タイ国 防災能力向上プロジェクト フェーズ 2 終了時評価調査報告書

平成 27 年 12 月 (2015 年)

独立行政法人国際協力機構 地球環境部

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語

ADPC	Asian Disaster Preparedness Center	アジア防災センター
CBDRM	Community-based Disaster Risk Management	コミュニティ防災
DDPM	Department of Disaster Prevention and Mitigation	災害防止軽減局
DLA	Department of Local Administration	自治体振興局
ESAO	Education Service Area Office	教育サービス地域事務所
GTZ	Gesellschaft für Technische Zusammenarbeit	ドイツ技術協力公社
	(German Technical Cooperation Agency)	
LA	Local Authority	ローカルオーソリティ
		(市・町を含む地方行政組織の総称)
JCC	Joint Coordination Committee	共同調整委員会
JICA	Japan International Cooperation Agency	国際協力機構
M/M	Minutes of Meetings	協議議事録
MOE	Ministry of Education	教育省
OBEC	Office of Basic Education Commission	初等教育局
ODA	Official Development Assistance	政府開発援助
PDM	Project Design Matrix	プロジェクトデザインマトリックス
РО	Plan of Operation	活動(実施)計画
R/D	Record of Discussion	討議議事録
TF	Task Force	タスクフォース
TICA	Thailand International Development Cooperation	タイ国際開発協力機構
	Agency	
UNDP	United Nations Development Program	国連開発計画

レビュー調査結果要約表

1. 案件の	概要	
国名:タイ		案件名:防災能力向上プロジェクト(フェーズ2)
分野:水資	源・防災-総合防災	協力形態:技術協力プロジェクト
所轄部署:	地球環境部	協力金額(評価時点):3.8億円
	先方関係機関:内務省災害防止軽減局、教育省初等教 育局	
協力期間 2010年6月~2014年5月 (実績) (4年間)		日本側協力機関:名古屋大学、兵庫県、神戸市、名古 屋市、アジア防災センター、あいち防災リーダーの 会、NPO法人プラス・アーツ等

1-1 協力の背景と概要

タイ国政府は 2002 年に、防災・災害対策全般について責任を持つ災害防止軽減局 (Department of Disaster Prevention and Mitigation: DDPM)を内務省内に設置する等、防災・ 災害対策の強化に取り組んできた。

2006 年、タイ政府は日本に対し、DDPM の防災・災害軽減担当機関としての能力向上及び地 方・コミュニティにおける災害対応能力向上を目的とする技術協力プロジェクトと、学校防災 教育に係る技術協力プロジェクトを要請した。事前調査において、学校防災教育においても DDPM と教育省が連携することの重要性が確認されたため、2 つの要請を 1 つの技術協力プロ ジェクトにまとめ、「防災能力向上プロジェクト (フェーズ 1)」(2006 年 8 月~2008 年 8 月) を実施した。中央レベルにおいては DDPM の能力強化及び関係諸機関との連携強化を図った。 一方、コミュニティレベルでは災害対応能力向上を目指し、洪水、地すべり、津波の観点で選 定された 3 県をモデルサイトとして、「県レベル・コミュニティレベルのハザードマップ作成」 及び「コミュニティ防災 (Community-based Disaster Risk Management: CBDRM)」の能力強 化、また、「学校防災教育」手法の導入を行った。フェーズ 1 の活動は中央レベルとコミュニテ ィレベルでの活動が中心であったため、さらに、その中間にある地方行政(県、郡)を巻き込 んでいく必要がある。さらにフェーズ 1 の成果をタイ国内に普及・展開していくためには、 DDPM を中心に中央レベル及び地方レベルの関係諸機関との普及体制の構築が必要である。こ のため、タイ政府は、我が国に対してフェーズ 1 の成果普及体制の構築を主な目的とした、フ ェーズ 2 の実施を要請した。

1-2 協力内容

- (1) 上位目標:モデル県・モデル村以外で、防災・災害軽減活動が普及する。
- (2) プロジェクト目標: DDPM が関連機関及び県・地域と協力して、防災・災害軽減アクショ ンプラン、コミュニティ防災活動、学校防災教育を普及させていくための能力が向上す る。
- (3) 成果:
 - 災害弱者への配慮を含めた防災・災害軽減アクションプランが、国レベル及びモデル県の県レベルとローカルオーソリティ¹(Local Authority: LA)レベルで作成される。
 - 2. DDPM 職員の CBDRM 実施促進のためのファシリテーターとしての能力が向上する。
 - 3. DDPMの自然災害対策に関する研修カリキュラムが改良される。
 - 自然災害に関する防災教育カリキュラムに基づいた、学校防災教育の普及体制が構築される。
 - 5. DDPM のハザードマップ作成、早期警報システムの構築及び構造物対策の設計における 知識と技術力が向上する
- (4) 投入(終了時評価時点):

¹ ローカルオーソリティとは、タイで県よりも下の地方行政組織の総称である。市・町が含まれる。ただし、タイの行政区 分では村は行政単位ではなく、市・町における地区という位置づけであるため、本報告書では地方行政組織あるいは市町 と呼称する。

-	本側(JICA)】				
- 	門家派遣 9名(110.5	59人月) 機材供与 966万円			
特別講師派遣 4名		プロジェクト経費負担 2,157 万円			
本邦研修員受入 93名 インドネシア現地視察 20名					
【多子側】					
-					
1	カウンターパート配置 154 名(33 名の合同調整委員会メンバーを含む) プロジェクト経費負担 1,435 万バーツ(施設、設備、ワークショップ・セミナー等の会場経				
	・印刷費等の提供等)	ハーノ(旭政、政備、ソークショソノ・ヒミノー等の云場柱			
	・印刷貨寺の症供寺) 評価調査団の概要				
乙. 貢					
	日本側:				
		画)JICA 地球環境部 参事役			
		合同会社適材適所シニアコンサルタント			
	タイ側:				
	0	msithi 内務省災害防止軽減局国際協力・研究部 部長			
調査す	01 0	gkapong 内務省災害防止軽減局渉外担当官(専門職レベル)			
	Ms. Kornisnan Wilawan	内務省災害防止軽減局政策計画分析官(専門職レベル)			
	Mr. Somsong Ngamwong	教育省国際協力課二国間協力第1課長			
	Ms. Attaya Memanvit	外務省タイ国際開発協力機構 (Thailand International			
		Development Cooperation Agency: TICA) 計画モニタリング			
		部開発協力担当官			
調査其	期間 2014 年 1 月 7 日~1 月 3	0日 評価種類:終了時評価			
3. 言	評価結果の概要				
3 - 1	1 進捗・実績の確認				
本に	プロジェクトでは以下の通り、	5 つのタスクフォース (Task Force:TF) が設置された:			
TF1 🖇	方災計画、TF2 コミュニティ防	災、TF3 防災研修、TF4 防災教育、TF5 洪水リスク管理。			
		果の達成を目指しプロジェクトで計画・合意された活動を実			
施して	ている。				
TF					
	期待される成果	進捗・実績			
1					
1	災害防止軽減アクションプ	 国家災害防止軽減計画の改訂(2012年閣議承認済) 			
1	災害防止軽減アクションプ ランが、国レベル及びモデ	 ・ 国家災害防止軽減計画の改訂(2012年閣議承認済) ・ 県レベルの災害防止軽減計画の作成(100%承認済) 			
1	災害防止軽減アクションプ ランが、国レベル及びモデ ル県の県レベルとローカル	 ・ 国家災害防止軽減計画の改訂(2012年閣議承認済) ・ 県レベルの災害防止軽減計画の作成(100%承認済) ・ モデル県の災害防止軽減アクションプランの作成(ほ) 			
	災害防止軽減アクションプ ランが、国レベル及びモデ ル県の県レベルとローカル オーソリティレベルで作成	 国家災害防止軽減計画の改訂(2012年閣議承認済) 県レベルの災害防止軽減計画の作成(100%承認済) モデル県の災害防止軽減アクションプランの作成(ほぼ100%済) 			
	災害防止軽減アクションプ ランが、国レベル及びモデ ル県の県レベルとローカル オーソリティレベルで作成 される。	 国家災害防止軽減計画の改訂(2012年閣議承認済) 県レベルの災害防止軽減計画の作成(100%承認済) モデル県の災害防止軽減アクションプランの作成(ほぼ100%済) GISデータベースの導入とスタッフ研修を実施済 			
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	 災害防止軽減アクションプ ランが、国レベル及びモデ ル県の県レベルとローカル オーソリティレベルで作成 される。 DDPM 職員のコミュニティ 防災実施促進のためのファ 	 国家災害防止軽減計画の改訂(2012年閣議承認済) 県レベルの災害防止軽減計画の作成(100%承認済) モデル県の災害防止軽減アクションプランの作成(ほぼ100%済) GISデータベースの導入とスタッフ研修を実施済 ファシリテーター研修コースの作成と228名のファシリテーターの育成 			
	 災害防止軽減アクションプ ランが、国レベル及びモデ ル県の県レベルとローカル オーソリティレベルで作成 される。 DDPM 職員のコミュニティ 防災実施促進のためのファ シリテーターとしての能力 	 ・ 国家災害防止軽減計画の改訂(2012年閣議承認済) ・ 県レベルの災害防止軽減計画の作成(100%承認済) ・ モデル県の災害防止軽減アクションプランの作成(ほぼ 100%済) ・ GIS データベースの導入とスタッフ研修を実施済 ・ ファシリテーター研修コースの作成と 228 名のファシリテーターの育成 ・ ファシリテーターガイドと研修教材の改訂済 			
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2	 災害防止軽減アクションプ ランが、国レベル及びモデ ル県の県レベルとローカル オーソリティレベルで作成 される。 DDPM 職員のコミュニティ 防災実施促進のためのファ シリテーターとしての能力 が向上する。 	 ・ 国家災害防止軽減計画の改訂(2012年閣議承認済) ・ 県レベルの災害防止軽減計画の作成(100%承認済) ・ モデル県の災害防止軽減アクションプランの作成(ほぼ100%済) ・ GISデータベースの導入とスタッフ研修を実施済 ・ ファシリテーター研修コースの作成と 228名のファシリテーターの育成 ・ ファシリテーターガイドと研修教材の改訂済 ・ モデル県で CBDRMの実践済 ・ GIS データベースの導入とスタッフ研修を実施済 			
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		•	モデル校に指定し普及活動を継続中 GISデータベースの導入とスタッフ研修を実施済 モデル校における防災教育の特徴は以下の通り。
			 授業への多様な防災の観点の取り込み 学習センターの設置と生徒の自主学習促進 村と連携した学校防災計画の作成と実施 年2回の避難訓練の実施 全国の学校・教育サービス地域事務所からの視察
			受け入れ
5	DDPM のハザードマップ作 成、早期警報システムの構 築及び構造物対策の設計に おける知識と技術力が向上 する。	•	成果5のタスクフォースは2012年1月に活動を開始 モデルサイトでの調査・分析の経験をもとに、ハザー ドマップ作成、早期警報システム、構造物対策につい てのマニュアルを作成 マニュアルを活用し、19名(18地域センター)に対し
		•	て技術研修を実施 ハザードマップ、早期警報システム、構造物対策につ いて、DDPM が市町を支援する体制・仕組みは未確立

3-2 評価結果の要約

(1) 妥当性

プロジェクトの妥当性は非常に高い。2011年の大洪水以降、災害防止軽減法と国家災害防止軽減計画(2009-2013)が改訂され、災害対応時の対応の一元化が明確化された。この中で本プロジェクトのカウンターパート機関である内務省災害防止軽減局は、国家災害防止軽減委員会の事務局として政策提案、緊急対応、防災促進、防災育成の面で一層の機能強化が求められている。教育省は教育開発五カ年計画で、教育省が管轄する全ての教育機関で防災教育をカリキュラムに加えることを促進しており、本プロジェクトで DDPM と教育省を支援することは妥当である。本プロジェクトは DDPM と教育省の地方行政機関への支援能力を高めることを目的としており、ターゲットの選択も妥当と言える。

(2) 有効性

プロジェクトの有効性は一部課題がある。本プロジェクトでは DDPM と教育省の市町への 支援能力強化とその強化された能力を活用して、全国の市町で防災活動を展開するための戦 略・制度・仕組み作りが期待されていた。本プロジェクトでは支援能力強化という目的は十 分果たせた。市町の防災計画づくりと防災教育については全国普及の明確な方針ができてい るが、コミュニティ防災とハザードマップづくりや早期警報システム、構造物対策について は、全国展開するための方針や仕組みが明確でない。

(3) 効率性

プロジェクトの効率性は高い。このプロジェクトでは日本側の投入は主に技術支援に対し て行われ、研修、セミナー・ワークショップの経費など運営費の多くはタイ側が積極的に負 担し、活動実施・成果達成はほぼスケジュール通りに進捗した。プロジェクトには多くの関 連組織が参加しコミュニケーションも円滑であったが、防災活動の全国展開に向けた組織間 連携の活動は十分とは言えなかった。

(4) インパクト(見込み)

インパクトは非常に高い。これまでにプロジェクトが導入したテンプレートを活用し、少なくとも 30 県で 2,755 の市町が防災アクションプランを作成するなど面的な展開が進んでいる。全国の災害リスクの高い 22,300 村のうち、1,400 村でコミュニティ防災が行われた。現在、DDPM の予算で毎年 780 村に対するコミュニティ防災を実施しているが、DDPM のリソースだけに依拠した場合、全ての村をカバーするのに 30 年を要する計算になる。全国的な普及展開には、市町が主体的にコミュニティ防災に取り組むような法制度、仕組み、動機付けが必要である。防災教育について、初等教育局はモデル校の経験に基づき、モデル校を拡大

している。これまでに 100 校以上がモデル校として指定されている。初等教育局による支援 が継続されれば、非常に大きな面的な展開が期待できる。

(5) 持続性(見込み)

プロジェクトの持続性はいくつかの課題がある。次期の国家災害防止軽減計画では、市町 による主体的な防災への取り組みの重要性が明記されるため、本プロジェクトの成果を普及 展開していく上で政策面での後押しとなることが期待できる。予算面では DDPM、教育省と もに現在の活動レベルを維持できる予算配分が見込まれる。ファシリテーターの維持、研修 活動の常設化、ハザードマップ・早期警報システム・構造物対策の業務化については継続性 に課題がある。

3-3 効果発現に貢献した要因

2011年の大洪水以降、災害防止軽減法の改正と国家災害防止軽減計画の改訂による国家災害防止軽減委員会の権限強化や関係機関間の連携促進が図られた。また、コミュニティ防災への予算増加、洪水リスクの高い県・市町への特別予算配分なども行われた。また、プロジェクトのモデル村や学校では、メディア等を通して洪水など災害への準備の重要性や意識向上がみられた。

3-4 問題点及び問題を惹起した要因

特になし

3-5 結論

2011年の大洪水以降、DDPMの防災活動を主導・促進する役割は益々重要性を増しており、 DDPMによる自治体への支援能力を強化するという実施アプローチも有効で、プロジェクトの 妥当性は非常に高いと言える。プロジェクトによりDDPMと教育省初等教育局の支援能力は高 まったが、モデル県での取り組みを全国に普及展開するための政策や制度作りは十分に具体化さ れておらず課題を残した。活動はほぼ予定通り実施され、当初計画した成果はほぼ達成している ため、プロジェクトの効率性は高いと言える。タイ側による積極的な投入もあり、2,000を超え る自治体で防災計画が策定され、100以上の小中学校が防災モデル校に指定されるなど、既にイ ンパクト発現が見られる。地方行政組織を含め積極的な外部への働きかけができれば、モデル県 の経験を全国に広く普及することが可能である。政策、予算面での持続性は高いが、プロジェクトの成果を維持するためには、普及展開のための仕組みや制度づくりが必要である。

3-6 提言(本プロジェクトに関する具体的な措置、提案、助言)

- 防災活動を全国普及・展開するための組織間連携の強化(自治体振興局、市町の首長連 合など)
- 現在のタスクフォースの枠組みの継続
- 提言への対応状況のモニタリング
- 市町の防災計画づくりへの図上訓練の確実な活用
- コミュニティ防災のモデル村への継続的な支援とモデル性の確立
- 防災人材育成計画の作成と研修コースの体系化
- プロジェクトで実施した研修の常設化
- ハザードマップ、早期警報システム、構造物対策について DDPM が市町に技術提供・助 言する体制・仕組みづくり

3-7 教訓

(本プロジェクトから導き出された他類似プロジェクトの発掘・形成、実施、運営管理に参考と なる事柄)

 本プロジェクトでは、モデル県での経験(あるいはモデル県で検証したプロジェクトの 成果品)に基づく、実施機関への能力強化には成功したが、その能力を活用して全国の 自治体・コミュニティに成果を普及展開するまでのシナリオ(ストーリー)が明確では なく、プロジェクトデザインマトリックス(Project Design Matrix: PDM)でも明示され ていなかった。このため、プロジェクトでは能力強化には成功したが、全国への普及展 開を行うための政策、法制度、他組織との連携まで十分に踏み込むことが出来なかっ た。モデルの普及を視野に入れたプロジェクトでは、計画立案段階で、インパクト発現 までのシナリオを描き、実施機関と共有することが重要である。

本プロジェクトは中央省庁の地方事務所が自治体に対する支援能力を強化することを意図していたが、プロジェクトの成果作成と活動は主に中央省庁のカウンターパートが担当し、プレーヤーとしての地方事務所の位置付けはあまり高くなかった(成果品の効果を検証するサイトとしていの意味が強かった)。モデル県を実施主体にし、彼らが自治体への支援を試行することが出来たら、様々な支援策の有効性を現場で検証することができ、よりプロジェクトの有効性を高めることができたと思われる。

第1章 概要

1-1 背景

タイ国政府は 2002 年に、防災・災害対策全般について責任を持つ災害防止軽減局 (Department of Disaster Prevention and Mitigation: DDPM)を内務省内に設置する等、防災・災 害対策の強化に取り組んできた。2004 年 12 月のスマトラ島沖地震による大津波でプーケット島 などタイ南部を中心に多数の死傷者を出したことで、タイ国内の防災・災害軽減に対する関心が さらに高まった。2006 年、タイ政府は日本に対し、災害防止軽減局の防災・災害軽減担当機関 としての能力向上及び地方・コミュニティにおける災害対応能力向上を目的とする技術協力プロ ジェクトと、学校防災教育に係る技術協力プロジェクトを要請した。

事前調査において、学校防災教育においても災害防止軽減局と教育省が連携することの重要 性が確認されたため、2 つの要請を 1 つの技術協力プロジェクトにまとめ、「防災能力向上プロ ジェクト フェーズ 1」(2006 年 8 月~2008 年 8 月)を実施した。中央レベルにおいては災害防 止軽減局の能力強化及び関係諸機関との連携強化を図り、「防災白書の作成」と「自然災害マネ ジメント E ラーニング教材の作成」を行った。一方、コミュニティレベルでは災害対応能力向 上を目指し、チュンポン県(洪水)、メーホンソン県(地すべり)、プーケット県(津波)の3県 をモデルサイトとして、「県レベル・コミュニティレベルのハザードマップ作成」及び「コミュ ニティ防災 (Community-based Disaster Risk Management : CBDRM)」の能力強化、また、「学校 防災教育」手法の導入を行った。

フェーズ1のこれら活動は、新しい組織である災害防止軽減局と長い歴史を有する関係諸機関の協力体制のもとに実施され、中央レベルの協力体制は構築されたが、災害防止軽減局が強いリ ーダーシップを発揮して関係諸機関と連携して防災政策を策定・事業化していくことが期待され ている。また、フェーズ1の活動は中央レベルとコミュニティレベルでの活動が中心であったた め、さらに、その中間にある地方行政(県、郡)を巻き込んでいく必要がある。フェーズ1の成 果をタイ国内に普及・展開していくためには、災害防止軽減局を中心に中央レベル及び地方レベ ルの関係諸機関との普及体制の構築が必要である。このため、タイ政府は、我が国に対してフェ ーズ1の成果普及体制の構築を主な目的としたフェーズ2の実施を要請した。

本要請を受けて、JICA はフェーズ 2 の協力内容及び協力範囲を特定することを目的として、 2009 年 9 月から 10 月にかけて詳細計画策定調査を実施しタイ側関係機関との間で協議議事録

(Minutes of Meetings: M/M) を署名・交換し、討議議事録(Record of Discussion: R/D) は 2010 年 3 月 9 日に 4 年間の技術協力プロジェクトの実施について署名・交換した。

1-2 プロジェクトの枠組み

プロジェクトの枠組みは以下の通り。

(1) 上位目標

モデル県・モデル村以外で、防災・災害軽減活動が普及する。

(2) プロジェクト目標

災害防止軽減局が関連機関及び県・地域と協力して、防災・災害軽減アクションプラン、 コミュニティ防災活動、学校防災教育を普及させていくための能力が向上する。

- (3) 成果目標
 - 1. 災害弱者への配慮を含めた防災・災害軽減アクションプランが、国レベル及びモデ ル県の県レベルとローカルオーソリティ²レベルで作成される。
 - 2. 災害防止軽減局職員のコミュニティ防災実施促進のためのファシリテーターとして の能力が向上する。
 - 3. 災害防止軽減局の自然災害対策に関する研修カリキュラムが改良される。
 - 4. 自然災害に関する防災教育カリキュラムに基づいた、学校防災教育の普及体制が構築される。
 - 5. 災害防止軽減局のハザードマップ作成、早期警報システムの構築及び構造物対策の 設計における知識と技術力が向上する。

プロジェクトデザインマトリックス(Project Design Matrix: PDM)は別添資料1を参照。

² ローカルオーソリティとは、タイで県 (Province) よりも下の地方行政組織の総称である。市・町が含まれる。ただし、 タイの行政区分では村は行政単位ではなく、市・町における地区という位置づけである。このため、本報告書では地方行 政組織=市町と呼称する。

