with relevant organizations. The results of the evaluation were judged on the four scales from “very high” to “high”, “there are some points to be considered” and “low”.

### 3 Achievements of the Project

#### 3.1 Inputs

##### (1) Japanese Side

##### 1) Experts

The total of nine experts was dispatched for the Project in the nine fields of expertise. The total length of their assignments was 110.59 P/M. The experts on Table-top exercise (TTX) and GIS database were added to the original plan.

Experts dispatched for the Project (June 2010 – November 2013)

Fields of expertise	Plan (Person/Month)	Actual (Person/Month)
Team leader/Disaster management institution	16.50	20.80
Sub-tem leader/Disaster management plan	12.50	14.00
Sediment disaster management	5.00	9.63
Flood management	5.00	14.63
Community based disaster risk management 1	12.00	15.73
Community based disaster risk management 2	11.50	14.17
Disaster education	13.00	14.97
Disaster management table-top exercise	0.00	3.33
GIS database	0.00	3.33
TOTAL	64.00	110.59

(Source: Expert Team)

##### 2) Operation cost

The Japanese side provided the operation cost of 21.57 Million Japanese yen (approximately 6.8 Million Baht) for project implementation (The amount does not include experts' remunerations and the costs of counterpart training in Japan).

Operation Cost (March 2012 – September 2013)

Cost Items	Amount
Employment of local staff and interpreters	4,454,000
Repair and maintenance of equipment	467,000
Consumables, procurement of equipment, depreciation	519,000
Transport and travelling expenses for experts and local staff	8,940,000
Preparation of report and material (printing, interpretation, etc.)	3,937,000
Rent, organization of seminar, workshop, etc.	3,261,000
Total	21,578,000

(Source: The Project Office) Unit: Japanese Yen

### 3) Training in Japan

Four batches of counterpart training were organized for DDPM and other relevant organizations participating in taskforces 1, 2, 3 and 5. One batch was organized for the taskforce 4. For each batch, the duration of training was about two weeks.

Training Conducted in Japan

Training courses	Topics of training (sites visited)	Number of Participants
4 batches	Comprehensive Disaster Management Course (Sites of Great East Japan Earthquake, Aichi Preparedness Leaders Association, Kobe city hall, Hyogo Prefectural Government, Asian Disaster Reduction Centre, Higashiura disaster management network, etc.)	75
1 batch	Disaster Education Course (Hyogo Prefecture Maiko High School, "Iza! Kaeru Caravan!" by Plus Arts, Aichi Preparedness Leaders Association, Nagoya University, Obu City Kyowa-Nishi Elementary School, Nagoya Municipal Minato Disaster Prevention Center, Higashiura disaster management network, etc.)	18
Total		93

(Source: The Project Office)

### 4) Seminars and Workshops

The Project supported DDPM to organize the seminars on earthquakes and other natural disasters in 2011 and 2012. Speakers were invited from Japanese and Thai universities.

Date	Topics	No of participants
February 2011	<ul style="list-style-type: none"><li>NATURAL DISASTER, Essentials</li><li>An Overview of Seismic Risk and Earthquake Engineering Activities in Thailand</li><li>Towards Implementation of Disaster Safer Built Environment</li></ul>	183
January 2012	<ul style="list-style-type: none"><li>Learning the Lessons from Past Disasters is the Way to Survive</li><li>The Massive Flood 2011 and Lessons Learnt</li><li>The Great East Japan Earthquake on March 11, 2011 and Lessons Learnt</li></ul>	200

(Source: The Project Office)

### 5) Provision of equipment

The Project procured such small tools and instruments as radio communication system, siren, rain gauge and flood analysis software. In 2011, sand bags equivalent to 6 Million Japanese yen were procured for the flood in Bangkok. The total amount spent on equipment was 9.66 Million Japanese yen.

#### (2) Thai Side

##### 1) Assignment of counterpart personnel

Seven officers from DDPM (Project Director, Project Manager, Secretariat and leaders of four task forces) and one officer from MOE (the leader of task force 4) are assigned as the key counterpart personnel. During project implementation, the Project Manager was changed and the post for the

leader of Taskforce 3 became vacant in the third year. The successor of the Project Manager and the new director for the taskforce 3 were familiar with the Project; therefore, these changes did not affect project activities. In total 154 officers participated in the Project as counterpart personnel (33 JCC members, 19 for taskforce 1, 20 for taskforce 2, 16 for taskforce 3, 10 for taskforce 4 and 14 for taskforce 5, 13 from RICB, 26 from Lampun province and 3 from Lampang province). The list of counterparts is shown in Annex 3.

## 2) Operation cost

DDPM and OBEC/MOE basically covered the operation cost of the Project as project activities were conducted as part of the routine work of these organizations. Japanese side partially supported some activities such as the two seminars organized by JICA. The total budget DDPM allocated for the Project was 14,350,660 Baht (7.58 Million Baht to taskforce 1, 5.10 Million Baht to taskforce 2, 1.4 Million Baht to taskforce 3, and 0.27 Million Baht to taskforce 5). After the 2011 flood in Bangkok, DDPM increased its budget for the following activities:

- Special budget to conduct CBDRM for 360 high-risk communities
- The budget to conduct of workshops for the provinces in the proximity of Chao Phraya river (10 provinces x 10 times)
- The increased budget for CBDRM for 780 communities per year from 100 communities in previous years

Since 2013, OBEC has provided 4.05 Million Baht to ESAOs that submit a good proposal to implement disaster education activities.

## 3) Others

DDPM provided office space and utilities to the expert team.

### 3.2 Achievements of Activities

See Annex 4.

### 3.3 Achievements of Outputs

The Project's achievements in accordance with the PDM are shown in the table below. The status indicates the level of achievement for expected, main outputs of the Project for each component on a scale from A to D (A: completed and/or officially approved, B: almost completed and/or being on the process of getting official approval, C: completed more than 50% (50% ≥), D: completed less than 50%)

Output 1: Disaster Prevention and Mitigation Action Plans with considerations for vulnerable people are formulated for national, provincial and local authorities (in the model provinces).

Indicator: Disaster Prevention and Mitigation Action Plans are formulated at national, provincial (model provinces) and local levels (At least 80 local authorities or 80% in Lampang and 45 local authorities or 80% in Lamphun).

Main outputs	Status	Justification	Progress and achievements
		Level of Operationalization and/or institutionalization	
Revision of NDPMP	A	<ul style="list-style-type: none"> <li>NDPMC decided to add a new chapter to NDPMP to effectively deal with large-scale disasters after lessons learned from the flood in 2011.</li> <li>The Cabinet approved of the added chapter of NDPMP in March 2013.</li> </ul>	<ul style="list-style-type: none"> <li>The NDPMP was completed and approved by the Cabinet in November 2009 prior to the commencement of the Project. After the flood in 2011, the additional plan was developed in response to the issues and problems raised during the flood. The main points of the additional plan were on more detailed warning system, simplified and consistent command structure and two-way communication system necessary to feedback from the local authorities.</li> </ul>
Development of PDPMPs	A	<ul style="list-style-type: none"> <li>The Disaster Prevention and Mitigation Act requires all the provinces to develop their respective action plans.</li> </ul>	<ul style="list-style-type: none"> <li>At the commencement of the Phase II, approximately half of seventy-six provinces had developed their respective Provincial Disaster Prevention and Mitigation Plans (PDPMPs). During the Phase II all the provincial governments drafted their respective plans and the policy bureau checked if</li> </ul>

	<ul style="list-style-type: none"> <li>All the PDPMPs were officially endorsed by DDPM after inspection done by the policy bureau of DDPM.</li> </ul>	<ul style="list-style-type: none"> <li>their plans complied with NDPMP.</li> <li>Although PDPMP must be reviewed periodically in compliance with NDPMP, it is difficult to impose the provincial governments to do so. Therefore, the Minister of Interior sent an official letter to all the provincial governors to review and monitor their provincial plans with questionnaire survey and request them to conduct SWOT analysis. The Provincial DPM committees were compelled to review their provincial plans. Some provinces actually revised their programs after monitoring.</li> </ul>																										
<p>LDPM Action Plan (In model provinces)</p>	<p>A</p> <ul style="list-style-type: none"> <li>According to Section 16 of DPM Act, PDPMP shall include substantial essence of LDPM action plans in its jurisdiction.</li> <li>Article 3.1.2 of the Chapter 3 (Strategic framework, Programme and Measures) of NDPMP stipulates eight steps for preparedness procedures, and the formulation of DPMP at all levels from the national to community level is indicated as part of necessary procedures for preparedness. No numerical target is set as a key performance index for the number of LDPM action plans to be developed during 2010 – 2014.</li> <li>Almost all the action plans are waiting for the confirmation and approval of the provincial offices. On approval, the LAOs will develop response manuals to make LDPM action plan operational (The preparation of the response plan is not a part of the LDPM action plan.)</li> </ul>	<ul style="list-style-type: none"> <li>Good progress has been made on LDPM action planning. With support of the expert team, the policy bureau introduced tabletop exercise, standard templates for LDPM action planning in the model provinces. The LDPM action plans in the model provinces were developed in a participatory manner through workshops (one workshop for training and four workshops for actual planning), participated in by the committee members (major, section chiefs of LAO and other relevant organizations, heads of villages and head of sub-district). As a result, Almost all the LAOs in the model provinces have drafted their respective action plans, awaiting checking by DDPM provincial office. The action plan includes the identification of target disaster(s), pre-disaster actions, during-disaster actions and establishment of Emergency Operation Center, post-disaster actions and communication system.</li> <li>The Policy Bureau also distributed the template and examples of LDPM action plans to all the provincial offices.</li> </ul>																										
<p style="text-align: center;">Progress of LDPM action plans in the model provinces</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">Province</th> <th rowspan="2">No of LAO</th> <th colspan="5">Progress</th> </tr> <tr> <th>1</th> <th>2</th> <th>3</th> <th>4</th> <th>5</th> </tr> </thead> <tbody> <tr> <td>Lampang</td> <td>103</td> <td>103 (100%)</td> <td>103 (100%)</td> <td>103 (100%)</td> <td>62 (60.2%)</td> <td>0</td> </tr> <tr> <td>Lamphun</td> <td>58</td> <td>56 (96.6%)</td> <td>56 (96.6%)</td> <td>56 (96.6%)</td> <td>8 (13.8%)</td> <td>8 (13.8%)</td> </tr> </tbody> </table> <p style="text-align: right;">(Source: Policy Bureau, DDPM)</p> <p style="text-align: center;"><b>Process of LDPM action planning</b> 1: DPM Provincial Office explained LAO to formulate DPM Action Plan.</p>			Province	No of LAO	Progress					1	2	3	4	5	Lampang	103	103 (100%)	103 (100%)	103 (100%)	62 (60.2%)	0	Lamphun	58	56 (96.6%)	56 (96.6%)	56 (96.6%)	8 (13.8%)	8 (13.8%)
Province	No of LAO	Progress																										
		1	2	3	4	5																						
Lampang	103	103 (100%)	103 (100%)	103 (100%)	62 (60.2%)	0																						
Lamphun	58	56 (96.6%)	56 (96.6%)	56 (96.6%)	8 (13.8%)	8 (13.8%)																						

		<p>2: LAO established a committee for formulation of DPM Action Plan.</p> <p>3: LAO committee formulated Draft DPM Action Plan.</p> <p>4: DPM Provincial Office checked the draft DPM Action Plan.</p> <p>5: LAO started to prepare the Response Manuals.</p> <ul style="list-style-type: none"> <li>• Effects of having an action plan explained by the interviewed LAOs include the following: <ul style="list-style-type: none"> <li>• Clear communication channel established for response</li> <li>• Clarification of specified roles to be played by different sections</li> <li>• More investment in awareness building, TTX and CBDRM and strengthened network with other agencies</li> </ul> </li> <li>• One Staff member in the policy bureau was trained in the use of GIS database. The bureau is able to update the database based on the records of action plans submitted by the provincial offices at the end of each fiscal year.</li> </ul>	
Development of GIS database	A	<ul style="list-style-type: none"> <li>• GIS database can be an effective tool to check the progress of action planning.</li> </ul>	

**Output 2: Capacity of DDPM staff as facilitators on implementation of Community Based Disaster Risk Management (CBDRM) is enhanced.**

**Indicators:**

- CBDRM manuals and facilitator's guide developed by the JICA Project Phase I (for facilitators and for communities) are improved and are utilized in the model communities.
- Disaster training and educational materials (for facilitators and for communities) are improved and are utilized in the model communities.
- CBDRM action plan for implementation is developed by DDPM.

Main outputs	Status	Justification Level of Operationalization and/or institutionalization	Effects and (prospective) impacts
Utilization of improved CBDRM facilitator's guide	A	<ul style="list-style-type: none"> <li>• The previous facilitator's guide was designed for a four-day workshop, which was too long and not so practical. Also the guide needed to be user-friendlier.</li> <li>• The facilitator's guide will be finalized in January 2014 in consultation with the experts and approved by the Director General in February and presented at the orientation meeting inviting facilitators in February 2014.</li> <li>• 250 copies will be distributed to all the provincial offices and the head office and the</li> </ul>	<ul style="list-style-type: none"> <li>• The main points of improvements were the reduction of the training days from 5 to 2 days, to make the facilitator's guide more flexible and applicable to different types of disasters. The main contributions made by the experts were on how to deal with different types of disasters, and introducing examples and how to make training attractive by using visual materials such as DVD and photos.</li> </ul>



Utilization of improved training and educational materials	B	<p>guidelines will be uploaded to the DDPM website, together with other materials such as the Guidelines for communities (developed by DDPM) and some samples and examples.</p> <ul style="list-style-type: none"> <li>Materials directly used for the facilitation of workshop would help the facilitators to smoothly conduct workshop.</li> <li>The materials will be distributed in February 2014 to all trained facilitators.</li> </ul>	<ul style="list-style-type: none"> <li>The taskforce is working on the production of a CD-ROM to show how to conduct CBDRM and PPT materials that can be used by facilitators in the field. The finalized CD-ROM and PPT materials will be presented at the orientation meeting in February 2014. Also, flip charts are being developed with assistance of the experts for the remote communities that do not have access to electricity.</li> </ul>
Increased number of CBDRM facilitators	A	<ul style="list-style-type: none"> <li>Before the Phase I, about 100 facilitators had been trained through the Phase I and also with support of GTZ, Red Cross and ADPC provided prior to the phase I. Yet, the number of facilitators was too small to scale up CBDRM. DDPM took the initiative to provide training while the experts provided advice.</li> <li>The number of facilitators has been drastically increased, but specific measures have not yet been taken to secure the appropriate number of facilitators for all the provincial offices.</li> </ul>	<ul style="list-style-type: none"> <li>During the Phase II, training was organized 4 times at different regions and trained 228 facilitators (52, 46, 50 and 80 each). About 70% of them are from provincial offices of DDPM and 30% are external facilitators mainly from regional centers of DDPM and some are retired teachers, community leaders and former DDPM staff.</li> </ul>
Development of model villages	B	<ul style="list-style-type: none"> <li>The model villages were selected to develop the facilitators' guide and other materials as well as training courses, and to verify the effectiveness of these outputs.</li> </ul>	<ul style="list-style-type: none"> <li>CBDRM was conducted for the target villages, involving not only the villagers but also the provincial office of DDPM, the LAOs and the schools. Rainfall gauge and water level gauge and sirens were also provided to set a warning system. Baseline and longitudinal surveys were conducted to measure the effects of CBDRM and to draw lessons. One lesson is the importance of follow-up because the awareness of villagers was reduced gradually as time passed in the villages where no disaster occurred.</li> <li>The good feature of the model villages is that they conduct activities together with the school in the village (e.g., conducting drills jointly, the participation of the school in CBDRM, clearly specified roles of</li> </ul>

			<p>the school in the warning system and evacuation plan).</p> <ul style="list-style-type: none"> <li>In the action plan, requests made to the various organizations to take DRM measures and seek synergy in the municipality's 3-year plan. For example, drainage requested when highway is constructed.</li> <li>These villages are more advanced but further efforts are needed to establish these villages as models applicable to roll out to other villages.</li> <li>The positive effects of CBDRM recognized by the model villages are as follows: <ul style="list-style-type: none"> <li>Formalized communication system to respond to emergency</li> <li>Identification of high-risk areas in the village (for example, villagers avoid building houses in disaster prone areas.)</li> <li>Villagers believe and follow the instructions given by the committee members. (Before CBDRM, they did not take the committee seriously.)</li> <li>Drills give villagers a fresh image of actual disasters.</li> </ul> </li> </ul>
Development of GIS database	A	<ul style="list-style-type: none"> <li>GIS database can be an effective tool to set strategies for scale-up of CBDRM.</li> </ul>	<ul style="list-style-type: none"> <li>Two staff members in the promotion bureau were trained in the use of GIS database. The bureau is able to update the database based on the records of CBDRM submitted by the provincial offices at the end of each fiscal year.</li> </ul>

**Output 3: Training curriculum at DPMA is improved.**

**Indicator:** At least one curriculum on disaster management on natural disaster (flood, flash flood and mud flow) for DDPM staff is improved.

Main outputs	Status	Justification	Effects and (prospective) impacts
	Level of institutionalization	Operationalization and/or institutionalization	
Training course on flood, flush-flood and landslide	A	<ul style="list-style-type: none"> <li>DDPM did not have a training course focused on flood, which is the major disaster in Thailand.</li> </ul>	<ul style="list-style-type: none"> <li>The Project developed a practical technical training course on flood, flush flood and landslide (in total 27.5 hours), which includes lectures and table-top exercise. The contents were reviewed by TMD, RID,</li> </ul>

<ul style="list-style-type: none"> <li>• The training course is recognized as one of the important, regular training courses of DPMA.</li> <li>• After the Project, DPMA plans to conduct at least one course per year. Yet, this would depend on the budget available for training. The budget allocated to DPMA is about 9 Million Baht - decreased from more than 10 Million in previous years. This is because the budget for honorarium was cut by the instructions of Budget Bureau. It is difficult to accommodate all training needs from different bureaus.</li> <li>• Training is not yet linked with career path of DDPM staff because DDPM does not have a career plan or accreditation system. Training records are added to the personnel database by personnel section of DDPM.</li> </ul>	<ul style="list-style-type: none"> <li>• DMR, MOE as well as DDPM.</li> <li>• 21 officials in DPMA are able to act as instructors on disaster management while RID, DMR and TMD send lecturers to teach technical subjects. The syllabus and teaching material were developed and utilized for six batches of the training course conducted during the project duration. As a result, 14% (279/2159) of DDPM officials received training.</li> <li>• DPMA has an evaluation system. DPMA conducts pre/post tests and distributes questionnaire to the participants after training. The Project introduced follow-up six months after training to hear feedback from the participants as well as their superintendents. According to the evaluations, the newly developed training course highly rated for all the items such as usefulness of TTX in their planning activities. DPMA is compiling feedback to further improve the training course.</li> </ul>
---	---

**Output 4: Based on the Natural disaster preparedness educational curriculum, schools have improved preparedness for disaster.**

**Indicators:**

- At least three schools in the model provinces implement disaster education on natural disasters as model schools supported by MOE headquarters and the first model schools from Phase I.
- 100 teachers from natural disaster prone areas are trained on disaster education.

Main outputs	Status	Justification Level of Operationalization and/or institutionalization	Effects and (prospective) impacts
The guideline for disaster education and sub-reading material with DVD	A	<ul style="list-style-type: none"> <li>• The guideline was an effective tool to mainstream disaster education at schools and ESAOs.</li> <li>• The Secretary General endorsed the guideline and 32,000 copies of the guideline and the sub-reading material with DVD were distributed to all the ESAOs and the schools under the jurisdiction of OBEC.</li> </ul>	<ul style="list-style-type: none"> <li>• In the Phase II, the taskforce produced the guideline and sub-reading material with DVD in 2012. The target is from primary to high school. The contents of the guideline were presented at the seminar to invite all the ESAOs in February 2012. OBEC plans to revise the guideline, incorporating comments made by ESAOs at the seminar (mainly making the guideline more easy to read for readers). The guideline and the guide will be uploaded to the website of MOE soon.</li> </ul>

Integration of disaster education in the existing curriculum	A	<ul style="list-style-type: none"> <li>This is vitally important to ensure that disaster education would be conducted as part of regular school activities.</li> <li>OBEC sends an official letter to all the ESAOs to ensure that all the schools should integrate disaster education in their curriculum, conduct a drill at least once a year and develop a school's DPM plan.</li> </ul>	<ul style="list-style-type: none"> <li>Two model schools in Lamphun and Lamphag have incorporated disaster education in their curriculums. Integration is an on-going process for the other school in Nakhon Si Thammarat. It took 3 – 6 months for the teachers to complete this work.</li> <li>OBEC also encouraged the schools to incorporate disaster education into the relevant curriculums (e.g., adding to social science, science and health education) by sending the official letter to respective ESAOs and give instructions. The taskforce conducted monitoring on the progress in selected areas, mostly the ESAOs and schools that received budget for disaster education.</li> </ul>
Establishment of model schools	A	<ul style="list-style-type: none"> <li>OBEC has set a strategy to select active schools to be model schools to roll out to neighboring schools.</li> <li>One of the criteria to select a model school is that the community is also actively engaged in CBDRM, so that the school can be strongly supported by the community.</li> <li>Every year OBEC allocates 100,000 Baht to each of the selected ESAO to establish and strengthen model schools.</li> <li>Basically once a year OBEC organizes a national seminar where teachers from model schools present their activities and the proceedings are distributed to ESAOs and schools.</li> </ul>	<ul style="list-style-type: none"> <li>The taskforce selected four schools as the model. For the model provinces, various DRM and educational activities such as evaluation planning, hazard mapping, table-top exercise were conducted. More than 1000 people including teachers and ESAO staff participated in these activities – good opportunities to learn from instructors from DDPM, LAOs (e.g., fire fighters) as well as the experts.</li> <li>All the three model schools have been already established well as a model school in that: <ul style="list-style-type: none"> <li>✓ These schools are conducting disaster education as part of their regular program.</li> <li>✓ These schools have established and extensively use a learning center for pupils to study about disasters.</li> <li>✓ These schools have developed their respective plans.</li> <li>✓ These schools conduct drill once or twice a year.</li> <li>✓ These schools are closely working with the community for CBDRM as well as disaster education.</li> <li>✓ These schools have increasingly received visitors from other schools.</li> </ul> </li> </ul>
Utilization of GIS	B	<ul style="list-style-type: none"> <li>This assistance was intended for OBEC to use GIS database to set strategies and develop plans for the expansion of disaster education.</li> </ul>	<ul style="list-style-type: none"> <li>4 staff members from MOE (two from the bureau) were trained in the use of database on GIS. But some of them are not yet familiar with GIS because they do not use the database not so often.</li> <li>All the reports on the records of disaster education activities are</li> </ul>

				submitted by the selected ESAOs that received a budget for disaster education to OBEC at the beginning of the year. The issue is the availability of staff for updating the database and using it for policy making and planning.
--	--	--	--	---

**Output 5: Knowledge and technical capacity of DDPM on hazard mapping, early warning system and design of structural measures are enhanced.**

**Indicators:**

- Manuals on rainfall / flood analysis and hazard mapping are developed.
- Manuals on early warning system and structural measures for flood mitigation and prevention are developed.
- Training targeting on all of 18 DPM regional centers using the above manuals.

Main outputs	Status	Justification		Effects and (prospective) impacts
		Level of Operationalization	and/or institutionalization	
Development of Manuals on rainfall/flood analysis and hazard mapping	B	<ul style="list-style-type: none"> <li>• DDPM should be able to provide GIS-supported hazard maps to provinces, LAOs and communities in order for them to use such maps for DPM planning.</li> <li>• Four staff members of Disaster Prevention Criteria Bureau are able to produce hazard maps, using the manual.</li> </ul>		<ul style="list-style-type: none"> <li>• Following training on hydrology and hydraulics, the taskforce conducted runoff flood simulation and risk zonation map on community scale once or twice a week. As a result, the taskforce members were able to produce a flood zonation map for a model village. Based on these experiences, the manual on rainfall/flood analysis and hazard mapping was produced.</li> </ul>
Development of the manual on early warning system and structural measures	B	<ul style="list-style-type: none"> <li>• DDPM Regional Centers should be able to provide technical information for early warning system and also give advice to LAOs where and what structure should be constructed.</li> <li>•</li> </ul>		<ul style="list-style-type: none"> <li>• The taskforce installed several auto-recordable water level gauges and rainfall gauges at a model site. Based on recorded flood events, rainfall criteria for preparedness and evacuation were set and shared with the community to establish an early warning system.</li> <li>• Based on site survey on actual structures in the model sites, the taskforce prepared the manual on flood control structural measures. The manual consists of river planning and flood control structures.</li> </ul>
Training of staff at 18 target regional centers	A	<ul style="list-style-type: none"> <li>• The developed manuals should be utilized by the main users – technical staff of the regional centers.</li> <li>• In 2014, the Bureau plans to organize the same training and train the remaining technical staff at all the</li> </ul>		<ul style="list-style-type: none"> <li>• Training for staff of regional center No. 10, which is in charge of four provinces in the North.</li> <li>• 19 staff members from 18 regional centers were trained on basic hydrology, channel flow analysis, geometry data processing and basic flood analysis based on the manuals produced by the Project.</li> <li>• One batch of training is also expected in 2014 although it depends on the</li> </ul>

	regional centers so that all the technical staff would be capacitated.	budget availability for the fiscal year 2014.
--	--	---

**Project purpose:** Capacity of DDPM is enhanced to scale up Disaster Prevention and Mitigation Action Plans, Community Based Disaster Risk Management: CBDRM and disaster education, collaborating with concerned agencies, provincial and local levels.

**Indicators:**

- Plans for up-scaling are included in the National Disaster Prevention and Mitigation Action Plan.
- Plans for up-scaling within the provinces are included in the Provincial Disaster Prevention and Mitigation Action Plans of the model provinces.

Main outputs	Effects and (prospective) impacts
Strategies and plans for implementation of national level DPM activities and for the model provinces	<ul style="list-style-type: none"> <li>• DDPM has taken the following measures to scale up action planning to LAOs: (1) DDPM developed TTX manual based on practices in the model provinces. DDPM periodically organizes regional workshops to train the officials of provincial offices so that they can support LAOs to develop their respective action plans. (2) DDPM distributes standard templates for LDPM action planning and examples of LDPM action plans to all the provincial offices. (3) DDPM also promotes LDPM action planning nation-wide to allocate a budget (1.57 Million Baht for 2013) to provide technical support (e.g., dispatch of instructors) to the provincial offices so that they could lead planning activities while LAOs shoulder the cost of seminars, meetings and other operation costs. (4) To support these activities, an official letter was issued by the permanent secretary to DLA to encourage LAOs to develop their own LDPM action plans and also allocate 2% of the their annual budget for DPM activities. (5) DDPM has set up a helpdesk to respond to inquires from DDPM provincial offices. In the next NDPMP, LAOs will be requested to take initiative in undertaking DPM planning and activities. For the model provinces, all the LAOs (103/103) in Lamphun and 97% (56/58) in Lamphang have drafted their LDPM action plans.</li> <li>• The strategy to scale up CBDRM is as follows: (1) one measure taken by DDPM is to allocate a budget to conduct CBDRM for 780 communities every year. (2) DDPM also has implemented a project for sustainable development of CBDRM. The project aims at developing model villages equipped with a disaster preparedness center. (3) In order to drastically scale up CBDRM, the LAOs need to take initiative to plan and finance CBDRM. The development of a LDPM action plan would lead to the increase of CBDRM because the LDPM action plan needs to be developed based on the needs of communities.</li> <li>• OBEC has a clear strategy to scale up disaster education as follows: (1) For the mainstreaming of disaster education, OBEC issues an guideline to ESAOs to encourage all the schools under the jurisdiction of OBEC to incorporate disaster education into the existing curriculums, develop the school's DPM plan and conduct a drill at least once a year. (2) OBEC selects model schools that meet the above-mentioned requirements. (3) OBEC has decided to allocate 100,000 – 50,000 Baht to the ESAOs that submit good plans to introduce disaster education, conduct drills and hazard mapping. The same strategy is applied to the model provinces.</li> <li>• Training is conducted based on the needs of the DDPM and requests from other organizations with available budget to DPMA. A framework for career development is necessary to identify required competence and qualifications for the human resource development of DDPM staff. Also, CBDRM facilitator training, training on action planning with TTX, training on hazard mapping, early warning system and structural measures for LAO staff as well as DDPM staff needs to be instituted as part of the DPMA's regular training program.</li> </ul>

**Overall goals:** Implementation of disaster risk management activities is improved and scaled up.

**Indicators:**

- Provincial Disaster Prevention and Mitigation Plans and Action Plans are formulated in all 76 provinces and BMA, and revised (if necessary).

- All 76 provinces and BMA conduct table-top exercise (TTX) at least one LAO (Tedsabaan/Oobortor) together with the province to verify the disaster prevention and mitigation action plan at local level.
- Evacuation plans are prepared by more than 100 communities every year (other than the Project model communities) with support of DPM Regional Centers and Provincial offices.
- Disaster education is implemented by at least four schools. Each school functions as a learning center at the initiative of ESA Office in four major regions in Thailand, respectively.

Main outputs	Effects and (prospective) impacts																																										
Development of provincial DPM plans	<ul style="list-style-type: none"> <li>• At the commencement of the Phase II, approximately half of seventy-six provinces had developed their respective PDPMPs. During the Phase II all the provincial governments drafted their respective plans and the policy bureau checked if their plans complied with NDPMP.</li> </ul>																																										
Scale-up of LDPM action plans with use of TTX	<ul style="list-style-type: none"> <li>• As of January 2014, out of 7,776 LAOs, 2,755 of them developed their respective LDPM action plans in 30 provinces. The actual number is estimated much higher than 2,755 or 35.4% of all the LAOs because the data for other 47 provinces are not yet available. The official letter from MOI to DLA and LAOs instructs the action planning with TTX. The actual number of TTX used for action planning is not available as of January 2014.</li> </ul>																																										
Conduct of CBDRM nationwide by trained facilitators	<p>The numbers of CBDRM conducted during the Phase II are shown in the table below:</p> <table border="1"> <thead> <tr> <th>Year</th> <th>The number of villages conducted CBDRM</th> </tr> </thead> <tbody> <tr> <td>2009</td> <td>969</td> </tr> <tr> <td>2010</td> <td>863</td> </tr> <tr> <td>2011</td> <td>769</td> </tr> <tr> <td>2012</td> <td>1,385</td> </tr> <tr> <td>2013</td> <td>1,076</td> </tr> </tbody> </table> <p>(Source: DDPM)</p> <p>CBDRM conducted by source of funding for the last four years in the province</p> <table border="1"> <thead> <tr> <th></th> <th>DDPM</th> <th>LAOs</th> <th>Provincial Government*</th> <th>JICA</th> <th>Total</th> </tr> </thead> <tbody> <tr> <td>2013</td> <td>12</td> <td></td> <td></td> <td></td> <td>12</td> </tr> <tr> <td>2012</td> <td>6</td> <td>11</td> <td></td> <td>2</td> <td>19</td> </tr> <tr> <td>2011</td> <td>3</td> <td></td> <td>27</td> <td></td> <td>30</td> </tr> <tr> <td>2010</td> <td>9</td> <td></td> <td>3</td> <td></td> <td>12</td> </tr> </tbody> </table> <p>(Source: DDPM-Lampang Provincial Office)</p> <p>Lampang provincial office has collected data on the records of CBDRM conducted in the province (not only by DDPM). As shown in the table, there are possibilities to get funding from LAOs and provincial Government for CBDRM.</p> <ul style="list-style-type: none"> <li>• In addition to the model schools, OBEC designated more than 100 model schools and allocated a budget for disaster education. Achievements made by model schools were presented at the annual ESAO meetings, participated in by 225 ESAOs and 4 regions in 2012 and 175 ESAOs in 2013. Some schools publicized their activities on the their websites.</li> </ul>	Year	The number of villages conducted CBDRM	2009	969	2010	863	2011	769	2012	1,385	2013	1,076		DDPM	LAOs	Provincial Government*	JICA	Total	2013	12				12	2012	6	11		2	19	2011	3		27		30	2010	9		3		12
Year	The number of villages conducted CBDRM																																										
2009	969																																										
2010	863																																										
2011	769																																										
2012	1,385																																										
2013	1,076																																										
	DDPM	LAOs	Provincial Government*	JICA	Total																																						
2013	12				12																																						
2012	6	11		2	19																																						
2011	3		27		30																																						
2010	9		3		12																																						
Disaster education																																											

### 3.4 Implementation Process

- As shown in the table below, five taskforces were formed in accordance with the existing organizational structure of DDPM and mandates of responsible bureaus. For the taskforce 4, OBEC is the core counterpart, yet other offices participated in project activities when other than public primary to middle schools were concerned. The taskforces 1, 2, 3 and 4 started their activities in October 2010. The taskforce 5 was formed to undertake a new component added in October 2012. RICB played a very important role to coordinate and facilitate project activities.

