

2.4.4 第6次現地活動

(1) 活動総括

第5次現地活動までに作成されたマニュアル及びガイドラインについて、データ更新や内容整備を行った。また、集中的にカウンターパートに技術移転を実施した。技術移転した結果は、2009年7月28日～29日に実施されたワークショップ及び2009年11月23日に開催されたセミナーにおいて発表された。これらのワークショップやセミナーでは、参加した各関連機関の代表から、発表したマニュアルやガイドラインの取りまとめに有益な意見やコメントが出された。

インドネシア語版のマニュアル・ガイドラインは、専門家の作成した英語版テキストを参照しつつも、各関連機関からの意見を取り入れて、カウンターパート自らが作成した。日本人専門家はその活動を支援した。最終版の作成のため2010年2月23日～25日に開催したワークショップにおいて、集中的に議論し、最終インドネシア語版を作成した。最終的に作成されたマニュアル・ガイドラインは次の通りである。

- ① 河川および構造物整備台帳マニュアル
- ② 河川維持管理マニュアル
- ③ 河川及び河川構造物評価マニュアル
- ④ ゲート及びポンプ操作マニュアル
- ⑤ 洪水氾濫区域図作成マニュアル
- ⑥ 洪水氾濫調査マニュアル
- ⑦ 洪水予警報マニュアル
- ⑧ 流出抑制ガイドライン

これらマニュアル・ガイドラインの関係は次の通りである。

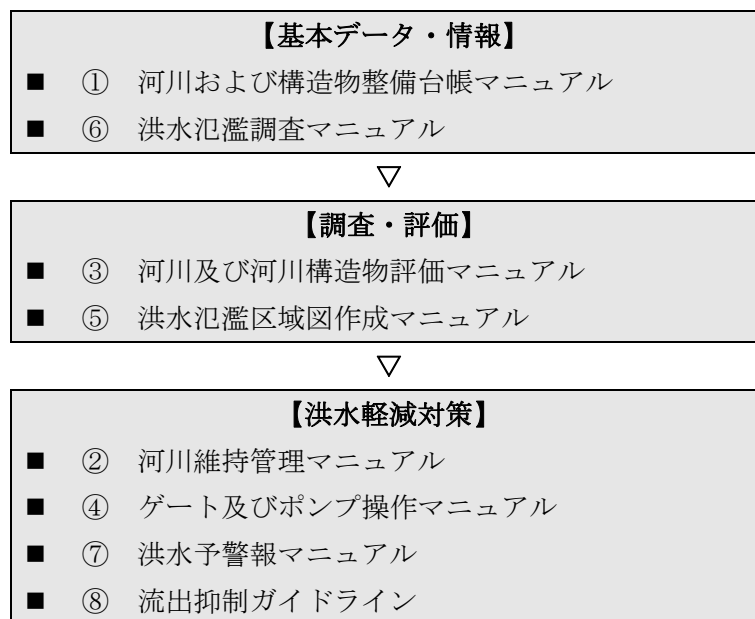


図-2.41 マニュアル・ガイドラインの関係

1) この期間の目標成果に対する活動結果

河川・排水施設の維持管理・運用能力向上にかかる支援（プロジェクト成果 1 関連）および洪水対策に関するデータの収集・分析能力向上にかかる支援（プロジェクト成果 2 関連）

- ◆ 河川台帳・排水施設台帳のデータ更新
- ◆ 河川施設・排水施設評価モデルの見直し
- ◆ 洪水調査に係る解析作業
- ◆ 河川・排水路・排水施設の維持管理・運用マニュアルのためのデータ更新・整理・取りまとめ
- ◆ 排水ポンプとゲートの運用方法に関する検討

洪水情報提供体制の改善にかかる支援（プロジェクト成果 3 関連）

- ◆ 洪水ハザードマップの見直し
- ◆ 水文ネットワークの評価
- ◆ 洪水警報システムの取りまとめ

流域流出抑制対策能力向上にかかる支援（プロジェクト成果 4 関連）

- ◆ 流域流出モデルのレビュー
- ◆ 流域流出モデルを使った流出計算（パサングラハン流域）
- ◆ 流域流出抑制にかかわる土地利用規制の検討

2) カウンターパートトレーニング

カウンターパートトレーニングは OJT および日本でのカウンターパートトレーニングにより実施された。日本での研修は、日本における総合治水対策を題材として 2009 年 11 月に実施され、2 名のカウンターパートが派遣された。派遣されたカウンターパートの成果は、2010 年 2 月 23 日～25 日のワークショップにおいて発表された。

3) ワークショップ及びセミナー

以下のセミナー及びワークショップを公共事業省主催、JICA 共催で開催した。

- ◆ マニュアル及びガイドラインに関するワークショップ（2009 年 7 月 29 日～30 日：ボゴール）
- ◆ 都市洪水制御に関するセミナー（2009 年 11 月 23 日：ジャカルタ）
- ◆ マニュアル・ガイドライン作成のためのワークショップ（2010 年 2 月 23 日～25 日：ボゴール）

第 1 回ワークショップ 2009 年 7 月 28 日～29 日（ボゴール）

公共事業省主催、JICA 共催によるマニュアル及びガイドラインをテーマとしたワークショップを開催した。このワークショップの目的は、1)技術移転したマニュアル及びガイドラインをカウンターパートが発表することにより理解を深めること、2)マニュアル及びガイドラインの内容を治水関連機関で協議し確認を行うこと、および 3)バンテン州及び西ジャワ州に対して、マニュアル及びガイドラインを周知普及させることである。

第 2 回セミナー 2009 年 11 月 23 日（ジャカルタ）

公共事業省主催、JICA 共催により都市洪水制御をテーマとしたセミナーが実施され、関係機関による治水の現状に対する意見交換と総合治水を推進するための協議が行われた。また、セミナーでは、JABODETABEK における洪水管理に対する調整方法についての協議が行われた。

主な成果は 1) 都市洪水制御における総合治水対策導入の基本方針の合意形成 2) 総合治水対策の各種施策を計画・実施するための関係機関の調整機関の設置推進

第 2 回ワークショップ 2010 年 2 月 23 日～25 日 (ブンチャック)

公共事業省主催、JICA 共催により、カウンターパートが各マニュアル及びガイドラインのインドネシア語版を作成するためワークショップを開催した。本ワークショップの目的は、インドネシア語版のマニュアル及びガイドラインに対する集中的なとりまとめを行うことである。

(2) 河川・排水施設の維持管理・運用能力向上にかかる支援 (プロジェクト成果 1 関連) および洪水対策に関するデータの収集・分析能力向上にかかる支援 (プロジェクト成果 2 関連)

本項に関連して作成されたマニュアルは次の通りである。

- ◆ 河川および構造物整備台帳マニュアル
- ◆ 河川維持管理マニュアル
- ◆ 河川および河川構造物評価マニュアル
- ◆ ゲートおよびポンプ操作マニュアル

その概要は以下の通りである。

1) 河川および河川構造物台帳作成マニュアル

本プロジェクトのパイロット地域 (チリウン川・西放水路流域およびジャカルタ中心部 : 537 km²) における河川および河川構造物の状況を調べそれらの台帳を作成する手順等を示したマニュアルで、次のような内容で構成されている。

- ◆ 河川および河川構造物の分類
- ◆ 河川およびため池台帳
- ◆ ゲート台帳
- ◆ 排水機場台帳
- ◆ 堤防台帳

2) 河川維持管理マニュアル

上述のマニュアルで作成された河川および河川構造物の維持管理を実施する手順等を示したマニュアルで、次のような内容で構成されている。

- ◆ 巡回パトロールの手順と頻度
- ◆ 緊急の措置と優先順位
- ◆ 維持管理の分類
- ◆ 河川・水路の維持管理

- ◆ 河川構造物の維持管理
- ◆ 河川・水路の流下能力調査

3) 河川および河川構造物評価マニュアル

本プロジェクトのパイロット地域に関連する河川への流出、河川の疎通能力およびポンプの能力を算定する手順等を示したマニュアルで、次のような内容で構成されている。

- ◆ 洪水ピーク流量計算
- ◆ 降雨解析（降雨観測所・データ、確率雨量、降雨強度曲線）
- ◆ 不等流計算
- ◆ 水位—流量曲線
- ◆ 河道流下能力評価
- ◆ ポンプの運転能力評価（貯水池 H-V 曲線、流入ハイドログラフ、ポンプ運転計算）

4) ゲートおよびポンプ操作マニュアル

本プロジェクトのパイロット地域に存在するゲートや排水ポンプに関する操作手順等を示したマニュアルで、次のような内容で構成されている。

- ◆ ゲート操作
 - 排水システム
 - 防潮ゲート
 - 流量制御ゲート
- ◆ ポンプ操作
 - ポンプ場の概要
 - Pluit ポンプ場の操作
 - Ciden ポンプ場の操作
 - Melati ポンプ場の操作
- ◆ ポンプ施設の評価
- ◆ ゲート・ポンプの巡回

(3) 洪水情報提供体制の改善にかかる支援（プロジェクト成果 3 関連）

本項に関連して作成されたマニュアルは次の通りである。

- ◆ 洪水氾濫区域図作成マニュアル
- ◆ 洪水氾濫調査マニュアル
- ◆ 洪水予告警報マニュアル

その概要は以下の通りである。

1) 洪水氾濫区域図作成マニュアル

本マニュアルは、ジャカルタ首都圏のチリウン川流域の洪水ハザードマップを策定するために必要となる想定氾濫区域図作成の手順について記述したものである。洪水氾濫シミュレーションモデルは、

チリウン川流域を対象として完成した。このシュミレーションプログラムは、JICA 技術協力チームからカウンターパートの関係機関へ委譲し、その使用及び操作方法についてトレーニングした。その結果は、2009年7月28日～29日に開催されたワークショップにおいて、カウンターパートが発表し、関係機関で協議した。本マニュアルは次のような内容で構成されている。