第2章 終了時評価

2-1 終了時評価の目的

終了時評価は2014年1月7日から29日まで下記の目的のために実施された。

- プロジェクト開始に関する両政府の合意文書(R/D)、プロジェクトのフレームワーク (PDM)、プロジェクト実施計画表(PO)に基づき、プロジェクトの進捗・実績を確 認すること。
- (2) 5項目の視点(後述)に基づき、プロジェクトを評価すること。
- (3) プロジェクト実施者に対して改善のための提言を行い、合わせて将来の類似案件にとって参考となる教訓を引き出すこと。

2-2 評価チームの構成

終了時評価はタイ・日双方の評価者による合同評価として実施された。評価チームのメンバーは下表の通り。

(1)	タ	イ	側	:
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	名前	所属・役職
1	Mr. Chainarong Vasanasomsithi	内務省災害防止軽減局国際協力・研究部 部長
2	Ms. Duangnapa Uttamangkapong	内務省災害防止軽減局渉外担当官(専門職レベル)
3	Ms. Kornisnan Wilawan	内務省災害防止軽減局政策計画分析官(専門職レベル)
4	Mr. Somsong Ngamwong	教育省国際協力課二国間協力第1課長
5	Ms. Attaya Memanvit	外務省 TICA 計画モニタリング部開発協力担当官

(2) 日本側:

	名前	所属・役職	
1	永石雅史	総括/評価計画	
2	井田光泰	評価分析	

終了時調査のスケジュールは別添資料3を参照。

2-3 終了時評価の方法

終了時評価調査は以下の手順に沿って実施された。

- (1) プロジェクトの詳細計画策定調査、プログレスレポート、中間レビュー調査報告書な ど既存資料に基づく実績と進捗状況の把握。
- (2) プロジェクトに参加した災害防止軽減局や教育省の職員(カウンターパート)への質問票(アンケート調査)とヒアリングによる成果目標の達成状況、本邦研修の効果、技術移転の方法・効果などの把握。
- (3) 気象局、王立灌漑局、国連開発計画(United Nations Development Programme: UNDP)、アジア防災センター(Asian Disaster Preparedness Center: ADPC)など関連 機関、モデル県・市・町などの地方政府関係者へのヒアリング調査によるプロジェク

ト参加によるメリット、成果目標の到達状況、プロジェクトの効果・インパクト、プ ロジェクト終了後の課題の把握。モデル村、モデル学校でのヒアリングによる事業効 果の把握。

(4) 上記4つの活動に基づく5項目評価の実施。なお、5項目評価の視点は以下の通りである。

評価項目	評価の視点
妥当性	タイ政府と受益者のニーズに対するプロジェクトの上位目標とプロジェ
女 当 IL	クト目標の整合性・妥当性を見る視点。
	計画された目標がプロジェクトによってどの程度達成されたかを見る視
有効性	点。また、PDM で明記されていなくてもプロジェクトによる直接の効果
	として認められる事項。
法录准	投入に対してどの程度成果が上がったか、どの程度効率的にプロジェク
効率性	トが実施されたのかを見る視点。
	プロジェクト実施による直接的あるいは間接的なプラス・マイナスのイ
インパクト	ンパクトを見る視点。特に、プロジェクトの上位目標への貢献度を見
	る。
	カウンターパート機関によるプロジェクト成果の維持性を見る視点。プ
持続性	ロジェクトは実施中のため、技術、財政、組織・体制面の現状に照らし
	て、プロジェクト終了後の持続性(見込み)を判断する。

(5) 上記の(4)に基づき評価レポートを作成し、5 つの各評価視点に沿って 4 段階(「非常 に高い」、「高い」、「一部課題がある」、「低い」) でのレーティング。評価結果につい てプロジェクト関係者との協議・合意形成。

第3章 プロジェクトの実績

3-1 投入

- (1) 日本側
 - 専門家の派遣

日本人専門家チームは8分野に9名の短期専門家、合計16名が派遣され、合計の投入 量は 110.59 カ月間であった。図上訓練・GIS データベースは、プロジェクト開始後に追 加したコンポーネントである。これらの活動に対応した分を含め、当初予定から投入量 を大幅に増加させた。

専門分野	派遣人数(月数)	派遣期間(月数)
総括/防災管理・制度	16.50	20.80
副総括/防災管理・計画	12.50	14.00
土砂災害管理	5.00	9.63
洪水対策	5.00	14.63
コミュニティ防災1	12.00	15.73
コミュニティ防災2	11.50	14.17
防災教育	13.00	14.97
図上訓練・災害管理	0.00	3.33
GIS	0.00	3.33
合 計	64.00	110.59

表 3-1 専門家派遣実績(2010月6月 - 2013月11月)

出所:専門家チーム

2) プロジェクト経費負担

日本側によるプロジェクト経費支出額は約2.157万円である(専門家経費と本邦研修経 費を除く)。現地傭人費には通訳、秘書等が含まれる。

表 3-2 専門家派遣実績(2010月6月 - 2013月11月)

	(単位:日本円)
支出科目	金額
傭人費	4,454,000
機材修繕・保守費	467,000
消耗品代	519,000
専門家・傭人の交通費	8,940,000
教材等作成・印刷代	3,937,000
会場費・セミナー等開催経費	3,261,000
合計	21,578,000

出所:専門家チーム

3) 本邦研修

災害防止軽減局、タスクフォース 1、2、3、5 の参加組織、モデル県の関係者に対して 防災管理研修が4回実施された。タスクフォース4(防災教育)については、教育省・初 等教育局の関係者に対して1回の研修が実施された。いずれも研修期間は2週間程度で、

日本における防災活動の視察を主な目的として実施された。

研修コース	主な訪問先	参加者
4 コース	総合防災コース:	75
	東日本大震災の被災地、名古屋大学減災連携研究センタ	
	ー、あいち防災リーダー会、神戸市役所、兵庫県庁、ア	
	ジア防災センター、東浦防災ネットワーク等	
1コース	防災教育コース:	18
	兵庫県舞子高校、愛知県共和西小学校 NPO 法人プラス・	
	アーツ「イザ・カエルキャラバン」、あいち防災リーダー	
	会、名古屋大学減災連携研究センター、名古屋市防災セ	
	ンター、東日本大震災の被災地等	
	合 計	93

表 3-3 本邦研修の実績

出所:専門家チーム

また、楽しく防災について学べるツールの紹介を行うため、JICA本部と専門家が連携 してタイの教育省(Ministry of Education: MOE)職員(中央と地方レベル双方)とその 他関係者を対象にしたインドネシア現地視察(2011年12月6日~10日)を計画・実施し た。

4) セミナー・ワークショップの開催

日本側は災害防止軽減局が実施した 2011 年、2012 年に地震・その他の災害についての ワークショップへの支援を行い、日本、タイからの専門家をスピーカーとして招待した。

開催月日			参加者数
2011.2	٠	自然災害の基本	183
	•	タイにおける地震リスクと耐震エンジニアリングの概観	
	•	耐震安全な環境構築のための取り組み	
2012.1	•	生存のために過去の災害から学ぶ	200
	•	2011年のタイの大洪水とその教訓	
	•	2011.3.11 東日本大震災からの教訓	

出所:専門家チーム

5) 機材供与

プロジェクトでは無線、サイレン、雨量計、洪水分析のソフトウエアなど小規模な器 具・機械を購入した。また、2011年には、バンコクの大洪水に際して 600 万円相当の砂 袋を提供した。機材供与の総額は966万円であった。

(2) タイ側

1) カウンターパートの配置

災害防止軽減局から7名 (プロジェクト・ディレクター、プロジェクト・マネージャー、 秘書官、4つのタスクフォースのリーダー)、教育省から1名 (タスクフォース4のリー ダー)、合計8名がメイン・カウンターパートとして配置された。プロジェクト実施中、 プロジェクト・マネージャーとタスクフォース3のリーダーの交代があったが、後継者も プロジェクトについて周知しており、特にマイナスの影響はなかった。延べ人数で 154 名がプロジェクトに参加した [共同調整委員会(Joint Coordination Committee: JCC)メ ンバー33名、タスクフォース 1メンバー19名、タスクフォース 2メンバー20名、タスク フォース 3メンバー16名、タスクフォース 4メンバー10名、タスクフォース 5メンバー 14名、災害防止軽減局研究国際協力部 13名、ランプン県 26名、ランパーン県 3名]。カ ウンターパートと JCC メンバーのリストは別添資料 2を参照。

2) プロジェクト経費負担

プロジェクト活動の多くが災害防止軽減局と教育省初等教育局の本来業務となってい るため、経費負担もタイ側が負担し、日本側の負担は日本側が主導したセミナーの一部 負担など補完的な支援を行った。災害防止軽減局の拠出した予算総額は 14,350,660 バー ツ(タスクフォース 1: 7.58 百万バーツ、タスクフォース 2: 5.1 百万バーツ、タスクフォ ース 3: 1.4 百万バーツ、タスクフォース 5: 0.27 百万バーツ)2011 年のタイの大洪水以降、 タイ政府および災害防止軽減局は予算を次のように大幅に増額した。

- 洪水リスクの高い 360 コミュニティに対するコミュニティ防災予算の増額
- チャオプラヤー川周辺 10 県に対するワークショップ予算の提供(1 県年 10 回)
- コミュニティ防災のための予算増額(年780村分~2011年以前は100村分)

タスクフォース 5 は 2013 年から、防災教育向けに年総額 4.05 百万バーツを教育サービ ス地域事務所に配分している。

3) その他

災害防止軽減局は専門家の執務スペースを提供し、事務所の維持費を負担した。

3-2 活動の実績

別添資料4参照。

3-3 成果の実績

プロジェクト成果目標の達成状況は以下の通りである。成果は指標で明示したものだけでな くプロジェクトが成果として想定したものも含めた。成果の達成度は A から D で示した(A: 完成済あるいは正式承認済、B:ほぼ完成あるいは正式承認が見込まれる、C:50%以上の完成 状況にある、D:50未満の完成状況) 成果1:災害弱者への配慮を含めた防災・災害軽減アクションプランが、国レベル及びモデル県の県レベルと市町レベルで作成される。 指標:国家レベル、県レベル(モデル県)、市町レベル(ランパーン県の80市町あるいは80%の市町とランプン県の45市町あるいは80%の市 町)で災害防止軽減アクションプランが策定される。

主な成果(品)	達成度	成果の必要性	進捗状況と主な実績
	XEPAIX	業務化・制度化の見込み・現状	
国家災害防止軽	А		国家災害防止軽減計画は本プロジェクトの実施に先立つ 2009 年 11
減計画の改訂	11	の教訓に基づき、国家災害防止軽減計画を改訂	
		することを求めた。	の教訓に基づき、国家災害防止軽減計画を改訂することとなった。
		,	改訂(追加した章)の主なポイントは、警報システムの詳細化、災
		が閣議承認された。	害発生時の指令体制の見直し(シングルコマンドシステム、体制の
			簡素化、トップダウンの指令体制に市町からのフィードバックを組
			み込んだ体制に改訂する等)である。
県災害防止軽減	А	災害防止軽減法は全ての県で災害防止軽減計画	フェーズ 2 の開始時、76 県のうち既にほぼ半数の県が災害防止軽
計画の策定		を策定することを求めている。	減計画を作成済であった。その後、全ての県で計画が策定され、
		県災害防止軽減計画は、災害防止軽減局政策部	災害防止軽減局政策部の審査も完了している。
		の審査完了をもって正式に承認される。	国家災害防止軽減計画によれば、県災害防止軽減計画は定期的に見
			直しされることになっている。しかし、災害防止軽減局は県行政組
			織に対して策定された県の計画の見直しを命ずる権限はない。この
			ため、内務省は県知事に一定のフォーマット(SWOT マトリックス
			と質問票)を付した公式レターを送り、見直しとモニタリングを行
			うよう要請した。いくつかの県では、県災害防止軽減委員会が見直
			しを行い、計画の改訂を行った。
モデル県で、80	А		PDM の目標を大きく上回る成果を挙げている。専門家チームの支
以上の市町が災			援を受けながら、図上訓練、標準的なアクションプランのテンプレ
害防止軽減アク		なければならないとして、間接的表現で市町に	
ションプランを		よるアクションプラン作りを求めている。	加型でアクションプラン作りが進められた。アクションプランに
策定			は、地方行政組織の首長、行政長官、村長、市町の担当関連部署、
			他の関連機関(消防、警察など)が委員会メンバーとして参加して
			害発生前、発生時(緊急オペレーションセンターの設置)、発生後
			の3つのステージに沿ったプランなどが含まれる。
			また、災害防止軽減局防災政策局では、テンプレートとアクション
		目標などは設定していない。	プランのサンプルを全国の災害防止軽減局県事務所に配布した。

		モデル県のほぼ全ての市町でアクションプラン	市町のアクシ	ョンプラ	シ作成別	:況			
		が策定された。現在、多くの市町では、災害防		市町数		-	進捗状況	4	
		止軽減局県事務所による最終チェック中で、審			1	2	3	4	5
		査終了をもってアクションプランは実施可能と	ランパーン	103	103	103	103	62	0
		なる。(右1-5のプロセスのうち、5番目の緊			(100%)	(100%)	(100%)	(60.2%)	
		急時の対応マニュアルはアクションプランその	ランプン	58	56	56	56	8	8
		ものには含まれない)			(96.6%)	(96.6%)	(96.6)	(13.8%)	(13.8%)
			出所:災害防止	軽减局防災	政策局				
			マカンシング	゜ニヽノケゖ	のフニ				
			アクションプ				カミノートノ	プニンル	ゆの説明
			1: DDPM					ノフンኘF	りの配明
			2: 市町がり 3: 県災害隊					の古安たん	左击
			3: 県灰苦P 4: 災害防」						
			4: 火舌的」 ック	工虹侧问	宋 尹伤川	ルチクシ	<i>э~))</i>	マ糸の内	日谷をリエ
			ック 5:市町に。	トて取合ロ	時の対応,	7 71	し作式		
			アクションプ					雨灶田に	・トス)
			ノクションノ ✓ 緊急対M						- よ つ)
			✓ 全ての関 ✓ 図 L 訓約						山大日的
			✓ 図上訓約			防灰、て	の他防灭	息蔵の回	「上を日町
GIS データベース	•	CIC ける国的なアカションプラン佐りた畑坦		舌動への-		カッフィ	タに長し	TCICT	利田卡汗
	А	GIS は全国的なアクションプラン作りを把握							
		し、促進戦略を策定する上で有効なツールとな							
		る。	がってくるた	、い、てり	川肎報をプ	ツノアー	「「するこ	とか可能	目じめる。

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成果2:災害防止軽減局職員のコミュニティ防災実施促進のためのファシリテーターとしての能力が向上する。 指標:

- フェーズ1で作成されたコミュニティ防災マニュアルとファシリテーターガイド(ファシリテーター用とコミュニティ用)が改善され、 モデル村で活用される。
- 防災研修と教育教材(ファシリテーター用とコミュニティ用)が改善され、モデル村で活用される。
- 災害防止軽減局によりコミュニティ防災実施のためのアクションプランが開発される。

主な成果(品)	達成度	成果の必要性		進捗状況と主な実績
		業務化・制度化の見込み・現状		
改善されたファ シリテーターガ イドの活用	A	既存のファシリテーターガイドは4日間の研修向け で、期間が長過ぎて現実的でなかった。また、よりわ かりやすいガイドとすることへのニーズがあった。 2014年2月までに災害防止軽減局局長の承認を もって、改訂されたガイドの最終化とする予 定。2014年2月のプロジェクト最終セミナーで ファシリテーターを招いた改訂済ガイドの概要 説明を行う予定である。 改訂されたガイドは全国の災害防止軽減局県事務 所に配布し(250部配布予定)、同時に、コミュ ニティ用のガイド、事例なども合わせて災害防止 軽減局のウエブサイトにアップロードされる。		ファシリテーター用ガイドはプロジェクトで取り組み、それに基 づき、災害防止軽減局が主導的にコミュニティ用ガイドを作成し た。 主な改良点は、研修期間を5日から2日に縮小し、災害の種類に 合わせてファシリテーターが柔軟に対応できるように改訂したこ とである。専門家は異なる災害種類への対応方法の提案、魅力的 な研修とするための工夫・アイディアの提供を行った。
改 善 さ れ た 教 育 ・ 訓 練 教 材 の 活用	В	ファシリテーターがワークショップ形式で研修 を行う際、ファシリテーションに活用する教材 を開発することで、ファシリテーションを容易 にすることができる。 改善された教材は 2014 年 2 月のプロジェクト最 終セミナーで発表される。	•	タスクフォースではコミュニティ防災の進め方を概説した CD- ROM とワークショップで活用できるパワーポイント資料を作成 中である。 また、専門家が支援して、遠隔地でも利用できるフリップチャー トの作成にも取り組んでいる。
コミュニティ防 災のファシリテ ーター育成	A	フェーズ 2 の実施前段階で、約 100 名のファシリ テーターがドイツ技術協力公社(Gesellschaft für Technische Zusammenarbeit (German Technical Cooperation Agency): GTZ) などにより育成されて いた。しかし、コミュニティ防災を面的に展開す るためにファシリテーターの数が足りなかった。 フェーズ 2 によってファシリテーターの数は大 幅に増加したが、各県事務所に適正な人数のフ ァシリテーターを恒常的に配置するための措置 や体制はまだ確立されていない。	•	ファシリテーター育成については、災害防止軽減局が主に育成を 行い、専門家が助言する形で、ファシリテーター育成が図られ た。具体的には、4つの地域で合計4回のファシリテーター育成 研修が実施され、228名(各回の育成数は52名、46名、50名、 80名)が育成された。研修参加者の70%は災害防止軽減局の県 事務所職員で、残りの30%は災害防止軽減局地域センター、退 職した教師、元災害防止軽減局職員、村長などであった。

Lingth	-			
モデル村の確立	В	ファシリテーターガイドや教材の開発と研修コ	•	モデル村でのコミュニティ防災活動は、村人だけでなく、災害防
		ースを設計し、それら成果品の有効性を検証す		止軽減局県事務所、市町、学校などの関係者も含めて実施され
		るためパイロットサイトとしてモデル村が選定		た。また、雨量計や水位計、サイレンなど警報システムに必要な
		された。		機器も提供された。
			•	コミュニティ防災活動の有効性を把握するために、ベースライン
				調査と継続的なモニタリング調査が行われた。調査結果として、
				特に災害発生がない場合、コミュニティ防災活動がマンネリ化
				し、村人の意識・意欲が低下する傾向があった。一方、調査結果
				として、避難訓練、警報システムの確立、ハザードマップの作成
				など学校と一緒に取り組むことで、継続性に難のあるコミュニテ
				ィ防災の取り組みが強化されることもわかった。また、事例とし
				て村の防災アクションプランの中で挙げられた要望事項が市町の
				アクションプランに取り上げられ、道路建設プロジェクトに排水
				管の設置が認められたといった効果も見られる。
			•	モデル村でコミュニティ防災に取り組んだ直接的効果としては以
				下の点を挙げることができる(別添資料5のモデル村でのヒアリ
				ング調査結果参照)。
				✓ 緊急対応の際、コミュニケーションの仕組みが明確化し
				・ 系心内心の床、ニミュニア ションの圧屈のが列催しした。
				 ✓ 村内のリスクエリアが特定され、例えばそうしたエリアに
				家を建てるといったケースが減った。
				✓ 避難訓練は多くの村で初めての経験であり、非常にリアル
				で防災への意識が高まった。
				 ✓ コミュニティ防災活動を行う以前、村委員会からの避難指
				 コミューノイ防火活動を行う以前、村安員云からの遅難指 示などあっても信用しなかったが、現在では、村の防災委
				小などめっても信用しなかったか、現在では、村の防災委員会からの情報や指示に従うようになった。
			•	モデル村でのヒアリング調査によれば、村には警報システム、ア
				クションプラン、ハザードマップなどがあり、避難訓練も毎年実
				施するなど、周辺村に比べた場合、一定の先進性は認められる。
				ただし、他の村へ普及するためのモデル性という意味ではまだ十
				分差別化されていない(例えば、村の防災委員会としての独自の
				取り組みや工夫など)。
GIS データベース	А	GIS は全国のコミュニティ防災の実施状況を把	•	防災促進部の職員2名がGIS研修を受けた。年度末に各県事務所
の活用		握し、促進戦略を策定する上で有効なツールと		からコミュニティ防災の実施結果について報告書が上がってくる
		なる。		ため、防災促進部ではその情報に基づき GIS データベースを更
				新する。

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成果3:災害防止軽減局の自然災害対策に関する研修カリキュラムが改良される。 指 標:災害防止軽減局職員向けの自然災害(洪水、鉄砲水、泥流)の研修カリキュラムが少なくとも1コース改善される。

主な成果(品)	達成度	成果の必要性 業務化・制度化の見込み・現状		進捗状況と主な実績
自然災害(洪水、 鉄砲水、泥流)に ついての技術研修 コースの確立	A	タイでは洪水が主要な災害であるが、災害防止軽 減局では技術職員が少ないため、技術的に洪水に ついての知識が不足しており、洪水に特化した研 修も行われていなかった。 導入された研修コースは災害防止軽減アカデミー の定期コースとして実施される予定。プロジェク ト終了後、災害防止軽減アカデミーは最少でも年 1回の研修コース実施を想定しているが、実際の 開催は毎年の予算配分と各部からの研修要望によ り決められる。昨年度から財務局の指示で、「研 修講師謝金」への支出がカットされているため、 研修全体の規模が影響を受けている。 災害防止軽減局では防災人材の資格認定や人材育 成計画などまだ作成されていないため、この研修 の重み付けが明確でない。 研修受講の履歴は人事部の職員プロファイルに記 載される。	•	プロジェクトでは実践的な自然災害(洪水、鉄砲水、泥流)に関 する技術コース(合計 27.5 時間分)を作成した。この中には図上 訓練の講義も含まれる。また、内容については、タイ気象局、王 立灌漑局、天然資源局、災害防止軽減局、教育省が見直しを行っ た。 同研修コースの実施においては、災害防止軽減アカデミーの講師 21 名が分担して対応し、個別専門分野については、タイ気象局、 王立灌漑局、天然資源局等から講師が派遣される(こうした政府 機関の外部講師派遣は一般的に行われている)。シラバスと教材も 開発され、既に 6 回の研修で活用されている。この 6 回の研修 で、279 名(災害防止軽減局全体の対象職員数 2,159 名に対して 14%が受講済となった。 研修評価の方法として、災害防止軽減アカデミーでは研修前後の テストを実施し、研修後には受講者へのアンケートを実施してい る。フェーズ 2 では研修によるインパクトを把握するために、研 修 6 カ月後に、受講生と受講生の上司へのヒアリングを行うフォ ローアップを導入した。これらの評価調査結果によれば、全ての 講義項目について、計画作りなどの業務(例えば図上訓練)に活 かしていると回答している。災害防止軽減アカデミーとしては、 こうしたフォローアップを継続して実施して研修コースの改善を 図る予定である。