Composition of taskforces

Taskforce	Participating bureaus and offices
1	DDPM (Disaster Prevention and Mitigation Policy Bureau, Disaster Prevention Promotion Bureau, Disaster Prevention and Mitigation Academy, Disaster Prevention Criteria Bureau, Plan and Budget Section, and Research and International Cooperation Bureau), RID, NDWC, MOE, DMR, DLA, TMD, DWR, and JICA expert
2	DDPM (Disaster Prevention and Promotion Bureau, Disaster Prevention and Mitigation Policy Bureau, Disaster Prevention and Mitigation Academy, Research and International Cooperation Bureau, DPM Lamphun and Lamphun Provincial Offices), OBEC, Office of Non-formal and Informal Education, DMR, DLA, and JICA experts
3	DDPM (Disaster Prevention and Mitigation Academy, Disaster Prevention Promotion Bureau, and Research and International Cooperation Bureau), OBEC, Office of Non-formal and Informal Education, DMR, RID, TMD, Office of Woman's affairs and Family Development, and JICA expert
4	MOE (Office of Permanent Secretary, Office of Vocational Education Commission, Bureau of Policy and Planning, Office of Basic Education Commission, Office of Private Education Commission, and Office of the Non-Formal and Informal Education), and JICA expert
5	DDPM (Disaster Prevention Criteria Bureau, Research and International Cooperation Bureau, Disaster Prevention and Mitigation Academy, Disaster Prevention and Mitigation Policy Bureau, and Disaster Prevention and Promotion Bureau) DMR, RID, TMD, DWR, Land Development Department, Electricity Generating Authority of Thailand, and JICA Experts

- The Project selected four villages in Lamphun and Lamphun as its target villages. Two schools were also targeted to be model schools. In October 2011, Nakhon Si Thammarat province was added as a model province by Thai side to establish a good model in Southern Thailand with full initiative of Thai side while Japanese side provided minimal technical assistance.

Target villages of the Project

Province	Name of Villages	LAO	Name of Model School
Lampang	Ban Chai Chomphu and Ban Mae Salaem	Wiangmok	
	Ban Chawfa and Ban Jokfa	Thung Phueng	
Lamphun	Ban Muong Sam Pee	Li	Ban Muong Sam Pee School
	Ban Koornong	Kor	
Nakhon Si Thammarat	Ban Tham Talod	Num Tok	Ban Tham Talod School

- The massive flood in 2011 affected the Project in various ways. The work schedule was affected for a few months and some project activities such as seminars were rescheduled. After the flood, the Thai Government increased budgetary support for CBDRM and LDPM action planning. Also,



the awareness of LAOs and communities were raised, particularly the residents in high-risk villages (as confirmed by interviews conducted by the terminal evaluation team).

- JCC meeting was organized four times. As shown in the table below. No major change was made to the design, scope or framework of the Project. PDM was revised three times. The revisions were made mainly to specify indicators and the addition of the new component undertaken by the taskforce 5.

JCC meetings and main agendas

JCC	Date	Agendas discussed
1st JCC	June 2010	<ul style="list-style-type: none"> <li>• Basic condition of the Project implementation</li> <li>• Acceptance of the Inception Report</li> </ul>
2nd JCC	September 2011	<ul style="list-style-type: none"> <li>• Indicators in the PDM were discussed and agreed upon as PDM ver.2</li> <li>• Necessity of Taskforce flood risk management was discussed.</li> </ul>
3rd JCC	October 2011	<ul style="list-style-type: none"> <li>• Establishment of Taskforce flood risk management was agreed upon as PDM ver.3</li> </ul>
4th JCC	February 2012	<ul style="list-style-type: none"> <li>• Results of the Intermediate Review of the Project were agreed upon as PDM ver.4</li> </ul>
5 <sup>th</sup> JCC	February 2013	<ul style="list-style-type: none"> <li>• Report on progress of the project activities of each task force</li> <li>• Explanation of Progress Report 2</li> </ul>

(Source: Japanese expert team)

## 4 Evaluation by five criteria

### 4.1 Relevance

The relevance of the Project is judged to be “very high”.

- The importance of disaster prevention and mitigation has been well recognized by the massive flood in 2011. A new chapter was added to the Disaster Prevention and Mitigation Act and the Disaster Prevention and Mitigation Plan (2009 – 2014) respectively, and then the Cabinet approved of the additions in March 2013. The main changes made by additions are to demand agencies to integrate plans and coordinate operations, as well as to empower the National Committee of Disaster Prevention and Mitigation on Water and Flood Management to function as the centre to set policies, make commands to solve problems quickly in a consistent and unified manner. As the secretariat to national committee, DDPM is mandated to play the lead role in planning and promoting DPM activities. Therefore, it is appropriate to support DDPM to enhance its capacity with emphasis on planning and promoting DPM activities.
- Disaster education is included in the five-year Educational Development Plan where all the schools under MOE are encouraged to include disaster education in their curriculums. Therefore, it is appropriate to support MOE in the Project.
- The improvement of support functions of DDPM to LAOs is very appropriate. All LAOs are required to formulate their respective action plans under the DPM Act and NDPMP. Also, the LAOs are the main player to implement CBDRM.
- The latest Japan’s assistance policy to Thailand (December 2012) has three pillars; sustainable development of the economy and tackling issues of maturing society, tackling issues common to ASEAN countries and the promotion of cooperation towards countries outside ASEAN. The first pillar includes such agendas as the environment and climate change and flood control; therefore, the Project’s objective is very much relevant to the first pillar of the Japan’s ODA policy.

#### 4.2 Effectiveness

The effectiveness of the Project is judged to be “There are some points to be considered”.

- As shown in the table below, the objectives of the Project can be understood as follows:
  - (1) The capacity development of DDPM staff to support LAOs in DPM action planning, CBDRM and disaster education
  - (2) The institutional development to scale up DPM action planning, CBDRM and disaster education

	Phase I (2006 – 2008)	Phase II (2010 – 2014)
Objectives	<ul style="list-style-type: none"> <li>• Preparations for the development of DPM national plan</li> <li>• Development of guides, manuals and training materials, and white paper</li> <li>• Demonstration of DPM activities at the community level (CBDRM, drills and disaster education) to mainstream DPM activities</li> </ul>	<ul style="list-style-type: none"> <li>• Capacity development of DDPM staff to support LAOs and communities and schools (so that DDPM staff can facilitate action planning of LAOs, support LAOs to develop hazard map and early warning system, and act as facilitator for CBDRM).</li> <li>• Preparations of strategies and/or systems for the scale-up of DPM activities (model schools, CBDRM, LDPM action plans)</li> </ul>
Main targets	The national and the community levels	From the national to the community level with focus on the strengthening of support functions of DDPM to LAOs

- For the first objective, good achievements were made in the capacity development of DDPM staff to support LAOs, communities and schools to conduct DPM activities, yet further efforts are needed to institute all the capacity development activities conducted by the Project as part of the training program and capacity development plan of DPMA.
- For the second objective, Clear strategies have been set for LDPM action planning and disaster education for scale-up; however, strategies or systems to scale up CBDRM and technical support on hazard map, early warning system and structural measures still need to be prepared mainly through institutional development efforts.

#### 4.3 Efficiency

The prospect of efficiency of the Project is judged to be “high”.

- Project progress is made as mostly scheduled as shown in Annex 5. Input from Japanese side was mainly on technical services while the bulk of the operation cost (e.g., expenses for the conduct of training and seminars/workshops) was shouldered by Thai side.
- The following sums up the levels of project progress for each component.
  - DDPM’s provincial offices in the model provinces are able to guide LAOs to develop LDPM action plans with the template and TTX in a participatory manner. Several measures taken to expedite the development of action plans appear to be effective (so far 2,755 LAOs have developed their respective action plans.).
  - More than 200 CBDRM facilitators were trained and facilitator’s guide and training materials were produced. DDPM has made its own organizational efforts to scale up

CBDRM. Yet, DDPM needs to seek to collaborate with other agencies such as DLA, PLA and the National Municipal League of Thailand and the Sub-district Administration Organization Association to mainstream and scale up CBDRM on a much larger scale.

- Model schools are well established in the target provinces for scale-up. OBEC has set a strategy to roll out the model schools to other schools nation-wide.
- One technical training course on flood, flush-flood and landslide has been conducted, participated in by 14% (279/2159) of DDPM officials.
- Technical capacity has been improved to develop hazard map, provide necessary data for early warning system and advise on structure measures. Technical support of DDPM on hazard map, early warning system and structural measures has not been made available to LAOs.
- The most significant external factor was the flood in 2011. After the flood, the roles of the National Committee of Disaster Prevention and Mitigation on water and flood management was strengthened. On the operational level, the budget for CBDRM was increased although the overall budget allocation to DDPM was decreased, and the awareness of the communities was raised as residents visually understood the impacts of the flood (as confirmed by interviews to the model villages).
- Communication and cooperation between DDPM and MOE were very good. Other agencies such as RID, TMD and DNR supported the Project on the technical aspects (e.g., acted as trainers and experts on hydrology, geology and meteorology, etc.). Various activities such as training and seminars were also jointly organized among taskforces. Collaboration between DDPM and DLA is underway to set standards on DPM activities of LAOs, yet communication with external organizations such as DLA was not so much pursued by the Project on such issues as monitoring on implementation of action plans.
- The Project provided training in Japan to quite a large number of counterparts. Generally, training in Japan gave the participants a good learning opportunity. According to the interviews to the participants, many of them got good ideas about how they can apply good practices to CBDRM and disaster education in Thailand. The training was effective for the participants who would act as facilitators or lecturers because they were able to share their experiences after they returned from Japan. Quite impressive for many participants was their visits to disaster preparedness leaders and volunteers and the important roles played by the municipalities in Japan.

#### **4.4 Impact**

The impact of the Project is judged to be “Very high”.

- As of January 2014, out of 7,776 LAOs in 30 provinces, 2,755 of them developed their respective LDPM action plans, utilizing the template introduced by the Project (the data for the remaining 47 provinces are not yet available at the time of evaluation.). It is assumed that TTX was also conducted in the course of action planning. As these numbers indicate, the impact of the Project is quite significant.
- In Thailand, 26,400 communities are identified to be high-risk communities. So far, 4,100 of them have conducted CBDRM. Therefore, 22,300 communities need to be targeted for CBDRM. Since the flood in 2011, the budget for CBDRM has been increased to the extent that DDPM can conduct the improved CBDRM by the Project for approximately 780 communities per year. Conducting CBDRM for 780 communities every year can be accepted as a good impact of the Project, but it is not sufficient, given the number of high-risk communities (It would take 30 years to conduct CBDRM for all the high-risk communities.).

- For disaster education, based on the experiences gained from the model schools, OBEC took imitative to designate more than 100 model schools and allocated a budget to 58 ESAOs to expand the model school program. It is expected that model schools would be further expanded every year.

#### 4.5 Sustainability

The prospect of sustainability is judged to be “There are some points to be considered”.

- Risk reduction and risk assessment, emergency response and rehabilitation will be the pillars of the next NDPMP with new focus on risk assessment. Other new points include private and public cooperation and promotion of CBDRM to local communities under the concept of self-reliant communities. The policy will help DDPM promote and scale up such DPM activities as DPM action planning, CBDRM and disaster education.
- The outlook of sustainability of the Project’s outputs is as follows:
  - DDPM allocates a budget (1.57 Million Baht for 2013) to the provincial offices to support LDPM action planning. MOI sent an official letter to all the LAOs via DLA to develop their respective action plans, using TTX. The TTX manual and the template of action plan are available for download on the DDPM website. Therefore, support for action planning would likely continue at the same pace after the project duration. The risk factor is that DDPM has institutional constraints to monitor the implementation of and the effectiveness of the developed action plans. DDPM plans to include a budget under the “Miscellaneous budget account so that DDPM would be able to allocate some portion of the budget for monitoring.
  - As shown earlier, the budget for CBDRM has been increased and the sufficient number of facilitators has been trained to cover 780 communities per year. Therefore, the activity level can be sustained at the same pace after the project duration. Yet, as an earlier experience of DDPM suggests that facilitators are difficult to retain due to retirement, job transfer, losing interest or confidence in facilitation, etc. Therefore, it is important to train facilitators on a regular basis and give them good opportunities to act as the CBDRM facilitator in a sustainable manner.
  - The sustainability of training is not so high as DMPA suffers budget cut for the expenses for trainers. A strategy needs to be developed to institute training courses supported by the Project.
  - The budget is allocated to the selected ESAOs that have submitted a good plan to develop model schools. In 2013, 56 out of 225 ESAOs receive budget allocation. The total amount allocated was around 4.05 Million Baht in 2013. OBEC needs to present good results to MOE to implement this program in a sustainable manner. Another concern is that OBEC has not established a unit specialized in disaster education. Some staff members are appointed as persons in charge. Organizational strengthening is necessary to entrench disaster education in OBEC/MOE.
  - At present, DDPM has not started the technical services to the Provincial Governments/LAOs to support the development of hazard map or early warning system. The sustainability of the technical capacity of the Disaster Prevention Criteria Bureau will depend on their roles to support regional centers and provincial offices (without such roles or mandates, it would be difficult to maintain technical knowledge.).
  - In order to sustain the current level of activities, the taskforces need to be maintained. It is not clear if institutional arrangements are necessary to keep the current framework for each output.

## 5 Conclusions

The Project's relevance is very high as DDPM is expected to guide and lead DPM activities and targeting LAOs is also valid as they are the key players to implement DPM activities. The Project's effectiveness has some points that need to be considered. The Project has effectively helped increase the capacity of DDPM; however, strategies and/or systems to scale up DPM activities have not yet been elaborated. The project's efficiency is high. Inputs were provided and activities conducted mostly as scheduled. Thai side took initiative to invest in the Project and scale up model sites. The prospect of impact is also very high for action planning of LAOs and disaster education. Strong collaboration is necessary to further scale up CBDRM. The policy and the financial sustainability of the project's outputs are positive to maintain the current activity level. Yet, efforts are necessary to strengthen cooperation with other agencies and LAOs to expand DPM activities in a sustainable manner.

## 6 Recommendations

Based on the results of evaluation, the joint terminal evaluation team makes the following recommendations:

Recommendations to DDPM management:

### Cooperation with other agencies

- Seeking inter-organizational cooperation is vitally important to scale up the outputs of the Project. Therefore, Thai side should take such measures as follows:
  - To make efforts to make an agreement with DLA, which would include an instruction to the provincial offices of DDPM and DLA to jointly monitor and conduct follow-up activities, as well as to the LAOs to ensure a certain percentage of their budget for DPM activities and develop their DPM action plans as a priority task. The agreement should also mention other areas of cooperation. For example, DDPM would be able to supply DLA academy with good practices (e.g., video clip on warning system, drills and disaster education) to encourage executive members to secure a budget for DPM.
  - To approach the National Municipal League of Thailand and the Sub-district Administration Organization Association and discuss ways to promote results of model villages and schools (e.g., action planning with TTX, CBDRM and school education)

### Cooperation among taskforces

- The current framework of taskforce is important to sustain the outputs of the Project. Therefore, DDPM and the expert team should discuss and decide the suitable formation of taskforces before the end of the Project duration. Also, DDPM should organize inter-taskforce meeting periodically to have synergy effects.

### Continuous monitoring

- DDPM and JICA Thailand Office should jointly monitor the recommendations made in the report periodically after the termination of the project duration.

### Final seminar

- The Project is going to hold its final seminar. The terminal evaluation team recommends that all the important relevant organizations should be invited to discuss how to respond to the

recommendations made in the evaluation report.

Recommendations to taskforces:

To Taskforce 1:

Utilization of TTX

- DDPM should make sure that LAOs utilize TTX in their action planning.

Monitoring of LDPM action planning

- In order to facilitate LDPM action planning nation-wide, DDPM should strengthen the monitoring of progress of action planning.

To Taskforce 2:

Distribution of guides and other materials

- All the materials produced by the Project should be distributed to all the provincial offices of DDPM and LAOs.

Development of model villages

- Materials to promote the model villages should be produced for other villages. The provincial offices should also monitor and support the model villages in cooperation with the LAOs.

To Taskforce 3:

Necessity of a human resource development plan of DDPM

- A strategic plan for the national human resource development on DPM is necessary to institute the training course supported by the Project in a sustainable manner. DDPM should set a roadmap for human resource development on DPM (not only for DPM staff but also for all relevant government staff responsible for DPM).

Integration of the Project's capacity development activities into the regular training courses

- The Project assisted capacity development of CBDRM facilitators, technical staff for hazard mapping and data analysis for early warning system and provincial staff to facilitate LAOs action plans with TTX. DDPM should be developed and customized if necessary to be part of regular training courses of DPMA.

To Taskforce 4:

Management of GIS database

- OBEC needs one or two more staff members who can operate and update GIS database. OBEC should designate one or two officials as GIS operators and receive technical support from the DDPM officials who were trained by the Project.

The continuation of the model school program and its national annual seminar

- The OBEC's support for the scale-up of disaster education is quite effective. The evaluation team recommends that OBEC should continue the current program to support ESAOs to roll out model schools and also organize the national seminar presented by model schools every year and the proceedings be available to all the schools nation-wide.

To taskforce 5:

Finalization of the manuals

- All the manuals should be finalized and distributed to all the regional centers before the end of the project duration.

Conduct regular training on hazard mapping and early warning system

- DDPM plans to conduct one batch of training course on hazard mapping and early warning system to technical staff of the regional centers in the same manner as conducted by the Project. DDPM should ensure to secure a budget for the training to be conducted after the project duration.

Development of a plan to ensure the availability of technical support by regional centers to LAOs

- DDPM should develop a plan to make sure necessary technical support can be available to LAOs to produce hazard maps, data for the development of early warning system and advice on structural measures.

## **7 Lessons learned**

- The Project did not elaborate a scenario to roll out models to other LAOs, communities and schools. Also, such a scenario was not explicitly mentioned in the PDM. This led to a weakness in the implementation of institutional development to create an enabling environment for scale-up in the course of project implementation. A clear scenario(s) should be developed and shared with the counterpart organization at the planning stage of a project.
- It would be more effective to develop “model provinces” if the provincial offices of the model provinces designed and implemented their own plans to enhance their support capacity for LAOs with technical support of the experts and counterparts at the central office.

## Annex 1

### Project Design Matrix (PDM)

**Project Title:** The Project on Capacity Development in Disaster Management (Phase-2)      **Period:** 2010 - 2014 (4 years)  
**Implementing Agency:** Department of Disaster Prevention and Mitigation: DDPM, Co-Implementing Agency: Ministry of Education: MOE  
**Target Groups:** (direct) DDPM staff at central and provincial levels, (indirect) staff of local authorities and community people in the model areas.  
**Target Provinces:** Lamphun and Lamphun Provinces, additionally CBDRM and disaster education is conducted in Nakhon Si Thammarat and Other Provinces  
 (Version 4)

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumptions
<p><b>Overall Goal (in 3-5 years after the Project ends):</b>            Implementation of disaster risk management activities is improved and scaled up.</p>	<ol style="list-style-type: none"> <li>1. Provincial Disaster Prevention and Mitigation Plans and Action Plans are formulated in all 76 provinces and BMA, and revised (if necessary).</li> <li>2. All 76 provinces and BMA conduct table-top exercise (TTX) at least one municipality/SAO (Tedsabaan/Oobortor) together with the province to verify the disaster prevention and mitigation action plan at local level.</li> <li>3. Evacuation plans are prepared by more than 100 communities every year (other than the Project model communities) with support of DPM Regional Centers and Provincial offices.</li> <li>4. Disaster education is implemented by at least four schools. Each school functions as a learning center at the initiative of ESA Office in four major regions in Thailand, respectively.</li> </ol>	<ol style="list-style-type: none"> <li>1. Provincial Disaster Prevention and Mitigation Plans and Action Plans</li> <li>2. Evaluation report of TTX</li> <li>3. Evacuation plans</li> <li>4. Record of workshop report.</li> </ol>	
<p><b>Project Purpose (by the end of the Project)</b>            Capacity of DDPM is enhanced to scale up Disaster Prevention and Mitigation Action Plans, Community Based Disaster Risk Management: CBDRM and disaster education, collaborating with concerned agencies, provincial and local levels.</p>	<ol style="list-style-type: none"> <li>1. Plans for up-scaling are included in the National Disaster Prevention and Mitigation Action Plan.</li> <li>2. Plans for up-scaling within the provinces are included in the Provincial Disaster Prevention and Mitigation Action Plans of the model provinces.</li> </ol>	Disaster Prevention and Mitigation Action Plans	Mission and responsibility of DDPM regarding disaster management is maintained by law.
<p><b>Outputs</b>            &lt;Task force – Disaster Management Planning&gt;</p>	<ol style="list-style-type: none"> <li>1. Disaster Prevention and Mitigation Action Plans are formulated at national, provincial (model provinces) and local levels (At least 80 local authorities or 80% in Lamphun and 45 local authorities or 80% in</li> </ol>	<ol style="list-style-type: none"> <li>1. Disaster Prevention and Mitigation Action Plans at national, provincial and local levels</li> </ol>	



<p>1. Disaster Prevention and Mitigation Action Plans with considerations for vulnerable people are formulated for national, provincial and local authorities (in the model provinces).</p>	<p>Lamphun).</p>		
<p>&lt;Task force - CBDRM&gt; 2. Capacity of DDPM staff as facilitators on implementation of Community Based Disaster Risk Management (CBDRM) is enhanced.</p>	<p>2-1 CBDRM manuals and facilitator's guide developed by the JICA Project Phase 1 (for facilitators and for communities) are improved and are utilized in the model communities. 2-2 Disaster training and educational materials (for facilitators and for communities) are improved and are utilized in the model communities. 2-3 CBDRM action plan for implementation is developed by DDPM.</p>	<p>2-1-1 CBDRM manuals and activity reports 2-1-2 CBDRM Knowledge of facilitators and community people (confirmed by observation) 2-2-1 Educational materials 2-2-2 CBDRM Knowledge of facilitators and community people (confirmed by observation) 2-3 CBDRM implementation action plan and activity reports</p>	
<p>&lt;Task force - Disaster Management Training &gt; 3. Training curriculum at DPMA is improved.</p>	<p>3-1 At least one curriculum on disaster management on natural disaster (flood, flash flood and mud flow) for DDPM staff is improved.</p>	<p>3-1 Curriculum</p>	
<p>&lt;Task force - Disaster Education &gt; 4. Based on the Natural disaster preparedness educational curriculum, schools have improved preparedness for disaster.</p>	<p>4-1 At least three schools in the model provinces implement disaster education on natural disasters as model schools supported by MOE headquarters and the first model schools from Phase 1. 4-2 100 teachers from natural disaster prone areas are trained on disaster education.</p>	<p>4-1 Record of model schools observation of classes 4-2 Records of training, workshops and seminars (Number of participants, content of training, date, level of achievement, etc.)</p>	
<p>&lt;Task force - Flash Flood Risk Management &gt; 5. Knowledge and technical capacity of DDPM on hazard mapping, early warning system and design of structural measures are enhanced.</p>	<p>5-1 Manuals on rainfall / flood analysis and hazard mapping are developed. 5-2 Manuals on early warning system and structural measures for flood mitigation and prevention are developed. 5-3 Training targeting on all of 18 DPM regional centers using the above manuals.</p>	<p>5-1 Manuals on rainfall / flood analysis and hazard mapping 5-2 Manuals on early warning system and structural measures. 5-3 Record of training (number of regional centers participating in the trainings)</p>	

Activities	Inputs	Preconditions
<p>0-0 DDPm, in consultation with the Japanese experts, selects model areas:</p> <ul style="list-style-type: none"> <li>➢ Model province A: Lampang Model community a1: Ban Chai Chom Phu (Moo 10) and Ban Mae Salaem (Moo 6) Model community a2: Ban Chawfa (Moo 5: Chawfa and Jokfa)</li> <li>➢ Model province B: Lamphun Model community b1: Ban Muong Sam Pee (Moo 8) Additional model community b2: Ban Koomong (Moo 2)</li> </ul> <p>Additionally, TF-CBDRM selected Ban Tham Talod (Moo 4) as a model community in Nakhon Si Thammarat Province.</p> <p>&lt;TF Disaster Management Planning&gt;</p> <p>1-1 TF Disaster Management Planning designs capacity development plan on their activities and monitoring/ evaluation.</p> <p>1-2 TF conduct training for 300 DDPm staff at central, regional and provincial levels how to formulate disaster prevention and mitigation plans and action plans, focusing on priority items.</p> <p>1-3 DDPm staff at central and provincial levels review and/or develop provincial disaster prevention and mitigation plans, focusing on priority items, in consideration of vulnerable people for disasters, for the model provinces of Lampang and Lamphun.</p> <p>1-4 DDPm staff at central and provincial levels prepares national and provincial disaster prevention and mitigation action plans, and model local authorities in model provinces prepare local disaster prevention and mitigation action plans, focusing on priority items, in which method of up-scaling, staffing and budget are identified and incorporated in the model provinces of Lampang and Lamphun.</p> <p>1-5 TF conducts table-top exercises to revise disaster prevention and mitigation plans and action plans with concerned organizations.</p> <p>1-6 TF and concerned provincial staff modify disaster prevention and mitigation plans and action plans, based on the experience of table top exercises.</p> <p>1-7 TF proposes and DDPm institutionalizes up-scaling mechanism and establishes networks of sharing knowledge for all province staff such as study tour, case study forum, seminars, and newsletters.</p> <p>&lt;TF CBDRM&gt;</p> <p>2-1 TF-CBDRM designs capacity development plan on TF-CBDRM activities and monitoring/evaluation.</p> <p>2-2 TF reviews and revises CBDRM manuals and facilitator's guide seeking comments from 76 provinces</p>	<p>&lt;Thai side&gt;</p> <p>Counterparts Project Director Project Manager Task force members Administrative staff</p> <p>Project office and facilities at DDPm Working space at MOE</p> <p>Operational costs</p> <p>&lt;Japanese Side&gt;</p> <p>Experts Disaster Management Plan Disaster Management Institution Sediment Disaster Management Flood Management Community Based Disaster Management Disaster Education Disaster Management Exercise</p> <p>Counterpart Training in Japan</p> <p>Operational costs</p>	<p>Human resources and budget necessary for the implementation of the Project are provided by the Thai side.</p>

<p>and tests them at the model communities and finalizes them for publication.</p> <p>2-3 TF conducts training for at least 80 DDPM staff at central, regional and provincial levels to facilitate CBDRM. TF conducts training for staff of local authorities in the model provinces to enhance the knowledge of CBDRM for at least 220 staffs (300 staffs in total).</p> <p>2-4 Trained DDPM provincial staff in Lampang Province facilitates CBDRM activities, including Disaster Prevention and Mitigation Action Plans for local authorities at the model communities of Ban Chai Chom Phu (Moo 10) and Ban Mae Salaem (Moo 6) in collaboration with the local model school.</p> <p>2-5 Trained DDPM provincial staff in Lamphun Province facilitates CBDRM activities, including Disaster Prevention and Mitigation Action Plans for local authorities at the model community of Ban Muong Sam Pee (Moo 8) in collaboration with the local model school.</p> <p>2-6 Trained DDPM provincial staff in Lampang Province facilitates CBDRM activities, including Disaster Prevention and Mitigation Action Plans for local authorities at the model community of Ban Chawfa (Moo 5: Chowfa and Jokfa) in collaboration with the local model school.</p> <p>2-7 TF proposes and DDPM institutionalizes up-scaling mechanism and establishes networks of sharing knowledge for all province staff such as study tour, case study forum, seminars, and newsletters.</p> <p>&lt;TF Disaster Management Training&gt;</p> <p>3-1 TF-Disaster Management Training designs a capacity development plan for its activities and monitoring/evaluation.</p> <p>3-2 TF develops guidelines for evaluation and monitoring of training.</p> <p>3-3 TF conducts needs assessment for training in collaboration with other task forces.</p> <p>3-4 TF revises standard disaster management curriculum in DPMA training courses on flood, flash flood and mud flow.</p> <p>3-5 TF, in collaboration with concerned organizations, develops training modules and materials to synchronize training curriculum on disaster management (flood, flash flood and mud flow), CBDRM.</p> <p>3-6 TF, in collaboration with concerned organizations, train master trainers for DDPM staff.</p> <p>3-7 Master trainers train 300 DDPM staff of disaster management on flood, flash flood and mud flow.</p> <p>3-8 TF proposes and DDPM institutionalizes up-scaling mechanism and establishes networks of sharing knowledge for all province staffs such as study tour, case study forum, seminars, and newsletters.</p> <p>&lt;TF Disaster Education&gt;</p> <p>4-1 DDPM and Ministry of Education discuss and agree on the roles of each agency to implement TF-disaster education activities.</p>	
---	--

	<p>4-2 TF in collaboration with OBEC develops model curriculum of disaster education in schools on flood, flash flood, mudflow, and Tsunami.</p> <p>4-3 TF in collaboration with OBEC modifies textbooks and teachers' guide.</p> <p>4-4 TF selects at least four model schools and ESAOs in northern, north-eastern, central, and southern part of Thailand for disaster education planning and implementation.</p> <p>4-5 TF in collaboration with MOE trains at least four model schools collaboration with ESAOs.</p> <p>4-6 ESAOs that supervise model schools prepare disaster education strategic plan and curriculum design to enhance the outcome to other schools including private schools.</p> <p>4-7 Model schools train at least 100 teachers how to teach disaster education at schools in cooperation with local communities, cooperation with local authorities and DPM offices.</p> <p>4-8 TF in collaboration with MOE develops at least one master school as information center of disaster education.</p> <p>4-9 TF in collaboration with OBEC reviews the process and revises curriculum.</p> <p>4-10 TF proposes and DDPM institutionalizes up-scaling mechanism and establishes networks of sharing knowledge for all province staffs such as study tour, case study forum, seminars, and newsletters.</p> <p>&lt;TF Flood Risk Management&gt;</p> <p>5-1 TF designs capacity development plan on its activities and monitoring/evaluation.</p> <p>5-2 TF selects one sub-basin model site in Lampang or Lamphun province based on GIS base risk area maps which are being prepared by DDPM..</p> <p>5-3 TF prepares manuals for rainfall / flood analysis and hazard mapping through the process of the practical training taking the model site as an example.</p> <p>5-4 TF prepares manuals for improvement of early warning system and for evaluation of structural measures, in which the result of 5-3 will be functionally utilized.</p> <p>5-5 TF conducts training on hazard mapping, early warning system and structural measures targeting DPM regional centers using the above manuals.</p>
--	--