- ◆ 洪水ハザードマップの説明
- ◆ 洪水氾濫解析モデル作成準備
- ◆ 提案する洪水氾濫解析モデル（JYECS-FLOW 2D）の説明
- ◆ 降雨モデル
- ◆ 河道・水路モデル
- ◆ 流域流出モデル
- ◆ 氾濫区域モデル
- ◆ 洪水氾濫解析モデル（JYECS-FLOW 2D）の検証
- ◆ 氾濫計算および結果の評価
- ◆ フラッド・リスク・マップ（確率洪水 1/5,1/10,1/30,1/50,1/100）

2) 洪水氾濫調査マニュアル

本マニュアルは、実際に発生した洪水の直後に、洪水の実態、被害の実態、水防活動の実態に関する調査手順等を示したマニュアルで、次のような内容で構成されている。

- ◆ 水文調査
- ◆ 河川施設・排水施設の運転実態調査
- ◆ 洪水氾濫調査
- ◆ 水防活動の実態調査

3) 洪水予警報マニュアル

本マニュアルは、洪水予警報についての方針を示し、チリウン川の警戒水位や避難水位等の検討手順等を示したマニュアルで、次のような内容で構成されている。

- ◆ 現状の警戒水位の実態
- ◆ 警戒水位の考え方
- ◆ 警戒水位の策定方法
 - 各河川断面の警戒水位
 - 基準観測所水位に関連した警戒水位
- ◆ 避難水位の策定方法
 - 避難水位の考え方
 - 基準観測所水位に関連した避難水位
 - 既往洪水の分析（水位上昇時間）
 - 避難時間（避難準備＋避難実行）
 - 特定氾濫区域に対応した非難水位
- ◆ 提言

(4) 流域流出抑制対策能力向上にかかる支援（プロジェクト成果4 関連）

本項に関連して作成されたガイドラインは流出抑制ガイドラインで、次のような内容で構成されている。

- ◆ 流出抑制の必要性の説明
- ◆ 流出抑制施設の分類
 - 貯留式施設
 - 雨水浸透施設
- ◆ 流出抑制施設の機能と効果
- ◆ 流出抑制の計画
 - 水文・水理計画
 - 降雨規模
 - 流出抑制施設の機能計画
- ◆ 貯留式施設の建設
- ◆ Pasangrahan 流域での流出抑制対策
- ◆ JABODETABEK での総合治水方式の適用性
 - 洪水低減対策の適用性
 - ステークホルダー参加による計画決定過程
- ◆ 流量増加への法・規則
 - 法規則の必要性
 - 法規則の構造
 - 組織と行動計画に関する法規制
 - 流出抑制対策に関する法規則

2.5 セミナー及びワークショップ

本技プロの活動成果の周知及び洪水対策関連機関がジャカルタ首都圏での洪水に対する現状認識を共有し、治水対策のための調整を促進することを目的としてセミナーを2008年12月4日、2009年11月23日の2回、ジャカルタで開催した。また、カウンターパートが本技プロでの活動を促進し、その成果を確認するためにワークショップをボゴール（2009年7月29日～30日）とプンチャック（2010年2月23日～25日）で2回開催した。セミナーの内容と発表についてはセミナーレポートとしてとりまとめ、別冊として提出している。セミナー及びワークショップの目的と結果を表-2.34に示す。また、その概要を表-2.35から表-2.38に示す。

表-2.34 セミナー及びワークショップ一覧

名 称	参加者	内 容
Seminar on Flood Management in JABODETABEK (4 Dec 2008 Jakarta)	119	<ul style="list-style-type: none"> ▶ 各治水関連機関の治水活動を発表し、各機関が抱えている課題、計画している内容等について共通認識をもつことを目的として実施した。 ▶ パネルディスカッションにおいて、ジャカルタ首都圏の治水対策については、各関連機関が協働して実施することが必要であること。また、そのための流域協議会を設置することが採択された。
Workshop on Flood Mitigation in JABODETABEK (29-30 July 2009 Bogor)	72	<ul style="list-style-type: none"> ▶ 目的は、フルタイムカウンターパートの技術移転内容の理解度を確保することと治水関連機関の意見を取り入れること。また、西ジャワ州やバンテン州等への技術の水平展開を目的として開催した。 ▶ マニュアルの内容について、カウンターパートから発表し、関連機関と協議し、必要に応じマニュアルを加筆した。
Seminar on Urban Flood Management (23 Nov 2009 Jakarta)	83	<ul style="list-style-type: none"> ▶ 都市治水の今後の方向について議論することを目的として開催した。 ▶ 本セミナーは水資源政策アドバイザーとの共同開催である。 ▶ 結果として、総合治水の意思形成がここで図られ、流域流出抑制の施設設置の必要性について共通認識をもった。
Workshop on Finalization of Manuals and Guideline (23-25 Feb 2010n Puncak)	19	<ul style="list-style-type: none"> ▶ マニュアル及びガイドラインのドラフト作成を目的として実施した。参加対象はフルタイムカウンターパートである。 ▶ その結果、7マニュアル 1ガイドラインがまとめられた。

表-2.35 セミナー及びワークショップの概要 (1/4)

I	1	Name of Program	:	Seminar on Flood Mitigation in JABODETABEK	
	2	Date	:	December, 4th 2008	
	3	Venue	:	Mutiara-1, Hotel Gran Melia	
	4	Location	:	Jl. HR. Rasuna Said Kav X-O Kuningan, Jakarta 12950	
	5	Objective	:	1. To exchange the information of the division activity plan and issues concerning flood mitigation done by related agencies	
					2. To Introduce and encourage comprehensive flood mitigation measures, including structural (on-stream and off-stream) and non structural; also to discuss the policy direction for the flood mitigation in JABODETABEK
					3. To Confirm the necessity of the coordination mechanism and to discuss inter-coordination framework in river basins among the related agencies on planning and implementing the comprehensive flood mitigation measures in the JABODETABEK
	6	Attendant	:	1. Ministry of Public Works	
					a. Dit. Gen. Water Resources
					b. Dit. Gen Spatial Planning

			c. Dit. Gen. Human Settlement
			2. Provincial Offices
			a. Province of DKI Jakarta
			a.1. BAPPEDA (Regional Development & Planning Board) DKI Jakarta Province
			a.2. Dinas PU (Public Works Agency) DKI Jakarta
			a.3. Dinas Tata Kota (Spatial Planning Agency) DKI Jakarta
			b. Province of Banten
			b.1. BAPPEDA (Regional Development & Planning Board) Banten Province
			b.2. Dinas SDA &P (Water Resources & Settlement Agency) Banten Province
			c. Province of West Java
			c.1. BAPPEDA (Regional Development & Planning Board) West Java Province
			c.2. Dinas PSDA (Water Resources Agency) West Java Province
			c.3. Dinas Tata Ruang Permukiman (Spatial Planning & Settlement Agency) West Java Province
			3. SDPU (Municipality Public Works Agency)
			a. SDPU Jakarta Pusat (North Jakarta)
			b. SDPU Jakarta Pusat (East Jakarta)
			c. SDPU Jakarta Pusat (West Jakarta)
			d. SDPU Jakarta Pusat (SouthJakarta)
			e. SDPU Jakarta Pusat (Central Jakarta)
			4. Japan Government (Embassy of Japan, JICA, Yachiyo Eng. Consultant)
			5. World Bank
			6. Asian Development Bank
			7. The Netherlands (Embassy of Royal Netherland, JFM Project)
			Total Participants: 119 persons
	Photo		



Front view of the stage



119 participants attended the workshop

 <p><i>Presentation from related agencies: BBWS Ciliwung-Cisadane, DG Spatial Planning, DG Human Settlement</i> (Left to right: Ir. Pitoyo, Ir. Imam Anshori, Ir. Sri Apariatini, Ir. Soesmono)</p>	 <p><i>Presentation from Counterpart trained in Japan</i> (Left to right: Ir. Sulad, Ir. Budi Santoso, and Ida Gede, ST)</p>
 <p><i>Panel Discussion among authorities concerned</i> DPU DKI Jakarta, DG. Spatial Planning, DG. Water Resources, DG. Human Settlement, National Water Resources Council, and Water Resources Agency & Settlement of Banten (Left to right: Ir. Budi Widiantoro, Ir. Reymod Kemur, Ir. Widagdo, Ir. EKo Djuli Sasongko, Ir. Imam Anshori, Ir. Winarjono)</p>	 <p><i>JICA Experts with Director of River, Lake and Reservoir</i> (Left to right: Mr. Shingu, Ir. Widagdo, Mr. Kusakabe, Mr. Usui)</p>

表-2.36 セミナー及びワークショップの概要 (2/4)

II	1	Name of Program	:	Workshop on Flood Mitigation in JABODETABEK	
	2	Date	:	July, 29 th -30 th 2009	
	3	Venue	:	Hotel Salak Bogor	
	4	Location	:	Jl. Juanda No. 8 Bogor	
	5	Objective	:	enhance capacity building of Full Time Counterparts and disseminate the flood mitigation technology to the related agencies	
	6	Attendant	:	1. Ministry of Public Works	
					a. Dit. Gen. Water Resources
					b. Dit. Gen Spatial Planning
					c. Dit. Gen. Human Settlement
					2. Provincial Offices
				a. Province of DKI Jakarta	
				a.1. BAPPEDA (Regional Development & Planning Board) DKI Jakarta Province	
				a.2. Dinas PU (Public Works Agency) DKI Jakarta	
				a.3. Dinas Tata Kota (Spatial Planning Agency) DKI Jakarta	

				b. Province of Banten
				b.1. BAPPEDA (Regional Development & Planning Board)
				Banten Province
				b.2. Dinas SDA &P (Water Resources & Settlement Agency)
				Banten Province
				c. Province of West Java
				c.1. BAPPEDA (Regional Development & Planning Board)
				West Java Province
				c.2. Dinas PSDA (Water Resources Agency) West Java Province
				c.3. Dinas Tata Ruang Permukiman (Spatial Planning & Settlement Agency) West Java Province
				3. BBWS/ Balai PSDA
				a. BBWS Ciliwung-Cisadane, Jakarta
				b. BBWS Cidanau-Ciujung-Cidurian, Banten
				c. BBWS Citarum
				d. BBWS Bengawan Solo, Central Java
				e. BBWS Sumatera VIII, Palembang
				f. BBWS Serayu Opak
				g. BBWS Pemali – Juana
				h. Balai PSDA Cidurian-Cisadane
				i. Balai PSDA Ciujung-Ciliman
				j. Balai PSDA Ciliwung-Cisadane
				k. BBWS Serayu Opak
				l. BBWS Pemali – Juana
				m. Balai PSDA Cidurian-Cisadane
				4. Japan Government (Embassy of Japan, JICA, Yachiyo Engineering Consultant)
				Total Participants: 72 persons
	Photo			