成果4:自然災害に関する防災教育カリキュラムに基づいた、学校防災教育の普及体制が構築される。 指 標:

• モデル県で少なくとも3校が、教育省本省とフェーズ1の学校の支援を受けたモデル校として、防災教育を実施する。

• 災害多発地域で100名以上の教員が防災教育について研修を受ける。

主な成果(品)	達成度	成果の必要性	進捗状況と主な実績
	建成汉	業務化・制度化の見込み・現状	に10/1/1/L C 上な大限
防災教育ガイド ラインと副読本 (DVD を含む) の作成	A	ガイドラインは防災教育の主流化とモデル校の普 及に効果的なツールである。 ガイドラインは初等教育局長の承認を得て、 32,000部が全国の教育サービス地域事務所と同局 傘下の小中学校に配布された。DVDと副読本もガ イドライン同様に32,000部が配布された。	
学校のカリキュ ラムへの防災教 育の反映	A	初等教育局ではそれぞれの学校が授業カリキュラ ムの中に防災教育を取り入れて行く方針である。 初等教育局は局長名で全国の教育サービス地域事 務所に通達を出し、初等教育局傘下の小中学校に おける(1)防災教育を学校のカリキュラムへの防 災教育の反映、(2)年1回の避難訓練の実施、(3) 学校防災計画の作成を求めている。	 ランパーン県とランプン県の2つのモデル校ではすでに学校のカリキュラムに防災教育が反映されている。また、初等教育局が主導するナコンシタマラート県のモデル校では、カリキュラムへの反映を継続的な取り組みと位置付け進めている。モデル校の校長によれば、教員が科目別に分担して、おおよそ3-6カ月かけて作業を行ったという。
モデル校の確立	A	 初等教育局では、モデル校を核に周辺の学校 に防災教育を普及する戦略を立てているため、モデル校の確立は極めて重要である。 モデル校選定の基準は上記通達で示した3点であるが、それに加えて、コミュニティ防災が活発な村を積極的に指定している。 2013年から、初等教育局では毎年、良い実施計画を提出した教育サービス地域事務所に10万バーツの予算を配分し、モデル校の充実と拡大を図っている。 初等教育局は防災教育の経験交流のために基本的に年1回、全国セミナーを開催し、モデル校の教員による経験発表を行っている。ま 	 タスクフォースはモデル校として4校を選定した。プロジェクトのモデル県のモデル校に対しては、避難訓練、ハザードマップ作り、図上訓練などが実施され、学校は村のコミュニティ防災の活動へも積極的に参加した。これらの活動には100名以上が参加し、災害防止軽減局、専門家、消防など市町の職員も技術・経験などを提供した。 今回の評価調査ではモデル校へのヒアリングを実施し、いずれも非常に高いモデル性を有した学校となっている。以下にいくつかの特徴を示す。 モデル校では課外授業だけでなく、正規の科目の授業の中に様々な形で防災の視点が入っている。これは指定された3教科に限定されず、音楽、家庭科、英語など色々に工夫し授業に反映させている。

		た、セミナーの結果は報告書にまとめられ、 教育サービス地域事務所と小中学校に配布さ れている。	 ✓ モデル校では防災についての学習センター(教室)を設置し、ビデオ上映、関連書籍や教材の展示、生徒が製作したポスター、避難グッズの展示など行い、生徒が自主学習できるような環境を提供している。 ✓ モデル校ではそれぞれの防災計画を作成している。 ✓ モデル校ではそれぞれの防災計画を作成している。 ✓ 避難訓練は最低年1回という通達が出ているが、モデル校では、初等教育局から配分される年1回分の予算に加えて、市町からの予算配分を受け、想定する災害の種類を変えて、年2回実施している。 ✓ モデル校では村の防災委員会と非常に密接に連携し、避難訓練などに取り組んでいる。 ✓ モデル校はいずれも非常に多くの視察を受け入れている。 ✓ モデル校はいずれも非常に多くの視察を受け入れている。 ✓ 新所の職員である。
GIS データベース の活用	В	GISデータベースは初等教育局が防災教育の全国 普及の状況を把握し、戦略を作成するためのツー ルとして提供した。	4名の教育省のスタッフ(うち2名が初等教育局)が GIS データベ ースの利用法について研修を受けた。ただし、まだ不慣れなこと とデータベース更新は頻繁でないため、まだ十分習得していると は言えない。 防災教育の実施データは年1回教育サービス地域事務所から報告 書が上がってくるため、データの入手は十分可能であるが、GIS デ ータベースを更新する職員(オペレータ)の確保に一部課題があ る。

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成果5:災害防止軽減局のハザードマップ作成、早期警報システムの構築及び構造物対策の設計における知識と技術力が向上する。 指 標:

- 降雨・洪水分析とハザードマップ作成のためのマニュアルが作成される。
- 早期警報システムと洪水防止軽減のための構造物対策のマニュアルが作成される。
- 18の災害防止軽減局地域センターで、上記マニュアルを活用した研修が実施される。

主な成果(品)	達成度	成果の必要性		進捗状況と主な実績
		業務化・制度化の見込み・現状		
ハザードマップ作 成マニュアルの整 備	В	県、地方行政組織がハザードマップを防災アクションプラン作りに活用できるように、災害防止軽減局が GIS を活用したハザードマップの作成支援 を行うことが求められている。 防災基準部の 4 名のスタッフはマニュアルに沿って、ハザードマップを作成することができる。	•	水文の技術研修を行った後、タスクフォースメンバーは表面流水 の洪水のシミュレーションとリスク区分地図を作成するトレーニ ングを継続的に実施した。その結果、タスクフォースメンバーは モデル村を対象にリスク区分地図の作成を行うことができるよう になった。 これらの研修に基づいて、ハザードマップ作成のためのマニュア ルを作成し、プロジェクト終了までに、最終化できる予定であ る。
早期警報システム と構造物対策のマ ニュアル整備	В	災害防止軽減局の地域センターの技術者は、市町 に対して、早期警報システムに必要な情報を提供 し、構造物対策(設置すべき構造物とその場所) について助言できなければならない。	•	タスクフォースでは、自動記録できる簡易な水位計と雨量計をモ デルサイトに設置した。そのデータに基づき、早期警報と避難の 基準を設置し、モデル村に情報を提供した。 モデルサイトの実際の洪水対策用の構造物の調査を実施し、タス クフォースでは、構造物対策についてのマニュアルを作成した。 このマニュアルもプロジェクトの終了までには最終化される予定 である。
 18 の地域センタ 一職員に対するハ ザードマップ作 成、早期警報シス テム・構造物対策 の技術研修の提供 	A	マニュアルに従って、地域センターの技術職員 は、市町に対する技術支援を行うことが求められ る。 まだ県、市町に対する技術サービス提供の仕組み や方法は決まっていない。		モデル県を含む北タイ4県を管轄する第10地域センターに対する 職員研修を実施した。 19名(18地域センター)に対して、水文、流量分析、データ加工 について、マニュアルに沿って研修が行われた。 2014年度内に、災害防止軽減局ではもう1回同様の研修を実施 し、各地域センターで2名の職員が技術支援できるような体制を 作る予定である。

災害防止軽減局が関連機関及び県・地域と協力して、防災・災害軽減アクションプラン、コミュニティ防災活動、学校防災教育を普及させてい くための能力が向上する。

指標:

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- 普及拡大のための計画が国家災害防止軽減アクションプランに含まれる。
- モデル県の災害防止軽減計画に普及拡大の計画が含まれる。

主な成果(品)	達成状況
防災活動の普及拡	全国市町のアクションプランの作成
大のための戦略・	まとまった一つの計画ではないが、災害防止軽減局としては次のような戦略で取り組んでいる。
計画の作成と実施	(1) モデル県での実践をベースに災害防止軽減局は図上訓練のマニュアルを作成すると同時に、定期的に 4 つの地域でワークシ
	ョップを開催して、県職員の市町への計画作成支援能力強化を図っている。
	(2) 災害防止軽減局は市町のアクションプラン作成用テンプレートと実際のプランのサンプルを全国の県事務所に配布してい
	る。
	(3) 災害防止軽減局は全国の市町の防災アクションプラン作りを支援するための予算を確保し(2013 年実績で 157 万バーツ)、
	政策局の職員を講師として派遣するといった支援を行い、他方、市町はワークショップの経費負担を行うといった責任分担
	を求めている。
	(4) 内務省から市町を管轄する地方自治体振興局(Department of Local Administration: DLA)に対して通達を出し、全国市町のア
	クションプラン作りを推進することと防災に市町の2%の予算を配分することを求めている。
	(5) 災害防止軽減局は部内にヘルプデスクを設置し、アクションプラン作りについて県事務所からの質問への対応を行ってい
	(6) 次期の国家災害防止軽減計画では、市町による主体的なアクションプラン作りとプランの実施を求める方向で草案ができて
	いる。 (7) モデル県については、ほぼ全ての市町でアクションプランが策定済である。
	(1) モアル県については、はは主ての市町でアクションアフンが泉足街である。 コミュニティ防災の普及拡大戦略
	<u>ゴミューノイ防火の音及拡入戦略</u> 災害防止軽減局の予算範囲での戦略は明確だが、全国展開は外部に依存する。
	(1) 災害防止軽減局の基本的方針は災害防止軽減局の予算でコミュニティ防災の予算をできるだけ確保することで、2011年の大
	(1) 英吉防正裡國內の基本的分析和英吉防正裡國內の子鼻でコミュニティ防災の子鼻をてきるたけ確保することで、2011年の人 洪水以降、年間 780 村分の予算が配分されている。
	(2) 災害防止軽減局ではプロジェクトとは別にモデル事業として、モデル村を選定し防災センターを村に設置している。
	(3) コミュニティ防災の実施規模を飛躍的に拡大するためには市町がそれぞれ予算配分することが必要で、その一つの方法は、
	アクションプランの中にコミュニティ防災の実施を明記していくことである。
	防災教育の普及
	初等教育局は既に戦略的な予算配分を行っている。
	(1) 初等教育局はガイドラインを策定し、全国の教育サービス地域事務所を通して、各学校で防災教育のカリキュラム導入、学
	校の防災計画作成、避難訓練の実施に取り組むことを求めている。
	(2) 具体的な戦略として、2013 年以降、初等教育局は、教育サービス地域事務所のモデル校拡大のプランに予算を配分してい

る。この結果、短期間で 100 校がモデル校指定されている。また、年 1 回、全国規模のセミナーを開催し、先進的な事例を
紹介する活動を行っている。
研修活動の展開
 研修実施規模は災害防止軽減アカデミーへの予算規模にほぼ規定されている。
災害防止軽減アカデミーでは、支給される研修予算の枠内で毎年の各部局や外部からの要望に基づき研修コースが決定され
る。災害防止軽減局のキャリアプランを作成し、職位・職務別に必要な能力要件を明確化した上で、必要な研修体系を確立
し、市町のアクションプラン作り、ファシリテーター育成、ハザードマップ作り、洪水についての技術研修などを位置づけ
る必要がある。

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上位目標:モデル県・モデル村以外で、防災・災害軽減活動が普及する。 指標:

- バンコク都庁を含め全国 76 県で防災計画が策定される。
- 全ての県で少なくとも1つの市町で図上訓練が実施され、県の防災計画の有効性が検証される。
- 災害防止軽減局の地域センターと県事務所の支援を受けて、毎年100以上の市町で避難訓練が実施される。
- 防災教育が少なくとも4つの学校に対して実施され、4つの地域の学習センターとして機能する。

F					
主な成果(品)	期待されるインパクト				
全県での防災計画	 フェーズ2の期間内で既に全ての県が災害防止軽減計画を策定している。 				
作り					
図上訓練を活用し	2014年1月の段階で、これまで集計の終わった30県7.776市町のうち、2.755の市町で既にアクションプランが策定されてい				
た市町のアクショ	る。他の47県はまだ集計中である。				
ンプランの普及拡					
大	が活用されているかについてデータは収集されていない。				
訓練されたファシ					
リテーターによる					
コミュニティ防災	を実施した村の数				
の実施	2009 969				
の美旭	2010 863				
	2011 769				
	$\begin{array}{ c c c c c }\hline 2012 & 1,385 \\ \hline 2013 & 1.076 \\ \hline \end{array}$				
	山所:災害防止軽減局				
	モデル県であるランパーン県におけるコミュニティ防災の実績を見ると、災害防止軽減局だけでなく市町、県なども予算配分し				
	ている。また、企業による社会貢献活動してコミュニティ防災への支援に関心を持つ企業も出てきているため、災害防止軽減局				
	の予算だけに依存するのではなく、スケールアップのためには県、市町、企業等への働きかけも有効である。				
	ランパーン県のコミュニティ防災実績				
	年 災害防止軽減局 市町 県 JICA 合計				
	2013 12 12				
	2011 3 27 30 2010 9 3 12				
	2010 9 3 12 出所:災害防止軽減局ランパーン県事務所 12				
防災教育	□DH: 反告防止軽減局フランハーシ県事務所 ● プロジェクトで指定した 2 県以外に、初等教育局はナコンシタマラート県をモデル県に追加した。初等教育局ではこれまで				
127 25 35 日	• クロクエクトで指定した。初等教育局はクロククスクロー系をモアル系に追加した。初等教育局ではこれよくには、100 校以上をモデル校として指定し、防災教育の主流化が進められている。初等教育局では毎年全国 175 の教育サービス				
	地域事務所のうち56事務所に対してモデル校の確立などを目的とした防災教育への予算配分を行っている。				
L	地域事務内のノウJOJO事物内に対しててノル仪の唯立なこと日町とした防火欲目への子昇間力を行うている。				

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3-4 実施プロセス

下表で示す通り、災害防止軽減局の既存の組織体制と担当部署の職務に沿ってタスクフォー スが形成された。タスクフォース4については初等教育局が主なカウンターパートとなり、文部 省の他の部局(職業訓練局、私立学校局、ノンフォーマル教育局など)も関連する課題について 一部参加した。タスクフォース1~4は2010年10月、プロジェクトの開始時期に立ち上げられ たが、タスクフォース5は、2012年10月、新たに加えられた成果5に対応するために設置され た。プロジェクト期間を通じて、研究国際部が調整・促進業務(通訳を含む)で大きな役割を果 たした。

タスクフォース	参加組織・部局
1	災害防止軽減局(災害防止軽減政策部、防災促進部、災害防止軽減アカデミ
	一、災害防止基準部、計画予算課、研究国際協力部)、王立灌漑局、教育省、
	天然資源局、地方自治体振興局、国家災害警報センター、タイ気象局、水資源
	局
2	災害防止軽減局(防災促進部、災害防止軽減政策部、災害防止軽減アカデミ
	ー、研究国際協力部、ランパーン県事務所、ランプン県事務所)、初等教育局,
	ノンフォーマル教育局,地方自治体振興局、天然資源局
3	災害防止軽減局(災害防止軽減アカデミー、防災促進部、研究国際協力部)、
	初等教育局、ノンフォーマル教育局、天然資源局、王立灌漑局、タイ気象局、
	女性家族開発事務所
4	教育省(官房事務局、職業訓練局、政策計画部、初等教育局、私立学校局、ノ
	ンフォーマル教育局)
5	災害防止軽減局(災害防止基準部、研究国際協力部、災害防止軽減アカデミ
	ー、防災促進部、災害防止軽減政策部)天然資源局、王立灌漑局、タイ気象
	局、水資源局、土地開発局、タイ電力開発公社

表 3-4 タスクフォースのメンバー構成

ランパーン県、ランプン県の中からモデル村が選定された。また、2 つの学校がモデル学校と して選定された。2011年10月、タイ側は、南タイでのモデル作りを行うため、独自にナコンシ タマート県をモデル県として追加した。位置付けとして、北タイの2県は日タイ双方が支援し、 南タイの1県はタイ側が主導し、必要に応じて専門家が技術指導を行うこととした。

県名	村名	市町名	学校名
ランパーン	チャイチョンプー村、メーサラーム村	ウィアグモック	
	チャウファ村、ジョグファ村	トゥンプエン	
ランプン	ムワンサンピー村	リー	ムーンサンピー村小学校
	コーノーン村	- - -	
ナコンシタマ	タムタロック村	ナムトック	タムタロック村小学校
ラート			

表 3-5 プロジェクトの対象県・村・学校

2011年の大洪水は様々な形でプロジェクトに影響を与えた。工程表に数カ月の遅れが生じ、 セミナー開催を延期するといった影響があった。一方で、この洪水によって、タイ政府は様々な 防災への支援に取り組むことになり、そういう点ではプロジェクトの促進要因となった。具体的 には、災害防止軽減法の改正と国家災害防止軽減計画の改訂による国家災害防止軽減委員会の権 限強化や関係機関間の連携促進が図られた。また、コミュニティ防災への予算増加、洪水リスク の高い県・市町への特別予算配分なども行われた。また、プロジェクトのモデル村や学校では、 メディア等を通して洪水など災害への準備の重要性や意識向上がみられた(現地でのヒアリング 調査による)。

プロジェクトの意思決定機関である合同調整委員会は5回開催された(各回の主な議題は下表 を参照)。プロジェクトの成果 5 の追加以外、プロジェクトの枠組みや範囲に大きな変化はなか った。PDM は 3 回改訂されたが、主な変更点は用語の変更、成果 5 の追加、指標の明確化など であった。

委員会	開催年月	議題
1回目	2010年6月	• プロジェクト実施の基本的内容
		• インセプションレポートの説明と承認
2回目	2011月9月	 PDM の指標改訂(第2版)
		 洪水リスク管理コンポーネントの必要性について
3回目	2011年10月	• 成果 5(洪水リスク管理)のタスクフォース設置と PDM の改訂(第3
		版)
4回目	2012年2月	● 中間レビュー調査の発表
		● PDM の改訂(第4版)
5回目	2013年2月	• 各タスクフォースの進捗報告
		 プログレスレポートの説明

表 3-6 合同調整委員会の主な議題

出所:専門家チーム

第4章 5項目評価の結果

4-1 妥当性

プロジェクトの妥当性は非常に高い。

- 2011年の大洪水以降、災害防止軽減の重要性は一層高まった。具体的には、災害対応の反省から、災害防止軽減法と国家災害防止軽減計画(2009-2013)が改訂され、災害対応時の対応の一元化が明確化された。この中で本プロジェクトのカウンターパート機関である内務省災害防止軽減局は、国家災害防止軽減委員会の事務局として政策提案、緊急対応、防災促進、防災育成の面で一層の機能強化が求められている。本プロジェクトは災害防止軽減局の能力強化を通して災害対策活動の強化を図ることを意図しており、カウンターパート機関の選択は妥当である。
- 本プロジェクトでは災害防止軽減局が主なカウンターパート機関であるが、防災教育の普及展開のために教育省もカウンターパート機関として位置づけている。教育省は教育開発 五カ年計画で、教育省が管轄する全ての教育機関で防災教育をカリキュラムに加えること を促進しており、本プロジェクトの主旨はこの方針に合致している。
- 災害防止軽減法および国家災害防止軽減計画は、地方行政機関が防災アクションプランを 策定し、コミュニティ防災などの活動を推進することを求めている。従って、実際に防災 活動を担うのは市町などの地方行政機関である。本プロジェクトは災害防止軽減局と教育 省の地方行政機関への支援能力を高めることを目的としており、ターゲットの選択も妥当 と言える。
- 日本政府によるタイに対する政府開発援助(Official Development Assistance: ODA) 方針 (2012年12月)は、持続的な経済発展と成熟社会の課題解決への支援、アセアン諸国に共 通する課題への対応、アセアン以外の国への第三国支援を3つの重点課題としている。持 続的な経済発展と成熟社会の課題解決への支援の中には、環境、気象変動、洪水対策など が含まれており、本プロジェクトの対象分野は日本のODA政策とも整合性がある。また、 日本は東日本大震災など多くの災害を経験し、その対応においても先進的な経験が蓄積さ れており、防災分野での支援を行う上で優位性があり、タイでは日本の経験から学びたい という強い意欲がある(今回ヒアリングした政府機関およびモデル県でのヒアリングによ る)。

4-2 有効性

プロジェクトの有効性は一部課題がある。

本プロジェクトはフェーズ1からの継続事業であり、それぞれに異なる事業目的を有している。

	フェーズ1(2006 - 2008)	フェーズ 2(2010 - 2014)
プロジェクト のねらい	 国家レベルの防災計画作りの準備 防災活動を実践するために必要な基準や教材の整備(防災白書を含む) コミュニティレベルにおける防災活動(村の防災計画づくり、避難訓練、防災教育の実践など)の 	 災害防止軽減局と初等教育局が、全国の地 方行政組織を支援するための能力強化(各 種の防災関連研修の提供、ハザードマップ や早期警報システムの構築に必要な技術的 アドバイスの提供、防災計画作りのファシ リテーションなど) 市町村の防災計画づくり、コミュニティ防 災活動、学校での防災教育を全国的に普及 展開するための戦略や仕組み作り
	事例提示	
ターゲット	国家レベルとコミュニティレ ベル	国家レベルからコミュニティレベルまで。主に 中央と県をターゲットとして重視。