List of JCC members and Counterpart Personnel

Name	Position	Organization	JCC/Taskforce
Ms. Churairat Sangboonnum	Deputy Permanent Secretary	Ministry of Education	JCC
Mr. Chatchai Phromlert	Director General	Department of Disaster Prevention and Mitigation	JCC
Mr. Pornpoth Pempas	Deputy Director General	Department of Disaster Prevention and Mitigation	JCC
Miss Duriya Amatavivat	Director of Bureau of International Cooperation	Office of the Permanent Secretary Ministry of Education	JCC
Mr. Somsong Ngamwong	Chief of International bilateral Cooperation Unit 1, Bureau of International Cooperation	Office of the Permanent Secretary Ministry of Education	JCC
Mr. Suppakit Phoprapapan	Director of Disaster Prevention and Mitigation Policy Bureau	Department of Disaster Prevention and Mitigation	JCC
Mr. Suraphol Lekkao	Director of Disaster Prevention Criteria Bureau	Department of Disaster Prevention and Mitigation	JCC
Mr. Pallop Singhaseni	Director of Disaster Prevention and Promotion Bureau	Department of Disaster Prevention and Mitigation	JCC
Acting director	Director of Disaster Prevention and Mitigation Regional Center 10, Lampang	Department of Disaster Prevention and Mitigation	JCC
Mr. Chotnarin Kerdson	Director of Disaster Prevention and Mitigation Regional Center 11, Suratthani	Department of Disaster Prevention and Mitigation	JCC
Mr. Luckana Manimmanakorn	Director of Disaster Prevention and Mitigation Academy	Department of Disaster Prevention and Mitigation	JCC
Ms. Weena Akkratham	Director of Bureau of Academic Affairs and Education Standards	Office of the Basic Education Commission, the Ministry of Education	JCC
Mr. Adichat Surinkum	Specialist in Geological Resource Management Consulting	Department of Mineral Resources	JCC
Mr. Suwith Korsuwan	Director of Environment Geology and Geo-hazard Division	Mineral Resources	JCC
Mr. Winchai Uyangkul	Director of Bureau of Local Administrative Development	Department of Local Administration	JCC
Mr. Sirichai Manachai	Director of Monitoring and Evaluation Section	Department of Local Administration	JCC
Gp. Capt. Somsak Khaosuwan	Director of Warning System Administration	National Disaster Warning Center	JCC
Gp. Capt. Aekasaran Tabpasu	Director of Warning and Dissemination Section	National Disaster Warning Center	JCC
Mr. Supat Wattayu	Director of Office of Hydrology and Water Management	Royal Irrigation Department	JCC
Mr. Sompop Sucharit	Professional Engineering for Operation and Maintenance	Royal Irrigation Department	JCC
Mrs. Waicharee Virapan	Director of Weather Forecast Bureau	Thai Meteorological Department	JCC
Mr. Prawit Jampanya	Director of Central Weather Forecast Division	Thai Meteorological Department	JCC
Mr. Supon Sodsun	Acting for Chief of Water Crisis Prevention Center	Department of Water Resources	JCC

Mr.Ruangwit Ngaoosutit	Hydrologist, Professional Level	Bureau of Research Development and Hydrology Department of Water Resources	JCC
Mrs.Anusorn Inkampaeng	Director of Bureau of Gender Equality Promotion	Office of women's affairs and Family Development	JCC
Mrs.Daungsuda Mueangwong	Social Development Senior Official, Professional Level	Office of women's affairs and Family Development	JCC
Mr. Wattawit Gajasenit	Director of Countries Partnership Branch (Bilateral and Trilateral)	Thailand International Development Cooperation Agency (TICA)	JCC
Mrs.Charintip Yosthasan	Development Cooperation Officer	Thailand International Development Cooperation Agency (TICA)	JCC
Mr. Choornorn Inathep	Chief of DPM Provincial Office, Lamphun	DPM Provincial Office, Lamphun	JCC
Mr. Surasak Manochai	Mechanical Officer, Professional Level	DPM Provincial Office, Lamphun	JCC
Ms. Thawanrat Chai-inpan	Chief of DPM Provincial Office, Lampang	DPM Provincial Office, Lamlang	JCC
Mr. Jessada Vatananurak	Chief of DPM Provincial Office, Nakhon Si Thammarat	DPM Provincial Office, Nakhon Si Thammarat	JCC
JICA Representative		Japan International Cooperation Agency Thailand Office	JCC
Mr. Noritoshi MAEHARA	JICA Expert/Leader	JICA-PCDDM 2	JCC
Mr. Noboru JITSUHIRO	JICA Expert/Co- Leader	JICA-PCDDM 2	JCC
Mr. Chainarong Vasanasomsithi	Director of Research and International Cooperation Bureau	Department of Disaster Prevention and Mitigation	JCC
Mr. Arun Pinta	Chief of Foreign Relations Sub-Bureau	Research and International Cooperation Bureau	JCC
Mr. Suppakit Phoprapapan	Director of Disaster Prevention and Mitigation Policy Bureau	Department of Disaster Prevention and Mitigation	TF-1
Mrs. Sudarat Chaoprasert	Plan and Policy Analyst Senior Professional Level	Department of Disaster Prevention and Mitigation	TF-1
Mr. Somsong Ngamwong	Chief of International and bilateral Cooperation Unit Bureau	Office of Policy and Plan, Ministry of Education	TF-1
Mr.Adichat Surinkuni	Director of Environment Geology Division	Bureau of International Cooperation, Ministry of Education	TF-1
Mr.Suwit Korusuan	Director of Plan and Evaluation Division	Environment Geology Division Department of Mineral Resources	TF-1
Mr. Sirichai Manachai	Director of Monitoring and Evaluation Section, Bureau of Local Administrative Development	Environment Geology Division Department of Mineral Resources	TF-1
Gp.Capt.Somsak Khaosuwan	Director of Warning System Administration	Department of Local Administration	TF-1
Mr. Pongsthakorn Suvanpimol	Senior Expert on Hydrology	National Disaster Warning Center	TF-1
Mr.Pravit Jampanya	Director of Central Weather Forecast Division	Royal Irrigation Department	TF-1
To be named	Department of Water Resources	Thai Meteorological Department	TF-1
Ms. Wilairat Kahasathien	Human Resources Development Official Senior Professional	Department of Water Resources	TF-1
		Disaster Prevention Promotion Bureau, Department of Disaster Prevention and Mitigation	TF-1

Ms. Pallarin Phukit	Plan and Policy Analyst Professional Level	Disaster Prevention Promotion Bureau, Department of Disaster Prevention and Mitigation	TF-1
Mr. Chayut Wongwanich	Deputy Director, General Administrative Division Disaster Prevention and Mitigation Academy	Department of Disaster Prevention and Mitigation	TF-1
To be named	Disaster Prevention Criteria Bureau	Department of Disaster Prevention and Mitigation	TF-1
Acting director	Director of Plan and Budget Section	Department of Disaster Prevention and Mitigation	TF-1
Mr. Noboru JITSUHIRO	JICA Expert/Co-Leader	JICA-PCDDM 2	TF-1
Ms. Chachadaporn Boonpreerant	Director of Natural Disaster Policy Section	Department of Disaster Prevention and Mitigation	TF-1
Staffs of Natural Disaster Policy Section	Disaster Prevention and Mitigation Policy Bureau	Department of Disaster Prevention and Mitigation	TF-1
Mr. Kosit Srikritsanarat	Plan and Policy Officer	Research and International Cooperation Bureau, Department of Disaster Prevention and Mitigation	TF-1
Mr. Pallop Singhaseni	Director of Disaster Prevention Promotion Bureau	Department of Disaster Prevention and Mitigation	TF-2
Mrs. Boornuan Puksawad	Bureau of Academic Affairs and Education Standards Office of the Basic Education Commission	Ministry of Education	TF-2
Mrs. Hathalthip Maneerat	Office of the Non-Formal and Informal Education	Ministry of Education	TF-2
Mr. Adichat Surinkum	Director of Environment Geology Division Environment Geology Division	Department of Mineral Resources	TF-2
Mr. Suwith Korsuwan	Director, Active Fault Research Division	Mineral Resources	TF-2
Mr. Chaiphath Chaisawad	Director of Environment Management and Participation Promotion Section Bureau of Social Economic and Public Participation Development	Department of Local Administration	TF-2
Mr. Sitthigon Kwandee	Plan and Policy Analyst Professional Level	Disaster Prevention and Mitigation Policy Bureau, Department of Disaster Prevention and Mitigation	TF-2
Ms. Ananya Tianhom	Plan and Policy Analyst Practitioner	Disaster Prevention and Mitigation Policy Bureau, Department of Disaster Prevention and Mitigation	TF-2
Mr. Wijam Laothamyinyong	Training Deputy Director	Department of Disaster Prevention and Mitigation	TF-2
Ms. Chansima Sangsuriya	Chief of Research and Develop Sub-Bureau, Research and Develop Sub-Bureau	Research and International Cooperation Bureau, Department of Disaster Prevention and Mitigation	TF-2
Mr. Nattawat Singkaew	Disaster Prevention and Mitigation Provincial Office, Lampang	Department of Disaster Prevention and Mitigation	TF-2
Mr. Chumporn Intathep	Disaster Prevention and Mitigation Provincial Office, Lamphun	Department of Disaster Prevention and Mitigation	TF-2
Mr. Arata Sasaki	JICA Expert	JICA-PCDDM 2	TF-2
Mrs. Lolita Caparas Garcia	JICA Expert	JICA-PCDDM 2	TF-2

Mr. Natchanon Somprasert	Director Section of Participation Promotion	Department of Disaster Prevention and Mitigation	TF-2
Ms. Oranut Lo-Ounlum	Plan and Policy Analyst, Professional Level Disaster Prevention Promotion Bureau	Department of Disaster Prevention and Mitigation	TF-2
Ms. Kamolwan Chitpakdee	Plan and Policy Analyst, Professional Level Disaster Prevention Promotion Bureau	Department of Disaster Prevention and Mitigation	TF-2
Ms. Yaowapapan Khong khasri	Plan and Policy Officer Research and International Cooperation Bureau	Department of Disaster Prevention and Mitigation	TF-2
Ms. Luckana Manimmanakorn	Director of Disaster Prevention and Mitigation Academy	Department of Disaster Prevention and Mitigation	TF-3
Mr. Julapong Julasukon	Beau of General Administration Office, OBEC	Ministry of Education	TF-3
Mrs. Chuleeporn Patimnart	Office of the Non-Formal and Informal Education	Ministry of Education	TF-3
Mr. Adichat Surinkum	Director of Environment Geology Division Environment Geology Division	Department of Mineral Resources	TF-3
Mr. Suwith Korsuwan	Director, Active Fault Research Division	Department of Mineral Resources	TF-3
Mr. Sivaporn Phamornprawat	Director of Training Division	Royal Irrigation Department	TF-3
Mr. Prawit Jampanya	Director of Central Weather Forecast Division	Thai Meteorological Department	TF-3
Ms. Kamolwan Chitpakdee	Plan and Policy Analyst Professional Level	Disaster Prevention Promotion Bureau, Department of Disaster Prevention and Mitigation	TF-3
Ms. Pallarin Phukit	Plan and Policy Analyst Professional Level	Disaster Prevention Promotion Bureau, Department of Disaster Prevention and Mitigation	TF-3
Ms. Samorn Srisiri	Bureau of Gender Equality Promotion	Department of Disaster Prevention and Mitigation	TF-3
Mr. Chayakorn Witthayawech	Bureau of Gender Equality Promotion	Department of Disaster Prevention and Mitigation	TF-3
Mr. Noritoshi MAEHARA	JICA Expert/Leader	JICA-PCDDM 2	TF-3
Mr. Wijarn Laothamyinyong	Training Deputy Director Disaster Prevention and Mitigation Academy	Department of Disaster Prevention and Mitigation	TF-3
Ms. Paorampai Janya	Technical Deputy Director Disaster Prevention and Mitigation Academy	Department of Disaster Prevention and Mitigation	TF-3
Mr. Kittikon Thepyuamnuay	Chief of Technical Support Section, Technical Sub-Bureau Disaster Prevention and Mitigation Academy	Department of Disaster Prevention and Mitigation	TF-3
Ms. Kanokporn Chucherd	Foreign Relations Professional Level Research and International Cooperation Bureau	Department of Disaster Prevention and Mitigation	TF-3
Ms. Churairat Sangboonnum	Deputy Permanent Secretaries	Ministry of Education	TF-4
Mr. Peerapol Pooltaevee	Director, Bureau of Policy and Planning	Office of the Vocational Education Commission Ministry of Education	TF-4
Mrs. Yaowaluk Tienabanjong	Educational Officer, Professional Level Bureau of Academic	Office of the Basic Education Commission Ministry of Education	TF-4



	Affairs and Education Standards.	Education	
Mr. Somsong Ngamwong	Chief of International bilateral Cooperation Unit 1, Bureau of International Cooperation	Office of the Permanent Secretary Ministry of Education Ministry of Education	TF-4
Ms. Chanada Humsawad	Foreign Relations Professional Level Bureau of International Cooperation	Office of the Permanent Secretary Ministry of Education Ministry of Education	TF-4
Mrs. Sudarat Chaoprasert	Plan and Policy Analyst Senior Professional Level Office of the Permanent Secretary Ministry of Education	Ministry of Education	TF-4
Mrs. U-raiwan Sattan	Foreign Relations Officer Office of the Private Education Commission	Ministry of Education	TF-4
Mr. Thanatorm Naksen	Director, Bureau of Inspection and Evaluation Office of the Permanent Secretary Ministry of Education	Ministry of Education	TF-4
Mrs. Vipawan Waithanomsat	Educational Officer, Professional Level Office of the Non-Formal and Informal Education	Ministry of Education	TF-4
Mrs. Vannee Chantarasiri	Educational Officer, Senior Professional Level Bureau of Academic Affairs and Education Standards	Ministry of Education	TF-4
Ms. Utin Grungwisetphong	Educational Officer, Professional Level Bureau of Academic Affairs and Education Standards	Ministry of Education	TF-4
Ms. Thanathat Chaiyanon	Educational Officer, Practitioner Level Bureau of Academic Affairs and Education Standards	Ministry of Education	TF-4
Mr. Jun ONODERA	JICA Expert	JICA-PCDDM 2	TF-4
Mr. Suraphol Lekkao	Director of Disaster Prevention Criteria Bureau	Department of Disaster Prevention and Mitigation	TF-5
Mr. Lertsin Raksasakulwong	Director of Environment Geology and Geo-hazard Division	Department of Mineral Resources	TF-5
Mr. Somjai Yensabai	Director of Geo-hazard Division	Department of Mineral Resources	TF-5
Mr. Tinnakorn Tatong	Director of Geo-hazard Operation Center	Department of Mineral Resources	TF-5
Mr. Thada Sukhapunnaphan	Director of Hydrology Division Office of Hydrology and Water Management	Royal Irrigation Department	TF-5
Mr. Prawit Jampanya	Director of Central Weather Forecast Division	Thai Meteorological Department	TF-5
Mr. Nirut Koonpol	Director of Water Crisis Prevention Center	Department of Water Resources	TF-5
Mr. Satit Sueprasertsuk	Director of the protected area sub-bureau Water Crisis Prevention Center	Department of Water Resources	TF-5
Ms. Saowane Prachansri	Agricultural Scientists, Senior Professional Level Office of Natural Calamity and Agricultural Risk Prevention Office of Soil Survey and land Use Planning	Land Development Department	TF-5
Miss Kaesorn Jumba	Soil Survey officer, Professional Level Office of Soil Survey and	Land Development Department	TF-5

	land Use Planning		
Mr. Ekaphop Thera-Oran	Engineer Level 5 Water Resources Management Division, Survey Group	Electricity Generating Authority of Thailand	TF-5
Mr. Paitoon Naktae	Director of Safety Standard Sub-Bureau Disaster Prevention Criteria Bureau	Department of Disaster Prevention and Mitigation	TF-5
Mr. Banyat Yaingoolueam	Civil Engineer, Professional Level Disaster Prevention Criteria Bureau	Department of Disaster Prevention and Mitigation	TF-5
Mr. Chainarong Vasanomsithi	Director of Research and International Cooperation Bureau	Department of Disaster Prevention and Mitigation	Inter-TF
Ms. Paorampai Janya	Technical Deputy Director Disaster Prevention and Mitigation Academy	Department of Disaster Prevention and Mitigation	Inter-TF
Ms. Chachadaporn Boonpreerant	Director of Natural Disaster Policy Section	Department of Disaster Prevention and Mitigation	Inter-TF
Mr. Natchanon Sonprasert	Director Section of Participation Promotion	Department of Disaster Prevention and Mitigation	Inter-TF
Mr. Banyat Yaingoolueam	Civil Engineer, Senior Professional Level Disaster Prevention Criteria Bureau	Department of Disaster Prevention and Mitigation	Inter-TF
Mr. Somsong Ngamwong	Chief of International bilateral Cooperation Unit 1, Bureau of International Cooperation	Office of the Permanent Secretary Ministry of Education Ministry of Education	Inter-TF
Ms. Nuchanat Prasopsab	Chief of Research and Development Sub-Bureau Research and International Cooperation Bureau	Department of Disaster Prevention and Mitigation	Inter-TF
Ms. Chansima Sangsuriya	Research and Develop Sub-Bureau Research and International Cooperation Bureau	Department of Disaster Prevention and Mitigation	Inter-TF
Mr. Arun Pinta	Chief of Foreign Relations Sub-Bureau Research and International Cooperation Bureau	Department of Disaster Prevention and Mitigation	Inter-TF
Ms. Duangnapa Uitamangkamong	Plan and Policy Analyst Professional Level	Department of Disaster Prevention and Mitigation	Inter-TF
Ms. Kornisan Wilawan	Plan and Policy Analyst, Professional Level	Department of Disaster Prevention and Mitigation	Inter-TF
Mr. Nawin Sinthusa-ard	Vice Governor	Lamphun Province	Sub-TF Lamphun
Mr. Jamlong Nenyam	Assistant Governor	Lamphun Province	Sub-TF Lamphun
Mr. Wutipong Chaturat	Chief of Li District Office	Lamphun Province	Sub-TF Lamphun
Mr. Prachon Pratsakul	Director of Disaster Prevention and Mitigation Regional Center 10, Lamphun	Department of Disaster Prevention and Mitigation	Sub-TF Lamphun
Mr. Banleng Songboontham	Assistant Director of Lamphun Educational Service Area Office 2	Ministry of Education	Sub-TF Lamphun
Mr. Narong Meesanom	Chief of Natural Resources and Environmental Cooperation Section, Li District	Office of Natural Resources and Environmental Lamphun Province Department of Mineral Resources	Sub-TF Lamphun

Mr. Wichai Tinnowet	Chief of Lamphun Province Meteorological Station	Thai Meteorological Department	Sub-TF Lamphun
Mr. Yongyuth Leksomboon	Irrigation Operation, Experienced Level Lamphun Provincial Irrigation Office, Engineering Branch	Royal Irrigation Department	Sub-TF Lamphun
Mr. Wichai Pakdee	Li Municipality Mayor	Department of Local Administration	Sub-TF Lamphun
Mr. Chumporn Mano	Chief of Koh Sub-District Chief of Koh Local Administration Organization	Department of Local Administration	Sub-TF Lamphun
Mr. Choomporn Intathep	Chief of DDPM Provincial Office, Lamphun Province	Department of Disaster Prevention and Mitigation	Sub-TF Lamphun
Mr. Ridhipong Teachapan	Vice Governor, In Charge of Disaster Management Task	Lampang Province	Sub-TF Lamphun
Mr. Sarapong Sattayarak	Assistant Governor	Lampang Province	Sub-TF Lamphun
Acting director	Director of Disaster Prevention and Mitigation Regional Center 10, Lamphun	Department of Disaster Prevention and Mitigation	Sub-TF Lamphun
Mr. Santi Naruemit	Chief of Chae Hom District	Lampang Province	Sub-TF Lamphun
Mr. Surapol Burintharapan	Chief of Thoen District	Lampang Province	Sub-TF Lamphun
Mr. Sombat Sutthipornmaneeawat	Director of Lamphun Educational Service Area Office 2	Ministry of Education	Sub-TF Lamphun
Mr. Bun Saijam	Director of Lamphun Educational Service Area Office 3	Ministry of Education	Sub-TF Lamphun
Mr. Sanan Wongsa	Chief of Water Resources Division	Department of Water Resources	Sub-TF Lamphun
Mr. Thawil Kunchon	Tungpheung Municipality Mayor	Department of Local Administration	Sub-TF Lamphun
Mr. Phumpat Wongkhuenkeaw	Wiang Mok Municipality Mayor	Department of Local Administration	Sub-TF Lamphun
Ms. Thawanrat Chai-inpan	Chief of DDPM Provincial Office, Lamphun Province	Department of Disaster Prevention and Mitigation	Sub-TF Lamphun
Acting chief	Chief of Disaster Prevention and Operation Section DDPM Provincial Office, Lamphun Province	Department of Disaster Prevention and Mitigation	Sub-TF Lamphun
Mr. Nattawut Singkaew	Plan and Policy Analyst, Professional Level DDPM Provincial Office, Lamphun Province	Department of Disaster Prevention and Mitigation	Sub-TF Lamphun

## Annex 4

No.	Month	Date	Day	Schedule
	Jan.	6	Mon	Arrival in BKK (TG641)
2	Jan.	7	Tue	Visit JICA Thailand
				Kick-off meeting among Evaluation Team, DDPM
				Interview to RICB (Research and International Cooperation), DDPM 1/2
3	Jan.	8	Wed	Ministry of Education (All Bureaus in MOE together)
				Office of Basic Education Commission (OBEC), MOE
4	Jan.	9	Thu	Evaluation Reporting
				Interview to TF2 (CBDRM)
5	Jan.	10	Fri	Interview to TF1: Disaster Management Planning
				Teleconference with JICA HQ at JICA Thailand Office
				Move from JICA Thailand Office to TMD
				Thai Meteorological Department (TMD)
6	Jan.	11	Sat	Evaluation Reporting
7	Jan.	12	Sun	Evaluation Reporting
				Travel by TG-116 Bangkok - Chiang Mai
8	Jan.	13	Mon	Interview to DPM Lamphun Provincial Office
				Travel to Li District (Lamphun)
				Interview to representative of Tambol Li Municipality (Lamphun)
				Interview to principal of Muong Sam Pee School (Lamphun)
				Interview to leaders of Ban Muong Sam Pee village (Lamphun)
9	Jan.	14	Tue	Interview to Kor Sub-district Administrative Organization (Lamphun)
				Interview to Ban Koornong Village (Lamphun)
				Move to Thoen District (Lampang)
10	Jan.	15	Wed	Interview to representative of Thoen Municipality (Lampang)
				Interview to Ban Chaichomphu and Mae Salaem (Lampang)
				Interview to Non-model village before CBDRM (Lampang)
				Travel to Lampang City
11	Jan.	16	Thu	Interview to DPM Lampang Provincial Office
				Interview to DPM Regional Center 10, Lampang
				Interview to Ban Pong Sanook School and ESAO Lampang
				Travel by PG-206 Lampang - Bangkok
12	Jan.	17	Fri	Evaluation Reporting
13	Jan.	18	Sat	Evaluation Reporting
14	Jan.	19	Sun	Travel by DD7808 Bangkok - Nakhon Si Thammarat
				Interview to village head of Ban Tham Talod (Nakhon Si Thammarat)
				Interview to Ban Tham Talod Primary School (Nakhon Si Thammarat)
15	Jan.	20	Mon	Interview to Num Tok Sub-district (Nakhon Si Thammarat)
				Interview at Educational Service Area Office No.2 in Nakhon Si Thammarat with Directors of ESAOs who joined training in Japan
				Interview to DPM Nakhon Si Thammarat Provincial Office
				Travel by DD7819 Nakhon Si Thammarat - Bangkok
16	Jan.	21	Tue	Royal Irrigation Department (RID)
				Evaluation Reporting
17	Jan.	22	Wed	Interview to TF3 (Disaster Management Training)
				Interview to TF5 (Flood Risk Management)
				Interview to JICA Experts
18	Jan.	23	Thu	Evaluation Reporting
				Interview to Mr. Anusorn Kaewkangwan (Deputy DG)
19	Jan.	24	Fri	ADPC

				UNDP
20	Jan.	25	Sat	Preparation of evaluation report
21	Jan.	26	Sun	Preparation of evaluation report
22	Jan.	27	Mon	Discussion with JICA Thailand Office
				Discussion with C/P (Task Force members)
23	Jan.	28	Tue	Meeting among team members to finalize the report
				Discussion with Thai evaluation members and C/P (Task Force members)
				Courtesy call to Mr. Pornpoth Penpas (Deputy Director-General)
24	Jan.	29	Wed	Meeting among team members to finalize the report
				Preparation for JCC
25	Jan.	30	Thu	JCC and conclusion of MM
				Report to JICA Thailand Office
				Meeting with Embassy of Japan (a person in charge of AMCDRR)
				Meeting with key persons of DDPM
26	Jan.	31	Fri	Meeting with Mr. Chainarong Vasanasomsithi (Director of RICB, DDPM)
				Meeting with ESCAP
				Discussion with Japanese expert team on Final Seminar on Feb. 26
27	Feb.	1	Sat	Departure from Thailand (TG 676)



## ***Appendix 3***

### ***List of Participants of the Trainings in Japan***





**List of Trainees of the 1st Counterpart Training in Japan**  
**(Comprehensive Disaster Management Course: Nov.28 - Dec.11, 2010)**

	<b>Group</b>	<b>Name</b>	<b>Organization</b>	<b>Position</b>
1	JCC	Mr. Prateep Keeratirekha	DDPM	Deputy Director General
2	JCC	Mr. Thaweeep Limpakornwanich	RICB, DDPM	Dissemination Technical Officer
3	JCC	Mr. Prawit Jampanya	Thai Meteorological Dept. (TMD)	Director of Central Weather Forecast Div.
4	JCC	Mr. Sompop Sucharit	Royal Irrigation Dept. (RID)	Senior Expert on Irrigation Engineering
5	Task Force	Mr. Montree Chanachaiviboonwat	DPM Policy Bureau, DDPM	Director
6	Task Force	Ms. Siriporn Vachirasuriya	DPM Policy Bureau, DDPM	Plan and Policy Analyst
7	Task Force	Ms. Anaya Tianhom	DPM Policy Bureau, DDPM	Plan and Policy Analyst
8	Task Force	Mr. Songchai Rohitachart	DP Promotion Bureau, DDPM	Director
9	Task Force	Mr. Natchanon Sonprasert	Participation Promotion Division, ditto	Director
10	Task Force	Ms. Oranut Lo-Ounlum	DP Promotion Bureau, DDPM	Plan and Policy Analyst
11	Task Force	Ms. Luckana Manimmanakorn	DPMA, DDPM	Technical Deputy Director
12	Task Force	Mr. Chaitawat Siwabowon	DPMA, DDPM	Training Deputy Director
13	Task Force	Ms. Chakreeya Setthaseree	DPMA, DDPM	Plan and Policy Analyst
14	Task Force 4	Mr. Sombat Sutthipornmaneewat	ESAO,OBEC,MOE	Director of ESAO Lampang Area 2
15	Task Force 4	Mr. Somsong Ngamwong	Office of Permanent Secretary, MOE	Chief of International Cooperation Unit
16	Task Force 4	Mrs. Vipawan Waithanomsat	Office of Non formal Education, MOE	Educational Officer Professional Level
17	Task Force 4	Mrs. Sararat Leepaiboon	OBEC, MOE	Educational Officer, Professional Level
18	Sub-TF	Mr. Anusorn Kaewkangwan	DPM Regional Office 10	Director
19	Sub-TF	Mr. Chooporn Intathep	DPM Provincial Office Lamphun	Chief
20	Sub-TF	Mr. Nattawut Singkaew	DPM Provincial Office Lampang	Plan and Policy Analyst

**List of Trainees of the 2nd Counterpart Training in Japan**  
**(Comprehensive Disaster Management Course: Oct.10 - Oct.21, 2011)**

	<b>Group</b>	<b>Name</b>	<b>Organization</b>	<b>Position</b>
1	Task Force 5	Mr. Suraphol Lekkao	Disaster Prevention Criteria Bureau, DDPM	Director
2	JCC	Mr. Suwith Kosuwan	Bureau of Environmental Geology and Geohazards, Department of Mineral Resources	Director of Active Fault Research Division
3	JCC	Mr. Sirichai Manachai	Department of Local Administration, MOI	Director of the Division of Monitoring and Evaluation
4	Task Force 1	Mr. Sitthigon Kwandee	DPM Policy Bureau, DDPM	Plan and Policy Analyst
5	Task Force 1	Ms. Daowan Saeng-Ong	DPM Policy Bureau, DDPM	Plan and Policy Analyst
6	Task Force 2	Ms. Kamonwan Chidpakdee	DPM Promotion Bureau, DDPM	Plan and Policy Analyst
7	Task Force 2	Ms. Pallarin Phukit	DPM Promotion Bureau, DDPM	Plan and Policy Analyst
8	Task Force 3	Mr. Raywat Pongsuwan	DPMA, DDPM	Deputy Director of DPMA
9	Task Force 3	Ms. Paorumpai Janya	DPMA, DDPM	Human Resource Officer, Senior Professional Level
10	Task Force 4	Mr. Wirayut Khuankhit	Lampang Province	Director of Maehang Wittaya School
11	Sub-TF	Mr. Vattana Sacon	DPM Regional Center 10, DDPM	Plan and Policy Analyst
12	Sub-TF	Mr. Krichpet Petcharaburanin	DPM Lampang Province	Chief of DPM Provincial Office
13	Sub-TF	Mr. Jumroon Kulsonposakul	Wiang Mok Municipality, Lampang Province	Municipality Clerk of Wiang Mok
14	Sub-TF	Mr. Seri Sriruan	DPM Lamphun Province	Civil Works Technician, Senior Level
15	Sub-TF	Mr. Wichai Pukdee	Li Municipality, Lamphun Province	Mayor, Li Municipality

**List of Trainees of the 3rd Counterpart Training in Japan**  
**(Disaster Education Course: Nov.28 - Dec.7, 2011)**

	<b>Name</b>	<b>Position</b>	<b>Organization</b>
1	Mr. Chanvech Boonpradern	College Director	Office of the vocational education commission, Kansanapisek Industrial and Community College, Nongjok
2	Mr. Pradit Chaiprasitroj	Chief	Education Promotion Unit , Office of the Private Education Commission
3	Mr. Prachack Changrau	Director of Lamphun Primary Educational Service Area office 2	Lamphun Primary Educational Service Area office 2
4	Mr. Punya Chaowasaku	Teacher	Ban Kanglaung School, Kanchanaburi province
5	Mr. Charoon Chotchoi	Director	Banthamtalord School, Nakhon Si Thammarat Province
6	Mr. Kawinkiat Nonthapala	Director	Office of Ubon Ratchathani Primary Educational Service Area office 1
7	Mr. Paiboon Pongtatsana	Director	Office of Nakhon Si Thammarat Primary Educational Service Area office 2
8	Mr. Sutam Ruangpayungsak	Deputy Director	Office of Kanchanaburi Primary Educational Service Area office 1
9	Ms. Weena Akatham	Director	Bureau of Academic Affairs and Educational Standards, Office of the Basic Education Commission
10	Ms. Pantip Chaturanont	Educator	Bureau of Academic Affairs and Educational Standards, Office of the Basic Education Commission
11	Ms. Nongnaphat Chuenchowwai	Teacher	Muangsampee School, Lamphun Province
12	Ms. Uraiwan Intayarat	Director	Office of Nakhon Si Thammarat Nonformal and Informal Education, Office of Nonformal and Informal Education
13	Ms. Wannaporn Pachop	Teacher	Kudua School, Ubon Ratchathani Province
14	Ms. Wannaporn Peansara	Policy and Plan Analysis, Senior Professional Level	Bureau of Policy and Strategy, Office of the Permanent Secretary
15	Ms. Karuna Sirirerkudomporn	Public Relation Officer, Professional Level	Bureau of General Administration Office, Office of the Basic Education Commission
16	Ms. Yauwaluck Tearonabanchong	Head of Educational Material Development	Bureau Academic Affair and Education, Office of the Basic Education Commission
17	Ms. Siriwan Tongdang	Teacher	Banhadhong School, Chumphon province
18	Ms. Patchara Wongcomton	Director	Muangsampee School, Lamphun Province

**List of Trainees of the 4th Counterpart Training in Japan**  
**(Comprehensive Disaster Management Course: Nov.26 - Dec.7, 2012)**