Inside of the IstanaBall Room before workshop started



Opening Address by JICA Deputy Resident Representative, Mr. Kūchi TOMIYA



*Presentation and Discussion Topic 8
“Guideline for Run-off Control in Basin”*

*Presentation and Discussion Topic 1 “Manual for Inventory of
Rivers and River Structures”*

Partipants come from several institutions

*Best Full Time Counterpart & Best Team of Full Time Counterpart
pose with Director, Mr. Widagdo, and JICA Experts*

表-2.37 セミナー及びワークショップの概要 (3/4)

III	1	Name of Program	:	Seminar on Urban Flood Management	
	2	Date	:	November, 23 rd 2009	
	3	Venue	:	Hotel Grand Kemang	
	4	Location	:	Jl. Kemang Raya No. 2 H Kebayoran Baru, Jakarta Selatan	
	5	Objective	:	1. to indicate important issues of Urban Flood Management	
					2. to encourage related agencies, either Government or Non-Government Agencies to contribute in the implementation of Urban Flood Management in accordance with their competencies
					3. to promote further coordination among related agency in Urban River Basin
	6	Attendant	:	1. Ministry of Public Works	
					a. Dit. Gen. Water Resources
					b. Dit. Gen Spatial Planning
					c. Dit. Gen. Human Settlement
				2. Provincial Offices	
				a. Province of DKI Jakarta	
				a.1. BAPPEDA (Regional Development & Planning Board)	
				DKI Jakarta Province	
				a.2. Dinas PU (Public Works Agency) DKI Jakarta	

			a.3. Dinas Tata Kota (Spatial Planning Agency) DKI Jakarta
			a.4. Bapelda Provinsi DKI Jakarta (Environment Control Board)
			a.5. Dinas Kehutanan Provinsi DKI Jakarta (Forestry Agency of DKI Jakarta)
			a.6. Dinas Pertanian Provinsi DKI Jakarta (Agriculture Agency of DKI Jakarta)
			b. Province of Banten
			b.1. BAPPEDA (Regional Development & Planning Board) Banten Province
			b.2. Dinas SDA &P (Water Resources & Settlement Agency) Banten Province
			b.3. Dinas Tata Kota (Spatial Planning Agency) Banten
			b.4. Bapelda Provinsi Banten (Environment Control Board)
			b.5. Dinas Kehutanan Provinsi Banten (Forestry Agency of Banten)
			b.6. Dinas Pertanian Provinsi Banten (Agriculture Agency of Banten)
			c. Province of West Java
			c.1. BAPPEDA (Regional Development & Planning Board) West Java Province
			c.2. Dinas PSDA (Water Resources Agency) West Java Province
			c.3. Dinas Tata Ruang Permukiman (Spatial Planning & Settlement Agency) West Java Province
			b.4. Bapelda Provinsi Jawa Barat (Environment Control Board)
			b.5. Dinas Kehutanan Provinsi Jawa Barat (Forestry Agency of West Java)
			b.6. Dinas Pertanian Provinsi Jawa Barat (Agriculture Agency of West Java)
			3. SDPU (Municipality Public Works Agency)
			4. Regency Offices in DKI Jakarta, Banten, and West Java Provinces
			5. BAPPENAS (National Planning and Development Board)
			6. Japan Government (Embassy of Japan, JICA, Yachiyo Eng. Consultant)
			7. World Bank
			8. Asian Development Bank
			Total Participants: 83persons
	Photo		



*Mr. Widagdo, Director of River, Lake and Reservoir, hitting the gong to open the seminar officially
(Left to Right: Mr. Baba, Mr. Tomiya, Mr. Iyori, Mr. Widagdo)*



*Opening Address by Counselor of Japan Embassy,
Mr. Makoto IYORI*



*Presentation from related Directorate in Ministry of Public Works:
DG Water Resources, DG Human Settlement, DG Spatial Planning
(Left to Right: Mr. Budi Santoso, Mr. Sulad Sriharto, Mr. Eko Djuli Sasongko, Mrs. Sri Apriatini)*



*Presentation from JICA Experts and with Moderator, Head of
DPU DKI Jakarta
(Left to Right: Mr. Shingu, Mr. Budi Widiantoro, Mr. Baba, Mr. Kusakabe)*



*Panel Discussion: Coordination mechanism among the authority concerned:
Mr. Endar Margono, Secretary of Water Resources and Settlement Agency, Mr. Arifin Kertayasa, Head Section of Lake and Reservoir from BBWS Citarum, MR. Eko Djuli Sasongko-Head of Sub-Dit. Building Codes, DG Human Settlement, Mr. Sulad Srihartono-Head Sub-Dit. of Controlling of Water Resources Management, Mr. Hitoshi BABA-JICA Expert on Integrated Water Resources Management, Mr. Takaaki KUSAKABE-Chief Advisor of The Institutional Revitalization Project for Flood Management in JABDETABEK and Mr. Budi Widiantoro-Head of Public Works Agency of DKI Jakarta*

表-2.38 セミナー及びワークショップの概要(4/4)

IV	1	Name of Program	: Workshop on Finalization Manual
	2	Date	: February, 23 rd – 25 th 2010
	3	Venue	: Yasmin Resort and Conference Hotel
	4	Location	: Jl. Jeprah Palasari, Puncak 43253
	5	Objective	: Facilitate Full Time Counterparts to finalize manuals and guideline
	6	Attendant	: <ul style="list-style-type: none"> • Coordinator Counterpart
			1. Ir. Subardjo, Head of East Region Section, Sub-dit.O&M and Natural Disaster Fighting
			2. Ir. Slamet Budi Santoso, Head of Sub-dit Technical Planning
			3. Dani, ST, Staff of Sub-dit.O&M and Natural Disaster Fighting
			<ul style="list-style-type: none"> • Full Time Counterparts:
			4. Fikri, BBWS Cil-Cis
			5. Heru Purnomo, BBWS Cil-Cis
			6. Romelan, BBWS Cil-Cis
			7. Hendra, Sub-dit. Technical Planning
			8. Nila, Sub-dit. Implementer of West Region
			9. Ayu, Sub-dit. Hydrlogy and Water Quality
			10. Sumarno, Sub-dit. Hydrlogy and Water Quality
			11. Ambar, Sub-dit. Policy & Strategy
			12. Pilas, Sub-dit. Spatial Planning Region II
			13. Taufan, Sub-dit. O&M and Natural Disaster Fighting
		14. Puji Sutarto, BBWS Cil-Cis	
		15. Lina Fitriani, BBWS Cil-Cis	
		<ul style="list-style-type: none"> • JICA Project 	
		16. Tamotsu SHINGU	
		17. Sarwono Sukardi	
		18. Novita Nababan	
		19. Destri Kusumawardani	
		Total Participants: 19	
	Photo		



Mr. Sarwono gives explanation about Manual



Mr. Shingu gives explanation about Manual



Each group work and discuss their manual & guideline



Group working of M-1, M-2, M-3 an M-5



Group workingof M-4 and M-6



Mr. Subardjo and Mr. Slamet Budi Santoso gave some recommendations and comments about the manuals & guideline

2.6 OJT トレーニング

オンザジョブトレーニング（OJT）は基本的には表-2.39 に示すルールに従って実施した。通常は2週間に1回程度実施し、2009年5月から7月は集中的に各グループ毎に週1回CPトレーニングを実施した。テキスト完成後は、マニュアル及びガイドライン作成を目標として、少なくとも週1回CPトレーニングを実施した。

集中トレーニングのスケジュールを表-2.40 に示す。また、インドネシアでのミーティング一覧を表-2.41 に示す。3年間で、活動についての説明や議論のために記録しているだけで合計100回のミーティングを実施した。

表-2.39 CP トレーニングの基本ルール

期 間	OJT 頻度	備 考
2007年5月 - 2009年3月	1回 /2週間	<ul style="list-style-type: none"> ▶ データ収集と解析 ▶ 各段階での個別技術移転
2009年5月 - 2009年7月	各グループ 1回/週/各マニュアル (月～木の週4日)	<ul style="list-style-type: none"> ▶ データ収集と解析 ▶ 各技術移転項目に関するテキスト作成のための集中トレーニング
2009年8月 - 2010年2月	ランダム 最小 1回/週	<ul style="list-style-type: none"> ▶ 系統的技術移転 ▶ マニュアルとガイドライン作成のためのトレーニング