表 4-1 本プロジェクトの目的

- プロジェクトは次の2つの目的を有している。
 - (1) 災害防止軽減局および教育省による災害計画、コミュニティ防災、防災教育など防災活動を推進する能力を強化すること。
 - (2) 防災計画、コミュニティ防災、防災教育、防災研修を全国に普及展開するために必要な 制度・仕組み作りを推進する。
- (1)については市町に対する支援能力を十分強化することができたと言える。本プロジェクトで支援した様々な能力強化支援の内容を災害防止軽減局の研修サービスとして位置付け、業務に組み込むことができれば、一層災害防止軽減局の持続的な強化が確立することができるであろう。
- (2)に関して、市町の防災計画づくりと防災教育については、全国普及の明確な方針ができているが、コミュニティ防災とハザードマップづくりや早期警報システム、構造物対策については、全国展開するための方針や仕組みが明確でない。

4-3 効率性

プロジェクトの効率性は高い。

- プロジェクトは別添資料 5 の通りほぼスケジュール通りに進捗した。このプロジェクトでは日本側の投入は主に技術支援に対して行われ、研修、セミナー・ワークショップの経費など運営費の多くはタイ側が負担している。
- 3-3で示した通り、計画した成果目標は 2014 年 1 月時点でほぼ達成されている。成果毎 の主な達成状況は次の通りである。
 - ✓ モデル県では災害防止軽減局県事務所が図上訓練、テンプレートを十分活用しながら 市町の防災アクションプラン作りをファシリテートすることができる。また、災害防 止軽減局では全国の県事務所に対してのファシリテーション能力強化のワークショッ プを開催しており、現時点で2,755の市町がアクションプランを作成済である。
 - ✓ プロジェクトで改訂したガイドと研修教材を活用して、コミュニティ防災のファシリ テーターが 200 名以上養成された。災害防止軽減局では直接市町に予算を配分しコミ

ュニティ防災を実施しているが、コミュニティ防災を全国の多くの市町が実施するようになるためには、自治体振興局などの他政府機関、全国市長会や全国町長会など地 方行政組織の意思決定者に働きかけることが必要である。

- ✓ 防災教育については既にモデル校を中核にした主流化の仕組みが全国で展開されており、全国展開の戦略も明確である。プロジェクトで作成したガイドラインや教材も全国の学校に配布されている。
- ✓ 洪水に関する技術研修コースが新たに設置され、これまでに災害防止軽減局職員の 14%(279/2,159名)が受講済である。
- ✓ 災害防止基準部では、ハザードマップ作成、早期警報システムと構造物対策に必要な 技術アドバイスを行うことができるようになった。全地域センターで少なくとも1名 の技術職員が上記技術について研修を受けている。しかし、まだ実際に市町にそうし た技術サービスを提供できる体制や仕組みはできていない。
- 2011年の大洪水は大きな外部要因であったが、プロジェクトにとってはプラスの要因が多かった。これ以降、タイ政府は様々な防災への支援に取り組むことになり、災害防止軽減法の改正と国家災害防止軽減計画の改訂による国家災害防止軽減委員会の権限強化や関係機関間の連携促進が図られた。また、コミュニティ防災への予算増加、洪水リスクの高い県・市町への特別予算配分も行われた。また、プロジェクトのモデル村や学校では、メディア等を通して洪水など災害への準備の重要性や意識向上がみられた。
- プロジェクトに参加する組織間の連携は円滑であった。特に、タイ気象局、王立灌漑局、 天然資源局などからの参加者は研修コースの講師を務め、プロジェクトの成果品を作成す る上での技術的支援やタイ政府の基準に照らしたチェックなどを行うことで貢献した。ま た、研修やワークショップも組織間連携で実施された。一方で、プロジェクト成果を普及 するための組織連携については取り組みが弱く、大きな成果を上げるには至っていない。
- 本プロジェクトでは非常に多くのカウンターパートを本邦研修に派遣した。研修参加者へのヒアリングによれば、視察中心の研修は学びの場として有効で、特にタイで研修講師を務めている参加者の場合、講義の中で入手した資料・写真を示し日本での経験を事例として紹介するといった活用を行っている例が多かった。また、学校関係者や地方行政組織の参加者の多くが、日本における自治体の役割の重要性について強い印象を持ったとしており、また、現場における様々な工夫(簡易救命具の作り方など)を持ち帰り学校などで実践しているという声もあった。

4-4 インパクト

インパクトは非常に高い。

- 2014年1月時点で、プロジェクトが導入したテンプレートを活用し、少なくとも30県で2,755の市町が防災アクションプランを作成している。図上訓練の実施数についてはデータが収集されていないため実数が把握できないが、モデル県などのヒアリングによれば、広範に活用されているという。従って、プロジェクトのインパクトは非常に大きい。
- タイ政府は全国に 26,400 の災害リスクの高い村が存在するとしている。このうち、少なく とも1回のコミュニティ防災が取り組まれたのは 4,100 村である。従って、残り 22,300 村

に対する取り組みが期待される。2011年の大洪水以降、タイ政府はコミュニティ防災予算の増額を認め、現在、災害防止軽減局の予算で毎年780村に対するコミュニティ防災を実施しているが、災害防止軽減局のリソースだけに依拠した場合、全ての村をカバーするのに30年を要する計算になる。全国的な普及展開には、市町が主体的にコミュニティ防災に取り組むような法制度、仕組み、動機付けが必要である。

防災教育について、初等教育局はモデル校の経験に基づき、モデル校を拡大している。これまでに 100 校以上がモデル校として指定されている。初等教育局による支援が継続されれば、非常に大きな面的な展開が期待できる。

4-5 持続性

プロジェクトの持続性はいくつかの課題がある。

- 次期の国家災害防止軽減計画では、災害防止軽減、緊急時の対応、復旧が3つの柱として 上げられ、災害防止軽減では新たにリスクアセスメントが加えられる予定である。また、 官民連携も重視される。さらに、コミュニティ防災などの活動については、市町による主 体的な取り組みの重要性が明記されるため、本プロジェクトの成果を普及展開していく上 で政策面での後押しとなることが期待できる。
- 成果毎の持続性の見込みは次の通りである。
 - ✓ 災害防止軽減局は 2013 年実績で 157 万バーツを市町の防災アクションプラン作成の支援のために配分している。また、内務省から自治体振興局を通して市町に対し図上訓練を活用して防災アクションプランの作成を促している。図上訓練マニュアルと防災アクションプランのテンプレートは災害防止軽減局のホームページからダウンロードが可能である。以上の点から、災害防止軽減政策部による支援の継続性は高いと言える。次の段階として、策定された市町の防災アクションプランの実施状況のモニタリング、作成したプランの実効性の検証が必要だが、こうした活動は災害防止軽減局の権限を超えるため、管轄する自治体振興局等との連携が必要となる。なお、この点について、災害防止軽減局は、予算案の中に「その他の活動」としてアクションプランのモニタリングに充てるといった形で、作成後のアクションプランのフォローアップを行う予定である。
 - ✓ 3-3で示した通り、コミュニティ防災の予算は 2012 年以降増額されており、プロジェクト終了後も現在の活動レベルが維持できる見込みである。ファシリテーターについては懸念がある。過去 GTZ 等が育成した 100 名の追跡調査を行ったところ、20 名程度しか把握できなかったという。職員の異動・昇進、退職、ファシリテーター役への関心・自信の弱まり等により、十分な数のファシリテーターが確保できないリスクがある。このため、継続的に災害防止軽減アカデミーでファシリテーター育成を行う必要がある。
 - ✓ 災害防止軽減アカデミーにおける研修コースの持続性は不透明である。現状では、配 分予算の範囲で各部局から要望のあったものを選び実施するという形で研修が実施さ れている。このため、たとえ毎年実施している研修コースでも、いわゆる常設の研修 コースという位置付けではない。特に、近年、財務局の指示で研修講師の謝金が削減
されている。研修コースの実施戦略を明確にして、制度化を図る必要がある。

- ✓ 防災教育の予算については、まず全国の教育サービス地域事務所が計画書を初等教育局に提出し、初等教育局の方針に沿った計画書を提出した 56 の事務所に 5 万~10 万バーツの予算を配分している。この事業の年間予算は 405 万バーツである。このため、初等教育局が防災教育事業の有効性を提示できれば、継続して予算が確保できる可能性が高い。体制面について若干の懸念がある。現在、防災教育は初等教育局教務課の中の 4 名がグループで対応しているが、今後、防災教育の業務が拡大した場合、十分対応できない可能性がある。
- ✓ 現在、タスクフォース 5 のカウンターパートが習得したハザードマップの作成技術な どは、まだ市町には提供されていない。地域センターや県事務所の職員が市町の職員 に技術を教えるのか、市町の要望に応じて地域センターあるいは県事務所がハザード マップを提供するのか、といった基本的な仕組みも未だ明確でないため、このコンポ ーネントについては持続性に懸念がある。
- ✓ プロジェクトの成果と活動レベルを維持する上で、タスクフォースの枠組みを継続す ることが望ましい。そのために組織間の合意書などでタスクフォースの制度を位置づ ける必要があるかもしれない。

第5章 結論

2011年の大洪水以降、災害防止軽減局の防災活動を主導・促進する役割は益々重要性を増し ており、災害防止軽減局による自治体への支援能力を強化するという実施アプローチも有効で、 プロジェクトの妥当性は非常に高いと言える。プロジェクトにより災害防止軽減局と教育省初等 教育局の支援能力は高まったが、モデル県での取り組みを全国に普及展開するための政策や制度 作りは十分に具体化されておらず課題を残した。活動はほぼ予定通り実施され、当初計画した成 果はほぼ達成しているため、プロジェクトの効率性は高いと言える。タイ側による積極的な投入 もあり、2,000を超える自治体で防災計画が策定され、100以上の小中学校が防災モデル校に指 定されるなど、既にインパクト発現が見られる。地方行政組織を含め積極的な外部への働きかけ ができれば、モデル県の経験を全国に広く普及することが可能である。政策、予算面での持続性 は高いが、プロジェクトの成果を維持するためには、普及展開のための仕組みや制度づくりが必 要である。

第6章 提言

上記評価結果に基づき、合同評価チームは災害防止軽減局、初等教育局、専門家チーム、 JICAに対して以下の提言を行った。

6-1 災害防止軽減局に対する提言

他の組織との連携強化

- プロジェクトの成果を全国的に普及展開するためには、災害防止軽減局だけでなく、他の 機関との連携を強化することが不可欠である。そのためには、以下のような連携に取り組 むこと。
 - ✓ 市町を管轄する内務省自治体振興局との合意文書を取り交わす。具体的内容として、
 (1) 双方の県事務所が合同でモニタリングし、全国で市町が策定した防災アクションプランの実施内容と防災活動への予算執行状況を把握する、(2) 双方で相乗効果の得られる情報や活動を共有・共通化する(例えば、自治体振興局の研修部門が実施している自治体首長向けの研修プログラムには防災に関する講義が3時間割り当てられている。この講義内容を災害防止軽減アカデミーが提供し、首長が防災活動に予算付けするように、先進的なコミュニティ防災や学校防災の取り組みの紹介を行うなど)。
 - ✓ 県知事、全国市長会、全国町長会など地方の行政組織のリーダーへの働きかけを行い、 プロジェクト成果などのプロモーションを行い、予算付けを促すこと。

タスクフォース間の連携

プロジェクト終了後もプロジェクトの成果や活動レベルを維持するために、各タスクフォースで有効なプロジェクト後の枠組みを検討し、組織間の合意文書などで制度として定着させる。また、定期的にタスクフォース横断的な会合を持ち、連携を強化すること。

提言への対応のモニタリング

プロジェクト終了後も、JICA タイ事務所と災害防止軽減局/初等教育局が定期的に集まり、
 提言内容への各組織の対応状況をモニタリングすること。

プロジェクトの最終セミナー

プロジェクトは 2014 年 2 月に最終セミナーの開催を予定している。そのセミナーの場でも
 関係機関を集めて、提言内容への対応を協議すること。

6-2 各タスクフォースへの提言

タスクフォース1:

図上訓練の活用

現在、市町の防災アクションプラン作りでどの程度図上訓練が活用されているか把握できていないため、この点について確実な活用を促すこと。

<u>市町の防災アクションプラン作成状況のモニタリング</u>

 現在まだ 30 県の県事務所からのみ作成状況の報告がないため、全国の県事務所からの報告 を促すと同時に、今後も全国全ての市町が防災アクションプランを策定するよう働きかけ を継続すること。

タスクフォース2:

コミュニティ防災ガイドとその他の教材の配布

 コミュニティ防災に関するプロジェクトの成果品を全国の県事務所に配布して、同時にフ ァシリテーターによる活用を促すこと。

モデル村の確立

モデル学校に比べて、モデル村ではそれほどモデル性は高くないため、市町と連携し、引き続きモデル村におけるコミュニティ防災の活動をモニタリングし、必要に応じて支援を行うこと。また、モデル村の紹介パンフなど、プロモーション用の材料を用意すること。

タスクフォース3:

防災の人材育成計画の必要性

防災の研修を積み上げるだけでは、効果的な防災人材の育成につながらない可能性があり、
 研修の効果を高めるためにも、災害防止軽減局の人材育成計画が必要である。そのために、
 まず計画策定のステップを明確にすること。

プロジェクトの研修の常設コース化

 プロジェクトではコミュニティ防災、図上訓練、ハザードマップ作成など、様々な研修を 実施し、教材等も整備されている。このため、こうした研修コースを災害防止軽減アカデ ミーの常設コースとして位置づけること。

タスクフォース4:

GIS データベースの活用

 初等教育局では複数の GIS データベースを更新できるオペレータが必要である。そのため、 1~2 名の若手職員を任命し、必要に応じて、災害防止軽減局の GIS 担当の職員から操作法 を学び、GIS を活用できるようにすること。

防災教育普及のための支援継続

現在、初等教育局が推進している防災教育の普及事業は効果的であり、今後も同事業を通して教育サービス地域事務所を支援すると同時に、防災教育の全国セミナーの継続実施とセミナーの報告書を全国の学校に配布すること。

タスクフォース 5:

マニュアルの完成

 ハザードマップ作成、早期警報システムと構造物対策に関するマニュアルはプロジェクト 終了までに最終版を完成させること。 ハザードマップ作成、早期警報システムと構造物対策に関する研修

 防災基準部ではプロジェクト終了後も、地域センター職員に対して少なくとも1回の研修 を実施する予定であるが、これを2014年度以内に確実に実施すること。

市町への技術サービス提供の計画づくり

 災害防止軽減局ではハザードマップ作成、早期警報システムと構造物対策についての技術 を習得したが、これらの技術を市町に提供する方法や体制が決まっていないため、早期に 業務化計画を作成すること。

第7章 教訓

- 本プロジェクトでは、モデル県での経験(あるいはモデル県で検証したプロジェクトの成 果品)に基づく、実施機関への能力強化には成功したが、その能力を活用して全国の自治 体・コミュニティに成果を普及展開するまでのシナリオ(ストーリー)が明確ではなく、 PDM でも明示されていなかった。このため、プロジェクトでは能力強化には成功したが、 全国への普及展開を行うための政策、法制度、他組織との連携まで十分に踏み込むことが 出来なかった。モデルの普及を視野に入れたプロジェクトでは、計画立案段階で、インパ クト発現までのシナリオを描き、実施機関と共有することが重要である。
- 本プロジェクトは中央省庁の地方事務所が自治体に対する支援能力を強化することを意図していたが、プロジェクトの成果作成と活動は主に中央省庁のカウンターパートが担当し、 プレーヤーとしての地方事務所の位置付けはあまり高くなかった(成果品の効果を検証するサイトとしての意味が強かった)。モデル県を実施主体にし、彼らが自治体への支援を試行することが出来たら、様々な支援策の有効性を現場で検証することができ、よりプロジェクトの有効性を高めることができたと思われる。

別添資料

1 : PDM

2:カウンターパートと合同調整委員会メンバーリスト

- 3:終了時評価の日程
- 4:プロジェクト実施計画表(計画と実施)
- 5:モデル県ヒアリングメモ
- 6:協議議事録(Minutes of Meetings: M/M)

別添資料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: Lampang 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
Overall Goal (<u>in 3-5 years after the Project ends</u>): Implementation of disaster risk management activities is improved and scaled up.	 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 municipality/SAO (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. 	 Provincial Disaster Prevention and Mitigation Plans and Action Plans Evaluation report of TTX Evacuation plans Record of workshop report. 	
Project Purpose (by the end of the Project) 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.	 Plans for up-scaling are included in the National Disaster Prevention and Mitigation Action Plan. Plans for up-scaling win the provinces are included in the Provincial Disaster Prevention and Mitigation Action Plans of the model provinces. 	Disaster Prevention and Mitigation Action Plans	Mission and responsibility of DDPM regarding disaster management is maintained by law.
Outputs <task disaster="" force="" management="" planning="" –=""> 1. Disaster Prevention and Mitigation Action Plans with considerations for vulnerable people are formulated for national, provincial</task>	 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). 	 Disaster Prevention and Mitigation Action Plans at national, provincial and local levels 	

and local authorities (in the model provinces).			
<task -="" cbdrm="" force=""> 2. Capacity of DDPM staff as facilitators on implementation of Community Based Disaster Risk Management (CBDRM) is enhanced.</task>	 2-1 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. 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. 	 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 	
<task disaster="" force="" management="" training="" –=""> 3. Training curriculum at DPMA is improved.</task>	3-1 At least one curriculum on disaster management on natural disaster (flood, flash flood and mud flow) for DDPM staff is improved.	3-1 Curriculum	
<task disaster="" education="" force="" –=""></task> 4. Based on the Natural disaster preparedness educational curriculum, schools have improved preparedness for disaster.	 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 I. 4-2 100 teachers from natural disaster prone areas are trained on disaster education. 	 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.) 	
Task force – Flash Flood Risk Management> 5. Knowledge and technical capacity of DDPM on hazard mapping, early warning system and design of structural measures are enhanced.	 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. 	 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) 	

Activities	Inputs	Preconditions
 Activities 0-0 DDPM, in consultation with the Japanese experts, selects model areas: Model community al: Ban Chai Chom Phu (Moo 10) and Ban Mae Salaem (Moo 6) Model community al: Ban Chai Chom Phu (Moo 10) and Ban Mae Salaem (Moo 6) Model community al: Ban Muong Sam Pee (Moo 8) Additional model community b2: Ban Muong Sam Pee (Moo 8) Additional model community b2: Ban Koornong (Moo 2) Additional model community b2: Ban Koornong (Moo 2) Additional model community b2: Ban Koornong (Moo 2) Additional, Tri-CBDRM selected Ban Tham Talod (Moo 4) as a model community in Nakhon Si Thammarat Province. < < < <<td>Inputs <thai side=""> Counterparts Project Director Project Manager Task force members Administrative staff Project office and facilities at DDPM Working space at MOE Operational costs <japanese side=""> Experts Disaster Management Plan Disaster Management Institution Sediment Disaster Management Flood Management Community Based Disaster Risk Management Disaster Education Disaster Management Exercise Counterpart Training in Japan Operational costs</japanese></thai></td><td>Preconditions Human resources and budget necessary for the implementation of the Project are provided by the Thai side.</td>	Inputs <thai side=""> Counterparts Project Director Project Manager Task force members Administrative staff Project office and facilities at DDPM Working space at MOE Operational costs <japanese side=""> Experts Disaster Management Plan Disaster Management Institution Sediment Disaster Management Flood Management Community Based Disaster Risk Management Disaster Education Disaster Management Exercise Counterpart Training in Japan Operational costs</japanese></thai>	Preconditions Human resources and budget necessary for the implementation of the Project are provided by the Thai side.

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.	
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.	
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.	
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.	
TF Disaster Management Training> 3-1 TF-Disaster Management Training designs a capacity development plan for its activities and monitoring/evaluation.	
3-2 TF develops guidelines for evaluation and monitoring of training.	
3-3 TF conducts needs assessment for training in collaboration with other task forces.	
3-4 TF revises standard disaster management curriculum in DPMA training courses on flood, flash flood and mud flow.	
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.	
3-6 TF, in collaboration with concerned organizations, train master trainers for DDPM staff.	
3-7 Master trainers train 300 DDPM staff of disaster management on flood, flash flood and mud flow.	
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.	
<tf disaster="" education=""> 4-1 DPMA and Ministry of Education discuss and agree on the roles of each agency to implement TF-disaster education activities.</tf>	
4-2 TF in collaboration with OBEC develops model curriculum of disaster education in schools on flood, flash flood, mudflow, and Tsunami.	
4-3 TF in collaboration with OBEC modifies textbooks and teachers' guide.	
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.	
4-5 TF in collaboration with MOE trains at least four model schools collaboration with ESAOs.	

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.	
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.	
4-8 TF in collaboration with MOE develops at least one master school as information center of disaster education.	
4-9 TF in collaboration with OBEC reviews the process and revises curriculum.	
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.	
TF Flood Risk Management> 5-1 TF designs capacity development plan on its activities and monitoring/evaluation.	
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	
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.	
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.	
5-5 TF conducts training on hazard mapping, early warning system and structural measures targeting DPM regional centers using the above manuals.	