	<b>Group</b>	<b>Name</b>	<b>Organization</b>	<b>Position</b>
1	JCC	Mr. Supon Sodsoon	Mekhala Center, Water Crisis Prevention Center, DWR	Chief of Mekhala Center
2	JCC	Mr. Chayakorn Wittayawech	Bureau of Gender Equity Promotion, Office of Woman's affairs and Family Development	Social Development officer
3	TF-DMP	Mr. Ratipat Pangwatcharakorn	Disaster prevention policy bureau, DDPM	Plan and Policy Analysis, Practitioner level
4	TF-DMP	Ms. Supreeya Preedaromroj	Disaster prevention policy bureau, DDPM	Plan and Policy Analysis, Practitioner level
5	TF-CBDRM	Ms. Wilairat Kahasathien	Disaster Prevention and Promotion Bureau, DDPM	Human resource officer, Senior professional level
6	TF-CBDRM	Ms. Kamolwan Klubsri	Disaster Prevention and Promotion Bureau, DDPM	Human resource officer, Practitioner level
7	TF-DMT	Ms. Hataiwan Meesomsak	Disaster Prevention and Mitigation Academy, DDPM	Human resources officer, professional level
8	TF-DMT	Ms. Chantima Montien	Disaster Prevention and Mitigation Academy, DDPM	Human resources officer, professional level
9	TF-DE	Mrs. Boonruan Pugsawan	Bureau of Academic Affair and Education Standard, OBEC, MOE	Educational officer, Senior professional level
10	TF-DE	Ms. Ruangkan Punpukdee	International Cooperation Unit Bureau of International Cooperation, MOE	Foreign relation officer, professional level
11	TF-FRM	Mr. Amnat Phonmart	Disaster Prevention Measure Bureau, DDPM	Civil engineer, senior professional officer
12	TF-FRM	Mr. Banyat Yai-Ngoolueam	Disaster Prevention Measure Bureau, DDPM	Civil engineer, professional officer
13	Inter-TF	Ms. Woraphak Krearjaiwang	Research and Development Sub-bureau, RICB,DDPM	Plan and Policy Analysis
14	Sub-TF ( northern region)	Ms. Uraiwan Kaewmoonkham	Disaster Prevention and Mitigation Regional Center 10 (Lampang)	Plan and Policy Analysis, Professional level
15	Sub-TF ( southern region)	Mr. Anan Yingcomenueng	Disaster Prevention and Mitigation Regional Center 11 (Surathani)	Plan and Policy Analysis
16	Sub-TF (province)	Mr. Surasak Nanochai	Disaster Prevention and Mitigation Office, Lamphun province	Mechanic, Professional level
17	Sub-TF (province)	Mr. Boonjet Butte	Disaster Prevention and Mitigation Office, Lampang province	Mechanic, Professional level
18	Sub-TF (province)	Mr. Tanawat Rouengdej.	Disaster Prevention and Mitigation Office Nakhon Si Thammarat province	Plan and Policy Analysis
19	Sub-TF (LAO)	Ms. Titinan Pipisatiankun	Kor Sub-district Municipality	Municipality Clerk
20	Sub-TF (LAO)	Mr. Chaitad Srinunchai	Tung Pheung Sub-district Municipality	Municipality Clerk

**List of Trainees of the 5th Counterpart Training in Japan**  
**(Comprehensive Disaster Management Course: Jul.7 - Jul.21, 2013)**

	<b>Group</b>	<b>Name</b>	<b>Organization</b>	<b>Position</b>
1	JCC	Mr. Kitibodee Pravitra	Disaster Prevention and Promotion Bureau, DDPM	Director of Disaster Prevention and Promotion Bureau
2	TF-DMP	Ms. Yupawan Kongsantee	Disaster Prevention and Mitigation Policy Bureau, DDPM	Disaster prevention and mitigation officer
3	TF-DMP	Ms. Benyapat Jarupakchanon	Disaster Prevention and Mitigation Policy Bureau, DDPM	Government employee
4	TF-CBDRM	Ms. Pimnipa Attasaran	Disaster Prevention and Promotion Bureau, DDPM	Disaster prevention and mitigation officer
5	TF-CBDRM	Mr. Chonlatis Ponsujarit	Disaster Prevention and Promotion Bureau, DDPM	Disaster prevention and mitigation officer
6	TF-DMT	Ms. Jintana Nuntapipat	Training Section, Disaster Prevention and Mitigation Academy, DDPM	Human resource officer, senior professional level
7	TF-DMT	Ms. Venutsuda Nantasukon	Technical affairs sub-bureau, Disaster Prevention and Mitigation Academy, DDPM	Human resource officer, professional level
8	TF-DE	Mrs. Wannee Jantarasiri	Bureau of Academic Affairs and Educational Standards, Office of the Basic Education Commission, MOE	Educational officer, senior professional level
9	TF-DE	Mrs. Sunida Detsen	Bureau of General Administration , Office of the Basic Education Commission, MOE	Human resource officer, senior professional level
10	TF-FRM	Ms. Wibonlak Supa-em	Disaster Prevention Criteria Bureau, DDPM	Scientist, professional level
11	TF-FRM	Mr. Pisut Anurat	Disaster Prevention Criteria Bureau, DDPM	Scientist, professional level
12	Inter-TF	Ms. Jansima Sangsuriya	Research Sub-bureau, Research and International Cooperation Bureau, DDPM	Plan and policy analysis officer, senior professional level
13	Inter-TF	Ms. Yaowapapan Khongkhasri	Foreign Relation Sub-bureau, Research and International Cooperation Bureau DDPM	Plan and policy officer
14	Inter-TF	Ms. Sippaka Bimol	Foreign Relation Sub-bureau, Research and International Cooperation Bureau, DDPM	Plan and policy officer
15	Inter TF	Ms. Ratchaporn Phomthong	Foreign Relation Sub-bureau, Research and International Cooperation Bureau, DDPM	Plan and policy officer
16	Sub-TF ( northern region)	Mr. Prapan Sanitmajjaro	Disaster Prevention and Mitigation Regional Center 10, Lampang, DDPM	Civil engineer, senior professional level
17	Sub-TF ( southern region)	Mr. Pachok Wuthipong	Disaster Prevention and Mitigation Regional Center 11, Surat Thani, DDPM	
18	Sub-TF (province)	Ms. Arporn Ruttarapun	Disaster Prevention and Mitigation Provincial Office, Nakhon Si Thammarat province, DDPM	Financial and accounting analysis, professional level
19	Sub-TF (LAO)	Mr. Weerapong Butsimma	Namtok Sub-district Administration Organization, Nakhon Si Thammarat province	Community development Officer
20	Sub-TF (LAO)	Mr. Anurak Nuanseethong	Department of Provincial Administration, Nakhon Si Thammarat province	Village headman



## ***Appendix 4***

### ***List of Collected Data***





## Data Collection List of the Project on Capacity Development in Disaster Management in Thailand (Phase-2)

No.	Specialty	Title	Language	Date of Issue	Publisher	Date of Obtain	Place of Obtain	Form/Style
1		The Project on Capacity Development in Disaster Prevention and Mitigation for personnel and students	Thai	1-Jan-09	Disaster Prevention and Promotion Bureau, DDPM, MOI	Jun. 2010	DDPM	Document
2		Brochure for Disaster Prevention and Mitigation: Watch coastal areas, water erosion risk and land subsidence; year 7 Vol. 62	Thai	10-Sep-10	DDPM, MOI	Jun. 2010	DDPM	Brochure
3		Hyogo Framework Action Plan (HFA)	Thai	N/A	International Strategy for Disaster Reduction (ISDR)	Jun. 2010	DDPM	Brochure
4		Final Report: Education for National Disaster Preparedness in Asia-Pacific in the Context of Education for Sustainable Development Phase 2	Eng	February-08	UNESCO	Jun. 2010	DDPM	Book
5		Accident and Disaster Statistics 2008 and 2009 (January-April 2009)	Thai	1-Jun-09	Research and Development Group, RICB, DDPM, MOI	Jun. 2010	DDPM	Book
6		Disaster Prevention and Mitigation Drill Procedure	Thai	1-Aug-10	National Disaster Policy Section, Disaster Prevention and Mitigation Policy Bureau, DDPM	Jun. 2010	DDPM	Book
7		"Mr. Warning" for flood, flash flood and landslide in risk areas	Thai	9-Jun-09	Disaster Prevention and Promotion Bureau, DDPM, MOI	Jun. 2010	DDPM	Book
8		Safe Community and Disaster Preparedness under CBDRM	Thai	February-09	Disaster Prevention and Promotion Bureau, DDPM, MOI	Jun. 2010	DDPM	Book
9		Asian Disaster Management News: Earthquake Risk Management; Vol. 16, No. 1	Eng	January-April 10	Asian Disaster Preparedness Center (ADPC)	Jun. 2010	DDPM	Book
10		Accident and Disaster Statistics 2009	Thai	10-Jun-10	Research and Development Group, RICB, DDPM, MOI	Jun. 2010	DDPM	Book
11		Application of GIS: To analyze and plan for landslide in risk area; Case studies; Amphur Laplae, Thapla and Muang, Chang-Waat Uttaradit	Thai	2009	Research and Development Group, RICB, DDPM, MOI	Jun. 2010	DDPM	Book
12		Strategic National Action Plan (SNAP) on Disaster Risk Reduction 2010-2019	Eng	9-Jul-09	DDPM, MOI	Jun. 2010	DDPM	Book

No.	Specialty	Title	Language	Date of Issue	Publisher	Date of Obtain	Place of Obtain	Form/Style
13		National Disaster Prevention and Mitigation Plan 2010-2014	Thai	9-Dec-09	National Committee Disaster Prevention and Mitigation	Jun. 2010	DDPM	Book
14		Annual Report 2009	Thai	10-Feb-10	DDPM, MOI	Jun. 2010	DDPM	Book
15		Basic Education Core Curriculum 2008	Eng	8-Jul-08	MOE	Jun. 2010	DDPM	Book
16		Basic Education Core Curriculum 2008	Thai	9-Jul-08	MOE	Jun. 2010	DDPM	Book
17		Annual DDPM Operation Manual 2010	Thai	N/A	DDPM, MOI	Jun. 2010	DDPM	Book
18		DDPM, MOI Thailand Book	Eng	N/A	DDPM, MOI	Jun. 2010	DDPM	Book
19		Manual to formulate the Management System on Crisis Disaster	Thai	9-Aug-09	DDPM, MOI	Jun. 2010	DDPM	Book
20		Effect on the central plain area in case of Earthquake	Thai	N/A	Department of Mineral Resources, Ministry of Natural Resources and Environment	Jun. 2010	DDPM	Book
21		Manual to reduce impact from Earth Disaster	Thai	N/A	Department of Mineral Resources, Ministry of Natural Resources and Environment	Jun. 2010	DDPM	Book
22		Disaster Prevention and Mitigation Act 2007	Thai-Eng	9-Sep-09	DDPM, MOI	Jun. 2010	DDPM	Book
23		Preparedness and self-conduct in case of Earthquake	Thai	N/A	DDPM, MOI	Jun. 2010	DDPM	Book
24		Safety on road (2 books)	Thai	N/A	DDPM, MOI	Jun. 2010	DDPM	Book

No.	Specialty	Title	Language	Date of Issue	Publisher	Date of Obtain	Place of Obtain	Form/Style
25		Prevention and extinguish Fire	Thai	N/A	DDPM, MOI	Jun. 2010	DDPM	Book
26		Preparedness and self-conduct in case of Floods, Storms and Mud Slides	Thai	N/A	DDPM, MOI	Jun. 2010	DDPM	Brochure
27		Seminar on Disaster Management under the National Prevention and Mitigation Plan at BITEC on July 14, 2010	Thai	N/A	Disaster Prevention and Mitigation Policy Bureau, DDPM, MOI	Jun. 2010	DDPM	Brochure
28		National Disaster Prevention and Mitigation Plan 2010-2014	Thai	9-Nov-09	Disaster Prevention and Mitigation Policy Bureau, DDPM, MOI	Jun. 2010	DDPM	Brochure
29		Nongtan letter	Thai	2-Jul-05	Watnongtan School, Phraprom, Nakhon Si Thammarat	Jun. 2010	DDPM	Brochure
30		Accident and Disaster Statistics 2009	Thai	N/A	Research and Development Group, RICB, DDPM, MOI	Jun. 2010	DDPM	CD
31		Emergency Preparedness Working Group: Public-Private Partnership and Disaster Resilience Workshop	Thai	N/A	N/A	Jun. 2010	DDPM	CD
32		Program on Mainstreaming Disaster Risk Reduction into Development Policy, Planning and Implementation in Asia	Thai	N/A	Regional Consultative Committee (RCC)	Jun. 2010	DDPM	Book and CD
33		The Project on Disaster Learning Center	Thai	2-Jul-05	Disaster Prevention and Promotion Bureau, DDPM	Jan. 2011	DDPM	Book
34		Disaster Situation Report	Thai	N/A	DDPM, MOI	Jun. 2010	DDPM	Document
35		National Disaster Early Warning System in Thailand	Eng	N/A	Government House, BKK	Sep. 2010	DDPM	Document
36		Annual Budget Expenditure Act Fiscal Year B.E. 2553	Eng	9-Oct-09	Plan and Budget Sub-bureau, Policy Bureau, DDPM	Sep. 2010	DDPM	Document

No.	Specialty	Title	Language	Date of Issue	Publisher	Date of Obtain	Place of Obtain	Form/Style
37		Summary report of Seminar on Education for Disaster Preparedness Education in School, 9-11 August, Royal River Hotel	Eng	10-Aug-10	OBEC	Sep. 2010	DDPM	Document
38		Summary on Crisis Management Exercise (C-MEX 10) 19-20 August 2010, Chantha buri Province	Eng	11-Aug-10	DDPM, MOI	Sep. 2010	DDPM	Document
39		APEC Emergency Preparedness Working Group Workshop on Public-Private Partnerships and Disaster Resilience 24-27 August, 2010 BKK	Eng	12-Aug-10	APEC	Sep. 2010	DDPM	Document
40		National Consultative Meeting on Public Awareness for Flood Risk Reduction in Thailand	Eng	10-Sep-10	ADPC	Sep. 2010	DDPM	Document
41		Ted-sa-baan Tambon Tungpuing	Thai	2-Jul-05	JICA and RICB	Jul. 2010	DDPM	Document
42		Disaster History of Baan Muangsampee Moo. 8 Tambon Lee, Amphur Lee	Thai	2-Jul-05	N/A	Jul. 2010	DDPM	Document
43		Implementation under the Project on CBDRM community in Disaster Prevention and Mitigation based on CBDRM's Principle in Lamphun 2007-2010	Thai	1-Jun-10	DPM Lamphun provincial office	Jul. 2010	DDPM	Document
44		Flood situation	Thai	2-Jul-05	Oo-Bor-Tor Maeprik	Jul. 2010	DDPM	Document
45		Information on Wiangmok Subdistrict Municipality, Lampang	Thai	2-Jul-05	Wiangmok Subdistrict Municipality, Lampang	Jul. 2010	DDPM	Document
46		Basic information for selection pilot area under the Project on capacity Development in Disaster Management in Thailand: Phase 2	Thai	2-Jul-05	DPM Lampang provincial office	Jul. 2010	DDPM	Document
47		Forum to Solve Flood Problem by Committee of Baan Muangsampee dated November 12, 2009	Thai	2009	Baan Muangsampee, ESAO area-2, Lamphun, OBEC, MOE	Jul. 2010	DDPM	Document
48		Flood Report dated October 3, 2009	Thai	2010	Baan Muangsampee, ESAO area-2, Lamphun, OBEC, MOE	Jul. 2010	DDPM	Document

No.	Speciality	Title	Language	Date of Issue	Publisher	Date of Obtain	Place of Obtain	Form/Style
49		Sub-Task-Force Meeting under the Project on Capacity Development in Disaster Management in Thailand: Phase 2, Lampang	Thai	2010	Sub-Task-Force Lampang, JICA and DDPM	Nov. 2010	DDPM	Document
50		Sub-Task-Force (Provincial level) Meeting under the Project on Capacity Development in Disaster Management in Thailand: Phase 2	Thai	1-Nov-10	JICA and DDPM	Nov. 2010	DDPM	Document
51		Manual on School Safety	Eng	1-Oct-09	European Commission Humanitarian Aid, DFID, ADPC and UNDP	Nov. 2010	DDPM	Book
52		User's Manual on Risk Assessment and Evaluation ArcGIS toolbox	Eng	N/A	Italian Ministry for Environment and Territory and ADPC	Dec. 2010	DDPM	Book and CD
53		Information on DPMA Chiang Mai	Thai	N/A	DPMA Chiang Mai	Feb. 2011	DDPM	Brochure
54		Earthquake	Thai	N/A	TMD	Feb. 2011	DDPM	Brochure
55		Tsunami	Thai	N/A	TMD	Feb. 2011	DDPM	Brochure
56		Questionnaire for the Project on the Establishment of Flood Disaster Preparedness Indices (FDPI)	Eng	N/A	International Flood Initiative (IFI)	Feb. 2011	DDPM	Document
57		Curriculum 2008: Quick Guide	Thai	N/A	BAAE, OBEC	Nov. 2010	DDPM	Brochure
58		Disaster Management in Japan	Eng and JP	N/A	Cabinet Office, Government of Japan	Dec. 2010	DDPM	Book
59		Public-Private Partnerships and Disaster Resilience	Eng	N/A	Asia-Pacific Economic Cooperation (APEC)	Jan. 2011	DDPM	Book
60		White Paper: Report on Natural Disaster Management in Thailand 2007	Thai	N/A	DDPM, MOI	May 2011	DDPM	Book

No.	Specialty	Title	Language	Date of Issue	Publisher	Date of Obtain	Place of Obtain	Form/Style
61		8th Kyoto University Southeast Asian Forum	Eng	N/A	Kyoto University (CSEAS) and Kyoto Union Club	May 2011	DDPM	Book
62		Earthquake Preparedness Manual	Thai	N/A	DDPM, MOI	May 2011	DDPM	Booklet
63		Flood, Storm and Sediments Preparedness Manual	Thai	N/A	DDPM, MOI	May 2011	DDPM	Booklet
64		Natural Disaster Preparedness Manual (in case of Earthquake, Tsunami, Flood and Storm)	Thai	N/A	Graduate School of Language and Communication, NIDA	May 2011	DDPM	Booklet
65		Warning Volunteer Network Manual "Mr. Warning"	Thai	8-Aug-07	Disaster Prevention and Promotion Bureau, DDPM, MOI	May 2011	DDPM	Book
66		Official Residence Network Contact List, Disaster Prevention and Mitigation, 76 Provinces and Bangkok	Thai	N/A	Disaster Prevention and Promotion Bureau, DDPM, MOI	Jun. 2011	DDPM	Book
67		Disaster Management for Local Authorities Manual	Thai	8-May-09	Disaster Prevention and Promotion Bureau, DDPM, MOI	Jun. 2011	DDPM	Book
68		Workshop on Capacity Development in Disaster Prevention and Mitigation Annual year 2011 Plan (Design for Table – Top Exercise: TTX) Handout	Thai	8-Jun-11	Disaster Prevention and Mitigation Policy Bureau, DDPM, MOI	Jun. 2011	DDPM	Book
69		National Platform on Strategic National Action Plan (SNAP) on Disaster Risk Reduction 2010 - 20119	Thai	9-Sep-11	DDPM, MOI	Jul. 2011	DDPM	Book
70		Hyogo Framework for Action 2005 - 2015	Eng	N/A	UNISDR	Jul. 2011	DDPM	Book
71		HFA Progress in Asia-Pacific Regional Synthesis Report 2009 - 2011	Eng	3-Jul-05	UNISDR	Jul. 2011	DDPM	Book
72		National Disaster Prevention and Mitigation Plan B.E. 2553 - 2557 (2010 - 2014)	Eng	2-Jul-05	National Disaster Prevention and Mitigation Committee	Jul. 2011	DDPM	Book

No.	Specialty	Title	Language	Date of Issue	Publisher	Date of Obtain	Place of Obtain	Form/Style
73		Royal Irrigation Department Brochure	Eng	N/A	Royal Irrigation Department	Aug. 2011	DDPM	Brochure
74		HFA Progress in Asia-Pacific Regional Synthesis Report 2009-2011	Eng	3-Jul-05	UNISDR	Sep. 2011	DDPM	Report
75		Geological Hazard Warning Network in Nakhon Ratchasima Province	TH	1-Mar-11	Department of Mineral Resources	Oct. 2011	DDPM	Book
76		Instructivo De Capacitacion Caravana De La Rana --	Spanish	N/A	Coordinadora Nacional para la Reduccion de Desastres Secretaria Ejecutiva	Nov. 2011	DDPM	Book
77		Guia De Implementacion Caravana De La Rana	Spanish	N/A	Coordinadora Nacional para la Reduccion de Desastres Secretaria Ejecutiva	Nov. 2011	DDPM	Book
78		ASEAN Agreement on Disaster Management and Emergency Response - Work Programme 2010 - 2015	Eng	1-May-10	ASEAN	May 2012	DDPM	Work Programme
79		Operation Plan and Budget 2010-2012 (3 years plan) Under Disaster Prevention and Assistance for Flood Storm and Sediments Act (5 years plan)	Thai	1-Aug-10	DDPM, MOI	May 2012	DDPM	Book
80		Collective Center Guidelines	Thai	4-Jul-05	IOM-UNHCR	Jun. 2012	DDPM	Book
81		Collective Center Management Checklist	Thai	4-Jul-05	IOM-UNHCR	Jun. 2012	DDPM	Book
82		Accident and Disaster Statistics 2010	Thai	1-Jun-10	Research and Development Group, RICB, DDPM, MOI	Jul. 2012	DDPM	Book
83		Summary report of Seminar on Get through massive flood in 2011 and preparedness for water crisis in 2012	Thai	15-Mar-12	Disaster Prevention and Mitigation Policy Bureau, DDPM, MOI	Jul. 2012	DDPM	Report
84		Summary report on causes of death from flood, storm and sediments in 2010	Thai	1-Sep-11	Monitoring and Evaluating unit, Disaster Prevention and Mitigation Policy Bureau, DDPM, MOI	Jul. 2012	DDPM	Book

No.	Speciality	Title	Language	Date of Issue	Publisher	Date of Obtain	Place of Obtain	Form/Style
85		Disaster Management in School and ESAO Guideline	Thai	2012	Educational Standards, OBEC, MOE	Aug. 2012	DDPM	Book
86		Accident and Disaster Statistics 2011	Thai	1-Jun-11	Research and Development Group, RICB, DDPM, MOI	Aug. 2012	DDPM	Book
87		Outline of Project on Capacity Development on Disaster Management in Thailand On cooperation between Department of Disaster Prevention and Mitigation and The United Nations for Development Programme: UNDP	Thai	2012	Department of Disaster Prevention and Mitigation and The United Nations for Development Programme: UNDP	Sep. 2012	DDPM	Outline Document
88		Office of the non-formal and informal education volunteer spirit for people	Thai	2012	Office of the non-formal and informal education	Oct. 2012	DDPM	Book
89		Community based disaster risk management manual for people	Thai	2008	DPAM	Nov. 2012	DDPM	Book
90		Disaster Management Manual for people (Community Based Disaster Risk Management)	Thai	2012	Promotion Bureau, DDPM	Dec. 2012	DDPM	Book
91		Disaster Management Manual for people (Community Based Disaster Risk Management) Revised ver. On Aug 2012	Thai	Aug-12	Promotion Bureau, DDPM	Dec. 2012	DDPM	Book
92		ASEAN-APAN Cooperation Project Capacity Building of Local Government Officials on Disaster Management 2009-2010	English	2010	DDPM and ADRC	Feb. 2013	DDPM	Book
93		Manual for local cooperation supported by PAO	Thai	Sep-12	DOLA, JICA and TU	Feb. 2013	DLA, MOI	Book
94		Manual for Enhancing Coordination and Cooperation Between PAO and Local Administration Provincial Office	Thai	Nov-12	DOLA, JICA and TU	Feb. 2013	DLA, MOI	Book
95		Global Assessment Report on Disaster Risk Reduction 2013	English	2013	United Nation	Jun. 2013	DDPM	Book



No.	Speciality	Title	Language	Date of Issue	Publisher	Date of Obtain	Place of Obtain	Form/Style
96		Global Assessment Report on Disaster Risk Reduction 2013: The Pocket GAP 2013	English	2013	United Nation	Jun. 2013	DDPM	Book
97		Records of the Great East Japan Earthquake: To Advance Forwards After Disaster	English	Mar-13	Miyagi University of Education	Jul. 2013	DDPM	Book
98		The Great East Japan Earthquake and Tsunami	English	Jun-11	Kahoku Shipo Publishing Co.	Jul. 2013	DDPM	Book
99		ASEAN Safe Schools Initiative Phase 1 Report	English	May-13	AADMER Partnership Group	Dec. 2013	DDPM	Book
100		Plan Asia's Safe School Programme	English	Sep-13	Plan International	Dec. 2013	DDPM	Brochure
101		Comprehensive School Safety	English	Mar-13	UNICEF, INEE, IFRC, UNESCO, World Vision, Plan Int., ADPC, Child Fund, SEA MEO, Save the Children	Dec. 2013	DDPM	Brochure
102		Earthquake in Thailand	Thai	Oct-13	Department of Mineral Resources	Dec. 2013	DDPM	Book
103								
104								
105								
106								
107								



## ***Appendix 5***

### ***News Letter (No.1 – No.5)***



# Project news letter

- โครงการพัฒนาศักยภาพในการจัดการภัยพิบัติของประเทศไทย ระยะที่ 2 -

## การฝึกอบรมวิทยากรกระบวนการครั้งที่ 1

ณ วิทยาลัยป้องกันและบรรเทาสาธารณภัย (DPMA)  
จังหวัดเชียงใหม่  
ระหว่างวันที่ 13-16 ธันวาคม พ.ศ. 2553

การฝึกอบรมวิทยากรกระบวนการ (Facilitator) ด้านการจัดการ ภัยพิบัติ โดยอาศัยชุมชนเป็นพื้นฐาน ถูกจัดขึ้นระหว่างวันที่ 13-16 ธันวาคม พ.ศ. 2553 โดยกรมป้องกันและบรรเทาสาธารณภัย ซึ่งมีผู้เข้ารับการฝึกอบรมจำนวน 50 คน เป็นเจ้าหน้าที่ จากสำนักงานป้องกันและบรรเทาสาธารณภัย จังหวัดและศูนย์ป้องกันและบรรเทาสาธารณภัยเขต จาก 30 จังหวัด ทางภาคเหนือและภาคตะวันออกเฉียงเหนือ

การฝึกอบรมเริ่มจากที่ผู้เข้ารับการฝึกอบรมได้เรียนรู้การจัดการภัยพิบัติโดยอาศัยชุมชนเป็นพื้นฐานขั้นพื้นฐาน รวมถึงการวิเคราะห์ความเสี่ยงในชุมชน, การวิเคราะห์ความเสี่ยงต่อภัยพิบัติ, การทำแผนที่ภัยพิบัติและเสี่ยงภัย, การวางแผนการจัดการภัยพิบัติและเกมส์จินตนาการด้านภัยพิบัติ (DIG) การซ้อมแผนอพยพ (Evacuation drill) จะทำเป็นกระบวนการสุดท้าย ซึ่งผลจากการฝึกอบรมนี้เป็นที่น่าประทับใจอย่างยิ่งสำหรับผู้เข้ารับการฝึกอบรม



การทำแผนที่ภัยพิบัติ

ความคาดหวังที่ได้จากผู้เข้ารับการฝึกอบรม คือ การจัดทำแผนการปฏิบัติการในสำนักงานป้องกันและบรรเทาสาธารณภัยจังหวัดของตนเองได้หลังจากได้อบรมในครั้งนี้ รวมถึงการนำความชำนาญและความรู้ที่ได้จากการเรียนรู้ไปใช้ให้เกิดประโยชน์

การฝึกอบรมวิทยากรกระบวนการครั้งที่ 2 จะถูกจัดขึ้นอีกครั้งในเดือนมิถุนายน พ.ศ. 2554 โดยกลุ่มเป้าหมายจะเป็นเจ้าหน้าที่จากสำนักงานป้องกันและบรรเทาสาธารณภัยจังหวัดและศูนย์ป้องกันและบรรเทาสาธารณภัยเขตที่มาจากส่วนกลางและทางภาคใต้



การวางแผนการฝึกอบรมสำหรับการเตรียมความพร้อมภัยพิบัติ

## การฝึกอบรมด้านการจัดการภัยพิบัติในโรงเรียน

โรงเรียนบ้านถ้ำตลอด  
อ.ทุ่งสง จ. นครศรีธรรมราช  
ระหว่างวันที่ 20-22 ธันวาคม พ.ศ. 2553

การฝึกอบรมเป็นเวลา 3 วัน สำหรับการให้ความรู้ด้านการจัดการภัยพิบัติ ระหว่างวันที่ 20 - 22 ธันวาคม พ.ศ. 2553 ณ โรงเรียนบ้านถ้ำตลอด จ. นครศรีธรรมราช ที่จัดขึ้นโดยกระทรวงศึกษาธิการ ได้มีผู้เข้ารับการฝึกอบรมเป็นครูจำนวน 25 คนและนักเรียนจำนวน 25 คน จากโรงเรียน 14 แห่งในพื้นที่ใกล้เคียงกับ อ. ทุ่งสง ซึ่งผู้เข้ารับการฝึกอบรมทุกคนได้ฝึกการทำแผนที่เสี่ยงภัย, การซ้อมแผนอพยพและการเรียนรู้วิธีการกู้ภัย



ในวันแรกของการฝึกอบรมด้านการจัดการภัยพิบัติในโรงเรียน ผู้เข้ารับการฝึกอบรมได้เรียนรู้เกี่ยวกับภัยพิบัติธรรมชาติ, สาเหตุของการเกิดภัยพิบัติและการเตรียมพร้อมเมื่อเกิดภัยพิบัติ วันที่สองเจ้าหน้าที่จากสำนักงานป้องกันและบรรเทาสาธารณภัย จ. นครศรีธรรมราช และอาสาสมัครกู้ภัยได้บรรยายเกี่ยวกับระบบการเตือนภัยล่วงหน้า, เครื่องมือวัดปริมาณน้ำฝนและกิจกรรมการบรรเทาทุกข์ นักเรียนได้เรียนรู้ว่าหลายหน่วยงานได้เข้ามาเกี่ยวข้องกับการจัดการด้านภัยพิบัติ เช่น การรับมือกับภัยพิบัติและความเข้าใจในความสัมพันธ์ ในการจัดการด้านภัยพิบัติ นอกจากนี้พวกเขาายังได้เรียนรู้ถึง ความยากลำบากในการค้นหาและช่วยเหลือผู้ประสบภัย กิจกรรมสุดท้าย คือ การซ้อมแผนอพยพของผู้เข้ารับการอบรมทุกคน

อย่างไรก็ตาม เนื่องจากวันที่สองมีฝนตก ทำให้มีเวลาไม่เพียงพอในการออกเดินสำรวจภูมิประเทศและสภาพแวดล้อมของชุมชนรอบโรงเรียน เพื่อนำมาศึกษาพื้นที่เสี่ยงภัยอันเป็นส่วนสำคัญในการสร้างแผนที่ภัยพิบัติ อย่างไรก็ตามก็ถือเป็นโอกาสที่ดีของผู้เข้ารับการฝึกอบรมที่จะได้ตระหนักถึงความยากลำบากในการค้นหาและช่วยเหลือผู้ประสบภัยท่ามกลางพายุอย่างเช่น เสียงดังจากฝนตกและถนนที่เป็นโคลนที่อาจขัดขวางการปฏิบัติการช่วยเหลือผู้ประสบภัย

ผู้เชี่ยวชาญ JICA ได้แลกเปลี่ยนเรื่องการให้ความรู้และการจัดการภัยพิบัติในประเทศญี่ปุ่นหลายประการ รวมถึงตัวอย่างของหลักสูตรการศึกษาด้านภัยพิบัติและการจัดการความปลอดภัยในโรงเรียน ซึ่งจัดขึ้นโดยกระทรวงศึกษาธิการ, วิทยาศาสตร์, กีฬาและเทคโนโลยีในประเทศญี่ปุ่น