表-2.41 OJT 及び会議リスト

	日時	会議場所/ 接触相手	議題	JICA 専門家
1	29-May-08	<u>BBWS Ciliwung-Cisadane</u> 1. Mr. Heriyanto Waluyadi, ST, MT / Principal Supervisor of Situ Rehabilitation (as Full Time Counterpart/ FT CP) 2. Mr. Agung Djuhartono / Functionary of Commitment Maker of Water Res. Dev & Conservation	Explanation of Project and making database inventory of river & river structures	Mr. Heishi Ms. Novita
2	3-Jun-08	<u>Pluit Coastal Dike</u> Mr. Basri A / Supervisor of O&M DPU DKI (Staff of Maman Suparman the Section Head of Maintenance & Water Control in Public Works Agency)	Monitoring the situation, water level & dike construction (temporary structure)	Mr. Heishi Mr. Usui Mr. Kamimura
3	4-Jun-08	<u>DPU DKI Jakarta</u> 1. Ir. Tri Djoko S.M, ME / Section Head Water Res.Dev., Sub-Agency Technical Guidance of Water Resources (as Counterpart) 2. Ir. Dudi Gardesi A. MUM / Section Head Restoration of Water Pollution, Sub-Agency Environmental Technique and Infrastructure Management (as Counterpart) 3. Ir. Maman Suparman,ME / Section Head of Maintenance & Water Control, Sub-Agency Water Resources Development (as Counterpart)	1. Explain the activity & schedule of Counterpart (Inventory Database of river & river structures) 2. ask the new data of inundation occurred in Pluit on June 3rd, 2008 3. Arrange the progress meeting of Full-Time Counterpart (once a month)	Mr. Heishi Mr. Kusakabe Mr.Usui Ms. Novita
4	4-Jun-08	<u>DPU</u> Drs. Harmadi, ST. Sp1, MT / Head of Sub-Dir. River, Lake & Reservoir and Natural Disaster Fighting, Directorate River, Lake & Reservoir (as Counterpart Coordinator)	Explain the activity & schedule of Full Time Counterpart	Mr. Heishi Mr. Usui Mr.Kusakabe Ms.Novita
5	5-Jun-08	<u>DPU, Spatial Planning Building 3rd fl</u> 1.Ms. Ida Ayu Gede M, ST / Staff of Provincial Spatial Planning Management Section (as Counterpart) 2. Mrs. Liza Soraya K, ST / Staff of Metropolitan Spatial Planning Management Section (as Counterpart)	1. Ask the procedure of getting permit building in Jakarta Area (go to Bappeda) 2. Ask the planning of land use in year 2010	Mr.Heishi Mr. Kusakabe Mrs. Anisa
6	9-Jun-08	<u>DPU</u> 1. Drs. Harmadi / Head of Sub-Dir. River, Lake & Res. and Natural Disaster Fighting, Directorate River, Lake & Reservoir (as Counterpart Coordinator) 2. Full Time Counterpart Members / Staffs of Departemen PU, DPU DKI Jakarta and BBWS Cil-Cis	Full Time Counterpart Meeting: Explanation of Project, Implemented Activity, Post Flood Survey, 4th Activities	Mr. Heishi Mr. Kusakabe Mr. Usui Mr. Kamimura Ms. Novita Ms. Dian
7	10-Jun-08	<u>BAPPEDA Jakarta, Balaikota Blok F</u> Mr. Ir. Sri Mahendra, MM, MT / Head of Sub division of Water, facility, and City Utilities (as Counterpart)	1. Explanation the land use planning made by BAPPEDA 2. Explanation the permit building (go to Dinas Tata Kota and P2B)	Mr.Heishi Mr. Kusakabe Mrs. Anisa
8	13-Jun-08	<u>DPU</u> Mr. Sulad / Head of Sub Dir. Controlling of Water management (as Counterpart)	1. Seeking information about the person who apply for JICA training course 2. little information about next Monday	Mr.Kusakabe Mrs. Anisa

	日時	会議場所/ 接触相手	議題	JICA 専門家
			meeting and Spatial Planning expert from Japan	
9	17-Jun-08	<u>BBWS Ciliwung-Cisadane</u> 1. Mr. Bastari M.Eng. / Section Head of Planning, BBWS Cil-Cis (as Counterpart) 2. Mr. Heriyanto Waluyadi, ST, MT / Principal Supervisor of Situ Rehabilitation, BBWS Cil-Cis (FT CP)	1. Asking data & map of catchment area (River Basin Management Jurisdiction) 2. Asking the data of situ	Mr. Heishi Ms. Novita
10	17-Jun-08	<u>Bappeda DKI Jakarta</u> Mrs.Vera Revina / Head of Sub-Division of Spatial Planning (as Counterpart)	1. Discussion about Land Use map (Past, Present and Future) 2. Ask information about the procedure of IMB (Building Permit)	Mr. Heishi Mr. Kusakabe Ms. Novita
11	19-Jun-08	<u>BBWS Ciliwung-Cisadane</u> Mr. Bastari, M.Eng / Section Head of Planning, BBWS Cil-Cis (as Counterpart)	1. Ask information about improvement and planning in Western Banjir Canal (WBC) 2. Give information about the changing of new BM network due to land subsidence 3. Explanation of making database inventory	Mr. Heishi Mr. Usui Ms. Novita Ms. Dian
12	23-Jun-08	<u>Departemen PU, Bina PSDA</u> Mr. Sulad / Head of Sub Dir. Controlling of Water Res. Management (as Counterpart)	1. Ask information about River Code 2. Ask Definition about river structures	Mr. Heishi Ms. Novita
13	23-Jun-08	<u>Departemen PU, Dit. River, Lake and Reservoir</u> Mr. Harmadi / Head of Sub-Dir. River, Lake & Res. and Natural Disaster Fighting, Directorate River, Lake & Reservoir (as Counterpart Coordinator)	Confirm whether O&M section will make inventory database (like Mr. Sulad output)	Mr. Heishi Ms. Anne (FT CP) Ms. Novita
14	1-Jul-08	<u>Departemen PU, Spatial Planning</u> Ms. Ida Ayu Gede M.A. ST, MT / Staff of Provincial Spatial Planning Management Section (as Counterpart)	1. Give itinerary of training in Tokyo 2. Explanation of Training Program briefly (condition & situation of river in Japan) 3. Ask candidate to prepare presentation for the workshop of "Comprehensive Flood Mitigation Measure"	Mr. Heishi Mr.Kusakabe Ms. Novita
15	2-Jul-08	<u>DPU</u> Drs. Harmadi, ST. Sp1, MT / Head of Sub-Dir. River, Lake & Reservoir and Natural Disaster Fighting, Directorate River, Lake & Reservoir(as Counterpart Coordinator)	1. Inform the Progress of Training Program (attendance of Full Time Counterpart) 2. Discuss about data information (River Code), the system used, exchanging information & the format	Mr. Heishi Mr. Usui Ms. Novita
16	3-Jul-08	<u>DPU DKI Jakarta</u> 1. Ir. Tri Djoko S.M, ME / Section Head Water Res.Dev., Sub-Agency Technical Guidance (as Counterpart) 2. Ir. Maman Suparman,ME / Section Head of Maintenance&Water Control, Sub-Agency Water Resources Development (as Counterpart)	1. Ask 3 Municipalities to prepare detail / complete data of Pluit catchment area 2. Ask which bottle neck bridge (river) should be modeled 3. Ask information about the operation of gate & pump	Mr. Heishi Ms. Novita
17	7-Jul-08	<u>Departemen PU, Dir. River, Lake and Reservoir</u> Drs. Harmadi, ST. Sp1, MT. / Head of Sub-Dir. River, Lake & Reservoir and Natural Disaster Fighting, Directorate River, Lake & Reservoir (as Counterpart Coordinator)	1. Clarify about warning letter to Full Time CP (which intended address to the Head of Section/ Director instead of individually) 2. Inform the meeting with Bina Program, Data Information about River Code/ Database 3. Ask Department to discuss & work together w/ BBWS about additional	Mr. Heishi Mr.Usui Ms. Novita

	日時	会議場所/ 接触相手	議題	JICA 専門家
			information needed for river database	
18	8-Jul-08	<u>Setia Budi Barat Pump Station</u> Ir. Maman Suparman / Section Head of Maintenance & Water Control, Sub-Agency of Water Resources Development (as Counterpart)	1. Ask the Agency to install staff gauge there 2. Ask the BM which used for the installation 3. Discuss the format of Pump Operation & Maintenance record 4. Ask As Built Drawing of several gates (Manggarai, Karet, etc)	Mr. Heishi Ms. Novita
19	9-Jul-08	<u>Departmen PU</u> Mrs. Ida Ayu Gede mirah / Staff of Management of Provincial Spatial Planning Section (as Counterpart)	Ask to revise the A2A3 form	Mr. Kusakabe Mrs. Anisa
20	11-Jul-08	<u>BBWS Ciliwung-Cisadane</u> Mr. Bastari, M.Eng / Section Head of Planning, BBWS Cil-Cis (as Counterpart)	1. Discuss River Database (based on information from Bina Program) 2. Ask Engineer/ staff to work together in making database 3. Ask As Built Drawing (particularly improvement portion) and to do resurvey due to improvement 4. Ask Structure Organization of BBWS Cil-Cis (New Structure)	Mr. Heishi Ms. Novita
21	15-Jul-08	<u>DPU DKI Jakarta</u> Ir. Maman Suparman, ME / Section Head of Maintenance & Water Control, Sub-Agency of Water Resources Development (as Counterpart)	1. Ask Water Level Record from 1992-2008 (found only from year 2004, hard copy) 2. Ask Flooding report to Governor (found only January-February 2007) 3. Discuss about flooding area/over flow around Ciliwung River	Mr. Usui Mrs. Anisa
22	7-Aug-08	<u>Departmen PU</u> Ir. Widagdo Dipl. HE / Director of River, Lake and Reservoir, DG. Water Resources (as Steering Committee)	1. Explain the project (including the counterpart member and activity also the output of Cideng & Pluit Report) 2. Inform about Counterpart Progress Meeting (the Director wants to invite the project from World Bank) 3. Recommendation : <i>Mr. Heishi</i> : It is better to collect/ have good quality data and to analyze the phenomenon instead of using computer software or complicated model only <i>Mr. Widagdo</i> : Dissemination of flood damages and flood mitigation to the inhabitants	Mr. Heishi Mr. Kusakabe Mr. Usui Ms. Novita
23	7-Aug-08	<u>DPU DKI Jakarta</u> 1. Ir. Maman Suparman / Section Head of Maintenance & Water Control, Sub-Agency of Water Res Dev (as Counterpart) 2. Mr. Eko B. Santoso / Staff of Maintenance & Water Control, Sub-Agency Water Res. Dev. (FT CP) 3. Ir. Tri Djoko / Section Head Water Control, Sub-Agency Technical Guidance Water Resources (as Counterpart)	1. Discuss the recording form for O&M (Daily pump operation record & mechanical condition report) 2. Confirm the beginning (0 point) of Ciliwung River and Cideng River 3. Mr. Tri Djoko explain and ask some information about their project of Halim Reservoir (using HEC-RAS) 4. Inform the plan of Counterpart Progress Meeting which will be held on August 21 or 22, 2008	Mr. Heishi Ms. Novita
24	11-Aug-08	<u>DPU DKI Jakarta</u> 1. Ir. Maman Suparman / Section Head of	1. Define the river names in DKI Jurisdiction	Mr. Heishi Ms. Novita