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 Penpas	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 Kerdsom	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 Akratham	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 Director of Environment Geology and Geo-hazard Division	Department of Mineral Resources	JCC
Mr.Suwith Korsuwan	Director, Active Fault Research 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.Aeksaran 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. Watcharee 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 Ngaosusit	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

Name	Position	Organization	JCC/Taskforce
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Mr. Wattanawit Gajaseni	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. Choomporn Intathep	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, Lampamg	DPM Provincial Office, Lamlang	JCC
Mr. Jessada Vattananurak	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
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Mr. Arun Pinta	Chief of Foreign Relations Sub-Bureau	Research and International Cooperation Bureau Department of Disaster Prevention and Mitigation	JCC
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Mrs. Sudarat Chaoprasert	Plan and Policy Analyst Senior Professional Level	Office of Policy and Plan, Ministry of Education	TF-1
Mr. Somsong Ngamwong	Chief of International and bilateral Cooperation Unit Bureau	Bureau of International Cooperation, Ministry of Education	TF-1
Mr.Adichat Surinkum	Director of Environment Geology Division	Environment Geology Division Department of Mineral Resources	TF-1
Mr.Suwith Korsuwan	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	Department of Local Administration	TF-1
Gp.Capt.Somsak Khaosuwan	Director of Warning System Administration	National Disaster Warning Center	TF-1
Mr. Pongsthakorn Suvanpimol	Senior Expert on Hydrology	Royal Irrigation Department	TF-1
Mr.Prawit Jampanya	Director of Central Weather Forecast Division	Thai Meteorological Department	TF-1
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Ms. Wilairat Kahasathien	Human Resources Development Official Senior Professional	Disaster Prevention Promotion Bureau, Department of Disaster Prevention and Mitigation	TF-1
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Name	Position	Organization	JCC/Taskforce
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Ms. Kamolwan Chitpakdee	Plan and Policy Analyst, Professional Level Disaster Prevention Promotion Bureau	Department of Disaster Prevention and Mitigation	TF-2

Name	Position	Organization	JCC/Taskforce
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Mr. Julapong Julasukon	Beau of General Administration Office, OBEC	Ministry of Education	TF-3
Mrs. Chuleeporn Patininnart	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
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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
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Name	Position	Organization	JCC/Taskforce
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mis. Sudarat Chaoprasert	Permanent Secretary Ministry of Education		11'-4
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Wis. O-larwan Saltan	Commission		11-4
Mr. Thanatorn Naksen	Director, Bureau of Inspection and Evaluation Office of the	Ministry of Education	TF-4
Wit: Thanatoffi Ttakson	Permanent Secretary Ministry of Education		11 4
Mrs. Vipawan Waithanomsat	Educational Officer, Professional Level Office of the Non-	Ministry of Education	TF-4
ivits. Vipuwan Wardanishi	Formal and Informal Education		11 7
Mrs. Vannee Chantarasiri	Educational Officer, Senior Professional Level Bureau of	Ministry of Education	TF-4
	Academic Affairs and Education Standards		
Ms. Utin Grungwisetphong	Educational Officer, Professional Level Bureau of Academic	Ministry of Education	TF-4
	Affairs and Education Standards		
Ms. Thanathat Chaiyanon	Educational Officer, Practitioner Level	Ministry of Education	TF-4
-	Bureau of Academic Affairs and Education Standards		
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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
	Director of the protected area sub-bureau Water Crisis	Deserves of Weter Deserves	TF-5
Mr.Satit Sueprasertsuk	Prevention Center	Department of Water Resources	11-3
	Agricultural Scientists, Senior Professional Level Office of		
Ms. Saowane Prachansri	Natural Calamity and Agricultural Risk Prevention Office of Soil	Land Development Department	TF-5
	Survey and land Use Planning		
Miss Kaesorn Jumpa	Soil Survey officer, Professional Level Office of Soil Survey and	Land Development Department	TF-5
Nilss Kaesoni Julipa	land Use Planning	Land Development Department	11-5
Mr. Ekaphop Thera-Oran	Engineer Level 5 Water Resources Management Division,	Electricity Generating Authority of Thailand	TF-5
	Survey Group		11-5
Mr. Paitoon Naktae	Director of Safety Standard Sub-Bureau Disaster Prevention	Department of Disaster Prevention and Mitigation	TF-5
ivii. I altooli Ivaktae	Criteria Bureau	Department of Disaster revention and witigation	11 -5

Name	Position	Organization	JCC/Taskforce
Mr. Banyat Yaingoolueam	Civil Engineer, Professional Level Disaster Prevention Criteria Bureau	Department of Disaster Prevention and Mitigation	TF-5
Mr. Chainarong Vasanasomsithi	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 Boonpreeranat	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. Nutchanat Prasopsub	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 Uttamangkapong	Plan and Policy Analyst Professional Level	Department of Disaster Prevention and Mitigation	Inter-TF
Ms. Kornisnan 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. Wuttipong Chaturat	Chief of Li District Office	Lamphun Province	Sub-TF Lamphun
Mr. Prachon Pratsakul	Director of Disaster Prevention and Mitigation Regional Center 10, Lampang	Department of Disaster Prevention and Mitigation	Sub-TF Lamphun
Mr. Banleng Songboontham	Assistant Director of Lamphon 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

Name	Position	Organization	JCC/Taskforce
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. Ridthipong Teachapan	Vice Governor, In Charge of Disaster Management Task	Lampang Province	Sub-TF Lampang
Mr. Sarapong Sattayarak	Assistant Governor	Lampang Province	Sub-TF Lamphun
Acting director	Director of Disaster Prevention and Mitigation Regional Center 10, Lampang	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 Sutthipornmaneewat	Director of Lampang Educational Service Area Office 2	Ministry of Education	Sub-TF Lampang
Mr. Bun Saijam	Director of Lampang 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, Lampang Province	Department of Disaster Prevention and Mitigation	Sub-TF Lamphun
Acting chief	Chief of Disaster Prevention and Operation Section DDPM Provincial Office, Lampang Province	Department of Disaster Prevention and Mitigation	Sub-TF Lamphun
Mr. Nattawut Singkaew	Plan and Policy Analyst, Professional Level DDPM Provincial Office, Lampang Province	Department of Disaster Prevention and Mitigation	Sub-TF Lamphun

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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	luation 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					
	<i>v</i> unit	10		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					
17	5411.	17	Duii	Interview to village head of Ban Tham Talod (Nakhon Si Thammarat)					
				Interview to Vintige nead of Ban Tham Farod (Takhon Si Thammarat) Interview to Ban Tham Talod Primary School (Nakhon Si Thammarat)					
15	Jan.	20	Mon	Interview to Ban Tham Talou Trimary School (Nakion Si Thammarat)					
15	Juli.	20	101011	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)					
10	Juli.	21	Tue	Evaluation Reporting					
17	Jan.	22	Wed	Interview to TF3 (Disaster Management Training)					
1/	Jan.	22	weu	Interview to TF5 (Flood Risk Management)					
18	Ion	23	Thu	Interview to JICA Experts					
18	Jan.	23	Thu	Evaluation Reporting					
10	T	24	E.	Interview to Mr. Anusorn Kaewkangwan (Deputy DG)					
19	Jan.	24	Fri	ADPC					
	т	25	C .	UNDP					
20	Jan.	25	Sat	Preparation of evaluation report					
21	Jan.	26	Sun	Preparation of evaluation report					

別添資料3 終了時評価の日程

No.	Month	Date	Day	Schedule				
22	Jan.	27	Mon	scussion 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)				

別添資料4 プロジェクト実施計画表(計画と実施)

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Martine .		FY 2010					FY 2011					FY 2012 2012				Î	FY 2013																
Work Item	Plan/ Actual	5 0		2010		1114	2 4	121	21	16	201			10/14	112	110	121	4			010	10 1	112	112	121	ALE	201		0 110) 11 12		2014	
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(1) Preparation of Draft Inception Report	Plan Actual				-		F		-			-		-				-	-		-		-		П	-		-		\square		—	_
(2) Explanation and Discussion on Inception Report	Plan			+	+	Ħ	+					+		+		+			\pm		+			+		+	Ħ		+	井	#	+	
(3) Assistance in Organizing Task Forces	Actual Plan			+	1		1		1										\pm		+					+				#	#	+	
(4) Assistance in Baseline Survey for Capability Assessment	Actual Plan						+																	+		+			+	#		+	
(5) Assistance in Planning Capacity Development and Monitoring	Actual Plan						T.									+			\pm							\pm							
(6) Explanation and Discussion on Progress and Interim Reports	Actual Plan			+													+				+				+	\pm							
(7) Preparation of Annual Completion Reports to JICA	Actual Plan			+	+					+		-				+			\pm		+		-			+	+					\pm	
	Actual Plan				+	$\left \cdot \right $	-	$\left[\right]$		-				+		+	-		+	$\left \cdot \right $	+					+	+			++		+,	
(8) Preparation of Final Report, and Explanation and Discussion	Actual Plan		$\left \cdot \right $		+	\square	-		-	-			$\left \cdot \right $	+	$\left \right $		\vdash		+	$\left \cdot \right $	+				\vdash	+	\square	$\left \cdot \right $		\square	\square	┯	F
(9) Seminars on Management of EQ and Other Natural Disasters	Actual Plan			+	+-		Ŧ	₽∔	+	H		-	H	+		1	H	-	+	\square	+				H	+			+		\mp		F
(10) Counterpart Training in Japan	Actual				T	1 T	t		+						£.																	+	
< TF for Disaster Management Planning >	Plan				-	$\left \cdot \right $	+								+	-					-					-	$\left \right $				++		-
(11) Assistance in Training of DDPM Staff for Disaster Prevention Planning (11) Assistance, in Branaration/Durining, of Disaster, Prevention, and	Actual			t†	+-	##	1								1		t		÷		1				t:					##	##	+	F
 Assistance in Preparation/Revision of Disaster Prevention and Mitigation Action Plans Assistance in Table-top Exercise for Verification of Disaster 	Plan Actual Plan			+	-		+										-													¢‡	#	+	
Prevention Plans	Actual		+	-+-	╈	++	+	+	-			+-			+		-	-	┢	\vdash	+					-		++	Ŧ	++-	++	+	┢──
< TF for Community Based Disaster Risk Management >			_		_													-	_							_							
(14) Surveys to Assess Effects of CBDRM Activities	Plan Actual		$\left \cdot \right $				+-	$\left \cdot \right $	-	+			$\left \right $			-	+		+	$\left \cdot \right $	+				+	+	++	+		╘╧		+	\vdash
(15) Assistance in Revision of Manuals and Facilitator Guidelines	Plan Actual																													Ŧ	\mp	\mp	
(16) Assistance in Training of DDPM Staff as Facilitators for Promotion of CBDRM	Plan Actual							Ħ	-	1E		+	H	+	H			-	+	H	Ŧ					+			+	Ħ	\mp	+	F
(17) Assistance in Preparation of Action Plan and Its Application in Model Provinces	Plan Actual							Ħ							÷						Ì									\blacksquare		\mp	F
< TF for Disaster Management Training >					1										1		1						1	Ì	Ì.			1.1	Ì				
(18) Assistance in Training- Needs Assessment and Revision of Training Curriculum of DPMA	Plan Actual						-		-	+		-				+	-									+	$\left \cdot \right $			++		_	-
(19) Assistance in Preparation of Training Curriculum and Materials for Natural Disaster Management and CBDRM	Plan Actual			-	-		-		-	1							-															+	-
(20) Training of DDPM Staff as Master Trainer	Plan Actual			Ŧ	F	\square	F	F	\pm	E		-		-		Ŧ	-		Ŧ	H	F			-		-	F	H	-	++	H	+	\vdash
(21) Assistance in Training of DDPM Staff for Natural Disaster Management	Plan Actual				-	$\left \cdot \right $	-	H		-						-	-				-					-			-	╀╈		+	F
< TF for Disaster Education >															Į		I.,			μ.					Ι.								
(22) Assistance in Revision of Training Curriculum and Materials for Disaster Education in School	Plan Actual																														\pm	\pm	
(23) Assistance in Selection of Model Schools	Plan Actual				-																÷					-						\pm	\vdash
(24) Assistance in Training Teachers in Model School	Plan Actual							E					E														4				┢	\pm	\vdash
(25) Training of Master Teachers for Disaster Education in School	Plan Actual							E									-												1		+	+	\vdash
(26) Assistance in Bringing-up Model School as Information Center for Disaster Education	Plan Actual				-			H	-							1	-									4				╬┼╴	\square	+	\vdash
(27) Assistance in Review of Implementation Process and Model Curriculum for Disaster Education	Plan Actual		\square	-	-	H	+	H	-			_		1							÷					1				Ŧ	Ħ	\mp	F
< TF for Flood Risk Management >					1				_					_																			
(28) Selection of one sub-basin model site in Lampang or Lamphun based on GIS base risk area maps	Plan	-+	+		+-	++	+	┢	1	+				+	+ 1		+	-	+		+		-↓		+	+	+	+	-+	++	+-	+	\vdash
(29) Preparation of manuals for rainfall / flood analysis and hazard mapping	Actual Plan		+		+	++	+	++	+	+		+-	+	+	+		-	\vdash	+	\vdash	+		+		+						++	+	Н
through the training taking the model site as an example.	Actual														1		5																
(30) Preparation of manuals for improvement of early warning system and evaluation of structural measures	Plan Actual			+	\mathbb{F}		F		-					-		+	-						-	\pm							\square	\pm	F
(31) Assistance in training on hazard mapping, early warning system and structural measures for DPM regional centers	Plan Actual			\pm	+	\square	F		\pm	E		+		Ŧ		Ŧ	\square		Ŧ								H			✐	\square	\pm	\vdash
Report			IC/R		Γ	▲PF ▲Ba			urve	/ Rep	port		T				IT/R		Surve	y Rej	port1	P	R/R2				l Com y R.2			DF.	/R▲ R.▲	F/I	R▲
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別添資料5 モデル県のヒアリング調査結果

Summary of site visits – Provincial offices

A5-1

	Lampun Provincial Office of DDPM	Lampang Provincial Office of DDPM	Nakon Si Tammarat Provincial Office of DDPM
Interviewees	Mr. Chumporn Intathep, Director, Lampun Provincial Office Mr. Sae-ree Sriroon, Operation and Prevention Division Mr. Surasak Manosak, Mechanical Officer	Mr. Nattawut Singkaew, Strategic planning division, Provincial Office Mr. Boonjet Butte, Provincial office	Mr. Phachogk Sakjiraparong, Strategic planning division Mr. Tanawat Rouengdej, Strategic planning division
Background information	 The province has 58 municipalities. 28 staff (permanent 12, contractual 2, others 14), the number is sufficient, working closely with other organizations and volunteers. 	 The province consists of 13 districts, 36 sub- districts, 104 municipalities and 855 villages. The main support provided by JICA project include the capacity development of the provincial office staff to help the municipalities develop their action plans, facilitator training for CBDRM. They also participated in training in Japan and professional training at DPMA. 	 The province covers 185 municipalities and 23 districts. The provincial office has 55 staff members (25 officers) and the strategic planning division has 7 officers. The provincial office established 3 branch offices this year and one branch office takes care of 5 - 10 districts. This province experienced large-scale disasters in the past. So, the staff members are experienced to deal with extreme situations.
Provincial Plan	 The provincial plan was developed before the project. Provincial plan is updated every year. The experts provide advice, for example, to improve the evacuation plan, etc. The committee members participate from health, fire station, police and the military. The roles and responsibilities of all the members are very clear. After the plan is developed, it is reviewed and coordination meeting is organized before the rainy season and the dry season. DDPM provincial office monitors the activities that have received budgetary 	• The provincial plan has developed its DRM plan since 2004 (four year plan). The DRM plan is developed based on the municipal plans.	• The provincial plan was developed before the project. The plan is updated every year by the committee, mainly with the initiative of the DDPM provincial office.

	support from the DDPM central office. The provincial office may not have any information about the activities of municipal governments if the provincial office does not provide technical or financial support. The main point for monitoring is about how the inputs were used.		
Support to municipalities in action planning	 The idea is to capacitate the provincial offices so that they would be able to support the municipalities to produce action plans. In the province, there are 58 municipalities. DDPM sent an official letter and requested that all the municipalities should develop their respective action plans. Now about 50% of them have developed their respective action plans. The interviewees think that to strengthen ties with senior administrators such as deputy chief administration, the political line changes from time to time, but the administration line is consistent. By October 2014, all the municipalities will produce their plans. The importance of DRM has been recognized; municipalities are also aware of the importance. Lampun is small and it has a strong bond among municipalities. The effects of action plans that the provincial office notices include the following: Reduced damages by removing animals and belongings at the time of flooding. 	 Good results are that they fully understand the action planning process. The provincial office covers 104 municipalities. All the municipalities have already developed their action plans. The strategic planning division is in charge of action planning, staffed by 5 officers. All the staff members are well knowledgeable about the use of the templates and the manuals. Some other staff members in different divisions also understand the planning process. The provincial office has no problem about the staff capacity of action plans. Monitoring of progress of action plans is not a mandate of the provincial office, but DDPM central office instructs the municipalities to conduct evacuation drills periodically. Therefore, the provincial office supports drills organized by the private sector and schools. The municipality submits the action plan to POLA. Sharing of information with DLA is about training records to DLA (POLA), receiving resources of DLA for disaster management. A large-scaled drill is jointly organized with DLA. POLA sets the performance indicators where 30 points (out of 100%) are allocated for disaster management. Accordingly the performance of each municipality is evaluated in a numerical manner. Theoretically high performers are able to get more budgets. 	 The provincial office organized a workshop for action planning for 30 municipalities. The provincial office also prepared and sent a package of a CD-ROM and a booklet about action planning to all the municipalities, utilizing the budget of 30,000 Baht allocated by the central office to support action planning. Regardless of these initiatives, the template is not fully used because the use of the template is not compulsory and some municipalities are not familiar with the new format. The follow-up of the progress by the provincial office was not sufficient. Support for and monitoring of action planning will be the main task of the branch office from this year. Another problem is that not all the municipalities have assigned an officer in charge of disaster management. No specific budget is earmarked for support of action planning. The branch offices will carry out support to municipalities is expected. Five officers are capable of teaching how to develop action plans.

	 Evacuation plan was effective. (2) Communication among organizations has been improved. Yet, action Plans were developed just one year ago, not so much specific difference is noticed between municipalities with and without plans. The effectiveness of templates and guidelines – It is easy for the staff to 		• Action plans are submitted to the sub- districts and districts and then to the provincial Government. DLA is concerned more about development plans rather than action plans. Copies of the action plans are available at the district office. Under the current administration system, the district is in a better position rather than DLA
	encourage municipalities to develop their plans. Before the project, they mostly just request the municipalities to make plans and give a copy of the provincial plan as a sample.		 to monitor the progress of action plans with support of DDPM provincial office and its branch offices. DLA also strongly instructs the
	• Monitoring is not yet conducted. At the provincial level, cooperation with DLA is smooth. Sharing of information among the committee members is not difficult. Provincial office of DDPM can monitor with POLA and also take advantage of the meeting opportunities organized regularly every 2 months inviting deputy and heads of DLA to collect and share data about action plans of municipal governments.		municipalities to invest 2% of the budget for DPM.
CBDRM	 In Lampun, 575, 250 risk areas for flooding have been identified. So far 60 villages received training. This year 12 villages will be trained. The budget is too small, only 2 day training (without a drill) is provided for CBDRM. The total budget of the provincial office for CBDRM is about 200,000 Baht per year. The budget is usually estimated, based on how many batches of training to be conducted. One batch can target 3 – 4 villages at a time and cost about 50,000 Baht for each batch. 	 In the provincial office, 5 staff members are able to act as facilitators and 3 of them trained by the project. Also, one former staff member of the provincial office sometimes acts as the facilitator. Sub-facilitators from municipalities also support six facilitators. Because a number of municipal staff members are also trained in disaster management as part of their career path. CBDRM manual is also distributed to all the municipalities. The guidelines are easy to use and comprehensive. The province consists of 13 districts, 36 sub-districts, 104 Tambon and 855 villages. The 	 The provincial office organized a workshop, inviting 25 municipalities, utilizing a portion of the fund (2 Million Baht) allocated by the Provincial Government for DPM activities this year. The provincial office has a budget for 12 – 15 villages for CBDRM each year. 1 batch of training would cost 50,000 Baht. The total budget is about 200,000 Baht from DDPM central office. The Provincial Government may allocate some budget for CBDRM. It

 The provincial office does not set any numerical target to conduct CBDRM. Because CBDRM will be conducted based on the requests from villages. The 250 high-risk villages were identified based on the studies done by WRD and DNER, etc. Leaders of High risk villages know that their villages are identified as high risk, but villagers may not know about it. So, one way to promote CBDRM is to inform the results of studies by other agencies so that residents will request the municipalities to conduct CBDRM. Provincial office of DDPM has 5 facilitators. 5 - 6 staff members from other organizations such as TMD, police are also able to act as facilitators. Also, one retired teacher is a very active facilitator in the province. The facilitator training organized by the project was different from earlier training given by GTZ in that it targets various members of the communities with drill experies. 	f fc vi Vi C C tt bj oi g al • C S s tt ha m A m b • C BDR	r 3 - 4 t Illages) p Illages. S BDRM. e record y the mut fice sen overnme locate a BDRM ich as th others a ome mut emselve as an act unicipal lso, may unicipal udget for	office allocat batches (one b ber year. Appr Gome municipa The provincia s of all CBDR nicipalities. E ds a letter to the nt to encourage budget for CE is promoted to e municipal the nd children and nicipalities con- s. This is beca- ion plan and m ities request to be because it ities just wait r CBDRM.	patch is for 3 oximately 9 alities also co al office colle M activities very year, the provincial ge the munici BDRM. • other munic BDRM. • other munic calth offices d health volu- nducted CBE use each mu- nore and mon o conduct CE would take to for DDPM to	 4 16 onduct ects da condu e prov apalitie cipal of to targ to targ to targ DRM b nicipa BDRM ime if to alloc	ta on locted incial es to ffices get s. by lity the late a	•	depends on the Governor. Some governors are very active and some are not interested in DPM at all. The Governor of Nakon Si Tammarat is interested in tourism. CEFLON Since 2012 and HONDA since 2013 have sponsored CBDRM activities. In cumulative total, CEFLON provided approximately 6 Million Baht to prevent oil spill and sea accidents. Short-term training including drills (3 days) was also conducted for community leaders in 20 Municipalities. HONDA will support communities and schools – in a similar manner the Project supported the model village and school. About five officers can act as facilitators. Two community leaders were also trained as facilitators (They just finished training.). The Director of the provincial office of DDPM would like to actively
with drill exercise.			wunicipanties	*	JICA			promote CBDRM.
• To verify the guidelines and training program of facilitators was the objective of CBDRM. Therefore, the model villages may realize they are "models". Based on the CBDRM tested in the model villages, the guidelines were revised and its quality improved. A two-day training is probably too short. No target is set for the number of facilitators to be fostered in the province. Many provincial officers can actually act as sub-facilitators because they have opportunities to teach volunteers on CBDRM. Many of them actually want to become facilitators.	*Each develo The Pr allocat	year, the pment b ovincial es the bu	11 A-Lampang Pr e cabinet alloc: udget" to each Government, udget to the lin programs.	ates the "prop provincial g at its discreti	vincial overni	ment.	•	Rachapat University will conduct CBDRM as a research project for four villages.