ในวันสุดท้ายของการฝึกอบรม ผู้เข้ารับการฝึกอบรมได้ทำการทบทวนความรู้และจัดทำแผนปฏิบัติการการพัฒนาการให้ความรู้ด้านภัยพิบัติในแต่ละโรงเรียน

ปัจจุบันกระทรวงศึกษาธิการ ได้วางแผนการจัดการฝึกอบรมในแต่ละภูมิภาคเป็นประจำทุกปี ซึ่งใน พ.ศ. 2554 ก็เช่นเดียวกัน การสัมมนาเพื่อทบทวนความรู้จะจัดขึ้นที่กรุงเทพฯ เพื่อพิจารณาทบทวนถึงการฝึกอบรมที่ผ่านมา โดยวางแผนเป้าหมายไปที่การฝึกอบรมสอนครูต้นแบบ

แหล่งที่มาของข้อมูล:



MAEHARA NORITOSHI (Leader of the project)

SASAKI ARATA (CBDRM)

ONODERA JUN (Disaster Education)

กรมป้องกันและบรรเทาสาธารณภัย (DDPM)

3/12 ถ. อุทงนอก สวนดุสิต กรุงเทพฯ 10300

โทร : 02-637-3669

อีเมล: JICA.PCDDM2@gmail.com

# Project news letter

- โครงการยกระดับการจัดการภัยพิบัติของประเทศไทย ระยะที่ 2 -

## จัดสัมมนาเชิงปฏิบัติการการจัดการภัยพิบัติโดยชุมชน !

บ้านชัยชมพู่,บ้านแม่แสดม อ.เถิน จ. ลำปาง

บ้านม่วงสามปี อ.ลี้ จ. ลำพูน

วันที่ 16 – 27 พฤษภาคม 2554 ( 5 วัน x 2 ครั้ง)

ได้จัดสัมมนาเชิงปฏิบัติการเรื่องการจัดการภัยพิบัติ โดยชุมชนที่จังหวัดลำปาง และลำพูนขึ้นในวันที่ 16 – 27 พฤษภาคม 2554 ที่จังหวัดลำปาง ได้จัดการอบรมร่วมกันของ 2 หมู่บ้านคือบ้านชัยชมพู่,บ้านแม่แสดม และที่จังหวัดลำพูนได้เปิดการอบรมที่บ้านม่วงสามปี



สภาพการณ์เดือนภัยและการจัดทำแผนอพยพของชุมชน

ผู้นำชุมชนของแต่ละหมู่บ้านและผู้ปฏิบัติหน้าที่ด้านการจัดการภัยพิบัติ ประมาณ 20 - 30 คนจากแต่ละหมู่บ้านได้เข้าร่วมการอบรม ร่วมกันจัดทำแผนที่เสี่ยงภัยและเส้นทางอพยพ , พร้อมทั้งได้ตรวจสอบโครงสร้างและบทบาทหน้าที่เกี่ยวกับการจัดการภัยพิบัติภายใต้การแนะนำของวิทยากรจากสำนักงานป้องกันและบรรเทาสาธารณภัยจังหวัด สิ่งที่ได้จากการสัมมนานี้คือระบบเตือนภัยชุมชน และแผนการอพยพ สำหรับวันสุดท้ายของการสัมมนาเชิงปฏิบัติของแต่ละแห่ง ได้ประสานกับโรงเรียนประถมศึกษาทำการซ้อมแผนอพยพทั้งชุมชน ที่หมู่บ้านม่วงสามปีนั้น ยังได้ให้ความร่วมมือกับการสัมมนาเชิงปฏิบัติการของการเรียนการสอนการจัดการภัยพิบัติของโรงเรียนซึ่งได้จัดขึ้นในเวลาเดียวกันและได้ตรวจสอบระบบการสื่อสารของโรงเรียนกับชุมชนในตอนที่เกิดภัยพิบัติ



สภาพการณ์ซ้อมแผนอพยพร่วมกันกับรร.ประถมศึกษาม้าแม่แสดม

ในครั้งต่อไปมีแผนที่จะเปิดการสัมมนาเชิงปฏิบัติการเช่นเดียวกันนี้ในเดือนกุมภาพันธ์ – มีนาคม 2555 ที่ 2 หมู่บ้านจังหวัดลำปางและลำพูน (บ้านแม่ซ้อฟ้า, บ้านก้อหนอง)

## เปิดการสัมมนาเชิงปฏิบัติการการเรียนการสอนการจัดการภัยพิบัติในโรงเรียน !

โรงเรียนม่วงสามปี อำเภอลี้ จังหวัดลำพูน

วันที่ 24 – 27 พฤษภาคม 2554 ( 4 วัน)

ในวันที่ 24 - 27 พฤษภาคม 2554 ได้เปิดการสัมมนาเชิงปฏิบัติการการเรียนการสอนการจัดการภัยพิบัติขึ้นที่ภาคเหนือของประเทศไทยที่จังหวัดลำพูน ซึ่งไม่เพียงแต่คณะครูจากโรงเรียนใกล้เคียงเท่านั้น ยังมีผู้ที่เกี่ยวข้องกับการศึกษาอีก 25 คนจากพื้นที่ใกล้เคียงในจังหวัดลำปางมาเข้าร่วมด้วย ทั้งหมดรวมทั้งสิ้น 68 คน ทำให้งานสัมมนาครั้งนี้เป็นงานขนาดใหญ่



เพื่อที่จะให้คณะครูที่เข้าร่วมการสัมมนาได้ทราบถึงกิจกรรมของการจัดการภัยพิบัติที่ควรจะทำในฐานะที่เป็นสมาชิกของชุมชน เช่นการจัดทำแผนที่เสี่ยงภัยและการซ่อมแซมอพยพ เป็นต้น จึงจัดโอกาสในการสังเกตการณ์ของการสัมมนาเชิงปฏิบัติการส่วนหนึ่งของการจัดการภัยพิบัติของชุมชนที่ได้จัดขึ้นพร้อมกัน นอกจากนี้ผู้เชี่ยวชาญของ JICA ได้นำตัวอย่างของโรงเรียน Kamaishi ที่อพยพนักเรียนได้อย่างปลอดภัยในตอนที่เกิดสึนามิครั้งใหญ่ในภาคอีสานของญี่ปุ่น และทำให้ผู้เข้าสัมมนาเข้าใจอย่างลึกซึ้งถึงความมุ่งหมายของการเรียนการสอนการจัดการภัยพิบัติในโรงเรียนรวมถึงความตระหนักถึงความสำคัญของการอพยพ



ในการสัมมนาครั้งนี้ผอ. โรงเรียนบ้านถ้ำตลอดของจังหวัดนครศรีธรรมราชซึ่งได้จัดสัมมนาเชิงปฏิบัติการไปครั้งก่อนได้เข้าร่วมและได้ให้คำแนะนำกับคณะครูและนักเรียน ทั้งยังแลกเปลี่ยนข้อมูลและถ่ายทอดเทคนิคของการเรียนการสอนการจัดการภัยพิบัติให้กับโรงเรียนอีกด้วย

**เปิดสัมมนาเชิงปฏิบัติการของการจัดทำแผนป้องกันและบรรเทาสาธารณภัย !**

สำนักป้องกันและบรรเทาสาธารณภัยจังหวัด (โรงแรมในจังหวัดลำพูน)  
วันที่ 24 – 26 พฤษภาคม 2554 ( 3 วัน)

สำนักนโยบายของกรมป้องกันและบรรเทาสาธารณภัยซึ่งได้รับนโยบายอีกระดับหนึ่งจากแผนการป้องกันและบรรเทาสาธารณภัยจังหวัด ได้ร่วมกับผู้เชี่ยวชาญ JICA ส่งเสริมการจัดทำแผนการป้องกันและบรรเทาสาธารณภัยในระดับท้องถิ่น (DPM- Action Plan) ได้ช่วยเหลือในการจัดทำแผน DPM- Action Plan ของท้องถิ่น (เทศบาล/อบต.) ซึ่งนำไปดำเนินการ และคู่มือที่ส่งเสริมการใช้งานอย่างเหมาะสมและรวดเร็ว



นายศรีสมบัติ รองอธิบดี (ซ้าย)และนายชุมพร หัวหน้าสำนักป้องกันและบรรเทาสาธารณภัยจังหวัด (ขวา)ได้ให้เกียรติมาร่วมงาน

การจัดทำแผน DPM-Action Plan นั้นจะได้จัดทำแผนแม่แบบโดยผ่านการทำงานในจังหวัดที่เป็นต้นแบบ (จังหวัดลำปางและจังหวัดลำพูน) และจะได้ขยายการจัดทำแผน โดยอาศัยแผนแม่แบบไปทั่วประเทศ จากผลการดำเนินการตามนี้ จึงได้เลือกโรงแรมที่อยู่ในจังหวัดลำพูนเป็นสถานที่จัดการสัมมนาเชิงปฏิบัติการเพื่อที่จะจัดทำ Action plan ของจังหวัดต้นแบบ ในวันที่ 24-26 พค. ในการสัมมนานี้ได้มีผู้เข้าร่วมจากศูนย์เขต 10 ของกรมป้องกันและบรรเทาสาธารณภัยที่เกี่ยวข้องกับจังหวัดต้นแบบ และคณะทำงานจากจังหวัด อีกทั้งผู้ที่เป็นตัวแทนจากท้องถิ่นที่จะจัดทำแผน โดยตรง รวมทั้งสิ้น 200 คน โดยแบ่งเป็น 3 วัน นอกจากนี้ยังมีผู้แทนจากกระทรวงศึกษาธิการอีก 6 คนเข้าร่วมด้วย

ในการสัมมนาเชิงปฏิบัติการนั้น เริ่มต้นได้อธิบายโครงสร้างของแผนการป้องกันและบรรเทาสาธารณภัยระดับประเทศ จังหวัดก่อน, ต่อไปจึงอธิบายรูปแบบของแผน Action plan แม่แบบในระดับท้องถิ่น และติดตามด้วยการสัมมนาเชิงปฏิบัติการ ซึ่งให้ศึกษาแต่ละบทของ Action plan และส่งเสริมความเข้าใจรายละเอียดของแผนงานได้และแลกเปลี่ยนความคิดเห็นเชิงโครงสร้างมุ่งสู่การจัดทำแผน



จากการสัมมนาเชิงปฏิบัติการในครั้งนี้ ผู้ที่เกี่ยวข้องจากแต่ละท้องถิ่นสามารถเข้าใจถึงแผนแม่แบบในปัจจุบันได้อย่างพอเพียง และรู้สึกว่ามีความสามารถจะจัดการได้แม้ว่าจะมีความยากลำบากในการทำงานก็ตาม

ติดต่อสอบถาม:



Maehara Noritoshi (ผจก.ทั่วไประบบโครงสร้างการป้องกันภัยพิบัติ)  
Jitsuhiro Noboru (แผนการป้องกันภัยพิบัติ)  
Sasaki Arata (การจัดการภัยพิบัติชุมชน)  
Onodera Jun (การเรียนการสอนการจัดการภัยพิบัติ)

Department of Disaster Prevention and Mitigation  
3/12 U Thong Nok Rd. Dusit, Bangkok 10300  
Tel 02-637-3669  
e-mail: JICA.PCDDM2@gmail.com



# No. 3 June 2011 Project news letter

แผนการจัดการภัยพิบัติ  
การจัดการภัยพิบัติโดยชุมชน  
การเรียนการสอนการจัดการภัยพิบัติ  
การฝึกอบรมการจัดการภัยพิบัติ

- โครงการยกระดับการจัดการภัยพิบัติของประเทศไทย ระยะที่ 2 -

เปิดการสัมมนาเชิงปฏิบัติการการฝึกอบรมวิทยากรกระบวนการ

(Facilitator) การจัดการภัยพิบัติชุมชนครั้งที่ 2 !

วิทยาลัยป้องกันและบรรเทาสาธารณภัย(วิทยาเขตภูเก็ต)

วันที่ 6-9 มิถุนายน 2554 (4 วัน)

ได้เปิดการสัมมนาเชิงปฏิบัติการการฝึกอบรมวิทยากรกระบวนการ (Facilitator) ครั้งที่ 2 ให้กับเจ้าหน้าที่ของสำนักงานป้องกันและบรรเทาสาธารณภัยเขตพื้นที่เมื่อวันที่ 6-9 มิถุนายน ครั้งนี้ได้เชิญเจ้าหน้าที่จากภาคกลางและภาคใต้มาเข้าร่วมจำนวนประมาณ 50 คน

ในการสัมมนาเชิงปฏิบัติการครั้งนี้ ได้จัดสรรเวลาส่วนมากให้กับการสาธิตเพื่อที่จะให้มีความสามารถเชิงปฏิบัติคิดตัวเพื่อที่จะดำเนินกิจกรรมการจัดการภัยพิบัติในชุมชน



ผู้เข้าร่วมจากสำนักป้องกันและบรรเทาสาธารณภัยจังหวัดนั้นเมื่อกลับไปสำนักงานจังหวัดแล้วจะนำประสบการณ์ครั้งนี้ไปต่อยอด และวางแผนส่งเสริมการจัดการภัยพิบัติชุมชนต่อไป โดยที่ได้คาดหวังว่าผู้เข้าร่วมการฝึกอบรมในครั้งนี้จะได้แสดงบทบาทความเป็นผู้นำเพื่อที่จะขยายผลกิจกรรมการจัดการภัยพิบัติชุมชนในแต่ละเขต,แต่ละจังหวัดต่อไป

การจัดสัมมนาเชิงปฏิบัติครั้งที่ 3 นั้นคาดว่าจะเปิดสัมมนาราวต้นเดือนธันวาคม 2555 ซึ่งจะให้การอบรมกับเจ้าหน้าที่ของการปกครองส่วนท้องถิ่น

เปิดงานการฝึกอบรมโดยการศึกษาหัดบนแผนที่การป้องกันภัยพิบัติ !

โรงแรมรอยัล ริเวอร์(กรุงเทพ)

วันที่ 8 – 10 มิถุนายน 2554 (3 วัน)

ได้เปิดงานการฝึกอบรมของการศึกษาหัดบนแผนที่การจัดการภัยพิบัติ ณ โรงแรมกรุงเทพ เมื่อวันที่ 8 – 10 มิถุนายน เป็นเวลา 3 วัน งานการฝึกอบรมนั้นได้จัดขึ้นโดยความร่วมมือของสำนักนโยบายกรมป้องกันและบรรเทาสาธารณภัย (DDPM) กับผู้เชี่ยวชาญของ JICA สำหรับผู้เข้าร่วมงานนั้นเป็นเจ้าหน้าที่จากศูนย์เขตและสำนักงานป้องกันและบรรเทาสาธารณภัยจังหวัด ซึ่งได้รับการเชิญจากส่วนกลางของกรมและจากทั่วประเทศ ซึ่งมีจำนวนมากกว่า 230 คนทำให้กลายเป็นงานฝึกอบรมขนาดใหญ่

ผู้เข้าร่วมการฝึกอบรมนี้ เริ่มต้นได้ให้ฟังการบรรยายประเภทและจุดเด่นของการศึกษาหัดบนแผนที่ และทำความเข้าใจการบรรยายโดยรวม ต่อจากนั้นได้อธิบายหัวข้อสำคัญในการดำเนินการและทำการฝึกปฏิบัติสำหรับวิธี Image Training และวิธี Roll playing และได้รับประสบการณ์เชิงจำลองของการศึกษาหัดบนแผนที่ จากการฝึกอบรม เป็นเวลา 3 วัน ผู้เข้าร่วมได้ทำกิจกรรมอย่างเข้มข้นและเข้าใจเกี่ยวกับการศึกษาหัดบนแผนที่อย่างลึกซึ้ง



เนื่องจากในการฝึกอบรมนี้มีผู้เข้าร่วมมาก จึงได้แบ่งเป็น 18 ทีมตามศูนย์เขตพื้นที่ ดังนั้นจึงจำเป็นต้องมีวิทยากรกระบวนการ (Facilitator) ถึงประมาณ 20 คน เบื้องหลังของความสำเร็จของการฝึกอบรม 3 วันคือวิทยากรกระบวนการ (Facilitator) ที่แทบจะไม่มีประสบการณ์การศึกษาหัดบนแผนที่ได้ประชุมหรือกับผู้เชี่ยวชาญ JICA และเตรียมการล่วงหน้า ซึ่งอาจจะกล่าวได้ว่าประสบการณ์และการสร้างวิทยากรกระบวนการ (Facilitator) เป็นหนึ่งในผลที่ได้จากการฝึกอบรมนี้

ต่อไป คาดว่าจะเปิดการศึกษาหัดบนแผนที่โดยที่มีวัตถุประสงค์ที่จะพิสูจน์แผนการจัดการภัยพิบัติท้องถิ่นในพื้นที่ต้นแบบ ในเดือนมกราคม 2555

## เปิดการสัมมนาเชิงปฏิบัติการการเรียนการสอนการจัดการภัยพิบัติ !

โรงเรียนบ้านแก่งหลวง (จ.กาญจนบุรี)  
วันที่ 20 – 22 มิถุนายน 2554 (3 วัน)

ได้เปิดการสัมมนาเชิงปฏิบัติการการเรียนการสอนการจัดการภัยพิบัติขึ้นที่โรงเรียนบ้านแก่งหลวงที่อยู่ในเขตพื้นที่อบต. เกาะสำโรง จังหวัดกาญจนบุรี เมื่อวันที่ 20 – 22 มิถุนายน เป็นเวลา 3 วัน



คณะครูจากจังหวัดใกล้เคียงเช่น อุทัยฯ, สุพรรณบุรี, ลพบุรี เป็นต้น ได้เข้าร่วมจำนวนมากกว่า 70 คน ในการอบรมนี้ได้ทำให้เข้าใจอย่างลึกซึ้งในเรื่องที่นอกจากการเรียนการสอนที่เป็นต้นแบบที่ใช้ตำราที่ได้พัฒนาขึ้นในระยะที่ 1 แล้ว ยังมีเรื่องการจัดการภัยพิบัติของชุมชน

เกาะสำโรงเป็นท้องถิ่นที่ได้จัดการสัมมนานี้ได้ถูกคัดเลือกจากกรมป้องกันและบรรเทาสาธารณภัยเป็น “อบต. ที่มีหมู่บ้านที่เข้มแข็ง” ในท้องถิ่นนี้ได้รับการผลักดันเรื่องความร่วมมือระหว่างส่วนท้องถิ่น โดยโครงการ JICA และได้สร้างโครงสร้างที่ให้ร่วมมือในการดูแลจัดการภัยพิบัติขององค์กรปกครองส่วนท้องถิ่นเริ่มต้น 4 แห่งของจังหวัดกาญจนบุรี ในการซ้อมแผนอพยพ ได้รับความร่วมมืออย่างเต็มที่จากนายอบต. และหน่วยสนับสนุน ทำให้เป็นการซ้อมแผนอพยพที่สามารถสัมผัสได้ถึงความเข้มแข็งของศักยภาพการจัดการภัยพิบัติที่มีเครือข่ายชุมชนที่แข็งแรง



ติดต่อสอบถาม:



Machara Noritoshi (ผกททั่วไป/ระบบโครงสร้างการจัดการภัยพิบัติ)  
Jitsuhiro Noboru (แผนการจัดการภัยพิบัติ)  
Sasaki Atari (การจัดการภัยพิบัติชุมชน)  
Onodera Jun (การเรียนการสอนการจัดการภัยพิบัติ)

Department of Disaster Prevention and Mitigation  
3/12 U Thong Nok Rd. Dusit, Bangkok 10300  
Tel 02-637-3669  
e-mail: JICA.PCDDM2@gmail.com

## เปิดการฝึกอบรมวิทยากร (Master Trainer) รับมือสาธารณภัย !

วิทยาลัยป้องกันและบรรเทาสาธารณภัย(บางขุน ปทุมธานี)  
20 – 24 มิถุนายน 2554 (5 วัน)

ได้เปิดการฝึกอบรมวิทยากร (Master Trainer) ที่เน้นการรับมือต่อสาธารณภัย (โดยเฉพาะน้ำท่วม, น้ำหลาก, และดินโคลนถล่ม) ที่วิทยาลัยป้องกันและบรรเทาสาธารณภัย เมื่อวันที่ 20 – 24 มิถุนายน เป็นเวลา 5 วัน

เจ้าหน้าที่ 45 คนจากกรมป้องกันและบรรเทาสาธารณภัย, ศูนย์เขต, วิทยาลัยป้องกันและบรรเทาสาธารณภัย ได้เข้าร่วมการฝึกอบรม ได้เรียนรู้เทคนิคต่างๆ ในการนำเสนอเพื่อที่จะสอนเจ้าหน้าที่, ฝึกหัดบนแผนที่การจัดการภัยพิบัติเพื่อที่จะมีประโยชน์ในการใช้ความรู้จริง รวมถึงมีความรู้ที่จำเป็นในการรับมือต่อภัยพิบัติอีกด้วย

ในการอบรมนี้ออกจากการบรรยายเชิงปฏิบัติเรื่องการรับมือต่อภัยพิบัติน้ำท่วม, ดินถล่ม และการจัดการภัยพิบัติของชุมชน โดยกรมป้องกันและบรรเทาสาธารณภัย, ภูมิอากาศ, การเตือนล่วงหน้าเรื่องน้ำท่วมจากกรมอุตุนิยมวิทยา, การจัดการน้ำท่วมจากกรมชลประทาน, การจัดการภัยพิบัติดินหินถล่ม แล้ว ได้มีการบรรยายจากผู้เชี่ยวชาญของ JICA เรื่องบทเรียนจากแผ่นดินไหวครั้งใหญ่ในภาคอีสานญี่ปุ่น, เทคโนโลยีของการป้องกันแม่น้ำ, และกิจกรรมการป้องกันน้ำท่วม และการบรรยายการฝึกหัดบนแผนที่การจัดการภัยพิบัติและการสาธิต



การฝึกอบรมนี้ได้คาดหวังว่าเมื่อผู้เข้าร่วมการฝึกอบรม กลับไปยังที่ทำงานของตนแล้วจะทำการฝึกฝนและ ทำOJTและจะปฏิบัติงานเป็น Master Trainer ที่จะชี้แนะให้กับเจ้าหน้าที่ สำหรับการฝึกอบรมครั้งต่อไปคาดว่าจะเปิดการฝึกอบรมสำหรับเจ้าหน้าที่ปฏิบัติงานการจัดการภัยพิบัติในต้นปี 2555 เมื่อหมดฤดูฝนแล้ว

# Project news letter

No. 4 August 2012

防災計画  
防災研修  
洪水管理

- タイ国防災能力向上プロジェクト・フェーズ 2 -

## การฝึกอบรมเจ้าหน้าที่จากกรมป้องกันและบรรเทาสาธารณภัย เพื่อรับมือภัยพิบัติทางธรรมชาติ !

วิทยาลัยป้องกันและบรรเทาสาธารณภัย (วิทยาเขตปทุมธานี)

ครั้งที่ 1 : 14 – 18 พฤษภาคม 2555 (5 วัน)

ครั้งที่ 2 : 21 – 25 พฤษภาคม 2555 (5 วัน)

ช่วงเวลา 2 สัปดาห์ระหว่างวันที่ 14 – 18 พฤษภาคมและ 21 – 25 พฤษภาคม 2555 วิทยาลัยป้องกันและบรรเทาสาธารณภัยภายใต้สังกัดกรมป้องกันและบรรเทาสาธารณภัย (ปก.) ได้จัดอบรมเพื่อพัฒนาวิธีการรับมือภัยพิบัติทางธรรมชาติ (โดยเฉพาะอุทกภัย, น้ำป่าไหลหลาก และดินโคลนถล่ม)

เจ้าหน้าที่ผู้เข้าร่วมฝึกอบรม 2 ครั้งรวมทั้งหมด 91 คน จากกรมป้องกันและบรรเทาสาธารณภัย, ศูนย์ป้องกันและบรรเทาสาธารณภัยเขต, สำนักงานป้องกันและบรรเทาสาธารณภัยจังหวัด และวิทยาลัยป้องกันและบรรเทาสาธารณภัย

ระหว่างการศึกษาอบรม นอกเหนือจากวิทยากรของกรมป้องกันและบรรเทาสาธารณภัย ยังได้รับความร่วมมือจากวิทยากรของหน่วยงานที่เกี่ยวข้องและผู้เชี่ยวชาญพิเศษจาก JICA โดยวิทยากรแต่ละท่านได้จัดบรรยายโดยมีหัวข้อสำคัญดังต่อไปนี้

- ประสบการณ์ ประเด็นปัญหา และวิธีแก้ไขจากเหตุการณ์อุทกภัย 2554, การรับมือภัยจากดินโคลนถล่ม และความสำคัญของการป้องกันภัยพิบัติในชุมชน (ปก.)
- ความรู้พื้นฐานทางด้านสภาพภูมิอากาศ, ภัยพิบัติทางธรรมชาติในประเทศไทย, การเปลี่ยนแปลงของสภาพภูมิอากาศ, การสังเกตสภาพภูมิอากาศและการเตือนภัยล่วงหน้า (กรมอุตุนิยมวิทยา)
- วิเคราะห์เหตุการณ์อุทกภัย 2554, การรับมือในอนาคตรวมถึงภัยพิบัติที่เกี่ยวข้องกับวิธีรับมืออุทกภัย (กรมชลประทาน)
- สถานการณ์และวิธีรับมือภัยดินโคลนถล่ม (กรมทรัพยากรธรณี)
- บทเรียนจากเหตุการณ์แผ่นดินไหวในภาคตะวันออกเฉียงเหนือของประเทศไทย, วิศวกรรมน้ำ, โครงสร้างอาคาร และกิจกรรมป้องกันอุทกภัย, การรับมือภัยดินโคลนถล่มในประเทศไทย (ผู้เชี่ยวชาญ JICA)

นอกจากนี้ ในช่วงครึ่งหลังของการฝึกอบรม ยังมีกิจกรรมทบทวนแผนป้องกันภัยพิบัติแต่ละระดับ และการฝึกซ้อมแผนบนโต๊ะในรูปแบบการจำลองสถานการณ์เพื่อช่วยพัฒนาการบริหารงานของสำนักนโยบายป้องกันและบรรเทาสาธารณภัยต่อไป



ผู้เข้าร่วมอบรมกำลังอภิปรายถึงวิธีการรับมือสถานการณ์ตัวอย่าง

เจ้าหน้าที่จำนวนมากประสบปัญหาในการรับมือเหตุการณ์อุทกภัยครั้งรุนแรงในปี 2554 ซึ่งเชื่อว่าจะเกิดขึ้นทุก 50 ปี ทั้งนี้ผู้เข้าร่วมการอบรมได้รับฟังบรรยายและบทเรียนด้วยความตั้งใจ

## การจัดสัมมนาเชิงปฏิบัติการฝึกซ้อมแผนป้องกันภัยพิบัติ !

โรงแรม มิวราเคิล แกรนด์ คอนเวนชั่น (กรุงเทพฯ)

13 – 15 มิถุนายน 2555 (3 วัน)

สำนักนโยบายป้องกันและบรรเทาสาธารณภัยร่วมกับผู้เชี่ยวชาญพิเศษจาก JICA จัดสัมมนาเชิงปฏิบัติการการฝึกซ้อมแผนป้องกันภัยพิบัติขึ้นในโรงแรมใจกลางกรุงเทพฯ ระหว่างวันที่ 13 -15 มิถุนายน 2555 รวมเป็นเวลา 3 วัน ผู้เข้าร่วมงานคือเจ้าหน้าที่จากกรมป้องกันและบรรเทาสาธารณภัยรวมทั้งเจ้าหน้าที่จากศูนย์ปก.เขตและศูนย์ปก.จังหวัด ถือเป็นสัมมนาเชิงปฏิบัติการขนาดใหญ่ที่มีผู้ร่วมงานกว่า 280 คน จุดประสงค์ในการจัดงานครั้งนี้คือ

- (1) จัดฝึกอบรมเพื่อจัดทำแผนงานดำเนินการป้องกันภัยพิบัติระดับหมู่บ้าน ตำบล และอำเภอภายใต้การสนับสนุนของเจ้าหน้าที่ประจำจังหวัด
- (2) ดำเนินการฝึกซ้อมแผนบนโต๊ะเพื่อทบทวนเหตุการณ์อุทกภัย 2554 ซึ่งการฝึกซ้อมแผนบนโต๊ะดังกล่าวมีรายละเอียดดังต่อไปนี้

ก่อนหน้านี้ สำนักนโยบายได้จัดสัมมนาเชิงปฏิบัติการขึ้นเพื่อแนะนำวิธีการฝึกซ้อมแผนบนโต๊ะ (กลุ่มเป้าหมายคือเจ้าหน้าที่ปก.จังหวัด) และจัดการฝึกซ้อมแผนบนโต๊ะ (กลุ่มเป้าหมายคือหมู่บ้าน ตำบล และอำเภอต้นแบบ) เพื่อตรวจสอบแผนงานดำเนินการป้องกันภัยพิบัติ ทั้งสองกิจกรรมใช้รูปแบบการจำลองสถานการณ์ (Role Play) แต่สำหรับการฝึกซ้อมแผนบนโต๊ะในครั้งนี้ ใช้วิธีการวางแผนรับมือสถานการณ์ที่คาดว่าจะเกิดขึ้น (Scenario Driven) วิธี Scenario Driven หมายถึงการอภิปรายและพิจารณาหาวิธีรับมือสถานการณ์หรือปัญหาตัวอย่าง เป็นวิธีที่ที่เหมาะสมกับการจัดทำแผนงาน

ในงานสัมมนาเชิงปฏิบัติการจะแบ่งกลุ่มตามศูนย์ปก.เขตทั้ง 18 แห่งทั่วประเทศ (1) นำเสนอข้อมูล “การดำเนินการสำคัญของศูนย์ปก.จังหวัดในการรับมือเหตุการณ์อุทกภัย 2554” ซึ่งจัดทำโดยตัวแทนของแต่ละจังหวัดเอาไว้ล่วงหน้า (2) จากนั้นจึงแบ่งลักษณะการดำเนินการที่สำคัญของแต่ละจังหวัดตามตำแหน่งนโยบายในแผนการป้องกันภัยพิบัติระดับจังหวัด และสรุปหาวิธีการรับมือของแต่ละจังหวัดที่ดำเนินการไปแล้วและเกิดประสิทธิภาพ รวมถึงประเด็นปัญหาในอนาคต ขั้นตอนการทบทวนการฝึกซ้อมดังกล่าวจะช่วยให้ทุกคนรู้ผลการดำเนินการรับมืออุทกภัยและปัญหาที่เกิดขึ้นของเจ้าหน้าที่ศูนย์ปก.เขตในปีที่แล้ว (3) จากนั้น แต่ละกลุ่มจะคัดเลือกวิธีการดำเนินการที่คิดว่าสำคัญ เพื่อจัดทำเป็นสถานการณ์จำลองเกี่ยวกับเหตุการณ์น้ำท่วมในปีที่แล้วกลุ่มละ 1 เหตุการณ์

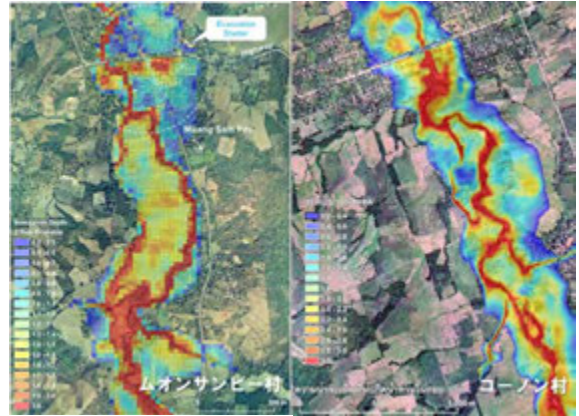
จากสถานการณ์จำลองที่สร้างขึ้นมา (4) ในขั้นตอนสุดท้าย ให้แต่ละกลุ่มฝึกซ้อมโดยใช้รูปแบบ Scenario Driven ในการฝึกซ้อม ผู้เข้าร่วมกิจกรรมจะพิจารณาสถานการณ์ (ประเด็นปัญหา) แต่ละข้อ แล้วอภิปรายหาวิธีรับมือที่ควรปฏิบัติเมื่อเกิดภัยพิบัติขึ้น (การรับมือเมื่อเกิดภัยพิบัติ) และการรับมือที่ต้องเตรียมการไว้ล่วงหน้า (การเตรียมตัวล่วงหน้า, การป้องกัน) สุดท้าย ให้นำเสนอผลการฝึกซ้อมในรูปแบบการอภิปรายเป็นคณะ (Panel Discussion) เพื่อให้ผู้เข้าร่วมงานทุกคนรับรู้ข้อมูลร่วมกัน