	日時	会議場所/ 接触相手	議題	JICA 専門家
		Maintenance & Water Control, Sub-Agency of Water Res Dev (as Counterpart) 2. Eko B. Santoso / Staff of Maintenance & Water Control, Sub-Agency Water Res. Dev. (FT CP) 3. Tri Djoko / Section Head Water Control, Sub-Agency Technical Guidance Water Resources (as Counterpart)	2. Distribute the invitation letter of 21th August meeting	
25	22-Sep-08	<u>Departmen PU</u> Drs. Harmadi, ST. Sp1, MT./ Head of Sub-Dir. River, Lake & Reservoir and Natural Disaster Fighting, Dir. River, Lake & Reservoir (as Counterpart Coordinator)	1. Inform the new members (Mr. Watanabe & Mr. Shingu) 2. Inform the workshop (on late of November) about "Run-Off Control" 3. Complain about the broken ceiling in the office (in one of the room)	Mr. Kusakabe Ms. Novita
26	23-Sep-08	<u>Departmen PU (Director of River, Lake, and Reservoir's place)</u> Ir. Widagdo / Director of River, Lake and Reservoir, DG. Water Resources	1. Introduce the new members (Mr. Watanabe & Mr. Shingu) 2. Request to fill the A1 Form (from Ms.Hiraoka-JICA)	Mr. Kusakabe Mr. Watanabe Mr. Shingu Mr. Yabe Ms. Hiraoka
27	26-Sep-08	<u>DPU DKI Jakarta</u> 1. Ir. Maman Suparman, ME / Section Head of Maintenance & Water Control, Sub-Agency Water Res. Dev. 2. Ir. Dudi Gardesi A., MUM / Section Head Restoration of Water Pollution, Sub-Agency Environmental Technique & Infrastructure Management	1. Courtesy call 2. Introducing new members (Mr. Watanabe & Mr. Shingu) 3. Ask the Main Duty and Function of the Counterpart, also the Organization Structure of Public Works Agency	Mr. Watanabe Mr. Shingu Mr. Kusakabe Ms. Novita
28	10-Oct-08	<u>DPU DKI Jakarta</u> 1. Ir. Fakhurrrazi / Head Sub-Agency of Technical Guidance of Water Resources Development 2. Ir. Maman Suparman, ME / Section Head of Maintenance & Water Control, Sub-Agency Water Res. Dev. 3. Ika Agustin Ningrum, ST / Staff of Technical Guidance of Water Resources (FT CP) 4. Dwi Murti Nuraili, MT / Staff of Technical Guidance of Water Resources (FT CP) 5. Purwanti Suryandari, ST / Staff of Technical Guidance of Water Resources (FT CP)	1. Introduction new member and new facilitator 2. Report the progress of full time CP (submit the material of their presentation in last August 21th, meeting) 3. Confirmation about the next activity for full time CP and ask the Head of Sub-Agency to support the staffs to come continuously to the project office in Department (since their Section Heads were changed) 4. Ask the condition of Early Warning System in DPU DKI (contact person: Eko Sulistyo, Bina Pogram)	Mr. Shingu Mr. Usui Mr. Kusakabe Mr. Sarwono Ms. Novita
29	13-Oct-08	<u>Departemen PU, Dit. River, Lake & Reservoir</u> Drs. Harmadi / Head of Sub-Dir. River, Lake & Reservoir and Natural Disaster Fighting, PU Department (coordinator of counterpart)	1. Explanation on Seminar 2. Confirm DG for the fix date of Seminar and to open the seminar	Mr. Kusakabe Mr. Usui Mr. Shingu Mr. Sarwono
30	15-Oct-08	<u>Departmen PU Meeting Room of Dit. River, Lake & Reservoir</u> 1. Mr. Andi / Staff of Controlling Water Resources Management (FT CP) 2. Ms. Ayu / Staff of Hydrology & Water Quality (FT CP)	1. Introducing new member and facilitator 2. Explanation of the 5th activities which are going to be conducted 3. Explanation the importance of Pluit Reservoir as flood controller in Jakarta	Mr. Shingu Mr. Usui Mr. Sarwono Ms. Novita

	日時	会議場所/ 接触相手	議題	JICA 専門家
		3. Mrs. Ambar / Staff of Sub-Dir. Policy and Strategy (FT CP)	4. Discuss the expectations of JICA Expert Team and Full Time CP for the success of technology and knowledge transferring	
31	20-Oct-08	<u>Departmen PU, Dit. River, Lake and Reservoir</u> Drs. Harmadi / Head of Sub-Dir. River, Lake & Reservoir and Natural Disaster Fighting, PU Det. (also as Coordinator Counterpart)	1. Waiting for reply from DG 2. Confirmation about the status of Mrs. Ineke as counterpart	Mr. Kusakabe Mr. Sarwono
32	31-Oct-08	<u>DPU DKI Jakarta</u> 1. Mr. Hendry / Staff of Maintenance&Water Control, Sub-Agency of WRD 2. Ms. Ika / Staff of Technical Guidance of Water Resources (FT CP) 3. Ms. Dwimurti / Staff of Technical Guidance of Water Resources (FT CP)	1. Introduce new Deputy Leader and Facilitator 2. Explained about the project and the progress 3. Asking to send the full time counterpart to the office 4. Inform the Seminar Program	Mr. Shingu Mr. Sarwono Ms. Novita
33	18-Nov-08	<u>Pluit Pump Station, Cideng Pump Station, Melati Pump Station</u> 1. Ir. Widagdo / Director of River, Lake and Reservoir 2. Drs. Harmadi / Head of Sub-Dit. O&M and Natural Disaster Fighting 3. Mr. Subarjo / Head of Section of Natural Disaster Fighting 4. Mr. Hendry / Staff of Maintenance & Water Control, Sub-Agency of WRD 5. Mr. Yos / Staff of Maintenance & Water Control, Sub-Agency of WRD	Site Inspection to Pump Stations	Mr. Shingu Mr. Usui Mr. Kusakabe Mr. Sarwono
34	4-Dec-08	<u>Grand Melia Hotel</u> 1. All counterpart members 2. Steering Committee 3. JICA 4. Yachiyo 5. Related Agencies	Seminar on Flood Mitigation in JABODETABEK by The Institutional Project for Flood Management in JABODETABEK (JICA-MPW Technical Cooperation Project)	All members of Project Team
35	9-11 Dec 08	<u>Hotel Seruni, Cisarua Bogor</u> Drs. Harmadi, ST. Sp1, MT. / Head of Sub-Dir. River, Lake & Reservoir and Natural Disaster Fighting, Dit. River, Lake &Reservoir (also as Coordinator Counterpart)	Attend the Workshop "Manual Operasi dan Pemeliharaan Sungai" (Workshop Counterparting for Flood Management) which held by Dit. River, Lake and Reservoir, DG. Water Resources	Mr. Kusakabe Mr. Usui Ms. Novita
36	6-Jan-09	<u>Departmen PU, Dit. River, Lake and Reservoir</u> Ir. Widagdo, Dipl.HE / Director of River, Lake and Reservoir	Consultation on Coordination Team (follow-up of the Seminar)	Mr. Watanabe Mr. Kusakabe Mr. Sarwono
37	6-Jan-09	<u>Secretariat of Dewan SDA</u> Ir. Imam Anshori / Secretary of National Water Resources Council of Water Resources Management	Consultation on Coordination Team (follow-up of the Seminar)	Mr. Watanabe Mr. Kusakabe Mr. Sarwono
38	8-Jan-09	<u>Directorate Bina PSDA</u> Ir. Sugiyanto / Director of Bina PSDA	Consultation on Coordination Team (follow-up of the Seminar) of TKPSDA WS 6 Ci	Mr. Watanabe Mr. Kusakabe Mr. Sarwono Ir. Sulad Sriharto Mrs.Nurwidiati