	1				
	•	The province targets 2% of the			
		population to be volunteers. So far			
		1.6% are registered. Each village has at			
		least one volunteer and a vehicle, and			
		one municipality one rescue team.			
Disaster	•	Disaster education should be conducted			
education		more often. During training in Japan,			
		OSAO and DDPM provincial office			
		traveled together and they decided to			
		implement disaster education for 100			
		schools, but the plan is not			
		implemented because the head of			
		ESAO was transferred.			
	•	The difficulty is that MOE changes its			
		policy priorities and budget allocation.			
		Some schools are interested, so			
		promotion to individual schools is one			
		way to promote disaster education.			
	•	Muong Sam Pee School is outstanding			
		in terms of its level of disaster			
		education. This school should be			
		further promoted.			
Technical	•	Taskforce 5 is responsible for hazard			
support for the		mapping for provinces, but they have			
improved		not conducted. Those who are trained			
standards of		in GIS at provincial office are not yet			
structures		able to conduct hazard mapping			
		without external assistance. The			
		original idea was the staff at the central			
		office trained by Phase I will teach			
		provincial offices to conduct GIS. The			
		realistic solution is to set up a system			
		where the central office provides GIS			
		to the provincial offices on request.			
		Given the current staff knowledge at			
		the provincial offices, it is difficult for			
		the provincial office to handle GIS.			
Training in	•	"Knowledge was expanded by training	•	"The training was very good. I shared my	
Japan		in Japan. Villages are interested in		experience when I act as the facilitator. For	
		· · · · · · · · ·		· · · · · · · · · · · · · · · · · · ·	

	 disaster in Japan, so I use experiences to explain the importance of planning, etc." "I found education facilities to teach kids about disasters was a very good idea. I show pictures and give my experience at CBDRM training as a facilitator." "I was impressed with the volunteers and ideas about how to deal with emergency. I also show pictures and give my experiences CBDRM training as a facilitator." 	example, I teach them not to just wait for assistance from the central government, but prepare at the local level. Also, I teach them how local people should prepare. I also show the example of DRM activities in Aichi, particularly how to support senior citizen."	
Others	For municipal action planning or CBDRM, cooperation with other agencies is smooth and the provincial office has no problem about seeking collaboration activities with them.	 <u>Additional interview to Regional center staff</u> DPM Regional Center 10, Lampang Mr. Prapan Sanitmajjaro, Senior civil engineer, regional center No. 10 Ms Uraiwan Kaewmoonkham, Planning division, regional center No. 10 The regional center covers four provinces. "Training in Japan was very relevant to my responsibilities in the regional center – related to infrastructure and facilities. Particularly the lecture given at Hyogo was useful to understand how to prepare and maintain emergency operation center. I made PPT material and presented it to the community leaders and volunteers from the four provinces as a lecturer as well as all the colleagues in the regional center." "I studies various non-structural measures. Based on what I learned in Japan, I wrote a proposal to use mobile phone to strengthen communication channels and prepare small kits for school children in four provinces." Training on action planning was very useful; particularly involving stakeholders from the communities and other organizations was new. The knowledge obtained at action planning is 	Relationship with DLA is good. DLA is also a member of the committee.
useful to understand planning process from the community to the provincial level.			
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One staff member participated in GIS training. The regional center plans to make GIS database usable for Emergency Operation Center, which is under preparation.			

Summary of site visits - Municipalities

	Tambol Li Municipality, Lampun	Kor Sub-district Administrative Organization, Lampun	Thoen Municipality, Lampan	Nam Tok Sub-district Administrative Organization, Nakon Si Tammarat
Interviewees	Mr. Wichai Pakdee, Chief of Lii Sub-district Municipality	Ms Titinan Pipisatiankul, Head of administration, Kor Tambon Municipality Mr. Suksauat Nanpon, Data input assistant	Mr. Nirut Wongphan, in charge of disaster prevention and mitigation Mr. Nikon Orn-lamoon in charge of community development Mr. Chakorn Na Lampnag, Director, Provincial DDPM Mr. Saneh Paksing, Policy and planning officer, Provincial DDPM	Mr. Weerapong Butsimma, Staff in charge of community development
Organizational structure and policy direction	• The administration section is in charge of disaster management. Two staff members are permanent and two contractual staff members are in charge of two areas to support the permanent staff. Opportunity to update or upgrade their skill is provided by DDPM provincial office.	 The municipality has a disaster center, chaired by the mayor. The administration section is in charge of disaster management with two staff members. In case of emergency, staff members from other sections are also mobilized to staff the disaster center. Village police and volunteers have been also appointed. The number of staff is sufficient to deal with disaster management because infrastructure (improvements of the river) has been already improved and the municipality can focus on prevention. Particularly, after the development of the action, the municipality has spent more on 	 The administration section is in charge of disaster management. The section is staffed by 9 officers. The heads of different sections have also roles to play in the municipal action plan. The large part of the municipality is covered with forest and hills. The area is very wide and villages are dispersed. Therefore, it is important to have good communication with distant villages. The roles are specified in the action plan, yet the reality is that those who are familiar with the action plan tend to be given more tasks. 	One officer in the deputy chief office is assigned for disaster management. The planning division also participates in planning activities.

		warning system, training and drills.		
Process and achievements of action plan	 Based on the training in Japan, the committee was organized, participated in by 10 villages and schools. The members analyzed the situation, using TTX. The meeting is organized every month. The municipal action plan is developed every year, based on the disasters caused in the previous year. The action plan is endorsed by the approval of the Chief executive. In planning, there is often a gap between the needs of the community and the measures that the municipality can take with an available budget. The template consists of three stages of before disaster, and the template is designed to deal with different stages. According to the action plan, the municipality bought a boat and 	 Two villages have been targeted by the project in the municipality. Good outputs include the increased awareness among the residents and the action plan developed after TTX, identified areas and land use plan is developed. The action plan is updated every year. Last year, flood was incorporated, and measures are taken (e.g., rescue team was formed and the municipality procured an ambulance, and arranged boats.) According to the action plan, the municipality improved the river and repaired riverbanks. These were strongly requested by the villagers after training and planning, the local people were more aware of the problems. The annual budget plan is developed with reference to the action plan. The action plan is developed based on the community needs. The template and the manual are useful, the municipality is able to develop an action plan by itself. The municipality is very small; the establishment of command structure is also very easy. The municipality experienced TTX two times, one in Lampan as trainees and actually used for the municipality afterward. TTX 	 The action plan was developed in 2012 and updated in 2013. The action plan incorporates village level plans and also the development plan of the municipality. Each year the municipality officers participate in the annual meeting of each village and discuss the needs of the villagers for disaster management to incorporate such needs in the action plan. The municipal committee for the action plan was not formally formed; the municipality conducted hearing to the communities and updated the action plan. For example, the basic data (area information, demography – the number of pregnant women, senior citizen, children, etc.) and budget items were revised in the action plan in 2013. The template was effective, but the requirements for the plan are too detailed for a small municipality to fill out. TTX was also good, particularly it was useful to establish and strengthen the network with other agencies. 	 Based on the development plan and of all the villages, the municipality develops its action plan. So far, one village (No.4) developed its plan and the municipality will conduct hearing from five villages. After that, the municipality plans to develop its action plan. Orientation is not yet given to the municipality to develop an action plan. The municipality has not yet received the template or a guide. This municipality was not invited to the TTX workshop organized by the project (They don't know why but other municipalities were invited.)

	 wireless devices, and also warning system was developed last year. These were all added to the action plan, based on the analysis and lessons learned from previous experience. The municipality now thinks of budget allocation, considering the three stages. 	gives everyone a visual image about disaster risks. The municipality plans to update the action plan, utilizing the results of TTX.		
Effects of action plan	 Before/after comparison (action plan developed in 2012) Before the action plan, the programs were only responsive, developed only after damages were caused. Now, the municipality invests more on mitigation and preparedness than before. Communities are increasingly aware of the importance of prevention, partly due to participation of various organizations in the committee and also promotion by Mr. warning and volunteers who promote the warning system and other preventive measures. So far no flood was caused, but warning 	• Before the project people were not so aware, but after 2011 of flooding, people are more concerned. People are more ready (evaluation plan and prepare emergency kits, etc.) through planning and CBDRM. After the planning, no major disasters occurred in the area. Therefore, it is difficult to say what has actually improved.	 The action plan was developed based on the information and plans of the target villages. In the future the action plan will incorporate the plans of all the fourteen villages. The plan is well elaborated. The changes/merits after having the action plan includes the following: Clear communication channel established Specified roles of different sections More investment in awareness building, TTX and CBDRM and strengthened network with other agencies 	• Not yet developed.

	 was issued some time. Communities were much more prepared and people listen to the leaders. Before the action plan, warning was not based on actual water levels, so local people tended to think the system is not plausible. (4) 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 		
Impacts	constructed.	 Based on the experiences of the model villages, the municipality plans to conduct CBDRM to other 12 villages. Mea Hon Son participated in training on action planning, and they developed their action plan. The effect is clear understanding of the roles of different organizations. (according to the DDPM provincial office) 	
Issues and concern to further improve action plan	• The template is very useful and suitable for the municipalities, but the areas suffer from higher level may need a different template.		

	 How to improve the communication at the community level is the key to increase the effectiveness of the action plan. This area suffers from flush flood due to deforestation. Preservation of the forest is addressed as one of the important issues. 			
CBDRM	 CBDRM is incorporated into the action plan by compiling requests from each community. The difficulty is to convince the communities to conduct CBDRM because the communities do not understand CBDRM. So, this year the municipality explained the importance of CBDRM to the communities prior to the action plan meeting. There are 16 communities and 3 of them are regarded as high-risk. The focus is placed on the three communities. 	 For the community, the priority is the pupils and to train them through evacuation exercise and drills. The CBDRM budget for 4 villages is included in the annual budget. The quality of CBDRM has been improved a lot. For example, the community leader understand how to use the budget and they are more independent in terms of securing a budget. People have strong attachment to the land, they don't want to move. This is one factor for their active participation in disaster management activities. The project targets two villages. The municipality helped two other villages develop their plans, and they also plan to help the two other training on TTX provided to community leaders. 	 No.6 and No. 10 villages are targets of the project. Two villages are high-risk villages for land slide and flush flood and other 4 -5 villages for flush flood. The effects of CBDRM are as follows: Residents who live in high-risk areas are increasingly aware by having drills. Before CBDRM, some residents, especially the senior, did not want to evacuate, now such cases are reduced. Also before only the community leaders were aware, now the majority of the residents have good awareness. Communication has been more systematic and roles clarified. 	 The municipality earmarked a budget for DPM. The total budget of the municipality is 15 Million Baht, and 50,000 Baht is allocated for DPM activities. 50,000 Baht is spent on training to volunteers and procurement of communication devices and other expenses for initial action at a disaster. It is expected that the budget for CBDRM would increase when more village plans are developed. Budget allocation depends on the willingness of the chief of the municipality, but basically the budget is decided based on requests from the villages. Generally speaking, the municipality does not have a high-risk area, but the risk is higher due to deforestation. Information on Village No. 4 is shared at the monthly

			developed, the municipality has not experienced any disaster.	 meeting organized by the municipality. Some villages are interested, but not to the extent that they would organize a committee. The municipality is aware that DDPM provincial office would dispatch a facilitator but other villages have made no requests.
Sustainability	• The municipality has priority agenda for the preservation of forest and little budget can be allocated for CBDRM. The municipality will continue to count on the DDPM for budget allocation. Also, they do not have any DRM specialists in the municipal government.	 The committee meeting is organized twice a year. One meeting for planning and the other meeting for reviewing the plan for updating. The important agenda is to make community leaders to understand the contents of the plan for CBDRM. The committee members include the mayor, deputy mayor, principals, health, 4 community leaders, volunteers (including police and fire station, leaders of rescue teams) and women's groups. This year 10% (1.6 Million Baht) of the municipal budget is allocated for disaster management. (600,000 for infrastructure and 1 Million for other purposes such as teacher training, procurement of medical & equipment, etc. During 2005 – 2010, the municipality spent 5% of its budget for disaster management, mainly for infrastructure, since 2011, the municipality has spent about 10% or more for prevention. 	 The Total annual budget of the municipality is 45 Million Baht. The budget for DRM is 567,500 Baht. A contingency budget for emergency is secured as a block budget. The Budget allocated to the municipality has been increased as the people were more aware and communities voiced more needs. The development plan includes CBDRM for all the villages (One CBDRM for one village per year) and the local assembly will surely approve the budget as DRM is given a priority. Also, the municipality knows that municipal governments are instructed by official letter from MOI to conduct CBDRM. For this year, 40,000 Baht is secured in the annual budget to conduct CBDRM for one village. The budget for disaster education (20,000 Baht) is also secured. The municipality also borrowed 3.8 Million Baht from a bank to 	

			construct facilities to install equipment in the fire station.	
Others	 Training in Japan was a good opportunity for the municipality to work on the action plan. 	• Training in Japan was effective. What the participants learned is that the municipality prepares everything at the time of disaster, instead of depending on other agencies to help the municipality. The way to weigh a budget for disaster management is very useful to make an annual budget plan.		 Contact or distribution of information from the provincial office of DDPM is usually made by formal letters (e.g., news on disasters, instructions) and also DDPM sends an instructor for volunteer training on request basis. DDPM provincial office is closely in contact with Anphor (District), so information on disaster is given through Anphor rather than directly by DDPM. The municipality wants to give more information and training about risks about disasters. Also, the municipality wants to receive training similar to training for No. 4. "The knowledge obtained in Japan was useful, disaster education and volunteers in Japan were applicable because they are engaged in these activates."

Summary of site visits – Communities in Lampun

Communities	Ban Muong Sam Pee village, Lampun	Ban Koornong Village, Lampun (No.1	Ban Kor tar village (No. 4 village)
		village)	
Category	Target village	Target village	Non-target village
Interviewees		Mr. Sao kham Sanping, head of village	Mr. Susakorn, Assistant to head of the village
Activities conducted	• The action plan was formulated in	• Training was conducted in March 2012	• No CBDRM was conducted for the village.
	2011, following training. Since	and the village developed its plan.	• The village has one siren. The village decides
	2011, there has not been a lot of	• Water gauge was set and community	that residents should evacuate to the temple

	flooding. But, the community can well prepare for a flood.	 board was also set up at the community office. When a water level reaches a certain level, the gauge beeps as warning. The community has appointed one person to check the gauge in accordance with the operation and maintenance manual. CBDRM manual produced by DDPM 	 during heavy rains because the village is located approximately 500m away from the river. The village developed a DRM plan, referring to the plan of No. 1 and 2 villages. The geographical condition is similar, so it is not difficult to develop a plan. Because no drill or exercise has been
		was also distributed to all the participants of CBDRM training.	 conducted, the villagers are not clear of their roles specified in the plan, but the interviewee expects that they would have a good understanding if a drill could be conducted. He has not heard of any activities of JICA-assisted projects. According to the municipality, the big difference between model villages and non-model villages is that the model villages are able to plan and implement DDP activities with their initiatives, but it is not yet possible for non-model to take any initiative. The municipality needs to take the lead role in every aspect.
Effects of CBDRM	 Before the project, the village watched out for water levels during raining season. But such activity was done by a group of people or individuals in an informal manner. Now, such activities are conducted as community activities and roles are clear for each zone. The responsibilities (watch-out, fastaid, watching property, rescue team) are clear. The plan consists of resource list, 	 Before the project, only training to volunteers was conducted. Now, the warning system is well known among villagers. Some positive effects recognized by the villagers include the following: Before the project, no risk area was designated. Now, the villagers are encouraged to build houses in flood prone area. In 2011, the municipality invested 5 Million Baht for mitigation and rehabilitation (drainage system). After 	

Monitoring and updating of the plan	 evacuation plan and communication system. The head of the zone is assigned to support the villagers who need aid during evacuation. Each year the plan is updated, participated in by committee members (e.g., village committee, heads of zones, volunteers) After assisted by the facilitator from the provincial office, the community is able to upgrade the plan themselves. It is not the village but the provincial office to write a report after CBDRM is conducted. When a budget for CBDRM is provided by DDPM, DDPM provincial office participates in CBDRM and write a report on the records (program and number of 	 that, communities spend more on prevention. The village committee has not updated the plan. Instead, DDPM provincial office attended the village meeting and helped modify the plan at the end of 2013. The village committee is discussing to organize a drill once a year. When preparing the village development plan (3 year plan), the CBDRM plan was based.
	participants, comments by participants, etc.) to DDPM central office. The local CBDRM plan is also attached to the report.	
Financial resources	• The plan is linked with the village development plan. For example, a bad road access for evacuation is also highlighted and targeted in the village development plan.	The village development plan is submitted to the municipality. Based on the plan, the municipality compiles requests and develops its annual and 3 year plan. If there is no request from the community, CBDRM may not be included in the municipal plans.
Cooperation with other organizations	• Linkage between the school and the community is strong in the area. When developing an	When CBDRM is conducted, organizational arrangement is done by the municipality to invite relevant

	evacuation plan, teachers joined the meeting and decided on evacuation methods and	organizations by sending formal letters to hospitals, schools, police, etc. The village does not directly contact other
	evacuation sites together.	organizations.
Others	• The project donated a community	• Hazard map is pinned on the
	board. The village shows the	community board.
	information about evacuation and	
	hazard map.	

Summary of site visits - Communities in Lampang and Nakon Si Thammarat

Category Interviewees	Ban Chaichomphu and Mae Salaam Target village Mr. Kul Wongri, Head of Village and the 20 committee members	Ban Pang Ah, Lampang (No.4 village) Non-target village Mr. Sompit Thawatwong, Head of village	Ban Tham Talod, Nakhon Si Thammarat (No. 4 village) Target village Mr. Anuthep, Head of village
Activities conducted	 The community DRM committee has 20 members from two villages. The villages are divided into 16 zones. The committee consists of one or two representative from each zone. Volunteers are also included in the committee. The committee meeting is organized once a month, following the DPM meeting at the district. The head of the village usually presents the results of the district meeting. Also, the committee members discuss such issues as warning system. Two manual sirens were provided by the project, but they are not yet used. The community board provided by the project shows hazard map and other materials. The community plan was developed in 2011. The plan is also shown on the community board. The municipality has constructed a 	 Years ago, a former head of the village join some training and introduced warning system, set the committee and made evacuation plan. Volunteers were also appointed to check the water level and give warning during heavy rains. These activities stopped after the change of the village head. Now, volunteers check rainfall level but no warning system is functional. Rainfall gauge broke down. The neighboring village near the mountain has a warning system; they would inform this village before heavy rains. Then, the village informs villagers by using a loudspeaker. In 2001 and 2011, the bridge in the village fell and experienced flooding, causing severe property damage. In the village meetings, the villagers sometimes asked about preventive measures and warning system. The need is high for securing warning system 	 Before the project, DPM activities were not conducted. The project provided capacity development training on DPM and knowledge to the villagers. After CBDRM, The committee consists of leaders from five zones and the committee developed the DPM plan (including calendar, evacuation route and sites, etc.). The committee organizes regular meeting at the same time when the village meeting is held once a month. In the meeting, the committee members usually explain about warning system and evaluation plan. After that, the village experienced TTX and conducted a drill.

	river-bank, the risk of flood has been reduced. In 2008, there was a landslide.	 because blackout occurs frequently in the village. If the village wants to conduct or procure a siren, they need to include items in the village plan. They did not know about activities conducted at the model villages. Also, they have never heard of drills. No discussion has been made with the municipality about CBDRM. The village has two high-risk areas at low land areas and risk of flush flood. 	
Effects of CBDRM	 After CBDRM, the villagers' understanding has improved on risk areas and evacuation. The big difference noticed after CBDRM is that residents believe and follow the instructions given by the committee. (Before CBDRM, they did not take the committee seriously.) The village has a risk of land slide. Villagers are also exposed to real cases of disaster through the Project and TV news, etc. So, the villagers are more concerned now. There has no disaster or warning issued since they started activities, so the villages did not have an opportunity to apply what they decided in the plan, but now the villagers talk more often about response and evacuation (e.g. how to establish communication lines when electricity goes off.) The residents are more Understanding the evaluation routes, risk areas, more confident in their plan, warning system more functioning after the training. Before the rainy season, residents discuss to confirm what they decided in 	Has not conducted.	 After the committee was formed, the village experienced a minor flood in November 2013 and also a small forest fire in 2013. There were some damages to agricultural land, but the village closely monitored the water level and informed the villagers through mobile phones. The neighboring village (No. 2 village) located near downstream area benefited from the warning system of this village. The villagers moved belongings to a higher place. The village has then organized a patrol team to monitor the water level of the river and to prevent forest fire. The villagers recognize the benefits and effects of CBDRM activities. The village leaders are more knowledgeable about where risk-areas are and how to manage emergency cases, they are more confident in response at a time of disaster. The officers in charge of DPM from the municipality have shared the experiences of the village with neighboring villages at municipality meetings.

	 the plan. By the project, the residents participated in a drill for the first time. The drill was very real to the extent that some villagers actually went panic and cried. The drill is a very effective tool to raise understanding about warning and evacuation as well as testing the validity of the plan. 		• The municipality has six villages. The other five villages are informed of the activities of the village No. 4 and very much interested in CBDRM. Next year the municipality plans to conduct CBDRM and the committee members of the village No. 4 would act as resource persons.
Monitoring and updating of the plan	• Since 2011, no major disaster or the situation has been changed; no change was necessary in the plan.	• No plan developed.	• The community's DRM plan is updated every year. The committee reviews the evacuation sites, calendar and conditions of risk-areas and locations of senior and disadvantaged residents.
Financial resources	• The village wants to organize a drill every year, the village does not have a budget, so it will request to the municipality.	• Totally depending on the municipal government.	• So far, the cost was shouldered by the DDPM for the dispatch of facilitators and the procurement of communication devices.
Cooperation with other organizations	• The director of the school in the village is also a committee member. They have close communication.		•
Others	 Wireless communication device is necessary. To conduct refresher training is also necessary because they would forget if nothing happens. They want to have a wider space for evacuation site. 		 The school was awarded a prize from "Green Earth Institute" for its activities in 2013 and won 250,000 Baht. "What I learned in Japan is that even small children participate in DRM. We should also include small children in our activities. I made a presentation at the school No. 4 to pupils and teachers and also spoke about my experience in Japan at meeting with other villages. (Head of village)."