จากการฝึกซ้อมในครั้งนี้ วิธีการฝึกซ้อมแบบ Scenario Driven ช่วยสรุปบทเรียนจากภัยพิบัติครั้งรุนแรง เช่น เหตุการณ์อุทกภัยในปี 2554 ผู้ร่วมงานตระหนักว่าวิธีนี้เป็นวิธีที่มีประโยชน์ต่อกิจกรรมการป้องกันภัยพิบัติในอนาคต ผลของการฝึกซ้อมในครั้งนี้จะไม่จบลงเพียงแค่ฝึกซ้อมเท่านั้น แต่หวังว่าจะเกิดประโยชน์ต่อการจัดทำแผนป้องกันภัยพิบัติของแต่ละจังหวัดต่อไปในอนาคต



บรรยากาศการฝึกซ้อมแผนบนโต๊ะ (1 ใน 18 กลุ่ม)

ตั้งแต่เดือนมกราคม 2555 เป็นต้นมา มีการจัดฝึกอบรมเจ้าหน้าที่เทคนิคของกรมป้องกันและบรรเทาสาธารณภัยอย่างต่อเนื่องเรื่องการวิเคราะห์ข้อมูลอุทกศาสตร์และทิศทางเคลื่อนที่ของเส้นทางน้ำ, นโยบายเรื่องการรुक้ำพื้นที่ริมตลิ่ง, การวิเคราะห์ภาวะน้ำเอ่อล้นฝั่ง, แผนที่เสี่ยงภัย และระบบการเตือนภัยระยะแรก ในการฝึกอบรมดังกล่าว ได้มีการจัดทำแผนที่เขตนํ้าท่วมถึงของพื้นที่ต้นแบบในหมู่บ้านม่วงสามปีในจังหวัดลำพูนซึ่งเป็นพื้นที่ต้นแบบและหมู่บ้านก้อหนอง และได้นำแผนที่เขตนํ้าท่วมถึงดังกล่าวไปแนะนำในงานสัมมนาเชิงปฏิบัติการการป้องกันภัยพิบัติในชุมชนของทั้งสองหมู่บ้าน เพื่อใช้สร้างแผนที่พื้นที่อุทกภัยต่อไป



นอกจากนี้ ในขณะทำงานยังมีวัตถุประสงค์เพื่อพัฒนาระบบการเตือนภัยระยะแรกในชุมชน จึงมีการติดตั้งเครื่องวัดปริมาณน้ำฝนและเครื่องวัดระดับน้ำแบบง่ายๆ ในพื้นที่ต้นแบบ พร้อมดำเนินการติดตามหาความสัมพันธ์ระหว่างลักษณะของฝนที่ตกลงมาในพื้นที่กั้นระดับน้ำ

ข้อมูลที่ได้จากกิจกรรมสัมมนาเชิงปฏิบัติการเรื่องการป้องกันภัยพิบัติจะเป็นประโยชน์อย่างยิ่งต่อชุมชน สามารถนำไปใช้เป็นเครื่องมือในการแจ้งอพยพและการดำเนินการอพยพได้อย่างราบรื่น



ตั้งแต่เดือนสิงหาคม 2555 เป็นต้นไป เจ้าหน้าที่ที่เข้ารับการฝึกอบรมข้างต้นจะเริ่มทำหน้าที่วิทยากร และเริ่มจัดฝึกอบรมให้เจ้าหน้าที่เทคนิคในศูนย์ปก.เขตทั้ง 18 แห่งทั่วประเทศ

### การฝึกอบรมการจัดการความเสี่ยงในการเกิดอุทกภัย!

กรมป้องกันและบรรเทาสาธารณภัย  
มกราคม – กรกฎาคม 2555 (6 เดือน)

ในประเทศไทย กระทรวงและหน่วยงานที่เกี่ยวข้องได้เริ่มจัดทำแผนที่เสี่ยงภัย (Hazard Map) ในระดับประเทศและระดับจังหวัด แต่ในขณะเดียวกันการจัดเตรียมแผนที่ภัยพิบัติอย่างละเอียดในระดับภูมิภาคซึ่งถือเป็นข้อมูลพื้นฐานสำหรับการพัฒนากิจกรรมป้องกันภัยพิบัติระดับชุมชนกลับดำเนินไปอย่างล่าช้า

นอกจากนี้ งานก่อสร้าง เช่น การสร้างท่อบก้นน้ำหรือฝายขนาดเล็กซึ่งดำเนินการโดยหน่วยงานท้องถิ่นเป็นการก่อสร้างโดยขาดการสำรวจพื้นที่จริงและไม่ได้สร้างตามหลักการที่เหมาะสม การป้องกันและบรรเทาสาธารณภัยในระดับท้องถิ่นจึงมีจุดที่ต้องแก้ไขอยู่หลายจุด อาทิเช่นปัญหาลังก่อสร้างพังทลายโดยง่ายจากเหตุอุทกภัย

จากสาเหตุดังกล่าว โครงการนี้จึงกำหนดคณะทำงาน (Taskforce) ที่ทำหน้าที่จัดการความเสี่ยงในการเกิดอุทกภัยได้รับความร่วมมือของกระทรวงและหน่วยงานที่เกี่ยวข้อง และทำหน้าที่สนับสนุนกิจกรรมต่างๆ

お問い合わせ：



前原規利 (総括/防災組織体制)  
実広 登 (防災計画)  
小池 徹、児玉 真 (洪水リスク管理)

Department of Disaster Prevention and Mitigation  
3/12 U Thong Nok Rd. Dusit, Bangkok 10300  
Tel 02-637-3669  
e-mail: JICA.PCDDM2@gmail.com

# Project news letter

- タイ国防災能力向上プロジェクト・フェーズ 2 -

## การสัมมนาฝึกอบรมเจ้าหน้าที่ป้องกันภัยพิบัติในชุมชน สำหรับเจ้าหน้าที่การปกครองส่วนท้องถิ่น!

13 - 17 กุมภาพันธ์ 2555 (4 วัน)

ในเดือนกุมภาพันธ์ 2555 มีการจัดสัมมนาฝึกอบรมเจ้าหน้าที่ด้านการป้องกันภัยพิบัติในชุมชน โดยมีกลุ่มเป้าหมายคือเจ้าหน้าที่จากองค์กรปกครองส่วนท้องถิ่นในจังหวัดลำปางและลำพูน การพัฒนากิจกรรมการป้องกันภัยพิบัติในชุมชนให้เข้มแข็งยิ่งขึ้นไม่ใช่หน้าที่ของกรมป้องกันและบรรเทาสาธารณภัยเพียงอย่างเดียวเท่านั้น แต่ต้องอาศัยการดำเนินการจากองค์กรปกครองส่วนท้องถิ่นเป็นหลัก ภายในงานสัมมนา มีการบรรยายเกี่ยวกับสถานการณ์ภัยพิบัติของประเทศไทยในปัจจุบัน และความสำคัญของกิจกรรมการป้องกันภัยพิบัติที่จัดขึ้นโดยชุมชน พร้อมแนะนำตัวอย่างกิจกรรมการป้องกันภัยพิบัติในชุมชนของต่างประเทศ เช่น ประเทศญี่ปุ่น ผู้เข้าร่วมงานได้ตระหนักถึงบทบาทหน้าที่ขององค์กรปกครองส่วนท้องถิ่นมากขึ้น

ในงานสัมมนาครั้งนี้ เจ้าหน้าที่จากสมาคมผู้นำการป้องกันภัยพิบัติโอจีไอได้ช่วยสาธิตและแนะนำวิธีการจัดกิจกรรมการป้องกันภัยพิบัติในชุมชนของจังหวัดโอจีไอให้ผู้ร่วมงานรับชม



## จัดสัมมนาเชิงปฏิบัติการป้องกันภัยพิบัติในชุมชน!

หมู่บ้านแม่ซ้อฟ้าและหมู่บ้านจอกฟ้า อำเภอแจ้ห่ม จังหวัดลำปาง  
20 - 24 กุมภาพันธ์ 2555  
หมู่บ้านก้อหนองและหมู่บ้านก้อทุ่ง อำเภอลี้ จังหวัดลำพูน  
5 - 8 มีนาคม 2555

เมื่อวันที่ 20 กุมภาพันธ์ถึงวันที่ 8 มีนาคม 2555 มีการจัดสัมมนาเชิงปฏิบัติการการป้องกันภัยพิบัติในชุมชนครั้งที่ 3 และครั้งที่ 4 ขึ้นในจังหวัดลำปางและจังหวัดลำพูน จากการเรียนรู้ในการฝึกอบรมเจ้าหน้าที่ด้านการป้องกันภัยพิบัติในชุมชนเมื่อปี 2553 และสัมมนาเชิงปฏิบัติการการป้องกันภัยพิบัติในชุมชนเมื่อปี 2554 สัมมนาเชิงปฏิบัติการครั้งนี้จัดขึ้นตามคำชี้แนะของเจ้าหน้าที่กรมป้องกันและบรรเทาสาธารณภัย

ในการสัมมนาเชิงปฏิบัติการครั้งนี้มีทั้งอาจารย์และนักเรียนให้ความสนใจเข้าร่วมกิจกรรม และมีการจัดบทเรียนเรื่องการอพยพขึ้นในวันสุดท้าย บริเวณหมู่บ้าน กิจกรรมการป้องกันภัยพิบัติในชุมชนที่จังหวัดลำปางและลำพูนเป็นการจัดกิจกรรมครั้งสุดท้ายในโครงการ อย่างไรก็ตามทางโครงการแต่หวังเป็นอย่างยิ่งว่ากิจกรรมนี้จะเป็นตัวอย่างที่เผยแพร่และพัฒนาสู่ชุมชนอื่นๆต่อไปในอนาคต



## นำกิจกรรมการเรียนรู้เพื่อป้องกันภัยพิบัติของ NPO Plus Arts มา ปรับใช้ในกิจกรรมการเรียนรู้เพื่อป้องกันภัยพิบัติของประเทศไทย!

กรกฎาคม - สิงหาคม 2555

กรมป้องกันและบรรเทาสาธารณภัยจัดค่ายการเรียนรู้เพื่อป้องกันภัยพิบัติสำหรับนักเรียนระดับมัธยมศึกษาโดยนำโปรแกรมการเรียนรู้เพื่อป้องกันภัยพิบัติที่สนุกสนาน อีสะ! คะเอรุ คาราวาน ซึ่งสร้างสรรค์ขึ้นโดย NPO Plus Arts ในโอกาสครบรอบ 10 ปีการเกิดแผ่นดินไหวครั้งรุนแรงในเมืองโกเบเมื่อปี 1995 มาปรับใช้กับกิจกรรมของประเทศไทย โปรแกรม "อีสะ! คะเอรุ คาราวาน" เป็นกิจกรรมที่สร้างขึ้นในประเทศญี่ปุ่น แต่ในปัจจุบัน กิจกรรมดังกล่าวเริ่มแพร่หลายในทวีปอเมริกากลาง เอเชียและตะวันออกกลาง ประเทศไทยเริ่มจัดเตรียมกิจกรรมดังกล่าวตั้งแต่ปีที่ผ่านมา และในปีนี้มีการจัดค่ายการเรียนรู้เพื่อป้องกันภัยพิบัติขึ้นใน 4 จังหวัด จังหวัด ได้แก่ จังหวัดสงขลา จังหวัดขอนแก่น จังหวัดอุบลราชธานี และจังหวัดเชียงรายได้ชื่อ "IKC (Iza Kaeru Caravan) Thailand" ในอนาคตมีแผนจะจัดกิจกรรมดังกล่าวสำหรับนักเรียนระดับประถมศึกษาต่อไป



## แจกคู่มือป้องกันภัยพิบัติในโรงเรียนให้กับสำนักงานเขตพื้นที่การศึกษาทั่วประเทศ!

เมื่อเดือนมิถุนายน 2555 ที่ผ่านมา สำนักงานคณะกรรมการการศึกษาขั้นพื้นฐาน ได้แจกจ่ายคู่มือป้องกันภัยพิบัติภายในโรงเรียนไปยังสำนักงานเขตพื้นที่การศึกษา 225 แห่งทั่วประเทศ และจัดสัมมนาเชิงปฏิบัติการเรื่องการจัดการศึกษาเพื่อเตรียมความพร้อมเผชิญสถานการณ์ทางภัยพิบัติอย่างต่อเนื่อง โดยจัดในพื้นที่ 5 ภูมิภาครวมทั้งกรุงเทพมหานคร มีผู้อำนวยการสำนักงานเขตพื้นที่การศึกษาและผู้อำนวยการสถานศึกษาเข้าร่วมทั้งหมดรวม 1,000 คน ภายในงานสัมมนาได้มีการแนะนำบทเรียนการป้องกันภัยพิบัติจากโรงเรียนต้นแบบ เพื่อสร้างความเข้าใจเกี่ยวกับนโยบายการจัดการการป้องกันภัยพิบัติในโรงเรียนและการเรียนรู้เรื่องการป้องกันภัยพิบัติให้ลึกซึ้งมากยิ่งขึ้น



พื้นที่จัดสัมมนาได้แก่ กรุงเทพมหานคร (30 มิ.ย. - 1 ก.ค.) จังหวัดลำปาง (5-6 ก.ค.) จังหวัดนครศรีธรรมราช (11-12 ก.ค.) อุบลราชธานี (26-27 ก.ค.) และจังหวัดกาญจนบุรี (9-10 ส.ค.) รวมทั้งหมด 5 ครั้ง จากนั้น สำนักงานเขตพื้นที่การศึกษาที่เข้าร่วมสัมมนาดังกล่าว ได้เริ่มจัดการดำเนินการสัมมนาขึ้นในพื้นที่รับผิดชอบของตนเอง

ในการสัมมนาซึ่งจัดขึ้นที่จังหวัดนครศรีธรรมราช อาจารย์อิโรโกะ คอนโดจากศูนย์วิจัยการบรรเทาภัยพิบัติ มหาวิทยาลัยนาโงยา (ผู้เชี่ยวชาญด้านการศึกษาด้านการป้องกันภัยพิบัติ) ได้เข้าร่วมบรรยายและแนะนำระบบการจัดการการเรียนการสอนเรื่องการป้องกันภัยพิบัติในประเทศไทย



## DVD การเรียนรู้เรื่องการป้องกันภัยพิบัติเสร็จสมบูรณ์!



เมื่อเดือนมิถุนายน 2555 สำนักงานคณะกรรมการการศึกษาขั้นพื้นฐาน กระทรวงศึกษาธิการ ได้พัฒนาสื่อการเรียนการสอนมัลติมีเดีย (DVD) ขึ้นเพื่อการเรียนรู้เรื่องภัยพิบัติทางธรรมชาติและเผยแพร่สู่บุคลากรในแวดวงการศึกษา

ภายใน DVD จะนำเสนอเนื้อหาจากสื่อการเรียนการสอนที่ได้พัฒนาขึ้นจากโครงการในระยะที่ 1 (อุทกภัยดินถล่ม, สึนามิ) โดยใช้ภาพประกอบพร้อมอธิบายเกี่ยวกับกลยุทธ์ DIG และบทเรียนเรื่องการอพยพให้เข้าใจง่าย อีกทั้งยังเสริมข้อมูลเกี่ยวกับแผ่นดินไหว พายุไต้ฝุ่น และระดับน้ำทะเลที่สูงขึ้น เพื่อให้ผู้ชมมองเห็นภาพภัยพิบัติที่เกิดขึ้นในประเทศไทยได้อย่างชัดเจน นอกจากนี้ ยังมีข้อมูลอื่นๆ เช่น ประสบการณ์จากเหล่านักเรียนผู้ประสบเหตุอุทกภัยครั้งใหญ่เมื่อปีที่แล้ว บทสัมภาษณ์นักวิชาการ รวมถึงแนะนำเหตุการณ์แผ่นดินไหวครั้งรุนแรงในภาคตะวันออกเฉียงเหนือของประเทศไทย



ภายในปีเดียวกันนี้จะมีแผนจะจัดทำเอกสารอ้างอิงสำหรับผู้สอนเพื่อใช้ประกอบการเรียนการสอนเรื่องการป้องกันภัยพิบัติ และจะแจกจ่ายไปยังโรงเรียนทั่วประเทศพร้อม DVD ดังกล่าว

お問い合わせ:



前原規利 (総括/防災組織体制)  
佐々木新 (コミュニティ防災)  
小野寺純 (防災教育)

Department of Disaster Prevention and Mitigation

3/12 U Thong Nok Rd. Dusit, Bangkok 10300

Tel 02-637-3669

e-mail: JICA.PCDDM2@gmail.com

## ***Appendix 6***

### ***Project Output Sustainability Plan***







# **The Project on Capacity Development in Disaster Management in Thailand (Phase-2)**

## **Project Outputs Sustainability Plan**

March 2014

Japan International Cooperation Agency

IDEA Consultants, Inc.

Earth System Science Co., Ltd.



## TABLE OF CONTENTS

<b>Summary and Recommendations</b> .....	<b>1</b>
<b>1. Introduction</b> .....	<b>3</b>
1.1 Background of the Project .....	3
1.2 Objective of the Project .....	4
1.3 Project Output Sustainability .....	4
<b>2. The Project</b> .....	<b>6</b>
<b>2.1 Task Force for Disaster Management Planning (TF-DMP)</b> .....	<b>6</b>
(1) Project Activities .....	6
(2) Project Outputs .....	7
<b>2.2 Task Force for CBDRM (TF-CBDRM)</b> .....	<b>8</b>
(1) Project Activities .....	8
(2) Project Outputs .....	8
(3) Project Review .....	8
<b>2.3 Task Force-for Disaster Management Training (TF-DMT)</b> .....	<b>9</b>
(1) Project Activities .....	9
(2) Project Outputs .....	9
<b>2.4 Task Force-for Disaster Education (TF-DE)</b> .....	<b>10</b>
(1) Project Activities .....	10
(2) Project Outputs .....	10
(3) Project Review .....	11
<b>2.5 Task Force-for Flood Risk Management (TF-FRM)</b> .....	<b>11</b>
(1) Project Activities .....	11
(2) Project Outputs .....	12
<b>3. Sustainability Plan</b> .....	<b>13</b>
<b>3.1 Task Force for Disaster Management Planning (TF-DMP)</b> .....	<b>13</b>
(1) Proposed Activities for Sustainability .....	13
(2) Implementation Procedures and Schedule .....	13
(3) Arrangements to Secure Implementation of Measures .....	15
<b>3.2 Task Force for CBDRM (TF-CBDRM)</b> .....	<b>16</b>
(1) Proposed Activities for Sustainability .....	16
(2) Implementation Procedures and Schedule .....	16
(3) Arrangements to Secure Implementation of Measures .....	17
<b>3.3 Activities of Task Force for Disaster Management Training (TF-DMT)</b> .....	<b>17</b>

	(1) Proposed Activities for Sustainability.....	17
	(2) Implementation Procedures and Schedule.....	18
	(3) Arrangements to Secure Implementation of Measures .....	20
<b>3.4</b>	<b>Activities of Task Force for Disaster Education (TF-DE) .....</b>	<b>20</b>
	(1) Proposed Activities for Sustainability.....	20
	(2) Implementation Procedures and Schedule.....	21
	(3) Arrangements to Secure Implementation of Measures .....	21
<b>3.5</b>	<b>Activities for Task Force for Flood Risk Management (TF-FRM) .....</b>	<b>21</b>
	(1) Proposed Activities for Sustainability.....	21
	(2) Implementation Procedures and Schedule.....	22
	(3) Arrangements to Secure Implementation of Measures .....	23

### **LIST OF APPENDICES**

Appendix 1	Results of Task Force Workshop 1: Concrete Measures to be taken for the Project Outputs Sustainability
Appendix 2	Results of Task Force Workshop 2: Evaluation and Feedback from Viewpoints of Efficiency, Effectiveness, Impact, Sustainability and Others
Appendix 3	List of Participants of the Task Force Workshop on 25 October 2013 at DPMA Pathum Thani

### ABBREVIATIONS

A	ADPC	Asian Disaster Preparedness Center
	ADRC	Asian Disaster Reduction Center
	AIT	Asian Institute of Technology
C	CA	Capacity Assessment
	CBO	Community Based Organization
	CD	Capacity Development
	C/P	Counterpart
	CBDRM	Community Based Disaster Risk Management
	CDV	Civil Defence Volunteer
D	DDPM	Department of Disaster Prevention and Mitigation, MOI
	DIG	Disaster Imagination Game
	DMR	Department of Mineral Resources
	DOLA / DLA	Department of Local Administration, MOI
	DOPA	Department of Provincial Administration, MOI
	DPM	Disaster Prevention and Mitigation
	DPMA	Disaster Prevention and Mitigation Academy, DDPM
	DPMAC	Disaster Prevention and Mitigation Administrative Center
	DPM-Act	Disaster Prevention and Mitigation, 2007
	DPM-AP	Disaster Prevention and Mitigation Action Plan (= LAO DPM-AP)
	DPM Plan	Disaster Prevention and Mitigation Plan (National-/ Provincial-DPM Plan)
	DPMPO	Disaster Prevention and Mitigation Provincial Office, DDPM (= DPM-PO)
	DMPMB	Disaster Prevention and Mitigation Policy Bureau, DDPM
	DPMRC	Disaster Prevention and Mitigation Regional Centre, DDPM (= DPM-RC)
	DTRAC	Disaster Tracking Recovery Assistance Center
	DWR	Department of Water Resources
E	EOC	Emergency Operation Center
	ESAO	Educational Service Area Office, MOE
F	FGD	Focus Group Discussion
G	GIS	Geographic Information System
	GISTDA	Geo-Informatics and Space Technology Development Agency
H	HFA	Hyogo Framework for Action 2005 - 2015
I	Inter-TF	Inter Task Force
J	JAXA	Japan Aerospace Exploration Agency
	JCC	Joint Coordination Committee
	JICA	Japan International Cooperation Agency
L	LAO	Local Administrative Organization of specified locality (= Tedsabaan/Oobortor)
	LDPM	Local Disaster Prevention and Mitigation (action plan)
M	M/M	Minutes of Meeting
	MOA	Ministry of Agriculture
	MOE	Ministry of Education
	MOI	Ministry of Interior
	MOL	Ministry of Skills and Development in Ministry of Labor
	MSDH	Department of Gender in Ministry of Social Development and Human Security
N	NDWC	National Disaster Warning Center
O	OBEC	Office of the Basic Education Commission, MOE
	ODA	Official Development Assistance
	ONIE	Office of Non-formal and Informal Education Commission, MOE
	OPEC	Office of the Private Education Commission, MOE
	OTOS	One Tambon One Search and Rescue Team
	OVEC	Office of the Vocational Education Commission, MOE

P	PCDDM-2	the Project on Capacity Development in Disaster Management (Phase-2)
	PCM	Project Cycle Management
	PDM	Project Design Matrix
	PO	Plan of Operation
R	R/D	Record of Discussion
	RESTEC	Remote Sensing Technology Center of Japan
	RICB	Research and International Cooperation Bureau, DDPM
	RID	Royal Irrigation Department
S	SAO	Sub-district Administrative Organization (= Oobortor)
	SNAP	Strategic National Action Plan on Disaster Risk Reduction
	SOP	Standard Operating Procedure
T	TF	Task Force
	TF-DMP	Disaster Management Planning Task Force (TF-1)
	TF-CBDRM	Community Based Disaster Risk Management Task Force (TF-2)
	TF-DMT	Disaster Management Training Task Force (TF-3)
	TF-DE	Disaster Education Task Force (TF-4)
	TF-FRM	Flood Risk Management Task Force (TF-5)
	TICA	Thailand International Department Cooperation Agency
	TMD	Thai Meteorological Department
	TTX	Table-top exercise
V	VDPM	Village Disaster Prevention Management Committee
W	WS, W/S	Workshop

## Summary and Recommendations

This Project Outputs Sustainability Plan represents concrete efforts of each task force to sustain and up-scale the Project outputs nation-wide after the JICA Project completion. The JICA Expert Team recommends that the proposed activities shall be implemented based on the Plan by taking necessary procedure and securing budget.

### Summary of the Project Outputs Sustainability Plan (1/2)

Activities for Outputs Sustainability		Fiscal Year					Budget
		2014	2015	2016	2017	2018	
<b>1. Disaster Management Planning (TF-DMP)</b>							
<u>Activities to set the Plan in LAO:</u>							
(1-1)	Execution of TTX at least one batch every year	■	■	■	■	■	DDPM
(1-2)	Promoting award for outstanding performance of DPM-AP	■	■	■	■	■	DDPM
(1-3)	Training course for DDPM officials on LAO DPM-AP	■	■	■	■	■	DDPM
(1-4)	Bringing up dissemination of LAO DPM-AP to MOI policy	■	■	■	■	■	DDPM
<u>Activities to upgrade the Plan:</u>							
(1-5)	Preparation of Standard Operation Procedures (SOP) for EOC	■	■	■	■	■	DDPM
(1-6)	Formulation of DPM-AP for various disasters to meet with respective localities.	■	■	■	■	■	DDPM
(1-7)	Revision of DPM-AP in comply with National DPM Plan to be revised	■	■	■	■	■	DDPM
<b>2. CBDRM (TF-CBDRM)</b>							
<u>Collaboration with Local Authorities:</u>							
2-1)	Enhancement of CBDRM knowledge of Local Administration Offices (LAOs)	■	■	■	■	■	DDPM
2-2)	Cooperation with DLA to expand CBDRM Activities	■	■	■	■	■	DDPM/LAO
2-3)	Placing Importance on CBDRM in LAO's Role in New DPM Plan	■	■	■	■	■	
<u>Continue and expand the activities in this project:</u>							
2-4)	Review and Revision of CBDRM Facilitator Guide and Manual	■	■	■	■	■	DDPM
2-5)	Training of CBDRM Facilitators	■	■	■	■	■	DPMA project budget
2-6)	Continuous Allocation of Budget for CBDRM	■	■	■	■	■	DDPM
2-7)	Coordination with Other Agencies on CBDRM	■	■	■	■	■	
<u>Motivating relevant personnel for CBDRM:</u>							
2-8)	Establishment of Disaster Prevention Center in Community	■	■	■	■	■	DDPM
2-9)	Promoting Community Leaders as Facilitators	■	■	■	■	■	DDPM
2-10)	Establishment of CBDRM Facilitator Certification System	■	■	■	■	■	DDPM

**Summary of the Project Outputs Sustainability Plan (2/2)**

Activities for Outputs Sustainability		Fiscal Year					Budget
		2014	2015	2016	2017	2018	
<b>3. Disaster Management Training (TF-DMT)</b>							
3-1)	Training on natural disaster management and post evaluation	■					DPMA project budget
3-2)	Review and revision of curriculum on natural disaster management	■	■	■			DPMA project budget
3-3)	Formulating curriculum for human resources development in DDPM	■	■	■			DPMA project budget
3-4)	Natural disaster experience/knowledge exchange among ASEAN countries			■	■	■	DPMA project budget
3-5)	Formulation of training curriculum on international level			■	■	■	DPMA project budget
3-6)	Study visit on natural disaster management (aboard)			■	■	■	DPMA project budget
3-7)	Supporting DDPM official staff for advanced human resources development			■	■	■	DPMA project budget
3-8)	Formulation of a human resource development plan of DDPM	■					DDPM
3-9)	Integration of the Project's capacity development activities into the regular training courses	■	■	■	■	■	DPMA project budget
<b>4. Disaster Education (TF-DE)</b>							
4-1)	Meeting on reviewing the activities in this project	■					MOE
4-2)	Disseminating the materials through internet	■					OBEC
4-3)	Disaster education in regular curriculum	■	■	■	■	■	OBEC
4-4)	Revision of the guidelines	■					OBEC
4-5)	Establishment of main responsible unit of disaster education	■	■	■	■	■	OBEC
<b>5. Flood Risk Management (TF-FRM)</b>							
5-1)	To establish Map Unit in DP Criteria Bureau	■					DDPM
5-2)	To publish manuals for basic hydrology, hydraulics, GIS and flood hazard	■	■				DDPM
5-3)	To conduct master-facilitator training for DDPM officials	■	■				DDPM
5-4)	To conduct facilitator training of DDPM officials	■	■	■	■	■	DDPM
5-5)	To support other bureaus providing hazard maps	■	■	■	■	■	DDPM



## **1. Introduction**

### **1.1 Background of the Project**

The Government of the Kingdom of Thailand has contended with enhancement of disaster prevention and mitigation by having established such organizations as the Department of Disaster Prevention and Mitigation (DDPM), Ministry of Interior, responsible for general disaster management including disaster prevention and emergency response in 2002 and the Disaster Prevention and Mitigation Academy (DPMA) responsible for human resources development of DDPM staff in 2004. Moreover, the National Disaster Warning Center (NDWC) has been established to strengthen organizational setup for disaster management taking the Asian Tsunami in December 2004 as a turning point.

DDPM still is a relatively new organization and its capacity and experience are developing to cope with natural disasters in Thailand by collaborating with concerned various organizations. It is a pressing challenge to develop the capacity of DDPM.

The Project on Capacity Development in Disaster Management in Thailand (Phase-1) was carried out from August 2006 to August 2008 in response to the request of the Government of Thailand. The following outputs are achieved by the Phase-1 Project:

- The system which collects, accumulates and utilizes information on disaster and disaster risk management is established in DDPM.
- Relationship and communication between DDPM and other related organizations are strengthened through publishing a White Paper and formulating a National Disaster Prevention and Mitigation Plan.
- A training system for enhancing the capacity of DDPM staff on natural disaster management is strengthened including e-Learning system.
- Capacities of DDPM staff and village people are enhanced to promote disaster management activities at community level.
- Capacities of MOE staff and teachers at model schools are enhanced to promote education for disaster preparedness at schools.

However, since the activities of the Phase-1 Project focused on national and community levels, involvement of provincial and local authority levels was insufficient. In order to improve and scale up disaster prevention and mitigation capacity in Thailand, it is indispensable to involve regions, provinces, local authorities, etc. in disaster management activities.

In 2008, the Government of Thailand requested the Government of Japan to carry out the Project on Capacity Development in Disaster Management (Phase-2) aiming at improving and up-scaling the outputs of the Phase-1 Project in Thailand. In response to the request, JICA and the authorities

concerned of the Government of Thailand agreed upon the basic framework and scope of the cooperation, and both the parties concluded M/M in October 2009 and R/D in March 2010 on the Project.

## **1.2 Objective of the Project**

### **(1) Project Purpose**

Objective of the Project is summarized below:

Super Goal: Implementation of disaster risk management activities is improved and scaled up throughout Thailand and damages caused by natural disasters are mitigated.

Overall Goal: Implementation of disaster risk management activities is improved and scaled up.

Project Purpose: Capacity of DDPM is enhanced to scale up Disaster Prevention and Mitigation Action Plans, Community Based Disaster Risk Management (CBDRM) and disaster education, collaborating with concerned agencies at provincial and local levels.

### **(2) Outputs of the Project**

The following four outputs are expected as a result of activities of the relevant Task Forces (TF(s)) for the Project:

Outputs 1: Disaster Prevention and Mitigation Action Plans with considerations for vulnerable people are formulated for national, provincial and local authorities in the target provinces < by Task Force for Disaster Management Planning (TF-DMP)>.

Outputs 2: Capacity of DDPM staff and facilitators on implementation of CBDRM is enhanced < by Task Force for CBDRM (TF-CBDRM) >.