	日時	会議場所/ 接触相手	議題	JICA 専門家
39	13-Jan-09	<u>BBWS Ciliwung-Cisadane</u> 1. Ir. Bastari, M.Eng. / Section Head of Planning, BBWS CC 2. Drs. Prayitno, MM / Head of Sub-Program of General Affair & Employee Sector, BBWS CC	1. Courtesy call (introducing Mr. Watanabe as new Team Leader) 2. Explanation the importance of the establishment of TKSPDA (Tim Koordinasi Pengelolaan Sumber Daya Air/ Coordination Team of Water Resources Management) in inter-provincials river basin 3. Checking the telemetry unit	Mr. Watanabe Mr. Kusakabe Mr. Sarwono Ms. Novita
40	20-Jan-09	<u>Dinas SDA & P Banten Province</u> 1. Endar Margono, ME / Secretary of the Agency 2. Drs. Suwanda, MT / Head of Technology Sector 3. Mr. Benny Benyamin / Head of River Sector 4. Mr. Djoko Suryanto, ME / Head of Balai PSDA Cidurian-Cisadane 5. Mr. H. Sumiarsa, ATP / Head of Balai PSDA Cijung-Cidanau	1. Discussion about flood management in Banten Province (the cause, the counter-measures had been conducted, the problem of limited budget, etc) 2. Explanation the importance of the establishment of TKSPDA (Coordination Team of Water Resources Management) in Inter-Provincials River Basin 3. Inform that the project will support and assist the activity of TKPSDA (in flood management) until 2010. 4. Ask the Secretary of Agency to encourage the staffs to involve in the project (as counterpart)	Mr. Watanabe Mr. Kusakabe Mr. Sarwono Ms. Novita
41	20-Jan-09	<u>BAPPEDA Banten Province</u> 1. Ir. Widodo Hadi, Sp. / Head of BAPPEDA Banten Province 2. Mr. Khairudin, ST., M.Si./ Head of Sub-Sector of Regional Infrastructure	1. Explanation the importance of the establishment of TKSPDA (Coordination Team of Water Resources Management) in Inter-Provincials River Basin 2. Inform that the project will support and assist the activity of TKPSDA (in flood management) until 2010. 3. Ask the Head of Bappeda to encourage their staff to involve in the project (as counterpart)	Mr. Watanabe Mr. Kusakabe Mr. Sarwono Ms. Novita
42	21-Jan-09	<u>Dinas PSDA West Java Province</u> 1. Mr. Iding Srihadi Adiwinata, ME / Head of Water Resources Agency of West Java Province 2. Mr. Endang Kusnadi, ST., MT. / Head of Operation and Maintenance Sector	1. Discussion about flood management in West Java Province 2. Explanation the importance of the establishment of TKSPDA (Coordination Team of Water Resources Management) in Inter-Provincials River Basin 3. Inform that the project will support and assist the activity of TKPSDA (in flood management) until 2010. 4. Ask the Head of Water Resources Agency to encourage their staff to involve in the project (as counterpart)	Mr. Watanabe Mr. Sarwono Ms. Novita
43	21-Jan-09	<u>BAPPEDA West Java Province</u> 1. Prof. Dr. Ir. Denny Juanda, DEA / Head of BAPPEDA of West Java Province 2. Ir. Dicky Saromi, MSc. / Head of Structural Sector 3. Ms. Linda Al Amin, SH., MM / Head of Sub-Sector of Regional Infrastructure	1. Discussion about flood management in West Java Province 2. Explanation the importance of the establishment of TKSPDA (Coordination Team of Water Resources Management) in Inter-Provincials River Basin 3. Inform that the project will support and assist the activity of TKPSDA (in flood management) until 2010.	Mr. Watanabe Mr. Sarwono Ms. Novita

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			4. Ask the Head of Bappeda to encourage their staff to involve in the project (as counterpart)	
44	22-Jan-09	<u>DPU DKI Jakarta</u> Ir. Budi Widiatoro, MSi / Head Agency of Public Works of DKI Jakarta	1. Discussion about flood management in DKI Jakarta Province 2. Explanation the importance of the establishment of TKSPDA (Coordination Team of Water Resources Management) in Inter-Provincials River Basin 3. Inform that the project will support and assist the activity of TKPSDA (in flood management) until 2010. 4. Report the inspection of Pluit Pump Station and Reservoir on January 14th, 2009 which conducted by the project 5. Ask the Head Agency to encourage the staffs of agency to involve in the project as counterpart.	Mr. Watanabe Mr. Usui Mr. Sarwono Ms. Novita
45	22-Jan-09	BAPPEDA DKI Jakarta 1. Mr. Andi Baso / Head of City Facility & Infrastructure and Environmental Sector 2. Ir. Hindradman / Head of Sub-Sector of Water Facility and Utility 3. Ir. Benny Agus Chandra / Head of Sub-Sector of Spatial Planning & Building System 4. Mr. Rully Irzal / Staff sub-sector of Communication, City Facility and Infrastructure and Environmental Sector	1. Courtesy call and brief explanation about the project (that BAPPEDA is also the counterpart of the project based on the Decree of Public Works Minister & Decree of Water Resources Director General) 2. Discussion about flood management in DKI Jakarta 3. Explanation the importance of the establishment of TKSPDA in Inter-Provincials River Basin 4. Inform that the project will support and assist the activity of TKPSDA (in flood management) until 2010. 5. Team Leaser asks to meet the Head of BAPPEDA DKI Jakarta	Mr. Watanabe Mr. Usui Mr. Sarwono Ms. Novita
46	27-Jan-09	<u>BAPPEDA DKI Jakarta</u> 1. Ir. Nurfakih Wirawan, MSp. / Head of BAPPEDA DKI Jakarta 2. Mr. Rully Irzal / Staff sub-sector of Communication, City Facility-Infrastructure and Environmental Sector	1. Explanation the importance of the establishment of TKPSDA WS Lintas Provinsi and ask the candidate for selection team from DKI Jakarta 2. Confirm that the Institutional Revitalization Project will support and assist the activity of TKPSDA WS Lintas Provinsi 3. Report the inspection of Pluit Pump Station and Reservoir on January 14th, 2009 which was conducted by the project.	Mr. Watanabe Mr. Kusakabe Mr. Usui Mr. Sarwono Ms. Novita
47	3-Feb-09	<u>Departmen PU, Dit. River, Lake and Reservoir</u> 1. Mr. Suhartono, ME / Head of Sub-Dit. O&M and Natural Disaster Fighting 2. Ir. Subarjo / Section Head of East Region, Dit. River, Lake and Reservoir	1. Explanation the importance of the establishment of TKPSDA WS Lintas Provinsi 2. Confirmation the planning of comparison study to Bengawan Solo regarding the establishment of TKPSDA WS 6 Ci 3. Report the inspection of Pluit Pump Station and Reservoir on January 14th, 2009 which was conducted by the project.	Mr. Kusakabe Mr. Usui Mr. Sarwono Ms. Novita
48	9-Feb-09	<u>BBWS B. Solo, Surakarta</u> 1. Ir. Graita Sutadi, MSc. / Head of BBWS B. Solo	1. Introduction on IRPFM in Jabodetabek (JICA Project) 2. Discussion on TKPSDA WS B. Solo	Mr. Kusakabe Mr. Shingu Mr. Sarwono

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		2. Ir. Susanto/ Section Head of Data & Information, BBWS B. Solo	3. Discussion on Secretariat of TKPSDA (experience, recommendation)	Mrs.Nur Widayati
49	9-Feb-09	<u>Branch Office, PJT 1 Surakarta</u> Ir. Erwin Budoyo, MEng. / Branch Manager PJT 1 WS B. Solo	1. Introduction on IRPFM in Jabodetabek (JICA Project) 2. Discussion on Gajah Mungkur Dam	Mr. Kusakabe Mr. Shingu Mr. Sarwono Mrs.Nur Widayati
50	10-Feb-09	<u>Dinas SDA, Central Jawa</u> Ir. FX Pri Joewo Guntoro, DplHE, Msi / Head of Development and Technical Guidance Sector	1. Introduction on IRPFM in Jabodetabek (JICA Project) 2. Discussion on TKPSDA WS B. Solo, recommendation	Mr. Kusakabe Mr. Shingu Mr. Sarwono
51	11-Feb-09	<u>BAPPEDA, Central Jawa</u> Ir. Boedi Setyana, MSI / Head of Regional Infrastructure Sector	1. Introduction on IRPFM in Jabodetabek (JICA Project) 2. Discussion on TKPSDA WS B. Solo, recommendation	Mr. Kusakabe Mr. Shingu Mr. Sarwono
52	11-Feb-09	<u>BWRM Project, Central Jawa</u> 1. Ir. Ghozi / Co Team Leader, BWRM Central Jawa 2. Ir. Edy Riswanto, DiplHE / River Management Specialist 3. Ir. Puguh / Institutional Specialist	1. Introduction on IRPFM in Jabodetabek (JICA Project) 2. Discussion on Dewan SDA Jawa Tengah	Mr. Kusakabe Mr. Shingu Mr. Sarwono
53	18-Feb-09	<u>Dept. PU, Meeting Room</u> 1.Mr. Arimoto Takashiro / Senior Advisor of PT. JABABEKA Tbk. 2. Mr. Kukuh Sulaksono / Senior Manager of PT. JABABEKA Tbk. 3. Mr. Rachmat Yulianto / Estate Management Senior of PT. JABABEKA Tbk. 4. Mr. Ali / Staff of JABABEKA Tbk.	1. Explain the result of site inspection (The problem is no improvement in downstream which cause backwater to Jababeka area. So, it needs excavation or river widening) 2. The report (result of inspection was already given to the Director of River, Lake & Reservoir and The embassy of Japanese) 3. Recommend PT. JABABEKA to ask for assistance to BBWS Ciliwung-Cisadane	Mr. Shingu Mr. Usui Mr. Kusakabe MR. Sarwono Ms. Novita
54	19-Feb-09	<u>Water Gate of Manggarai, WG of Istiqlal/ Capitol, WG of Jembatan Merah, WG of Tangki, WG of Pasar Ikan, WG of Marina</u> 1. Eko B. Santoso / Staff of Flood Control Facility & Infrastructure Maintenance Section, Public Works Agency 2. Operators (in each gate)	Gate Inspection to know the operation of gate (operation rule, size of the gate, relation the gates, condition of the gate, maintenance, and the problem in operation)	Mr.Shingu Mr. Kusakabe Mr. Sarwono Ms. Novita
55	20-Feb-09	<u>Water Gate of Siantar, WG of Sogo, WG of Duri</u> 1. Eko B. Santoso / Staff of Flood Control Facility & Infrastructure Maintenance Section, Public Works Agency 2. Operators (in each gate)	Gate Inspection to know the operation of gate (operation rule, size of the gate, relation the gates, condition of the gate, maintenance, and the problem in operation)	Mr.Shingu Mr. Kusakabe Mr. Sarwono Ms. Novita
56	3-Mar-09	<u>Departmen PU</u> 1. Suhartono / Head of Sub-Dit. O&M and Natural Disaster Fighting, Dit. River, Lake & Reservoir 2. Subardjo / Section Head of East / Region, Sub - Dit. O&M and Natural Disaster Fighting 3. Firman Hutapea / Head of Sub-Dit. O&M and Natural Disaster Fighting, Dit. River, Lake & Res.	Progress Report Meeting 3 (Full Time Counterpart) which discuss: *the explanation of project and overall project *Progress of 5th activities *Meeting agenda on March 13th, 2009 (Topics of presentation which are going to be presented by the full time counterpart members)	Mr. Watanabe Mr. Shingu Mr. Usui Mr. Kusakabe Mr. Sarwono Ms. Novita Ms. Dian Ms. Anisa