Summary of site visits - Model Schools and ESAOs

Schools	Mu	ong Sam Pee village, Lampun	Ban	Pong Sanook School and ESAO	Ban	Tham Talod Primary School,	ESA	AOs from 3 Nakhon Si
	Pro	ovince	Lan	npang province	Nak	hon Si Thammarat	Tha	ammarat
Interviewees	•	Ms Wong Kam Tan, Director,	•	Mr. Sompong Naakphitak,	•	Mr. Banjop Anuchon, the	•	Mr. Santi Senravee,
		Sam Pee School		Director of Baanpong Sannook		Director of the school		ESAO No. 2

	 Ms Amphaporn Rinpanyo, Ms Sowaros Pothika, teacher, Sam Pee School Mr. Witthaya Pa-in, Deputy Director, ESAO, Lamphun Province Mr. Chuporn Intahnep, Chief of DPM provincial Office, Lampun Province 	 school Mr. Charonchai Kittipeeradej, Vice Director of ESAO Mr. SOmbat Suthipoornmaneewat, Director of ESAO 	•	Mr. Manop, TAO deputy director		
Background and activities	 Even before the project, the school was active in environmental education because of frequent floods in the area. Through the project, disaster education was very much strengthened through hazard mapping, drills and training in Japan. At the end of the fiscal year, each school submits a report to evaluate their activities to ESAO. 	 Before the project, ESAO initiated some activities. For example, ESAO established a committee for disaster education, identified six high- risk schools and one school was selected as a model school by OBEC for JICA assisted project. The project support teacher training in Indonesia, develop a model plan for Ban Pong Sanook School together with municipality, regional center, provincial office and the expert. After that the school spent six months to integrate disaster education into the existing curriculums. The school submits annual report to ESAO. The report includes the records of disaster education activities. 	•	OBEC organized a workshop on disaster education in 2010. Before that, the school did not have any activities. In compliance with the OBEC guidelines, the school is integrating disaster education into eight subjects. Integration is an on-going process by five teachers. The guidelines gave impetus and obligation to the school to promote disaster education. The school decided to organize drill twice a year – one drill for forest fire and the other one for flooding. The director thinks that drills must be conducted periodically so that children would not forget how to prepare themselves. In 2011 the school had the new director.	•	In 2011, OBEC and JICA started the development of model schools in the Southern Thailand. The model village was selected by the Project from eight candidate schools. Training and workshops were main tools to strengthen disaster education and DPM for the model school.
Effects of the project	• There have been a few cases of warning since the project started. The school noticed	• The sub-reader and DVD are frequently used by the school. But almost all the students have	•	The most conspicuous effect is that the pupils have experienced what to do at time of different	•	Pupils are more aware of the disasters and risk- areas and how to

 the improved communication		already studied the sub-reader	disasters and they don't panic and	evacuate in the model
between the school and the		and watched DVD. Now the	how to help other kids.	schools.
communities. After the		school uses materials collected		
warning, pupils and parents		on the Internet. More materials		getting famous for their
also evacuated according to		are necessary; especially the		activities and popular
the plan. Mr. warning also		materials produced in the		among parents because of
helped.		Philippines would very useful		the schools' measure for
 Video clips showing 		(The school can not use such		securing safety. The
accidents are very popular		materials due to copy rights.).		model schools tend to
among pupils because they	•	The school director and the		increase enrolments.
can understand disasters		vice-director of ESAO joined a		
visually.		study tour to Indonesia to visit		
		model schools and		
		communities. Using what they		
		learned in Indonesia, they		
		introduced school drills and		
		games, which they found very		
		effective to train children. After		
		coming back from the training,		
		the school requested the ESAO		
		to help produce game materials.		
	•	The school director was		
		nominated to join the Thai		
		delegation to SEAMEO to		
		present his experience and		
		outputs in the Philippines.		
	•	The model school is not located		
		in the high-risk area, but the		
		effects of the model school		
		were rolled out to other high-		
		risk schools.		
	•	More and more schools are		
		getting interested in introducing		
		disaster education in the		
		province. This is because the		

			teachers are exposed to actual cases such as flood in the South, typhoons in the Philippines and the big earthquake in Japan in 2011 on TV and newspapers. Visual information is very important to mainstream disaster education among teachers.				
Salient features of the school	 The feature of the school is the school and the community work together to discuss problems and implement activities. The experts who supported disaster education and CBDRM facilitated for this purpose. This community is prone to flooding; therefore, teachers join the community meeting and discussed measures. Training in Japan helped the director of the school develop the evacuation plan. Another feature is that hazard map is distributed to all the pupils and they have evacuation plan. Inspired by the Japanese schools she visited during her training in Japan, the school conducted drills to prepare for emergency cases for three days. This exercise is conducted every year before 	•	The most important is the integration of disaster education in the school curriculums. Integration is very extensive – the school spent six months for this work. Introduction of techniques such as games and drills. Also, the school conducts drills two times a year. The communication tools such as LINE and SNS are widely used by students to transfer information and warning. The strong network has been established with other organizations, particularly the regional center of DDPM. The school director traveled to Indonesia with the head of DDPM regional center. Since then, ESAO/the model school and Regional Center have very strong communication. The school has received visitors from more than 10 provinces.	•	What this school stands out is a very close relationship with the community. The school is closely working with the community. The school has only four teachers. There are limit to what extent they can do. So, the two helped each other to conduct various activities. For example, the teachers are members of the village DRM committee. The school is equipped with a loudspeaker and included in the warning system. The school is also designated as a temporal evacuation site. The village has only one school. All village events including forestation activities are organized together with the school. Another feature of the school's disaster education is the school focuses not only disaster education but also forest protection. The school promotes the protection of the forest to	•	The good features of Ban Tham Talod Primary School are strong commitment and willingness of the school and the community leaders, and the well- equipped learning center.

	 the rainy period. The school compiled all kinds of materials including the outputs from Phase I and II, prepared its original teaching materials and developed a "Community based Disaster prevention learning program". The school integrated disaster education into all the subjects with teaching kits (e.g., pop-up, albums) – Thai language, science, English, etc. Disaster education is also conducted in forms of drama, watching DVD, singing songs as extracurriculum activities. Pictures and materials from Japan are frequently used. The learning center was set up in the school for students to learn about disaster by themselves. 	• The pamphlet of the school is available to the visitors. The most requested by the visitors is the CD-ROM that includes the curriculums for 8 subjects and the contents of disaster education from grade 1 to 6.	 prevent such disasters as flood and landslide. The school also encourages the pupils to produce various educational materials (e.g., booklets, comic books, life-saving goods) as part of home economics and science. Parents are also invited sometimes to participate in such activities. 	
Scale-up of model school	 This school is designated as the model school. OBEC identifies it as an advanced school. In the province, five schools are identified as such. The school formulated a five- year plan and received 100,000 Baht from OBEC to train other schools and help other schools formulate respective plans for 96 	 All 141 schools under ESAO No. 1 received orientation by ESAO No.1. And 14 schools emulated the model school, adopting a similar method to integrate disaster education. There are three ESAOs in the province, and the ESAO No. 1 covers 141 primary schools. ESAO No. 1 plans to establish the model school as the 	• ESAO NO. 2 office manages eight Amphor (districts) and OBEC organized a two-day workshop for two times, inviting more than twenty schools. After the workshop, the school provided orientation and advice to these schools. It also provides teaching materials to these schools by email. Three of them have started to integrate disaster	 In 2011, ESAO selected other seven schools as model schools. The model schools were further expanded to other 13 model schools in 2013. The total number of the model schools in this province is 21 as of 2013. In ESAO No. 2, four

schools in the district. Also, the school received a budget to prepare itself to serve as	learning center and roll out to all the schools in its four-year plan. The issue is the difficulty	 education into their curriculums. There are about 201 schools under ESAO No. 2. ESAO No. 2 	agencies (DDPM, ESAO, Health center, Province) jointly participated in and
model schools to receive visitors.	to organize seminars or meetings for remote	encourages them to integrate disaster education into the	supported training to 21 schools.
• Every month the school receives a lot of visitors from public and private schools (one group usually consists of 100 students.). Also, teachers are often invited by other ESAOs to speak about their activities outside the province.	 communities and schools. The budget for disaster education was about 130,000 Baht in 2012, 100,000 in 2013. The total budget of ESAO is about 3 Million Baht. This means ESAO No. 1 allocates about 3.3% of its annual budget for disaster education. Because the budget is limited, the main role of ESAO is to promote 	 curriculum as well as conduct a drill at least once a year. Because types of disaster are different, depending on the area, the curriculum should be developed by each school. The school is designed as a model school. Therefore, ESAO No. 2 will request a budget for the school to OBEC. ESAO No. 2 also plans to request a budget to the school is designed to be developed. 	 In ESAO No. 2, there are 206 schools. Schools are grouped into eight networks (clusters). Each cluster consists of approximately 20 schools. Each cluster has one model school. The idea is to promote the model school to other schools in the same
	 disaster education. ESAO does not have a large program budget (e.g., a budget for conducting drills). OBEC organizes an annual national meeting to share good 	 the Provincial Administrative Organization (PAO). PAO is also required by municipalities to spend more on prevention. In 2013, the regional workshop was organized every year by 	cluster. The teachers from the model school act as resource persons and trainers. The learning center of the model school is also used for
	practices of advanced schools. This is a very good learning opportunity for schools. Unfortunately, last year, OBEC did not organize the meeting.	OBEC for each region, inviting ESAOs to share the experiences of 50 model schools. 50 schools were invited to make presentation. The proceedings of the workshop will be compiled and distributed.	training. ESAO plans to send the teachers of the model school to other schools to facilitate the introduction of disaster education from this year. For this purpose, ESAO
		 Each year OBEC requests ESAOs to submit proposals to develop and scale-up model schools to boost up the model schools. (100,000 Baht for each ESAO) OBEC issued a letter to ESAOs 	 In ESAO No. 1, the OBEC guidelines were instructed to all 120 schools. The training was

		 to promote integration of disaster education in the curriculum and also conduct a drill. ESAO No.2 plans to propose to OBEC to designate the school as a model school and request a budget to prepare as a model school. 	 conducted for all the schools to develop their plans. Also, ESAO instructed the schools to conduct twice a year. The cost for training and workshops were shouldered by ESAO (not OBEC). Because the area experienced severe disasters, communities and other agencies and provincial government were very cooperative. Every school conducts drills twice a year (one sponsored by ESAO and the other one initiated by schools.) ESAO sends inspectors to all the schools regularly, and also check if the schools integrate disaster education into the curriculum.
Others	• Before 2012, the main disaster was flooding but now storm is added as a new problem.	• This school has pupils from kindergarten to grade 6.	 One concern is a high turnover of officers in ESAO and school directors. Boy scout is very active in the province and ESAO wants to send teachers to Boy Scout.

別添資料6

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 complied 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. <u>Remaining Activities</u>

(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

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ANNEX 1

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

TERMINAL EVALUATION TEAM

JANUARY 2014

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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)

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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

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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)
- Capacity of DDPM staff as facilitators on implementation of Community Based Disaster Risk Management (CBDRM) is enhanced.
- 3. Training curriculum at DPMA is improved.
- 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:

- 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
- To draw useful recommendations to the Project and lessons learned for future projects.

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2.2 Members of the terminal evaluation team

	Name	Position/ Organization					
1	Mr. Chainarong Vasanasomsithi	Director of Research and International Cooperation Bureau, DDPM					
2	Ms. Duangnapa Uttamangkapong	Foreign Relations Official, Professional Level, DDPM					
3	Ms. Kornisnan 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 Nagaishi	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 is referred if the expected benefits of the Project have been achieved planned and if the benefits were brought about as a result of the Project (not of external factors).				
Efficiency Efficiency refers to the productivity of the implementation process and efficiency 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			

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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.

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		

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

(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 (N	March 2012 -	September 2013)
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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

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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 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

Training Conducted in Japan

(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	 NATURAL DISASTER, Essentials An Overview of Seismic Risk and Earthquake Engineering Activities in Thailand Towards Implementation of Disaster Safer Built Environment 	183		
January 2012	 Learning the Lessons from Past Disasters is the Way to Survive The Massive Flood 2011 and Lessons Learnt The Great East Japan Earthquake on March 11, 2011 and Lessons Learnt 	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

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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.

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3.2 Achievements of Activities

See Annex 4.

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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% ($50\% \ge$), 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	 NDPMC decided to add a new chapter to NDPMP to effectively deal with large-scale disasters after lessons learned from the flood in 2011. The Cabinet approved of the added chapter of NDPMP in March 2013. 	 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.
Development of PDPMPs	A	• The Disaster Prevention and Mitigation Act requires all the provinces to develop their respective action plans.	 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

		• All the PDPMPs were officially endorsed by DDPM after inspection done by the policy bureau of DDPM.	Although NDPMP, Therefore governors survey an committee	PDPMP it is diffi the Minis to review d request as were con	with NDPM must be re cult to impo- ster of Interior and monitor them to cond mpelled to re r programs af	viewed per se the prov or sent an of r their prov luct SWOT view their pr	vincial go ficial letter incial plar analysis. rovincial p	vernment r to all th is with o The Prov	ts to do so ne provincia questionnaire vincial DPM
LDPM Action Plan (In model provinces)	A	 According to Section 16 of DPM Act, PDPMP shall include substantial essence of LDPM action plans in its jurisdiction. 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 	 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. The Policy Bureau also distributed the template and examples of LDPM action plans to all the provincial offices. Progress of LDPM action plans in the model provinces 						
	 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 	Province	No of	1	Pro 2	ogress 3	4	5	
		the provincial offices. On approval,	Lampang	LAO 103	103 (100%)	103 (100%)	103 (100%)	62 (60.2 %)	0
	operational (The preparation of the response plan is not a part of the LDPM action plan.)				56 (96.6%)	56 (96.6%)	56 (96.6)	8 (13.8 %)	8 (13.8 %)
			Process of LD 1: DPM Provi	PM action				A Action	Plan.

	nent of GIS A • GIS database can be an eff to check the progress planning.		 2: LAO established a committee for formulation of DPM Action Plan. 3: LAO committee formulated Draft DPM Action Plan. 4: DPM Provincial Office checked the draft DPM Action Plan. 5: LAO started to prepare the Response Manuals. Effects of having an action plan explained by the interviewed LAOs include the following: Clear communication channel established for response Clarification of specified roles to be played by different sections More investment in awareness building, TTX and CBDRM and strengthened network with other agencies
Development of GIS database			• 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.
		0	

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	Effects and (prospective) impacts	
		Level of Operationalization and/or institutionalization		
Utilization of improved CBDRM facilitator's guide	A	 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. 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. 250 copies will be distributed to all the provincial offices and the head office and the 	 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. 	

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		guidelines will be uploaded to the DDPM website, together with other materials such as the Guidelines for communities (developed by DDPM) and same samples and examples.	ū	
Utilization of improved training and educational materials	В	 Materials directly used for the facilitation of workshop would help the facilitators to smoothly conduct workshop. 		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
		• The materials will be distributed in February 2014 to all trained facilitators.	1	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.
Increased number of CBDRM facilitators	A •	• 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.	1	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.
		• 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.		
Development of model villages	es th w	• 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.	1	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 villages where no disaster occurred. The good feature of the model villages is that they conduct activit together with the school in the village (e.g., conducting drills join the participation of the school in CBDRM, clearly specified roles

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			 the school in the warning system and evacuation plan). In the action plan, requests made to the various organizations to tak DRM measures and seek synergy in the municipality's 3-year plan For example, drainage requested when highway is constructed. These villages are more advanced but further efforts are needed t establish these villages as models applicable to roll out to othe villages. The positive effects of CBDRM recognized by the model villages ar as follows: Formalized communication system to respond to emergency Identification of high-risk areas in the village (for example villagers avoid building houses in disaster prone areas.) Villagers believe and follow the instructions given by th committee members. (Before CBDRM, they did not take th committee seriously.) Drills give villagers a fresh image of actual disasters.
Development of GIS database	A	 GIS database can be an effective tool to set strategies for scale-up of CBDRM. 	 Two staff members in the promotion bureau were trained in the use o GIS database. The bureau is able to update the database based on the records of CBDRM submitted by the provincial offices at the end o each fiscal year.

Output 3: Training curriculum at DPMA is improved.

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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	
		Level of Operationalization and/or institutionalization	
Training course on flood, flush-flood and landslide		• DDPM did not have a training course focused on flood, which is the major disaster in Thailand.	 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,

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	 The training course is recognized as one of the important, regular training courses of DPMA. 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. 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. Millon and the personnel database by personnel section of DDPM. Millon and the personnel database by personnel section of DDPM. Millon and the personnel database by personnel section of DDPM. Millon and the personnel database by personnel section of DDPM. Millon and the personnel database by personnel section of DDPM.
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Output 4: Based on the Natural disaster preparedness educational curriculum, schools have improved preparedness for disaster.

 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. n.

	100 teachers	from natural	disaster	prone areas	are trained	on disaster	education
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Main outputs	Status	Justification	Effects and (prospective) impacts	
		Level of Operationalization and/or institutionalization		
The guideline for disaster education and sub-reading material with DVD	A	 The guideline was an effective tool to mainstream disaster education at schools and ESAOs. 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. 	 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. 	

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Integration of disaster education in the existing	А	• This is vitally important to ensure that disaster education would be conducted as part of regular school activities.	 Two model schools in Lamphun and Lampnag have incorporate disaster education in their curriculums. Integration is an on-goin process for the other school in Nakhon Si Thamarat. It took 3 – 		
curriculum		• 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.	 months for the teachers to complete this work. 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. 		
Establishment of model schools	A	OBEC has set a strategy to select active schools to be model schools to roll out to neighboring schools.	• 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		
		 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. Every year OBEC allocates 100,000 Baht to each of the selected ESAO to establish and strengthen model schools. 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. 	 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. All the three model schools have been already established well as a model school in that: These schools are conducting disaster education as part of their regular program. These schools have established and extensively use a learning center for pupils to study about disasters. These schools have developed their respective plans. These schools are closely working with the community for CBDRM as well as disaster education. These schools have increasingly received visitors from other schools. 		
Utilization of GIS	В	• This assistance was intended for OBEC to use GIS database to set strategies and develop plans for the expansion of disaster education.	 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. All the reports on the records of disaster education activities are 		

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	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
10	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.

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Main outputs	Status	Justification			
		Level of Operationalization and/or institutionalization			
Development of Manuals on rainfall/flood analysis and hazard mapping	В	 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. Four staff members of Disaster Prevention Criteria Bureau are able to produce hazard maps, using the manual. 	 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. 		
Development of the manual on early warning system and structural measures	В	 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. 	 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. 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. 		
Training of staff at 18 target regional centers	A	 The developed manuals should be utilized by the main users – technical staff of the regional centers. In 2014, the Bureau plans to organize the same training and train the remaining technical staff at all the 	 Training for staff of regional center No. 10, which is in charge of four provinces in the North. 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. One batch of training is also expected in 2014 although it depends on the 		
Project purpose: Ca Management: CBDR Indicators: Plans for up-scal: Plans for up-scal:					

Main outputs					
Strategies and plans for implementation of national level DPM activities and for the model provinces					

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).

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- 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,

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Main outputs			ospective) im	pacts			4	
Development of provincial DPM plans	At the NI	• 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.						
Scale-up of LDPM action plans with use of TTX	nu Th pla	mber is e officia anning is	estimated mu al letter from s not available	ch higher that MOI to DLA as of January	n 2,755 and L 2014.	5 or 35 AOs ir	f them developed their respective LDPM action plans in 30 provinces. The actual 5.4% of all the LAOs because the data for other 47 provinces are not yet available. Instructs the action planning with TTX. The actual number of TTX used for action	
Conduct of	The nu	mbers o	f CBDRM co	nducted durin	g the P	hase I	I are shown in the table below:	
CBDRM	Year	TI	ne number of vi	illages conducte	d CBD	RM		
nationwide by	200	2009				969		
trained facilitators	201	0				863		
an a	201	1			769			
	201	2			1,385			
	201	3	1,076			1,076		
		e: DDPM		ce of funding Provincial Government*	for the ЛСА	last for Total	ur years in the province	
	2013	12		Government		12		
	2013	6	11		2	19		
	2011	3		27		30		
	2010	9		3	1	12		
	Lampa	(Source: DDPM-Lampang Provincial Office) 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.						
Disaster education	• In Ac	addition hievem	n to the mode ents made by	el schools, Ol model school	BEC d s were	esignat preser	ted more than 100 model schools and allocated a budget for disaster education need at the annual ESAO meetings, participated in by 225 ESAOs and 4 regions in cized their activities on the their websites.	