Outputs 3: Training curriculum at DPMA is improved < by Task Force for Disaster Management Training (TF-DMT) >.

Outputs 4: Based on the natural disaster preparedness educational curriculum, schools have improved preparedness for disaster < by Task Force for Disaster Education (TF-DE) >.

Outputs 5: Knowledge and technical capacity of DDPM on hazard mapping, early warning system and design of structural measures are enhanced < by Task Force for Flood Risk Management (TF-FRM) >.

## **1.3 Project Output Sustainability**

With earnest efforts of DDPM and MOE officials, almost all the planned activities have been

implemented successfully. But successful activities are not the goal of the Project. The outputs achieved through the Project should be sustained and up-scaled nation-wide in order to accomplish the Overall and Super Goals of the Project.

This Project Outputs Sustainability Plan has been prepared based on the Task Force Workshop on Project Outputs Sustainability on October 25, 2013 at DPMA Pathum Thani and subsequent series of discussions with the task force members. The Plan represents concrete efforts of each task force to sustain and up-scale the Project outputs nation-wide after the JICA Project

## 2. The Project

The Project consists of major three kinds of components, i.e. 1) Disaster management planning, 2) Human resources and contents development with DDPM and 3) Human resources and contents development with MOE. Human resources and contents development with DDPM can be further divided into three kinds of activities, i.e. 1) CBDRM, 2) Disaster management training, and 3) Flood risk management. Outputs of the Project and major target levels are graphically illustrated in Figure 2.1.

	<b>Disaster Management Planning (TF1)</b>	<b>Human Resources (HR) and Contents Development with DDPM</b>			<b>HR and Contents Development with MOE (TF4)</b>
		<b>(TF2)</b>	<b>(TF3)</b>	<b>(TF5)</b>	
<b>Main C/P</b>	Disaster Prevention and Mitigation Policy Bureau, DDPM	Disaster Prevention and Promotion Bureau, DDPM	Disaster Prevention and Mitigation Academy, DDPM	Disaster Prevention Criteria Bureau, DDPM	Office of Basic Education Commission (OBEC) and MOE
<b>State</b>	Standard templates for local DPM action planning GIS database to monitor progress of local action planning	Training of CBDRM facilitators (DDPM staff & others)	CBDRM Facilitator Guide CBDRM Manual for community GIS database	Improvement of curriculum on flood, flash flood and sediment disasters Material Development + Training - Community hazard map - Early warning system - Small scale structural measures	Guideline on Disaster Education Material development Selection of model sites GIS database
<b>Province</b>	Monitoring of progress of Provincial DPM planning Guideline to guide local authorities to prepare local DPM action plan <Pilot Activities> Workshop to guide local DPM action planning		Provincial action plan to disseminate CBDRM <Pilot Activities> Implementation of CBDRM in the model communities and sharing lessons learned	Post-evaluation of trainings	<Pilot Activities> Workshop on disaster education for ESAO staff and teachers in model areas
<b>Local Authority</b>	Table-top exercise to verify local action plan (Model provinces and local authorities in the model provinces)				
<b>Community/School</b>				<Pilot Activities> Development of hazard maps and improvement of early warning system in model community	<Pilot Activities> Implementation of disaster education at model schools Evacuation drill with community

**Figure 2.1 Outputs of the Project and Major Target Levels**

Outline of the Project outputs by each task force is discussed in the following subsections.

### 2.1 Task Force-for Disaster Management Planning (TF-DMP)

#### (1) Project Activities

Disaster Prevention and Management Act (the DPM Act) was enacted in 2007, and National DPM Plan was approved by the cabinet in 2009. Provincial DPM Plans were being formulated in respective

provinces across the country, when the current project started. However, the plans for Local Administrative Organizations of specified localities (LAO), were not yet formulated, though they assume fundamental roles in disaster prevention and mitigation operations. Taking into account the crucial situation, Task Force 1 concentrated its effort on assistance in formulation of LAO DPM Action Plans. The assistance was carried out by means of workshops and table-top exercises, as follows:

- 1) Development of template of DPM Action Plan and Flood Response Manuals through workshops and table-top exercises (TTX) in model areas in the provinces of Lampang, Lamphun, and Nakhon Si Thammarat.
- 2) Execution of workshops to explain DPM Action Plan using the template. The DPM Action Plan shall be formulated by respective LAO across the country, guided by DPM-PO/RC and DDPM-HQ.
- 3) Execution of table-top exercises (TTX) to introduce procedures of TTX and to verify the plan, for both staff of model LAO and officials of DPM-PO/RC and DDPM-HQ. The TTX is a competent tool for LAO staff to get in practice the disaster responses operations to improve the plan.

## **(2) Project Outputs**

- 1) Workshops for DPM-AP were carried out 5 times with a total of 540 attendants and TTX 4 times with a total of 680 attendants. As a result,
  - (1) Staff of model LAO (2 staff each of every LAO in Lampang/Lamphun provinces) received explanations to formulate DPM-AP, and
  - (2) Officials of DPM-PO throughout the country (2 persons x twice) participated the workshop/TTX so that they can assist LAO in their areas.
- 2) The template of DPM-AP was further discussed and authorized in a Task Force consisting of internal and external officials and experts chaired by Deputy Director General. DDPM. DDPM also budgeted for the dissemination activities in FY-2013.
- 3) Formulation of DPM-AP is under way across the country using the template. According to the latest information as of end of September, 2013, plans were formulated more or less in 34 provinces. Out of these, all LAO formulated the plan in 6 provinces, and 90% of LAO in 5 provinces.
- 4) For promotion of the plan formulation, officials of DPM Policy Bureau were sent to DPM-PO and LAO upon request, and discussed the problems encountered.
- 5) GIS database trainings were conducted to develop and maintain GIS database to visually monitor progress of formulation of DPM-AP.

## 2.2 Task Force-for CBDRM (TF-CBDRM)

### (1) Project Activities

Activity	Description
CBDRM Facilitator Training	The project conducted a total of 6 times CBDRM facilitator training courses for DPM officials and local officials.
CBDRM demonstration workshop	The project supported CBDRM activities in 5 villages in Lampang, Lamphun, and Nakhon Si Thammarat provinces.
Revising CBDRM facilitator guide and manual	CBDRM facilitator guide prepared in the Phase-1 was modified. CBDRM manual prepared after the Phase-1 is revised.
GIS database Training	GIS database trainings were conducted to improve the monitoring of CBDRM progress at DDPM central.

### (2) Project Outputs

#### 1) CBDRM Facilitator Training

228 CBDRM facilitators including not only DDPM staff but also other related organization staff and retired DDPM staff, and retired teachers were cultivated and 324 local authority staffs were trained in the Phase-2.

#### 2) CBDRM demonstration workshop

The Project supported to conduct 4 batches of CBDRM activities in Lampang and Lamphun provinces complying with the project design. The project organized a facilitator team consists of staff from DPM Regional Center 10 (Lampang), DPM Lampang provincial office, and DPM Lamphun provincial office. CBDRM activities were facilitated by these DPM provincial and regional staff and JICA Experts. Most of CBDRM activities were conducted in collaboration with schools in the villages and school teachers and school students took part in the evacuation drills organized at the last of CBDRM workshops. In addition, the project supported to conduct one CBDRM activity at Nakhon Si Thammarat province upon request of DDPM.

#### 3) Others

CBDRM facilitator guide and CBDRM manual are prepared. To monitor the progress of CBDRM, the project suggested to utilize GIS database and conducted trainings.

### (3) Project Review

The entire provinces prepared CBDRM action plan for each province and the trained facilitators conducted CBDRM workshops for more than 2,000 villages in 2 years of 2012 and 2013. The

manual and guide are used in the CBDRM workshops. The GIS database is used for monitoring and planning of CBDRM trainings effectively.

## **2.3 Task Force-for Disaster Management Training (TF-DMT)**

### **(1) Project Activities**

Task Force-for Disaster Management Training (TF-DMT) has been worked for the outputs 3 of the Project, i.e. improvement of training curriculum on natural disaster management at Disaster Prevention and Mitigation Academy (DPMA). DPMA was established in October 2004 at Bangpoon, Pathum Thani Province having six campuses in Prachinburi, Songkhla, Chiang Mai, Khon Kaen, Phuket, and Phitsanulok. DPMA takes responsibility of human resources development and knowledge management in DDPM. It also provides training services for officials of local authorities and private sectors in the area of disaster risk management.

Major activities of TF-DMT were as follows:

Activity	Description
Improvement of DPMA's post training evaluation	TF-DMT has developed a post evaluation method of questionnaire survey on effectiveness of the training for both participants and superiors after half a year from the training.
Improvement of standard curriculum for training on management of natural disasters	TF-DMT has improved a training curriculum for management of flood, flash flood and sediment disasters consists of both lecture and workshop of table-top exercise.
Implementation of Training of Master Trainer on Management of Natural Disasters (Flood, Flash Flood and Sediment Disasters)	Based on the improved training curriculum, TF-DMT implemented the Training of Master Trainer on Management of Natural Disasters (Flood, Flash Flood and Sediment Disasters) from June 20 to June 24, 2011 at DPMA for 45 DDPM mid-level officials.
Implementation of Training of DDPM Staff on Management of Natural Disasters (Flood, Flash Flood and Sediment Disasters)	Based on the improved training curriculum, TF-DMT implemented the Trainings of DDPM Staff on Management of Natural Disasters (Flood, Flash Flood and Sediment Disasters) 6 batches at DPMA for 279 DDPM practitioner level officials.

### **(2) Project Outputs**

#### **1) Standard Curriculum for Training on Management of Natural Disasters**

Standard curriculum for training on management of natural disasters (flood, flash flood and sediment disasters) has been developed through the Project activities. The curriculum will be one of the bases of the training curriculum and is to be improved regularly incorporating up-to-date information.

#### **2) Human Resources Development**

45 DDPM mid-level officials were trained as the master trainers in management of natural disasters (flood, flash flood and sediment disasters) and 279 DDPM practitioner level officials were also trained on management of natural disasters (flood, flash flood and sediment disasters) based on the newly improved training curriculum. As a result, 14% (279/2159) of DDPM officials receive the training.

### 3) Post Training Evaluation

DPMA has a training evaluation system. DPMA conducts pre/post tests and distributes questionnaire to the participants after training. The Project introduced follow-up six months after training to hear feedback from the participants as well as their superintendents. According to the evaluations, the newly developed training course highly rated for all the items such as usefulness of TTX in their planning activities. DPMA is compiling feedback to further improve the training course.

### 4) Technique of Table-top Exercise

Trainings and workshops including table-top exercise (TTX) have been conducted four times in the activities of Disaster Management Planning and seven times in the Disaster Management Training. As a result, TTX has already been crept into DDPM officials and the facilitators who can lead TTX are also cultivated.

## 2.4 Task Force-for Disaster Education (TF-DE)

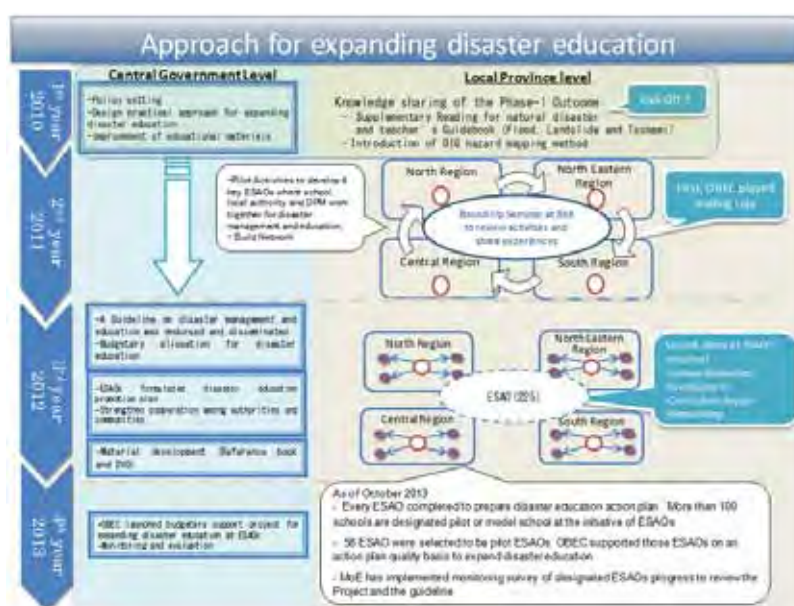
### (1) Project Activities

This project had two approaches. One is the top down approach to disseminate OBEC's disaster education guideline. The other is bottom up approach, model school method to develop human resources on disaster education.

### (2) Project Outputs

#### 1) Disaster Education Guidelines

OBEC formulated guidelines on disaster education. The guidelines provide Standards for disaster education promotion at ESAOs and School level. These guidelines were introduced in the five times seminars at





Bangkok and 4 regions. In the results, all ESAOs completed the action plan for disaster education.

## **2) Education Material Development**

OBEC has developed a set of new materials for disaster education (one is a reference book and the other is a DVD). Those materials have been developed by utilizing the educational materials in the Phase-1 Project. These materials enable teachers and students to learn how they can prepare and respond to hazards such as flooding, landslides and tsunami, including preparation of hazard map.

## **3) Human Resource Development**

OBEC in cooperation with JICA and DDPM conducted the Project for fostering model ESAOs and model schools under this project. Through a series of workshops in this project, OBEC's educational materials in Phase-1 were effectively utilized. Regarding curriculum design, a series of workshops were good opportunities to share ideas for improvement. Also, a learning method such as hazard mapping was introduced, and evacuation drills were implemented.

## **(3) Project Review**

The OBEC two-way Approach to spread disaster education proved to be practical. The Guideline functions as a vertical connector of the three actors among the Central Government, local educational offices and schools. On the other hand, model school method provides a total solution for disaster management and education. As the result of synergistic effect of these two approaches, more than 50 ESAOs were selected as priority areas and more than 100 schools were designated pilot schools at the initiative of ESAOs in 2013.

## **2.5 Task Force-for Flood Risk Management (TF-FRM)**

### **(1) Project Activities**

Task Force-for Flood Risk Management (TF-FRM) was organized additionally upon approval of Joint Coordination Committee.(JCC) in October, 2011. TF-FRM aims to enhance technical knowledge and capability of DDPM officials particularly for preparation of hazard maps, improvement of early warning systems and assessment of disaster relief work designs in order to respond to the requirements from the sites:

- 1) Larger scale hazard maps applicable to effective CBDRM are not available, though hazard maps of provincial level were prepared in Phase-1 Project,
- 2) Reliability of warning criteria and evacuation timing still remains low, since they are not always based on sufficient scientific data. Capability of officials to handle hydrological data

should be enhanced so as to utilize data from DDPM-assisted Mr. Warning and simplified rain-gauges more effectively.

- 3) Officials of DPM-PO have duty to assess designs of disaster relief works proposed by LAO in provincial disaster relief committee. These works may include small-scale structural works and river works. Capacity of officials in these fields needs to be enhanced.

Coping with the requirements mentioned above, TF-FRM took three approaches commonly for (1) rainfall and runoff analyses, and preparation of GIS-hazard map; (2) basic hydrology and criteria for early warning system; and (3) assessment of disaster relief structures, as follows:

- 1) Lectures for engineering officials of Disaster Prevention Criteria Bureau,
- 2) Preparation of manuals to be used for lectures, and
- 3) Lectures for engineering officials of DPM-RC.

## **(2) Project Outputs**

- 1) Lectures for Engineering Officials of Disaster Prevention Criteria Bureau: Lectures were made periodically during the period when JICA Exerts for Sediment Disaster Management and Flood Management were available, using the texts prepared by them. As a result, two engineering officials were brought up as lecturers for lectures in DPM-RC.
- 2) Preparation of Manuals: The texts (English) used for the lectures in Disaster Prevention Criteria Bureau were edited as Manuals. The Manual is now being translated into Thai by the Bureau
- 3) Lectures for Engineering Officials of DPM-RC: The first lecture by the lecturers of the Bureau was held in DDPM for the officials from 18 DPM-RC (19 persons) across the country. According to the questionnaire to the attendants, they offered favorable comments on the lectures.
- 4) New section for hazard mapping was established in Disaster Prevention Criteria Bureau in August, 2013, deploying 20 engineering officials additionally.
- 5) Regarding the improvement of warning criteria, Disaster Prevention Criteria Bureau requested budgets of lectures for DPM-RC and hydrological observation equipment for the areas other than the model areas for FY-2014

### **3. Sustainability Plan**

Task-Force Workshop for Project Output Sustainability was held on 25 October 2013 at DPMA, Pathum Thani, in attendance with five task force members, i.e., Task Forces for Disaster Management Planning, CBDRM, Disaster Management Training, Disaster Education and Flood Risk Management. In the workshop, project activities made so far were reviewed, and activities to be taken to sustain the project outputs after the Project were discussed. Further discussions were made on the activities for Project sustainability and their implementation procedures in respective task forces. Sustainability Plans were finally made up as described in succeeding sub-sections.

#### **3.1 Task Force for Disaster Management Planning (TF-DMP)**

##### **(1) Proposed Activities for Sustainability**

The DPM-AP formulated in the respective LAO should be set in the LAO as governing rule of DPM activities, and upgraded as needed. From this point of view, following activities were listed for project output sustainability, based on Capacity Development Plan and results of discussions in Task Force Workshop (TF-WS):

##### Activities to set the Plan in LAO:

- (1-1) Execution of TTX at least one batch every year
- (1-2) Promoting award for outstanding performance of DPM-AP
- (1-3) Training course for DDPM officials on LAO DPM-AP
- (1-4) Bringing up dissemination of LAO DPM-AP to MOI policy

##### Activities to upgrade the Plan:

- (1-5) Preparation of Standard Operation Procedures (SOP) for EOC
- (1-6) Formulation of DPM-AP for various disasters to meet with respective localities.
- (1-7) Revision of DPM-AP in comply with National DPM Plan to be revised

##### **(2) Implementation Procedures and Schedule**

###### **(1-1) Execution of TTX at Least One Batch Every Year:**

Objective: TTX is a competitive tool to verify DPM-AP and keep DPMAC and EOC operational. It is ideal to conduct TTX in all LAO every year. In order to promote the execution of TTX in LAO, DDPM assists in implementation of TTX at least one batch every year in collaboration with DPM-RC/PO.

##### Procedures and schedule:

- Preparation of Standard Implementing Procedures for TTX including criteria for selections of provinces and LAO for TTX. (2014)

- Preparation of manuals for role-playing TTX and scenario-driven TTX.(2014)
- In accordance with the Standard Implementing Procedures, (1) DDPM selects one province for TTX, (2) DPM-PO of selected province selects LAO for TTX, and (3) DPMAC and EOC of the selected LAO (player) and DPM-RC/PO (controller) execute TTX. Around 200 of attendants are supposed to be invited. (yearly from 2015)

**(1-2) Promoting Award for Outstanding Performance of DPM-AP:**

Objective: In order to promote proper operation of DPM-AP, the LAO who performed outstanding DPM operation is given incentive-award.

Procedures and schedule:

- Preparation of program for incentive-award and authorize it in collaboration with DLA and other offices concerned in MOI: (2014)
- Preparation of criteria and procedures for selection of award-winner (2015)
- Incentive –award in execution (from 2016)

**(1-3) Training Course of DDPM officials on LAO DPM-AP:**

Objective: In order to promote dissemination of DPM-AP for LAO properly, DDPM officials (including DPM-RC/PO) who assist LAO in plan formulation and monitoring are trained in the course of DPMA. The course is opened regularly every year, covering the lectures on DPM-AP and its effective operations, and exercises of role-playing and scenario-driven TTX.

Procedures and schedule:

- 2 batches Preparation of draft program of the training course and (2014)
- Consultation with DPMA for incorporation of DPM-AP training course. (2014)
- Preparation of training materials: Same materials as those prepared for activity-(1) (2014-2015)
- Implementation of the training course (yearly from 2015)

**(1-4) Bringing-up Dissemination of LAO DPM-AP to MOI Policy:**

Objective: Dissemination of LAO DPM-AP is a crucial issue to attain DPM of the country. And its execution needs cooperation of various agencies of MOI. It is therefore requested that the dissemination of LAO DPM-AP is brought-up as one of the main policies of the ministry and executed intensively in collaboration with agencies concerned.

Procedures and schedule:

- Preparation of request for bringing-up dissemination of LAO DPM-AP to MOI policy. (2014)
- Consultation with agencies concerned on this issue. (2015)
- Start operation in collaboration with MOI agencies concerned. (2015)

**(1-5) Preparation of Standard Operating Procedure (SOP) for EOC:**

Objective: In order to supplement DPM activities in LAO, DDPM offices (including DPM-RC and DPM-PO) assist LAO to prepare SOP for EOC.

Procedures and schedule:

- 1) DDPM offices prepare guidelines and explain to prepare SOP at LAO level (2014).
- 2) LAO starts prepare SOP for EOC with assistance of DDPM offices.(from 2015-)

### **(1-6) Formulation of DPM-AP for Various Disasters to Meet with Respective Localities:**

Objective: The type of disasters may different depending on the LAO, and the different disaster may require different response. The current template of DPM-AP seems not enough to cover all types of disasters. Formulation of DPM-AP for various disasters to meet with respective localities is required. Current template plan is applicable to flood, storm and landslide which are most common natural disaster across the country, and also applicable more or less for other disasters. In case the current plan is deemed not enough, it is advised to cope with them preparing SOP. For the time being, dissemination of current DPM-AP should be given the first priority for implementation.

Procedures and schedule:

- To continue assistance in formulation of LAO DPM-AP until the plan is set firmly across the country. (2014-2017)
- To assist LAO which need preparation of SOP individually upon request. (2014-2017)

### **(1-7) Revision of DPM-AP in Comply with National DPM Plan to be Revised:**

Objective: National DPM Plan will be revised in the year 2015. In comply with the revision, provincial DPM Plan and LAO DPM-AP should also be revised immediately.

Procedures and schedule:

- Review of revised National DPM Plan (2014)
- Revision of template of Provincial DPM Plan. (2014)
- Revision of template of LAO DPM-AP, and notice to respective provinces to advise LAO to revise their plan. (2014)
- Revision of Provincial DPM Plan and LAO DPM-AP. (2015)

### **(3) Arrangements to Secure Implementation of Activities**

In order to secure the successful implementation of the activities for project sustainability, following arrangements should also be taken into account

- 1) Budget arrangements based on the implementation plan of the activity: For all activities.
- 2) Collaborative activities with other bureaus in DDPM:
  - For activity 2), it would be better to establish an incentive-award system together with

other bureaus conducting similar activities.

- For activity 3), it should be promoted in coordination with CBDRM and Criteria Bureaus who intend to have their courses in DPMA.
- 3) Collaborative activities with other agencies in MOI: For activity 4): For activity 4) it would be better to move together in corporation with other bureaus who have activities in LAO.

### **3.2 Task Force-for CBDRM (TF-CBDRM)**

#### **(1) Proposed Activities for Sustainability**

There are 2 targets for project sustainability. One is to continue the CBDRM promotion activities lead by DDPM. The other is to conduct repetition CBDRM activities in the villages.

#### **(2) Implementation Procedures and Schedule**

##### **1) Collaboration with Local Authorities**

##### **2-1) Enhancement of CBDRM knowledge of Local Administration Offices (LAOs)**

To enhance CBDRM knowledge of Local Administration Offices (LAOs) is necessary to accelerate CBDRM activities and to keep the impact of CBDRM activities funded by DDPM. In this project, the LAOs in Lampang and Lamphun provinces have learned about CBDRM in the trainings conducted in February 2012. The contents of CBDRM will be included in the workshops on disaster prevention and mitigation for LAO executive levels and training courses for disaster prevention and mitigation officers.

##### **2-2) Cooperation with DLA to expand CBDRM Activities**

Cooperation with DLA to expand CBDRM activities will be sought to secure budgets for repetition activity in community level.

##### **2-3) Placing Importance on CBDRM in LAO's Role in New DPM Plan**

Collaboration with Policy Bureau to confirm that CBDRM is one of the most important parts of disaster management system in LAO in the next revision of National DPM Plan is necessary so that LAOs make effort to expand CBDRM activities in their jurisdiction in the next revision of National DPM Plan.

##### **2) Continue and expand the activities in this project**

##### **2-4) Review and Revision of CBDRM Facilitator Guide and Manual**

CBDRM facilitator guide and manual developed in the period of JICA Project will be reviewed and revised regularly.

##### **2-5) Training of CBDRM Facilitators**

CBDRM facilitator training will be conducted when the pool of facilitators is insufficient to

conduct CBDRM activities in each province. When 10 provinces do not have any facilitator, DDPM will provide CBDRM facilitator training with DPMA. The trainers will be sent from DDPM and out sources such as ADPC.

**2-6) Continuous Allocation of Budget for CBDRM**

To scale up CBDRM activities for all risk areas, DDPM has to allocate budget to conduct activity every year continually.

**2-7) Coordination with Other Agencies on CBDRM**

DDPM will coordinate with organizations which have DPM activities such as Thai Red Cross, COERR, Rak Thai Foundation and ADPC to conduct CBDRM activities.

**3) Motivating relevant personnel for CBDRM**

**2-8) Establishment of Disaster Prevention Center in Community**

Establishment of disaster prevention center in each village which has already conducted CBDRM workshop will motivate the villages to keep the activities.

**2-9) Promoting Community Leaders as Facilitators**

Promoting community leaders to be a facilitator for other communities or for relevant knowledge sharing platform will help to activate CBDRM activities.

**2-10) Establishment of CBDRM Facilitator Certification System**

To establish CBDRM Facilitator Certification System such as evaluation of facilitator and grading will motivate CBDRM facilitators to disseminate the knowledge and experience to other DPM officials.

Each measure shown above will be started from 2014.

**(3) Arrangements to Secure Implementation of Activities**

Preparation to negotiate with DLA will be started from the beginning of 2014. When both sides agree to cooperate, a seminar or workshop will be held to understand the importance of involvement of LAOs in CBDRM in terms of budget support. Other measures will be taken when it is necessary in 2014.

**3.3 Task Force-for Disaster Management Training (TF-DMT)**

**(1) Proposed Activities for Sustainability**

DPMA assumes important role in human resources development and knowledge management in DDPM. Therefore, the following concrete activities were proposed through the Task Force Workshop and discussion during the terminal evaluation of the Project.

- 3-1) Training on natural disaster management and post evaluation
- 3-2) Review and revision of curriculum on natural disaster management
- 3-3) Formulating curriculum for human resources development in DDPM
- 3-4) Natural disaster experience/knowledge exchange among ASEAN countries
- 3-5) Formulation of training curriculum on international level
- 3-6) Study visit on natural disaster management (aboard)
- 3-7) Supporting DDPM official staff for advanced human resources development
- 3-8) Formulation of a human resource development plan of DDPM
- 3-9) Integration of the Project's capacity development activities into the regular training courses

## **(2) Implementation Procedures and Schedule**

### **3-1) Training on natural disaster management and post evaluation**

Objective: In order to develop the capacity of DDPM staff in management of natural disasters (flood, flash flood and sediment disaster), two batches of the training course are conducted in 2014 fiscal year (in December 2013). Monitoring and post evaluation of the trainings are to be conducted to improve the training curriculum.

Procedures and schedule:

- FY2014 DPMA project budget
- To be conducted in December 2013

### **3-2) Review and revision of curriculum on natural disaster management**

Objective: Review and revision of the curriculum on natural disaster management (flood, flash flood and sediment disaster) should be made by using post evaluation results as assessment tools.

Procedures and schedule:

- DPMA project budget
- To be conducted within 1 - 3 years

### **3-3) Formulating curriculum for human resources development in intermediate level**

Objective: Following the basic level curriculum improved by JICA Project, formulation of curriculum of intermediate level will be conducted in order to enhance knowledge and skill of DDPM officials utilizing the basic level curriculum effectively.

Procedures and schedule:

- DPMA project budget
- To be conducted within 1 - 3 years



### **3-4) Natural disaster experience/knowledge exchange among ASEAN countries**

Objective: Based on the ASEAN Agreement on Disaster Management and Emergency Response dated July 26, 2005, technical cooperation among ASEAN countries should be accelerated. Exchange training program will be implemented among ASEAN countries.

Procedures and schedule:

- DPMA project budget
- To be conducted within 3 - 5 years

### **3-5) Formulation of training curriculum on international level**

Objective: In relation to the ASEAN Agreement on Disaster Management and Emergency Response dated July 26, 2005, training curricula of DPMA should be continuously improved to international level.

Procedures and schedule:

- DPMA project budget
- To be conducted within 3 - 5 years

### **3-6) Study visit on natural disaster management (aboard)**

Objective: In relation to the ASEAN Agreement on Disaster Management and Emergency Response, study visit to ASEAN countries on natural disaster management shall be conducted.

Procedures and schedule:

- DPMA project budget
- To be conducted within 3 - 5 years

### **3-7) Supporting DDPM official staff for advance level human resources development**

Objective: In order to foster in-house trainer in natural disaster management, it is necessary to support DDPM official staff to study in master and doctoral degree both in Thailand and aboard for an advance level human resources development.

Procedures and schedule:

- DDPM/ DDPM and scholarship from outside organization
- To be conducted within 3 - 5 years

### **3-8) Formulation of a human resource development plan of DDPM**

Objective: Formulation of a strategic plan for the national human resource development on DPM was recommended in the Terminal Evaluation of the Project. However, DDPM has already formulated

Strategic Plan for Human Resources Development Department of Disaster Prevention and Management (2013-2017) on September 2013. The plan includes strategy and training projects based on various analysis of the current human resources situation of the organization.

Procedures and schedule:

- DPMA project budget
- To be conducted from 2013 to 2017

**3-9) Integration of the Project's capacity development activities into the regular training courses**

Objective: The Project assisted capacity development of CBDRM facilitators, technical staff for hazard mapping and data analysis for early warning system and provincial staff to facilitate LAOs action plans with TTX. DDPM shall be responsible for conducting the above mentioned trainings.

Procedures and schedule:

- DPMA project budget
- To be conducted when requested.

**(3) Arrangements to Secure Implementation of Activities**

In order to secure the successful implementation of the proposed activities for the project sustainability, the following arrangements should also be taken into account.

- Budget arrangements based on the implementation plan of the activity: for all activities.
- Collaborative activities with other relevant agencies such as TMD, RID, DMR.
- CBDRM facilitator training, training on action planning with TTX, training on hazard mapping, early warning system and structural measures for LAO staff as well as DDPM staff needs to be a part of the DPMA's regular training program.

**3.4 Task Force-for Disaster Education (TF-DE)**

**(1) Proposed Activities for Sustainability**

The sustainable promotion system on disaster education is almost established through this project. Keeping and brushing up of the system will be the main target for project sustainability.

**(2) Implementation Procedures and Schedule**

**4-1) Meeting on reviewing the activities in this project**

Task force members would have a meeting to review the activities in this project and direction of the project outputs with relevant organizations.

#### **4-2) Disseminating the materials through internet**

OBEC and Permanent secretary office will develop online system for dissemination of supplementary reading and DVD, teacher's guideline on the website of OBEC.

#### **4-3) Disaster education in regular curriculum**

All commission in MOE will try to make regular curriculum include the contents of disaster education.

#### **4-4) Revision of the guidelines**

The guide line will be re-organized so as to easily understand each actor's responsibility for OBEC, ESAO and School. The guideline will mention the periodical review of the guideline contents, for instance, once every three years.

#### **4-5) Establishment of main responsible unit of disaster education**

Permanent secretary office and OBEC will try to establish a main responsible unit for school safety and disaster education to secure the budget for disaster education regularly.

The reviewing meeting will be held in February 2014 to determine the direction. In March 2014, the website for dissemination of materials will be prepared. Revision of the curriculum and guideline and establishment of disaster education unit will be started in the fiscal year 2014.

### **(3) Arrangements to Secure Implementation of Activities**

Permanent secretary office will organize the reviewing meeting in February 2014. In the meeting, implementation structure will be discussed and established.