	日時	会議場所/ 接触相手	議題	JICA 専門家
		4. Ambar / Staff of Sub-Dit. Policy & Strategy, Dit. Programming (Full Time CP) 5. Ayu Suci / Staff of Sub-Dit. Hydrology, Dit. Water Res. Management (Full Time CP) 6. Juniferanne / Staff of Sub-Dit. Controlling of Water Res. Management, Dit. Water Res. Management (Full Time CP) 7. Andi / Staff of Sub-Dit. Controlling of Water Res. Management, Dit. Water Res. Management 8. Lufiandi / Staff of Sub-Dit. O&M and Natural Disaster Fighting, Dit. River, Lake & Reservoir 9. Taufan / Staff of Sub-Dit. O&M and Natural Disaster Fighting, Dit. River, Lake & Reservoir		
57	4-Mar-09	<u>DPU DKI</u> 1. Eko B. Santoso / Staff of Maintenance of Flood Controller Facility & Infrastructure Section, Public Works Agency 2. Dwi Murti, MT / Staff of Maintenance of Flood Controller Facility & Infrastructure Section, Public Works Agency	1. Give materials delivered in CP Meeting (Progress Report 3) on March 3, 2009 and give brief explanation 2. Send the invitation letter for Progress Report 3 Meeting with Steering Committee and ask the FT CP from DPU DKI to have presentation in that meeting 3. Discussion about Pluit Pump Station latest condition	Mr. Watanabe Mr. Shingu Mr. Sarwono Ms. Novita
58	5-Mar-09	<u>Project Office, Departemen PU</u> 1. Ambar / Staff of Sub-Dit. Policy & Strategy, Dit. Programming (Full Time CP) 2. Juniferanne / Staff of Sub-Dit. Controlling of Water Res. Management, Dit. Water Res. Management (Full Time CP) 3. Ayu Suci / Staff of Sub-Dit. Hydrology, Dit. Water Res. Management (Full Time CP)	Discussion about the materials will be presented in Progress Report 3 (with steering committee)	Mr. Shingu Mr. Sarwono
59	6-Mar-09	<u>Project Office, Departemen PU</u> 1. Heriantono Waluyadi / Principal Supervisor of Situ Rehabilitation (Full Time CP) 2. Andi / Staff of Sub-Dit. Controlling of Water Res. Management, Dit. Water Res. Management	Discussion about the materials will be presented in Progress Report 3 (with steering committee)	Mr. Usui Mr. Sarwono
60	6-Mar-09	<u>Spatial Planning Building, 3rd fl</u> Ir. Firman Mulia Hutapea, Head of Sub-dit. Urban and Metropolitan Spatial Planning, DG. Spatial Planning	1. Courtesy call 2. Discussion about seminar material (JABODETABEK-PUNJUR spatial planning)	Mr. Kusakabe Mrs. Anisa
61	13-Mar-09	<u>Meeting Room Jatiluhur, Departemen PU</u> 1. Ir. Sugiyanto, Director of Water Resources Management, 2. Ir. Widagdo, Director of River, Lake and Reservoir, 3. Ir. Suhartono, Head of Sub-Dit.	Joint Coordination Committee Meeting <ul style="list-style-type: none"> • Presentation of Progress Report 3 • Conclusion of workshop on Dec 4th, 2008 	Mr. Watanabe Mr. Kusakabe Mr. Shingu Mr. Sarwono Ms. Novita Ms. Dian

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		Operation & Maintenance & Natural Disaster Fighting, 4. Ir. Eko Djuli Sasongko, Head of Sub-Dit Building Codes, DG. Human Settlement 5. Ir. Firman Hutapea, Head of Sub-Dit. Urban & Metropolitan Spatial Planning, DG. Spatial Planning 6. Representative from Planning & Development Board of DKI Jakarta Province 7. Representatives from Planning & Development Board of Banten Province 8. Representatives Agency of Water Resources Management of West Java Province 9. Full Time Counterparts 10. Representatives from JICA Indonesia (in total 31 participants)		
62	27-Mar-09	<u>Situ Gintung</u> 1. Djoko Kirmanto, Minister of Public Works 2. Iwan Nursyirwan, DG. Water Resources 3. Ir. Widagdo, Director of River, Lake and Reservoir_	1. Inform the Minister that Pesanggrahan catchment area is included in Project area of The Institutional Revitalization Project for Flood Management in Jabodetabek (JICA Grant Aid Project) 2. The Minister ask JICA to consider any assistance due to the disaster	Mr. Kusakabe Mr. Baba Mr. Sarwono
63	27-Mar-09	<u>Directorate of River, Lake and Reservoir</u> Widagdo, Director of River, Lake & Reservoir	Exchange of information and ideas for the rehabilitation of Situ Gintung	Mr. Kusakabe Mr. Baba Mr. Ueno Mrs. Hiraoka Mr. Sarwono
64	3-Apr-09	<u>DPU DKI Jakarta</u> 1. Budi Widianor, Head of DPU DKI Jakarta 2. Tarjuki, MT, Head of Water Resources Maintenance Sector	1. Answering the request from DPU DKI Jakarta for assistance of temporary repair of Pluit Pumping Station (since JICA may assist for the permanent work) 2. Confirmation the accuracy of rainfall data which published by DPU DKI Jakarta website	Mr. Kusakabe Mr. Baba Mrs. Hiraoka Mr. Sarwono Ms. Novita
64	13-Apr-09	<u>DPU DKI Jakarta</u> 1. Tarjuki, MT, Head of Water Resources Maintenance Sector 2. Ir. Budi Mulyanto, Head of Maintenance Section	1. Courtesy call 2. Inspection of Pluit Pump House	Mr. Oyamada Mr. Sarwono
66	14-Apr-09	<u>DPU DKI Jakarta</u> Mustajab, ST, Staff of Planning on Water Resources Management Section	1. Ask data of As-built drawing (cross-section) for 3 pump stations: Pluit, Cideng, Melati 2. Give form of Pluit Pump Station (detail information) to be fulfilled by Maintenance Section 3. Send invitation letter to the Head of agency, Head of Water Resources Maintenance Sector and Head of Flood Control Facility & Infrastructure Section	Ms. Novita
67	16-Apr-09	<u>DPU DKI Jakarta</u> Eko Budi Santoso, Staff of Flood Control Facility & Infrastructure Section	1. Ask data of As-built drawing (complete) of Pluit Pump Station 2. Ask the filled form which was given on	Ms. Novita

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			April 14, 2009 to the Maintenance Section	
68	11-May-09	<u>Directorate of river, Lake and Reservoir</u> 1. Ir. Widagdo, Director of River, Lake & Res. 2. Suhartono, ME, Head of Sub-Dit. O&M and Natural Disaster Fighting	Confirmation of site visit to Pluit Pumping Station on May, 13th 2009	Mr. Sarwono
69	11-May-09	<u>DPU DKI Jakarta</u> 1. Budi Widianor, Head of DPU DKI Jakarta 2. Tarjuki, MT, Head of Water Resources Maintenance Sector 3. Ir. Budi Mulyanto, Head of Maintenance Section	Confirmation of site visit to Pluit Pumping Station on May, 13th 2009	Mr. Sarwono
70	13-May-09	<u>Japanese Embassy & Pluit Pumping Station</u> 1. Makoto IYORI, Japan Embassy 2. Chikako SADO, Japan Embassy 3. Kiichi TOMIYA, JICA 4. Kanako HIRAOKA, JICA 5. Budi, Widianoro, Head of DPU DKI Jakarta 6. Tarjuki, MT, Head of Water Resources Maintenance Sector 7. Ir. Fakhurrazi, Head of Technical Guidance of Water Resources Development Sector	1. Presentation by Mr. Hitoshi BABA 2. Explanation by Mr. Widagdo and Mr. Budi Widianoro	Mr. Kusakabe Mr. Baba Mr. Sarwono
71	19-May-09	<u>Office of Secretariat of National Water Resources Council (Dewan Nasional SDA)</u> Ir. Imam Anshori, Secretary of National Water Resources Council	1. Inform Project 6th activities 2. Discussion of run-off control, implementation of the coming seminar and expected input for TKPSDA 6 C's	Mr. Watanabe Mr. Shingu Mr. Kusakabe Mr. Sarwono
72	20-May-09	<u>DPU DKI Jakarta</u> 1. Budi Widianor, Head of DPU DKI Jakarta 2. Tarjuki, MT, Head of Water Resources Maintenance Sector 3. Herning, ST, Head of Technical Guidance of Water Resources Development Section <u>Office of Director of River, Lake and Reservoir</u> Ir. Widagdo, Dipl. HE	1. Inform the schedule of Project 6th activities: On the Job Training Program, Workshop, Seminar and visit of JICA Mission Evaluation 2. Discussion about the plan of Pluit Pumping Station Reconstruction. JICA Experts recommend to apply Emergency Operation Rule in Pluit Pumping Station during the work in coming raining season.	Mr. Watanabe MR. Shingu Mr. Kusakabe Mr. Sarwono Ms. Novita
73	22-May-09	<u>Jatiluhur Meeting Room, Departmen PU</u> 1. Ir. Widgado, Dipl. HE, Director of River, Lake & Reservoir 2. Suhartono, ME, Head of Sub-dit. O&M and Natural Disaster Fighting 3. Ir. Subardjo, Head of East Region Section, Dit.O&M and Natural Disaster Fighting 4. Ir. Firman Hutapea Head of Sub-dit. Urban and Metropolitan Spatial Planning, DG. Spatial Planning 5. Ir. Leonarda, Head of Sub-dit. Hydrology	Counterpart Meeting: Confirmation about Project 6th Activity as the last stage In this stage there are several important activities will be conducted, such as: <ul style="list-style-type: none"> On the Job Training will be held 2 times in a week to prepare the final draft of manuals and guideline. Counterpart Meeting will be held 2 times a month to discuss the progress of OJT Program Workshop where FT/CP's will make presentation 	Mr. Shingu Mr. Kusakabe Mr. Sarwono Ms. Novita Ms. Destri Ms. Dian Mrs. Anisa