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 Lampang 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 Lampang and Lamphun as its target villages. Two schools were also targeted to be model schools. In October 2011, Nakhon Si Thamarat 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.

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 Tammarat	Ban Tham Talod	Num Tok	Ban Tham Talod School	

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Target	V 11	lages of	unc	110	CUL

• 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,

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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	Date	Agendas discussed
1st JCC	June 2010	 Basic condition of the Project implementation Acceptance of the Inception Report
2nd JCC	September 2011	 Indicators in the PDM were discussed and agreed upon as PDM ver.2 Necessity of Taskforce flood risk management was discussed.
3rd JCC	October 2011	 Establishment of Taskforce flood risk management was agreed upon as PDM ver.3
4th JCC	February 2012	• Results of the Intermediate Review of the Project were agreed upon as PDM ver.4
5 th JCC	February 2013	 Report on progress of the project activities of each task force Explanation of Progress Report 2

JCC meetings and main agendas

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.

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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:
 - 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	 Preparations for the development of DPM national plan Development of guides, manuals and training materials, and white paper Demonstration of DPM activities at the community level (CBDRM, drills and disaster education) to mainstream DPM activities 	 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). Preparations of strategies and/or systems for the scale-up of DPM activities (model schools, CBDRM, LDPM action plans)
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

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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.).

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• 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.

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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 increased 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

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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.

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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.

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Annex 1

Project Design Matrix (PDM) Annex 1
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: Lampang 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
Overall Goal (<u>in 3-5 years after the Project ends</u>): Implementation of disaster risk management activities is improved and scaled up.	 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 municipality/SAO (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. 	 Provincial Disaster Prevention and Mitigation Plans and Action Plans Evaluation report of TTX Evacuation plans Record of workshop report. 	
Project Purpose (by the end of the Project) 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.	 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. 	Disaster Prevention and Mitigation Action Plans	Mission and responsibility of DDPM regarding disaster management is maintained by law
Outputs <task disaster="" force="" management<br="" –="">Planning></task>	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 Lampang and 45 local authorities or 80% in	1. Disaster Prevention and Mitigation Action Plans at national, provincial and local levels	

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1. Disaster Prevention and Mitigation Action Plans with considerations for vulnerable people are formulated for national, provincial and local authorities (in the model provinces).	Lamphun).	
<task -="" cbdrm="" force=""> 2. Capacity of DDPM staff as facilitators on implementation of Community Based Disaster Risk Management (CBDRM) is enhanced.</task>	 2-1 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. 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. 	 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
<task disaster="" force="" management<br="" –="">Training > 3. Training curriculum at DPMA is improved.</task>	3-1 At least one curriculum on disaster management on natural disaster (flood, flash flood and mud flow) for DDPM staff is improved.	3-1 Curriculum
<task disaster="" education="" force="" –=""> 4. Based on the Natural disaster preparedness educational curriculum, schools have improved preparedness for disaster.</task>	 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 I. 4-2 100 teachers from natural disaster prone areas are trained on disaster education. 	 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.)
<task flash="" flood="" force="" risk<br="" –="">Management> 5. Knowledge and technical capacity of DDPM on hazard mapping, early warning system and design of structural measures are enhanced.</task>	 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. 	 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)

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Activities	Inputs	Preconditions
 0-0 DDPM, in consultation with the Japanese experts, selects model areas: Model community a1: Ban Chai Chom Phu (Moo 10) and Ban Mae Salaem (Moo 6) Model community a2: Ban Chawfa (Moo 5: Chowfa and Jokfa) Model province B: Lamphun Model community b1: Ban Muong Sam Pee (Moo 8) Additional model community b2: Ban Koornong (Moo 2) Additional model community b2: Ban Koornong (Moo 2) Additionally, TF-CBDRM selected Ban Tham Talod (Moo 4) as a model community in Nakhon Si Thammarat Province. CIF Disaster Management Planning> 1-1 TF Disaster Management Planning designs capacity development plan on their activities and monitoring/ evaluation. 1-2 Te 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. 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. 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. 1-5 TF conducts table-top exercises to revise disaster prevention and mitigation plans and action plans, based on the experience of table top exercises. 1-6 TF and concerned provincial staff modify disaster prevention and mitigation plans and action plans, based on the experience of table top exercises. 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	<thai side=""> Counterparts Project Director Project Manager Task force members Administrative staff Project office and facilities at DDPM Working space at MOE Operational costs Japanese Side> Experts Disaster Management Plan Disaster Management Institution Sediment Disaster Management Flood Management Community Based Disaster Risk Management Disaster Education Disaster Management Exercise Counterpart Training in Japan Operational costs</thai>	Human resources and budget necessary for the implementation of the Project are provided by the Thai side.

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and tests them at the model communities and finalizes them for publication. 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). 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. 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. 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. 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. <TF Disaster Management Training> 3-1 TF-Disaster Management Training designs a capacity development plan for its activities and monitoring/evaluation. 3-2 TF develops guidelines for evaluation and monitoring of training. 3-3 TF conducts needs assessment for training in collaboration with other task forces. 3-4 TF revises standard disaster management curriculum in DPMA training courses on flood, flash flood and mud flow. 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. 3-6 TF, in collaboration with concerned organizations, train master trainers for DDPM staff. 3-7 Master trainers train 300 DDPM staff of disaster management on flood, flash flood and mud flow. 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. <TF Disaster Education> 4-1 DDPM and Ministry of Education discuss and agree on the roles of each agency to implement TFdisaster education activities.

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

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Name	Position	Organization	JCC/Taskforce
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Mr.Pornpoth Penpas	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
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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
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Gp.Capt.Aeksaran Tabpasu	Director of Warning and Dissemination Section	National Disaster Warning Center	JCC
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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

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Mrs.Charintip Yosthasan	Development Cooperation Officer	Thailand International Development Cooperation Agency (TICA)	JCC			
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Ms. Thawanrat Chai-inpan	Chief of DPM Provincial Office, Lampamg	DPM Provincial Office, Lamlang	JCC			
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JICA Representative		Japan International Cooperation Agency Thailand Office	JCC			
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Mr. Noboru JITSUHIRO	JICA Expert/Co- Leader	JICA-PCDDM 2				
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	land Use Planning			
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Mr. Jamlong Nenyam	Assistant Governor	Lamphun Province	Sub-TF Lamphun	
Mr. Wuttipong Chaturat	Chief of Li District Office	Lamphun Province	Sub-TF Lamphun	
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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. Ridthipong Teachapan	Vice Governor, In Charge of Disaster Management Task	Lampang Province	Sub-TF Lampang	
Mr. Sarapong Sattayarak	Assistant Governor	Lampang Province	Sub-TF Lamphun	
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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 Sutthipornmaneewat	Director of Lampang Educational Service Area Office 2	Ministry of Education	Sub-TF Lampang	
Mr. Bun Saijam	Director of Lampang 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, Lampang Province	Department of Disaster Prevention and Mitigation	Sub-TF Lamphun	
Acting chief	Chief of Disaster Prevention and Operation Section DDPM Provincial Office, Lampang Province	Department of Disaster Prevention and Mitigation	Sub-TF Lamphun	
Mr. Nattawut Singkaew	Plan and Policy Analyst, Professional Level DDPM Provincial Office, Lampang Province	Department of Disaster Prevention and Mitigation	Sub-TF Lamphun	

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No.	Month	Date	Day	Schedule
5	Jan.	6	Mon	Arrival in BKK (TG641)
2	Jan.	7	Tue	Visit JICA Thailand
		1.1		Kick-off meeting among Evaluation Team, DDPM
1		1 33		Interview to RICB (Research and International Cooperation), DDPM 1/2
3	Jan.	8	8 Wed Ministry of Education (All Bureaus in MOE together)	
-		Sec. 1		Office of Basic Education Commission (OBEC), MOE
4	Jan.			Evaluation Reporting
				Interview to TF2 (CBDRM)
5	Jan.	10	Fri	Interview to TF1: Disaster Management Planning
				Teleconference with JICA HQ at JICA Thailand Office
1			6. J.	Move from JICA Thailand Office to TMD
			a second	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
		0.520		Travel to Li District (Lamphun)
1		Section 4	1 1 1 1 1 1	Interview to representative of Tambol Li Municipality (Lamphun)
		100	1 2	Interview to principal of Muong Sam Pee School (Lamphun)
			1	Interview to leaders of Ban Muong Sam Pee village (Lamphun)
9	Jan.	14	Tue	Interview to Kor Sub-district Administrative Organization (Lamphun)
		1		Interview to Ban Koornong Village (Lamphun)
		the star		Move to Thoen District (Lampang)
10	Jan.	15	Wed	Interview to representative of Thoen Municipality (Lampang)
-		1- 7-	1	Interview to Ban Chaichomphu and Mae Salaem (Lampang)
		1. 80	12.	Interview to Non-model village before CBDRM (Lampang)
		he in	120 2 1	Travel to Lampang City
11	Jan.	16	Thu	Interview to DPM Lampang Provincial Office
		La regard	1.	Interview to DPM Regional Center 10, Lampang
		1. F. 1		Interview to Ban Pong Sanook School and ESAO Lampang
		No. All	Carlos C.	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
		10.5	1	Interview to village head of Ban Tham Talod (Nakhon Si Thammarat)
		123.8	1.12	Interview to Ban Tham Talod Primary School (Nakhon Si Thammarat)
15	Jan.	20	Mon	Interview to Num Tok Sub-district (Nakhon Si Thammarat)
		1. 1.		Interview at Educational Service Area Office No.2 in Nakhon Si Thammarat
. (10.000	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)
-			1	Evaluation Reporting
17	Jan.	22	Wed	Interview to TF3 (Disaster Management Training)
		1		Interview to TF5 (Flood Risk Management)
				Interview to JICA Experts
18	Jan.	23	Thu	Evaluation Reporting

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20	Jan.	11111111111111111		UNDP
21		25	Sat	Preparation of evaluation report
21	Jan.	26	Sun	Preparation of evaluation report
22	Jan.	27	Mon	Discussion with JICA Thailand Office
			EL TAN	Discussion with C/P (Task Force members)
23	Jan.	28	Tue	Meeting among team members to finalize the report
117-2		100		Discussion with Thai evaluation members and C/P (Task Force members)
and the second	Ster Ster	a the set		Courtesy call to Mr. Pornpoth Penpas (Deputy Director-General)
24	Jan.	29	Wed	Meeting among team members to finalize the report
1 March				Preparation for JCC
25	Jan.	30	Thu	JCC and conclusion of MM
1				Report to JICA Thailand Office
			1111	Meeting with Embassy of Japan (a person in charge of AMCDRR)
State -		Carlos -		Meeting with key persons of DDPM
26	Jan.	31	Fri	Meeting with Mr. Chainarong Vasanasomsithi (Director of RICB, DDPM)
4				Meeting with ESCAP
1011	200 10 1	and a second		Discussion with Japanese expert team on Final Seminar on Feb. 26
27	Feb.	1	Sat	Departure from Thailand (TG 676)
8				

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				2010		-			year 2011		-	-		3rd ye FY 20	12		-				h yea 2013	-		T
Work Item	Plan/	-	2010		1	1	2011	1 Contraction		1		2	012						2013	0	1		201	
< Common >	Actual	5 6 7	89	10 11 12	2 1 2	3 4	5 6 7	8 9	10 11	12 1	2 3	4 5 6	7 8	9 1	0 11 12	2 1 2	3	4 5	6 7	8 9	10 1	1 12 1	1 2	3 .
(1) Preparation of Draft Inception Report	Plan Actual	-		+			-						H	+	+ -							1	++	-
(2) Explanation and Discussion on Inception Report	Plan Actual	1												+	++-				-					_
3) Assistance in Organizing Tesk Forces	Plan Actual																					-	-	
(4) Assistance in Baseline Survey for Capability Assessment	Plan Actual													++									++	
5) Assistance in Planning Capacity Development and Monitoring	Plan Actual		1																			-		
6) Explanation and Discussion on Progress and Interim Reports	Plan Actual												++	-		+-+-							-	
(7) Preparation of Annual Completion Reports to JICA	Plan Actual										-	+	++	++								+++		1
(8) Preparation of Final Report, and Explanation and Discussion	Plan Actual			1									++										++	
(9) Seminars on Management of EQ and Other Natural Disasters	Plan Actual			11	1							++	++	++									-	-
(10) Counterpart Training in Japan	Plan Actual				1		+	++	-		-	11	11			++				1				
< TF for Disaster Management Planning > (11) Assistance in Training of DDPM Staff for Disaster Prevention Planning	Plan		3		i ingen			11	Ind.	_		11	1	-	-		1	-			1.	-	+	
(12) Assistance in Preparation/Revision of Disaster Prevention and								-			1							-		-				
Mitigation Action Plana (13) Assistance in Table-top Exercise for Verification of Disaster Prevention Plans	Actual Plan Actual												++-	+					-				-	
< TF for Community Based Disaster Risk Management >	Plan							1	20110				1.1	11		T		1				1		
14) Surveys to Assess Effects of CBDRM Activities	Actual		+	E			+		E		1			11								-		
15) Assistance in Revision of Manuals and Facilitator Guidelines	Actual		- transf	and the second second	-						1		1.1	-		1			-			-		
16) Assistance in Training of DDPM Staff as Facilitators for Promotion of CBDRM	Actual	-							1	-		11							-					
(17) Assistance in Preparation of Action Plan and its Application in Model Provinces	Plan Actual						1-01-						1											-
< TF for Disaster Management Treining > 18) Assistance in Training- Needs Assessment and Revision of Training Curriculum of DPMA	Plan Actual							Ħ																
(19) Assistance in Preparation of Training Curriculum and Materials for Natural Disaster Management and CBDRM	Pian Actual																		_			++-	-	
20) Training of DDPM Staff as Master Trainer	Plan Actual		1	-11							-			1	1		++	-				11.	1	_
21) Assistance in Training of DDPM Staff for Natural Disaster Management	Plan Actual				-	-	+					-	11	TI								-	-	-
<tf disaster="" education="" for=""> (22) Assistance in Revision of Training Curriculum and Materials for Disaster Education in School</tf>	Plan Actual	1					nineers																-	-
23) Assistance in Selection of Model Schools	Plan Actual						1-1-															-		-
24) Assistance in Training Teachers in Model School	Plan			and the second									-							1				-
25) Training of Master Teachers for Disaster Education in School	Plan													1									-	-
(25) Assistance in Bringing-up Model School as Information Center for Disaster Education	Plan								-	-		1	E						-				-	-
27) Assistance in Review of Implementation Process and Model Curriculum for Disaster Education					-			1								1						+	-	
< TF for Flood Risk Management >			1 miles	LAND D			205	301	110		-	1	1.1	1	10	CIL		1			1-1-	1		
28) Selection of one sub-basin model site in Lampang or Lamphun based on GIS base risk area maps	Plan Actual		++			-		++-	1	-		-	-	-	+++	1-1-						1-1-		
29) Preparation of manuals for rainfall / flood analysis and hazard mapping	Plan							1		-		11										I	-	inne
brough the training taking the model site as an example.	Actual		1					1								-	hart	-			11.			
30) Preparation of manuals for improvement of early warning system and			+++				-	+				-	-				-						-	
valuation of structural measures 31) Assistance in training on hazard mapping, early warning system and to the service on the ODM extend methods.	Actual Plan Actual											1	-							la la			+	
structural measures for DPM regional centers	Actual	AIC/F	R	APR			11				AIT/R	11	11	I	PR/R	2				letion		DF/R		F/R
Report			11	▲Ba	seline S	urvey F	Report	11	Report		▲ Interi			ort1	hal	▲ Int	erim S	Survey	R.2			ey R.		

Figure 2.2.1 Planned and Actual Operation of the Project Activities



Annex4

List of JCC participants on 30th January 2014 No.352 Meeting Room, DDPM

No	Name	Position	Organization
1	Mr. Pornpoth Penpas	Deputy Director - General, DDPM	DDPM
2		Director Research and International Cooperation Bureau	Research and International Cooperation Bureau, DDPM
3	Mr. Masafumi Nagaishi	Leader of Evaluation Team	JICA HQ
4	Mr. Ryotaro Hayashi	Second Secretary	Embassy fo Japan in Thailand
5	Mr. Tomoyuki Kawabata	Senior Representative	JICA Thailand Office
6	Mr. Kaneyasu Ida	Consultant/Evaluator	JICA consultant
7	Mr. Masanori Takenaka	Senior Program Officer	JICA Thailand Office
8	Ms. Tanita Niltai	Program Officer	JICA Thailand Office
9	Mr. Noritoshi Maehara	Leader of JICA Expert/Disaster Management	JICA Expert Team
10	Mr. Makoto Kodama	JICA Expert/Flood Management	JICA Expert Team
11	Mr. Arata Ssasaki	JICA Expert/ CBDRM	JICA Expert Team
12	Ms. Lolita C. Garcia	JICA Expert/ CBDRM	JICA Expert Team
13	Ms. Arpatchanee Hongsawat	Interpreter	JICA
14	Mr. Supon Sodsoon	Chief of Mekhala Center, Water Crisis Prevention	Department of Water Resource
15	Mr. Surasak Manochai	Mechanic, Experienced Level	Disaster Prevention and Mitigation Provincial Office,
16	Mr. Tanawat Reungdech	Plan and Policy Analyst Professional Level	Disaster Prevention and Mitigation Provincial Office,
17	Ms. Panrapee Kaewparadai	Plan and Policy Analyst Practitioner Level	Nakhon Si Thammarat Province Disaster Prevention and Mitigation Provincial Office,
18	Mr. Boonjet Butte	Mechanic, Experienced Level	Nakhon Si Thammarat Province Disaster Prevention and Mitigation Provincial Office.
19	Mr. Sompop Sucharit	Senior Expert on Irrigation Engineering	Royal Irrigation Department
20	Mr. Chodmarin Koedsom	Director of Disaster Prevention and Mitigation Regional Center 11 in Surat Thani Province	Disaster Prevention and Mitigation Regional Center 11 in
21	Ms. Luckana Manimnakorn	Director of Disaster Prevention and Mitigation Academy	Surat Thani Province, DDPM Disaster Prevention and
22	Ms. Paorumpai Janya	Deputy Director (Technical Affairs Sub-division)	Mitigation Academy, DDPM Disaster Prevention and
23	Ms. Chattraporn Keawyon	Dissemination Technical Officer, Professional	Mitigation Academy DDPM Disaster Prevention and Mitigation Policy Bureau DDPM
24	Ms. Benyapat Jarudechthanon	Policy and Plan Officer	Disaster Prevention and Mitigation Policy Bureau, DDPN
25	Mr. Nutchanon Sonprasert	Director of Disaster Prevention Participation	Disaster Prevention Promotion Bureau DDPM
26	Ms. Kamonwan Chitpak	Plan and Policy Analyst, Professional Level	Disaster Prevention Promotion Bureau DDPM
27	Mr. Banyat Yai-ngoolueam	Civil Engineer, Professional Level	Disaster Prevention Criteria Bureau DDPM
28	Ms. Wibolluk Supaaem	Scientist, Professional Level	Disaster Prevention Criteria Bureau DDPM
29	Mr. Pitool Nakthae	Director Section of Safety Standard Division	Disaster Prevention Criteria Bureau DDPM
30	Mr. Wichet Amnuayporn	Civil Engineering, Practitional Level	Disaster Prevention Criteria
31	Ms. Supanan Theprat	0 0	Disaster Prevention Criteria Bureau DDPM
32 33	Mr. Naphat Heamtanon	Civil Engineer, Practitional Level	Disaster Prevention Criteria
34	Ms. Duangnapa Uttamangkanong Ms. Kornisnan Wilawan	Foreign Relations Official, Professional Level Plan and Policy Analyst Professional Level	Research and International Cooperation Bureau, DDPM
35	Mr. Kosit Srikritsanarat	Plan and Policy Analyst Protessional Level	Research and International Cooperation Bureau DDPM Research and International
36	Ms. Yaowapapan Khongkhasri	Plan and Policy Officer	Cooperation Bureau DDPM Research and International
30	Mr. Somsong Ngamwong	Foreign Relations Officer Senior Professional Level	Cooperation Bureau DDPM Office of the Permanent Secreta
38	Ms. Kanokwan Kawnthinphu	Foreign Relations Officer Senior, Protessional Level	Office of the Permanent Secreta Ministry of Education Office of the Permanent Secreta
39	Ms. Thanaporn Phromsuwan	Deputy Director of Women's Affairs and Family	Ministry of Education Office of Women's Affairs and
		Development	Family Developmant
40	Ms. Uthin Jungvisetpong	Education Officer, Professional Level	Office of The Basic Education Commission, Ministry of
41	Ms. Thanathat Chaiyanon	Education Officer, Practitional Level	Office of The Basic Education Commission, Ministry of

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List of JCC participants on 30th January 2014 No.352 Meeting Room, DDPM

No	Name	Name Position						
42	Ms. Wannee Chansiri	Technical Officer Senior Professional Level	Office of The Basic Education Commission, Ministry of					
43	Ms. Nuchchanart Prasopsub	Chief of Research and Development	Research and International					
44	Mr. Monchai Manosamut	Civil Engineering, Senior Professional Level	Disaster Prevention Criteria Bureau, DDPM					
45	Mr. Sapol Kamchamnan	Civil Engineering, Practitioner Level	Disaster Prevention Criteria Bureau DDPM					
46	Mr. Prapan Sanitmajjaro	Civil Engineering, Senior Professional Level,	Disaster Prevention and Mitigation Regional Center					

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