## **3.5 Task Force-for Flood Risk Management (TF-FRM)**

### **(1) Proposed Activities for Sustainability**

The objective of TF-FRM in the Project is to disseminate technical evidence-based disaster prevention and mitigation activities. TF-FRM has prepared the manuals on rainfall/flood analysis, hazard mapping, flood early warning system and structural measures, and conducted the training using these manuals. In order to achieve the goal, these activities should be continued after the project is finished. The basic procedure is that 1) to revise/improve the manuals and develop core personnel of DDPM, DPM-RC and DPM-PO taking a role of the trainers, and 2) to conduct the trainings according to the task of personnel. However, for the moment, it is recommended to proceed with these activities in parallel.

In order to sustain the output of the Project, the following activities should be conducted after the

project.

- 5-1) To establish Map Unit in DP Criteria Bureau:
- 5-2) To publish manuals for basic hydrology, hydraulics, GIS and flood hazard
- 5-3) To conduct master-facilitator training for DDPM officials :
- 5-4) To conduct facilitator training of DDPM officials :

## **(2) Implementation Procedures and Schedule**

### **5-1) To Establish Map Unit in DP Criteria Bureau:**

Objective: These data are fundamental information for DRR activities e.g. CBDRM. But there is no unit in charge of topographic map, satellite image, hazard map, GIS, etc. It is needed the approval of DG of DDPM to set up the above new unit. Therefore, discussion with relevant bureaus will be commenced to establish Map Unit.

#### Procedures and schedule:

- 1) To gain the approval of establishment of Map Unit 【2014】
- 2) To commence the operation of Map Unit 【2014】

### **5-2) To Publish basic engineering manuals for disaster prevention:**

Objective: The manuals on hydrology, hydraulics, flood hazard map, early warning system and structural measures prepared in the Project are very useful. TF-FRM will translate the manuals from English into Thai and share them widely in DDPM. Moreover, the summary of the manuals will be prepared as necessary in the future.

#### Procedures and schedule:

- 1) To prepare the manuals in Thai version 【2014】
- 2) To distribute the manuals in Thai version 【2014】
- 3) To prepare the summary of manuals and to distribute them 【2015】

### **5-3) To conduct master-facilitator training for DDPM officials:**

Objective: TF-FRM will conduct the annual training on hydrology/hydraulics, hazard map, etc. and develop master facilitator of the fields. The training should be designed in DPMA curriculum and the training resources (material and trainer) should be provided by TF-FRM. The target and contents are as follows.

- DPM-RC: to analyze hydrology, hydraulics, flood simulation, etc.

- DPM-PO: to understand the result of the above analysis and utilize them

Procedures and schedule:

- 1) To plan the training and discuss with DPMA 【2014】
- 2) To prepare the training material 【2014】
- 3) To conduct the master-facilitator training regularly 【after 2015】

**5-4) To conduct facilitator training of DDPM officials:**

Objective: TF-FRM will conduct the training on hydrology, hydraulics, hazard map, etc. for DPM-RC and DPM-PO and develop the facilitator instructing LAO and relevant agencies. These training will be organized by master facilitator mentioned above (5-3).

Procedures and schedule:

- 1) To plan the training and prepare the material 【2014】
- 2) To conduct the facilitator training 【after 2015】

**5-5) To support other bureaus providing hazard maps:**

Objective: TF-FRM will provide the project output e.g. hazard map for CBDRM activities etc. and support other bureaus in charge of these activities.

Procedures and schedule:

- 1) To prepare the plan for utilization of the project output: item, user, cost, etc. 【2014】
- 2) To print the output and provide 【after 2015】

**(3) Arrangements to Secure Implementation of Activities**

In order to secure the successful implementation of the activities for project sustainability, following arrangements should also be taken into account

- 1) Budget arrangements based on the implementation plan of the activity: For all activities.
- 2) Collaborative activities with other bureaus in DDPM: For activity 3), it should be promoted in coordination with Policy Bureau and CBDRM who intend to have their courses in DPMA.



## ***Appendix 1***

### *Results of Task Force Workshop 1*

#### *Concrete Measures to be taken for the Project Outputs Sustainability*





## Concrete Measures for Project Outputs Sustainability Proposed by Task Force (1/5)

### TF1: Disaster Management Planning

Period Month/Year-Month/Year	Person/ Organization In Charge	Concrete Measures
Within 2014 budget year	Task force member	Review and revision of DPM action plan in a comprehensive of all type of disaster and compatibility with area
2014 - 2015	Policy bureau, Directing center	Formulation of standard guideline for disaster management approach
Within 2014 budget year	Policy bureau, RICB, DPMA	Disseminate knowledge for planning and supporting DPMRC and DPMPO e.g. risk analysis, risk management
Every year	Policy bureau, RICB	Evaluating plan to practical level and giving reward for the communities which already used a plan with a concrete outputs
Within 2015 budget year	DOLA	Push forward LAO action plan to be one of the main policy in ministry level (MOI)
Within 6 months after cabinet approval	Task force member	Developing LAO action plan to compatibility with provincial plan and national plan

## Concrete Measures for Project Outputs Sustainability Proposed by Task Force (2/5)

### TF2: CBDRM

Period Month/Year- Month/Year	Person/ Organization In Charge	Concrete Measures
Start from 2014	Promotion bureau, DPMA	<ol style="list-style-type: none"> <li>1. Seeking for collaboration from LAO to expand CBDRM activity               <ol style="list-style-type: none"> <li>1.1. Inserting CBDRM knowledge in relevant LAO curriculum such as ; workshop on disaster prevention and mitigation for LAO executive level and training course for disaster prevention and mitigation officer</li> <li>1.2. Formulating MOU between DPDM and DOLA for Disaster prevention and Mitigation budget</li> </ol> </li> </ol>
Start from 2014	Promotion bureau,	<ol style="list-style-type: none"> <li>2. Review and revision of facilitator manual, DPM for people manual and conduct additional workshop for CBDRM facilitator</li> </ol>
Start from 2014	Promotion bureau, DPMPO	<ol style="list-style-type: none"> <li>3. Scale up CBDRM to all risk area, allocate budget to conduct activity every year continually Coordinating with similarly organization such as Thai Red Cross, COERR, Rak Thai Foundation and ADPC to conduct CBDRM</li> </ol>
Start from 2014	Promotion bureau, DPMPO	<ol style="list-style-type: none"> <li>4. Promoting community that already conducted CBDRM which keep continue activities such as establishing disaster prevention center in community/village level Promoting community leader to be a facilitator for other communities or for relevant academic platform</li> </ol>

## Concrete Measures for Project Outputs Sustainability Proposed by Task Force (3/5)

### TF3: Disaster Management Training

Period Month/Year- Month/Year	Person/ Organization In Charge	Concrete Measures
Short-term 1 year	DPMA	<ul style="list-style-type: none"> <li>• Training on natural disaster management (flood, flash flood and sediment disaster) 2 batches in 2014 fiscal year (on December 2013) including with monitoring and post evaluation</li> </ul>
Mid-term 1 - 3 years	DPMA	<ul style="list-style-type: none"> <li>• Review and revision curriculum of natural disaster management (flood, flash flood and sediment disaster) by using post evaluation results as assessment tools</li> <li>• Formulating curriculum for human resources development in DDPM (basic and intermediate level)</li> </ul>
Long-term 3 - 5 years	DDPM	<ul style="list-style-type: none"> <li>• Natural disaster experience/knowledge exchange among ASEAN countries</li> <li>• Formulating curriculum international level</li> <li>• Study visit on natural disaster management (aboard)</li> <li>• (Advance level) support DDPM official staff to study in natural disaster field in master and doctoral degree, both in Thailand and aboard</li> </ul>

## Concrete Measures for Project Outputs Sustainability Proposed by Task Force (4/5)

### TF4: Disaster Education

Period Month/Year- Month/Year	Person/ Organization In Charge	Concrete Measures
February 2014	Permanent secretary office	<ul style="list-style-type: none"> <li>Meeting on review project activities and direction for the project outputs in next fiscal year with task force members and relevant organizations</li> </ul>
February 2014	OBEC	<ul style="list-style-type: none"> <li>Seminar on human resources development in ESAO level</li> </ul>
March 2014	OBEC, Permanent secretary office	<ul style="list-style-type: none"> <li>Disseminating supplementary reading and DVD, teacher's guideline(by OBEC) through OBEC website and through all schools</li> </ul>
Start from 2014 fiscal year	for all commission in MOE	<ul style="list-style-type: none"> <li>Body of knowledge building in disaster management for disaster education (disaster will be content in main curriculums)</li> </ul>
Long-term	OBEC	<ul style="list-style-type: none"> <li>Establishing main responsible unit for school safety unit for all schools under OBEC</li> </ul>

## Concrete Measures for Project Outputs Sustainability Proposed by Task Force (5/5)

### TF5: Flood Risk Management

Period Month/Year- Month/Year	Person/ Organization In Charge	Concrete Measures
October 2013 – September 2014	Criteria Bureau	<ul style="list-style-type: none"> <li>• Establishing main responsible unit for risk area analysis (must get approval in policy level from DDPM)</li> </ul>
October 2013 – September 2014	Criteria Bureau	<ul style="list-style-type: none"> <li>• Translating and publishing materials of Basic hydrology, Open channel hydraulics, GIS, Flood hazard mapping by TF5 members and revision for an appropriate content in Thailand both in short-term and long-term use</li> </ul>
From October 2013	Criteria Bureau, DPMA	<ul style="list-style-type: none"> <li>• Training for DDPM staff (18 DPM-RCs and 76 DPM-Pos) based on year-on-year implementation plan and budget plan with implementation target (appointed as one course in DPMA)</li> </ul>
From October 2013	Criteria Bureau, DPMA	<ul style="list-style-type: none"> <li>• Training on capacity development for DDPM staff to be facilitator and pass on knowledge for LAO and relevant organization will be implement in short-term and long-term</li> </ul>
From October 2013	Criteria Bureau	<ul style="list-style-type: none"> <li>• Disaster Prevention Criteria Bureau will support other bureaus in DDPM to provide hazard maps for CBDRM activity and disaster management</li> </ul>



## ***Appendix 2***

### *Results of Task Force Workshop 2*

*Evaluation and Feedback from Viewpoints of Efficiency,  
Effectiveness, Impact, Sustainability and Others*





## Evaluation and Feedback from the Viewpoints of Efficiency, Effectiveness, Impact, Sustainability and Others (1/10)

### TF1: Disaster Management Planning (Group 1)

No.	Major activity	Description	Evaluation and feedback from the viewpoints of efficiency, effectiveness, impact, sustainability and Other
1	Preparation of DPM Action Plan at LAO levels	<ul style="list-style-type: none"> <li>• Since formulation of DPM Action Plan at LAO level had not been formulated, efforts of TF were concentrated mainly on preparation of the DPM Action Plans at LAO levels</li> <li>• The DPM Action Plan supports DPM activities of LAO centering around Local Director utilizing local resources in its jurisdiction</li> </ul>	<p>Efficiency: DPM action plan have enough effective plan because its mention all step of response of before disaster, during disaster and after disaster also this action plan coherence with DPM act Year 2550</p> <p>Effectiveness: LAO have DPM action plan and DDPM officer have TTX technical skill</p>
2	Implementation of workshops to guide how to prepare DPM Action Plan at LAO level	<ul style="list-style-type: none"> <li>• Trainings for DDPM, DPMRC, DPMPO and LAO officials were implemented to disseminate a template of LAO Action Plan and to enhance understanding how to prepare DPM Action Plan at LAO levels</li> </ul>	<p>Impact: Extend result of DPM action plan to all regions in Thailand</p>
3	Implementation of Table-top Exercise (TTX)	<ul style="list-style-type: none"> <li>• TTXs were conducted to verify and improve DPM Action Plan.</li> <li>• TTXs also aim that LAO staff improve information handling and decision making during the disaster, and DPM officials understand concept and procedures of TTX for their assistance to LAO</li> </ul>	<p>Sustainability: According to DPM act Year 2550 is legislation, all of LAOs will formulate DPM action plan with annual review, and people participation also including in action plan formulation</p>

## Evaluation and Feedback from the Viewpoints of Efficiency, Effectiveness, Impact, Sustainability and Others (2/10)

### TF1: Disaster Management Planning (Group 2)

No.	Major activity	Description	Evaluation and feedback from the viewpoints of efficiency, effectiveness, Impact, sustainability and Other
1	Preparation of DPM Action Plan at LAO levels	<ul style="list-style-type: none"> <li>• Since formulation of DPM Action Plan at LAO level had not been formulated, efforts of TF were concentrated mainly on preparation of the DPM Action Plans at LAO levels</li> <li>• The DPM Action Plan supports DPM activities of LAO centering around Local Director utilizing local resources in its jurisdiction</li> </ul>	<p><b>Efficiency:</b> Model plan already revise and starting plan by local/community</p> <p><b>Effectiveness:</b> It has been successful in some provinces/communities that interested in these activities</p> <p><b>Sustainability:</b> Plan is easy to understand and clearly (local formulate plan in detail) and create plan as a manual, guideline version</p>
2	Implementation of workshops to guide how to prepare DPM Action Plan at LAO level	<ul style="list-style-type: none"> <li>• Trainings for DDPM; DPMRC; DPMPO and LAO officials were implemented to disseminate a template of LAO Action Plan and to enhance understanding how to prepare DPM Action Plan at LAO levels</li> </ul>	<p><b>Efficiency:</b> Conducted training with all sector participation, efficiency facilitators and training contains</p> <p><b>Effectiveness:</b> Understand and able to use disaster risk management also the people have their role/ responsibility</p> <p><b>Sustainability:</b> Supported from DDPM headquarter by sent facilitators to requested area (community)</p>
3	Implementation of Table-top Exercise (TTX)	<ul style="list-style-type: none"> <li>• TTXs were conducted to verify and improve DPM Action Plan.</li> <li>• TTXs also aim that LAO staff improve information handling and decision making during the disaster, and DPM officials understand concept and procedures of TTX for their assistance to LAO</li> </ul>	<p><b>Efficiency:</b> Participation in all sector</p> <p><b>Effectiveness:</b> Using knowledge from training both in provincial and LAO level also start TTX annually (in pilot area)</p> <p><b>Suggestion:</b> Insufficiency of Local disaster information management and insufficiency of training in decision making in critical situation</p> <p><b>Sustainability:</b> Training by themselves (local) and expand to another LAO that interested but lack of budget</p>

## Evaluation and Feedback from the Viewpoints of Efficiency, Effectiveness, Impact, Sustainability and Others (3/10)

### TF2: CBDRM (Group 2)

No.	Major activity	Description	Evaluation and feedback from the viewpoints of efficiency, effectiveness, Impact, sustainability and Other
1	Review and Revision of CBDRM Facilitator's Guide	<ul style="list-style-type: none"> <li>Based on results of the facilitators workshop in December 2012, CBDRM Facilitator's Guide is reviewed and revised including shortening of the duration of the CBDRM workshop keeping the quality of CBDRM training (to be completed by the end of 2013)</li> </ul>	<p><b>Output:</b> Efficiency CBDRM Facilitator's Guide</p> <p><b>Problem:</b> For school sector the guideline have to many detail and inefficiency, training period should be shorten from 5 days change to 2 days Knowledge on disaster is not consistent with Thailand education</p> <p><b>Suggestion:</b> Revision of appropriate material; General (for people) Specific (for student)</p> <p><b>Impact:</b> Adjusting to meet the social context of Thailand Mae Hang Witthaya school in the one model school which already use disaster education course in school (ESAO Lamphun 1)</p>
2	Training of CBDRM Facilitators	<ul style="list-style-type: none"> <li>228 officials of DDPM, DPM-RC, DPM-PO, retired DPM officials, teachers, village headman and community leaders have been trained as CBDRM facilitators.</li> <li>Approximately 240 LAO officials in model provinces have been trained to enhance knowledge on CBDRM and disaster risk management</li> </ul>	<p><b>Efficiency:</b> Facilitator able to disseminate knowledge Facilitator capacity developing for their knowledge Promoting new/young facilitators</p> <p><b>Effective:</b> Expanding to the community</p> <p><b>Problem:</b> No certification for facilitators</p> <p><b>Suggestion:</b> Facilitator should get support from their original affiliation Developing and promoting new knowledge Pushing to Ministerial regulation, national act to set a standard of facilitator by the committee and creating Professional certification and facilitator evaluation</p> <p><b>Suggestion:</b> Facilitator should share knowledge/experience in facilitated</p>
3	Demonstration of CBDRM by the Facilitators	<ul style="list-style-type: none"> <li>CBDRM trainings for five model communities were facilitated by the trained facilitators gradually without guide of JICA experts</li> </ul>	<p><b>Suggestion:</b> Facilitator should share knowledge/experience in facilitated</p>

## Evaluation and Feedback from the Viewpoints of Efficiency, Effectiveness, Impact, Sustainability and Others (4/10)

### TF2: CBDRM (Group 3)

No.	Major activity	Description	Evaluation and feedback from the viewpoints of efficiency, effectiveness, Impact, sustainability and Other
1	Review and Revision of CBDRM Facilitator's Guide	<ul style="list-style-type: none"> <li>Based on results of the facilitators workshop in December 2012, CBDRM Facilitator's Guide is reviewed and revised including shortening of the duration of the CBDRM workshop keeping the quality of CBDRM training (to be completed by the end of 2013)</li> </ul>	Developed CBDRM Facilitator's Guide for community's training in the same direction and future expansion for CBDRM activities
2	Training of CBDRM Facilitators	<ul style="list-style-type: none"> <li>228 officials of DDPM, DPM-RC, DPM-PO, retired DPM officials, teachers, village headman and community leaders have been trained as CBDRM facilitators.</li> <li>Approximately 240 LAO officials in model provinces have been trained to enhance knowledge on CBDRM and disaster risk management</li> </ul>	<p>Increasing number of facilitators for knowledge dissemination for risk communities</p> <p>Knowledge building and technical learning to be facilitator in CBDRM training for community</p> <p>Awareness raising in DPM for local officers and relevant people for DPM activities supporting in that community</p>
3	Demonstration of CBDRM by the Facilitators	<ul style="list-style-type: none"> <li>CBDRM trainings for five model communities were facilitated by the trained facilitators gradually without guide of JICA experts</li> </ul>	<p>CBDRM facilitator which already trained able to use their knowledge to conduct a training in community by themselves</p> <p>Community can bring this knowledge to use in DPM in the area and for neighbor community (developing to be model community )</p>

## Evaluation and Feedback from the Viewpoints of Efficiency, Effectiveness, Impact, Sustainability and Others (5/10)

### TF3: Disaster Management Training (Group 3)

No.	Major activity	Description	Evaluation and feedback from the viewpoints of efficiency, effectiveness, impact, sustainability and Other
1	Post Evaluation of Training of DDPM staff on management of natural disasters	<ul style="list-style-type: none"> <li>• Post evaluations of the trainings have been conducted to keep track of the trainees from the training course and to measure if they have applied the knowledge gained in the course for their work, leading to higher work efficiency and quality</li> <li>• Collected information are applied for developing the training curriculum for improvement</li> </ul>	<p>Trainees earned their knowledge, understanding in DPM and can be applied in their routine task</p> <p>Knowledge disseminate to LAOs and risk communities</p> <p>Impact: incomplete feedback of evaluation form after training (lack of collaboration in answer evaluation)</p>
2	Improvement of curriculum for the training on management of natural disaster.	<ul style="list-style-type: none"> <li>• The curriculum for the training of DDPM staff on management of natural disaster (flood, flash flood and sediment disaster) was improved through discussion among TF members from relevant agencies (RID, TMD, DMR, MOE, DOLA, OWAFD, JICA experts, etc.)</li> </ul>	<p>Conducted training of natural disaster (flood, flash flood and sediment disaster) and developed and expanding to government official, headquarter officers</p> <p>Concept of sustainability development training course up to date and international</p> <p>Impact: Insufficient expert officers in DPMA, they must collaborate with network such as TMD, RID and DWR) developing curriculum</p>
3	Implementation of Training for DDPM staff on management of natural	<ul style="list-style-type: none"> <li>• 45 DPM officials were trained as the master trainers for management of natural disasters (flood, flash flood and sediment disaster)</li> <li>• 182 DPM official have participated natural disasters management course</li> </ul>	<p>Gaining DPM knowledge and coordination among officers</p> <p>Impact: Target group of the training can't expand knowledge, length of training day</p>

## Evaluation and Feedback from the Viewpoints of Efficiency, Effectiveness, Impact, Sustainability and Others (6/10)

### TF3: Disaster Management Training (Group 4)

No.	Major activity	Description	Evaluation and feedback from the viewpoints of efficiency, effectiveness, impact, sustainability and Other
1	Post Evaluation of Training of DDPM staff on management of natural disasters	<ul style="list-style-type: none"> <li>• Post evaluations of the trainings have been conducted to keep track of the trainees from the training course and to measure if they have applied the knowledge gained in the course for their work, leading to higher work efficiency and quality</li> <li>• Collected information are applied for developing the training curriculum for improvement</li> </ul>	<p><b>Efficiency:</b> Achieved project objective, most of trainees can apply the knowledge to their routine task in DPM specially in communication, disaster warning and coordination</p> <p><b>Effective:</b> Trainees from the first batch are understand and gain the knowledge also able to disseminated to other officers in provincial level</p>
2	Improvement of curriculum for the training on management of natural disaster.	<ul style="list-style-type: none"> <li>• The curriculum for the training of DDPM staff on management of natural disaster (flood, flash flood and sediment disaster) was improved through discussion among TF members from relevant agencies (RID, TMD, DMR, MOE, DOLA, OWAFD, JICA experts, etc.)</li> </ul>	<p><b>Impact (positive):</b> Facilitators able to disseminate DPM knowledge</p> <p><b>Impact (negative):</b> Some of the trainee unable to disseminate DPM knowledge some of the trainee did not designate to in charge as trainer, facilitator after this training</p> <p><b>Sustainability:</b> Developing a training course by focus on network participation which appropriate with situation and area</p>
3	Implementation of Training for DDPM staff on management of natural	<ul style="list-style-type: none"> <li>• 45 DPM officials were trained as the master trainers for management of natural disasters (flood, flash flood and sediment disaster)</li> <li>• 182 DPM official have participated natural disasters management course</li> </ul>	

## Evaluation and Feedback from the Viewpoints of Efficiency, Effectiveness, Impact, Sustainability and Others (7/10)

### TF4: Disaster Education -1 (Group 5)

No.	Major activity	Description	Evaluation and feedback from the viewpoints of efficiency, effectiveness, impact, sustainability and Other
1	Formulation and dissemination of Disaster Education Guideline nationwide	<ul style="list-style-type: none"> <li>• Disaster education guideline was formulated to define the responsibility of OBEC, ESAOs, schools by disaster phases of before, during and after disasters and it was approved by OBEC in May 2011</li> <li>• Seminars on the disaster education guideline were conducted to promote action plan in every ESAO</li> </ul>	<p>Enlarge target group to all office in MOE, disseminating guideline and textbook to OVEC, OPEC and informal education</p> <p>Seminar and workshop conducted only in some office (OBEC) it should be inclusive to all office in MOE</p>
2	Development and dissemination of Disaster Education Materials (Book and DVD)	<ul style="list-style-type: none"> <li>• OBEC has developed a new disaster education material consists of a book and a DVD for both students and teachers.</li> <li>• The material deals with natural disasters such as flood, sediment disaster, storm surge, typhoon, earthquake and Tsunami</li> </ul>	<p>Contents of material should be uploaded to website (not only in MOE website but also in relevant organization website) Uploading to student's tablet</p> <p>Creating various of disaster education material to cover all kind of disaster Disaster education material should be created to suit and appropriate with student's age</p>
3	Designation of a model school in four regions	<ul style="list-style-type: none"> <li>• 58 ESAOs were selected as priority areas and budget for promoting disaster education has been allocated</li> </ul>	<p>Allocating budget to all 225 ESAOs and expand to OVEC, OPEC and informal education</p>

**Evaluation and Feedback from the Viewpoints of Efficiency, Effectiveness, Impact, Sustainability and Others (8/10)**

**TF4: Disaster Education -2 (Group 4)**

No.	Major activity	Description	Evaluation and feedback from the viewpoints of efficiency, effectiveness, impact, sustainability and Other
1	Training of teachers who can teach Disaster Education classes	<ul style="list-style-type: none"> <li>• Disaster education workshops were conducted in all four regions collaborating with DPM-RC or DPM-PO</li> <li>• More than 1,000 teachers learned how to incorporate disaster education into classes through trainings at model areas</li> </ul>	Sustainability 1. Proceeding project evaluation 2. Sending request of policy making and budgeting to executive level for continuous and sustainable
2	Development of model schools as an information center	<ul style="list-style-type: none"> <li>• Two model schools in Lamphun and Lampang have been recognized as leading schools in disaster education and received study visits from other areas</li> </ul>	



## Evaluation and Feedback from the Viewpoints of Efficiency, Effectiveness, Impact, Sustainability and Others (9/10)

### TF5: Flood Risk Management (Group 5)

No.	Major activity	Description	Evaluation and feedback from the viewpoints of efficiency, effectiveness, impact, sustainability and Other
1	Preparation of manuals for rainfall/ flood analysis and hazard mapping	<ul style="list-style-type: none"> <li>• Preparation of manuals for rainfall/ flood analysis and hazard mapping through the process of the practical training taking the model site as an case study</li> </ul>	<p>Knowledge Integration from all agencies and JICA to create flood and flash flood hazard map</p> <p>DDPM should support budget for the manuals and hazard maps</p> <p>Publish manuals and disseminate to units/bureaus in DDPM</p> <p>Hazard map might not comprehensive and not consistent with actual incident</p>
2	Preparation of manuals for improvement of early warning system and for evaluation of structural measures	<ul style="list-style-type: none"> <li>• Preparation of manuals for improvement of early warning system and for evaluation of structural measures,</li> </ul>	<p>Comparing with past experiences in affected area</p> <p>Proceeding structure measure and expand to all of Thailand</p>
3	Technical Training for DPM regional center officials	<ul style="list-style-type: none"> <li>• Training on Basic hydrology, Open channel hydraulics, GIS, Flood hazard mapping for DPM regional center officials using the above manuals</li> </ul>	<p>Expanding the training to DDPM staffs both of DPMRC, DPMPO and relevant organization, DDPM should allocate budget for training and LAO as an in charge organization</p>

## Evaluation and Feedback from the Viewpoints of Efficiency, Effectiveness, Impact, Sustainability and Others (10/10)

### TF5: Flood Risk Management (Group 1)

No.	Major activity	Description	Evaluation and feedback from the viewpoints of efficiency, effectiveness, impact, sustainability and Other
1	Preparation of manuals for rainfall/ flood analysis and hazard mapping	<ul style="list-style-type: none"> <li>Preparation of manuals for rainfall/ flood analysis and hazard mapping through the process of the practical training taking the model site as an case study</li> </ul>	<p>Efficiency: Gaining knowledge on flood risk management for DPM officers (capacity development on model simulation for risk area analysis)</p> <p>Effectiveness: Community hazard map, the details are clearly understandable Manual of hazard map analysis can be expanded Manual of early warning system DDPM officers are able to use knowledge and manual effectively</p>
2	Preparation of manuals for improvement of early warning system and for evaluation of structural measures	<ul style="list-style-type: none"> <li>Preparation of manuals for improvement of early warning system and for evaluation of structural measures,</li> </ul>	
3	Technical Training for DPM regional center officials	<ul style="list-style-type: none"> <li>Training on Basic hydrology, Open channel hydraulics, GIS, Flood hazard mapping for DPM regional center officials using the above manuals</li> </ul>	

### ***Appendix 3***

*List of Participant  
Task Force Workshop on Project Outputs Sustainability  
on 25 October 2013 at DPMA Pathum Thani*

**List of Participant  
Task Force Workshop on Project Outputs Sustainability  
on 25 October 2013 at DPMA Pathum Thani**

<b>No.</b>	<b>Name</b>	<b>Organization</b>
1	Mr. Noritoshi Maehara	JICA
2	Mr. Noboru Jitsuhiro	JICA
3	Mr. Arata Sasaki	JICA
4	Ms. Lolita Garcia	JICA
5	Ms. Penpisut Sriprasert	JICA
6	Ms. Chatchadaporn Boonpeeranat	Disaster Prevention and Mitigation Policy Bureau
7	Mr. Sittikorn Kwandee	Disaster Prevention and Mitigation Policy Bureau
8	Ms. Yaupawan Kongsanteer	Disaster Prevention and Mitigation Policy Bureau
9	Ms. Ananya Ngamhom	Disaster Prevention and Mitigation Policy Bureau
10	Ms. Wilailuck Kehasatien	Disaster Prevention and Promotion Bureau
11	Ms. Kamolwan Jitpakdee	Disaster Prevention and Promotion Bureau
12	Ms. Panrarin Pukit	Disaster Prevention and Promotion Bureau
13	Ms. Kamolwan Kapsri	Disaster Prevention and Promotion Bureau
14	Ms. Pimnipa Autsaran	Disaster Prevention and Promotion Bureau
15	Mr. Chonlatis Ponsucharit	Disaster Prevention and Promotion Bureau
16	Ms. Paolampai Janya	DPMA
17	Mr. Kittikorn Tepuamnuy	DPMA
18	Ms. Areerat Wijitwatcharapon	DPMA
19	Mr. Taweep Limpakornmanit	DPMA
20	Ms. Ranya Pungtham	DPMA
21	Ms. Jittana Nantapipat	DPMA
22	Ms. Jantima Montien	DPMA
23	Ms. Hataiwan Meesomsak	DPMA
24	Ms. Veenutsuda Nantasukon	DPMA
25	Mrs. Vannee Chantarasiri	OBEC, MOE
26	Ms. Thanathat Chaiyanon	OBEC, MOE
27	Ms. Ratchadaporn Mahipun	OPEC, MOE
28	Ms. Wanlapa Chaiopas	OVEC, MOE
29	Mr. Narurit Kwansanit	OVEC, MOE
30	Ms. Supaporn Peenang	OVEC, MOE

<b>No.</b>	<b>Name</b>	<b>Organization</b>
31	Mr. Lucksak Yangsaman	OVEC, MOE
32	Mrs. Vipawan Waithanomsat	Office of Non-formal and Informal Education, MOE
33	Mr. Somsong Ngamvong	Permanent Secretary Office, MOE
34	Ms. Kanokwan Kwantinpu	Permanent Secretary Office, MOE
35	Mr. Paitoon Naktae	Disaster Prevention Measures Bureau
36	Mr. Monchai Manosamut	Disaster Prevention Measures Bureau
37	Mr. Banyat Yaingulueam	Disaster Prevention Measures Bureau
38	Ms. Wiboobluck Supaem	Disaster Prevention Measures Bureau
39	Mr. Pisut Anurak	Disaster Prevention Measures Bureau
40	Mr. Napat Henthanon	Disaster Prevention Measures Bureau
41	Mr. Wichien Amnuyporn	Disaster Prevention Measures Bureau
42	Mr. Sapon Kamnanchai	Disaster Prevention Measures Bureau
43	Ms. Supanan Theppakdee	Disaster Prevention Measures Bureau
44	Ms. Duangnapa Uttamangkpong	RICB
45	Ms. Kornisan Wilawan	RICB
46	Ms. Kanokporn Chucherd	RICB
47	Ms. Yaowapapan Konkasri	RICB
48	Ms. Orarang Sankasem	RICB
49	Mr. Pangsakorn Sarbmee	RICB
50	Ms. Natcharinee Sritinnon	RICB
51	Ms. Wipawan Srithani	RICB
52	Ms. Sippaka Pimon	RICB
53	Ms. Ratana Trirattanatham	RICB
54	Ms. Suparat Muangpng	RICB
55	Mr. Kosit Srirukit	RICB
56	Ms. Tanita Niltai	JICA Thailand
57	Mr. Natthawut Singkaew	DPMPO Lamphun
58	Mr. Chumporn Inthathep	DPMPO Lamphun
59	Mr. Prapan Sanitmatroj	DPMRC Lamphun
60	Mr. Chotnarin Kerdson	DPMRC Surathani
61	Mr. Thavanchai Phomma	DPMRC Surathani