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		6. Ananta Bambang, Head of Sub-dit. Institutional 7. Teguh Triyono, Head of O&M Section, BBWS Cil-Cis 8. Full Time Counterparts	<ul style="list-style-type: none"> Seminar 	
74	2-June-09	<u>DPU DKI Jakarta</u> Heria Suwandi, ST Staff of Technical Guidance of Water Resources Development Section also as FT CP	<ol style="list-style-type: none"> 1. Explain On the Job Training Program 2. Give module of training 3. Ask Mr. Heria to attend the next training 	Mr. Kusakabe Mrs. Anisa
75	26-June-09	<u>Ruang Sidang Gajah Mungkur, Departmen PU</u> 1. Ir. Widgado, Dipl. HE, Director of River, Lake & Reservoir 2. Suhartono, ME, Head of Sub-dit. O&M and Natural Disaster Fighting 3. Ir. Subardjo, Head of East Region Section, Dit.O&M and Natural Disaster Fighting 4. Ir. Surya Dewanto, Head of West Region Section, Dit.O&M and Natural Disaster Fighting 5. Ir. Slamet Budi Santoso, Head of Sub-dit.Technical Planning 6. Ir. Eko Djuli Sasongko, Head of Sub-dit. Building Management, DG. Human Settlement 7. Lufiandi, sT, Staff of Sub-dit. O&M and Natural Disaster Fighting 8. Sutisna, ST, Sub-dit. O&M and Natural Disaster Fighting 9. Full Time Counterparts	<p>Counterpart Coordination Meeting</p> <p>Agenda:</p> <p>A. Progress Activity</p> <ul style="list-style-type: none"> * Activity Report & Schedule * Progress of each manual <p>B. Agenda of Workshop on Flood Mitigation in Jabodetabek</p> <ul style="list-style-type: none"> * Agenda * Resource Person * Invitation list * Preparation & other material <p>C. In charge of Agency and Division for transferring data and equipment</p> <p>D. Progress the establishment of TKPSDA</p>	Mr. Shingu Mr. Kusakabe Mr. Usui Mr. Yonekura Mr. Sato Mr. Imagawa
76	6-July-09	<u>DPU DKI Jakarta</u> Budi Widiantoro, Head of DPU DKI Jakarta	<ol style="list-style-type: none"> 1. Confirmation that the reconstruction of East Pluit Pump Station will be started on Oct 2009 2. Recommendation that JICA will conduct survey to avoid delaying schedule 3. Submit the copy of proposal form sent by Departmen PU to BAPPENAS as a reference 4. Confirmation about dredging & DED after dredging of Pluit Reservoir 5. Confirmation about the schedule of resettlement 	Mr. Shingu Mr. Kusakabe Ms. Hiraoka Mr. Sarwono Ms. Novita
77	13-July-09	<u>Regional Planning Development Board of Banten Province (BAPPEDA Banten)</u> Ir. Indro Sarwono, M.Sc., Head of Sub-Sector Spatial Planning and Regional Infrastructure <u>Water Resources & Settlement Agency of Banten (SDA & P Banten)</u> Ir. Bai Isakandar,, Head of River & Coastal Section	<p>Give invitation letters of workshop to the counterparts in BAPPEDA Banten and ask Mr. Indro Sarwono as resource person</p> <p>Give invitation letters of workshop to the counterparts in SDA & P Banten , BBWS Cidanau-Ciujung-Cidurian, Balai PSDA Ciujung-Ciliman, Balai PSDA Cidurian-Cisadane</p>	Ms. Novita Mr. Lufiandi
78	14-July-09	<u>Hotel Salak, Bogor</u> 1. Ir. Subardjo Head of East Region Section, Sub-dit.O&M and Natural	<ol style="list-style-type: none"> 1. Survey, booking and pay down payment hotel 2. Arrange the lay out of the function hall 	Mr. Shingu Mr. Sarwono Ms.Novita

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		Disaster Fighting 2. Lufiandi, sT, Staff of Sub-dit. O&M and Natural Disaster Fighting 3. Sutisna, ST, Sub-dit. O&M and Natural Disaster Fighting	3. Visit Balai PSDA Jawa Barat to inform about the workshop as the nearest PU office to Hotel Salak Bogor	
79	15-July-09	<u>Regional Planning Development Board of West Java Province (BAPPEDA Jawa Barat)</u> Ir. Eko Priastono , Head of Sub-Sector Spatial Planning and Environment <u>Water Resources Agency of West Java (Dinas SDA Jawa Barat)</u> Iding Srihadi, Head of Water Resources Agency	Give invitation letters of workshop to the counterparts in BAPPEDA Jawa Barat Give invitation letters of workshop to the counterparts in Dinas SDA Jawa Barat and ask Mr. Endang Kusnadi as resource person	Ms. Novita Mr. Lufiandi
80	22-July-09	<u>Office of Director River, Lake & Reservoir, Departmen PU</u> 1. Ir. Widagdo, Dipl. HE, Director of River, Lake & Reservoir 2. Ir. Subardjo Head of East Region Section, Dit.O&M and Natural Disaster Fighting 3. Lufiandi, sT, Staff of Sub-dit. O&M and Natural Disaster Fighting 4. Sutisna, ST, Sub-dit. O&M and Natural Disaster Fighting	Report the progress of workshop preparation, including: *invitation (list and distributin) * presenter and resource person * presentation materials (ppt and hardcopy) * agenda	
81	29-30 July-09	<u>Hotel Salak Bogor</u> 1. Ir. Widgado, Dipl. HE, Director of River, Lake & Reservoir 2. Suhartono, ME, Head of Sub-dit. O&M and Natural Disaster Fighting 3. Ir. Subardjo, Head of East Region Section, Dit.O&M and Natural Disaster Fighting 4. Ir. Surya Dewanto, Head of West Region Section Dit.O&M and Natural Disaster Fightng 5. Ir. Slamet Budi Santoso, Head of Sub-dit.Technical Planning 6. Ir. Leonarda, Head of Sub-dit. Hydrology 7. Ir. Eko Djuli Sasongko, Head of Sub-dit. Building Management, DG. Human Settlement 8. Lufiandi, sT, Staff of Sub-dit. O&M and Natural Disaster Fighting 9. Sutisna, ST, Sub-dit. O&M and Natural Disaster Fighting 10. Full Time Counterparts And other participants from related agencies	Workshop on Flood Mitigation in Jabodetabek a. Report & Objective of Workshop b. Flood Management & National Development Program Presentation and Discussion of 7 manuals & 1 guideline c. Conclusion of workshop	Mr. Shingu Mr. Kusakabe Mr. Usui Mr. Yonekura Mr. Sato Mr. Imagawa Project Staffs
82	15-Sep-09	<u>Spatial Planing Building</u> 1. Ir. Firman Hutapea Head of Sub-dit. Urban and Metropolitan Spatial Planning, DG. Spatial Planning	1. Inform about JICA Mission 2. Ask about activity related with run-off control	Mr. Kusakabe Mrs. Anisa

	日時	会議場所/ 接触相手	議題	JICA 専門家
		2. Pilas Agita, Staff of of Sub-dit. Urban and Metropolitan Spatial Planning, DG. Spatial Planning (also as FT CP)		
83	16-Sep-09	<u>City Spatial Planning Office (Dinas Tata Kota DKI Jakarta)</u> Mrs. Martatiningsih, Section Head in Dinas Tata Kota	Inform about JICA Mission	Mr. Kusakabe Mrs. Anisa
84	29-Sept-09	<u>Regional Planning Development Board of West Java Province (BAPPEDA Jawa Barat)</u> Ir. Eko Priastono , Head of Sub-Sector Saptial Planning and Environment <u>Water Resources Agency of West Java (Dinas SDA Jawa Barat)</u> Endang Kusnadi, Head of O&M Water Resources Sector <u>Spatial Planning and Settlement Agency of West Java (Dinas Tata Ruang dan Permukiman Jawa Barat)</u> Budi Budiman Wahyu, ST, Staff of Spatial Planning and Settlement Agency of West Java	Invite for Joint Coordination Meeting on Oct 7th, 2009 in Departemen PU Invite for Joint Coordination Meeting on Oct 7th, 2009 in Departemen PU Invite for Joint Coordination Meeting on Oct 7th, 2009 in Departemen PU	Ms. Novita Ms. Novita
85	30-Sep-09	<u>Regional Planning Development Board of Banten Province (BAPPEDA Banten)</u> Khairuddin, M. Si, Head of Sub-Sector Water_Resources Infrastructure <u>Water Resources & Settlement Agency of Banten (SDA & P Banten)</u> Ir. Bai Isakandar,, Head of River & Coastal Section <u>BBWS Cidanau-Ciujung-Cidurian</u> Iday, Staff of BBWS Cidanau-Ciujung-Cidurian	Invite for Joint Coordination Meeting on Oct 7th, 2009 in Departemen PU Invite for Joint Coordination Meeting on Oct 7th, 2009 in Departemen PU Invite for Joint Coordination Meeting on Oct 7th, 2009 in Departemen PU	Ms. Novita
86	1-Oct-09	<u>Office of DG. Water Resources</u> 1. Iwan Nursyirwan, DG. Water Resources 2. Ir. Widagdo, Dipl. HE, Director of River, Lake and Reservoir_	Courtesy call of JICA Evaluation Mission Team with DG. Water Resources and Director of River, Lake and Reservoir	Mr. Watanabe Mr. Shingu Mr. Kusakabe Mr. Tsukahara Mr. Kobayashi Ms. Akiko Mr. Sarwono
87	2-Oct-09	<u>1. Pluit Pumping Station</u> <u>2. Cideng Pumping Station</u> <u>3. Melati Pumping Station</u> <u>4. Manggarai Gate</u>	Field Survey with JICA Mission	Mr. Watanabe Mr. Shingu Mr. Kusakabe Mr. Tsukahara Mr. Kobayashi Ms. Akiko Mr. Sarwono Ms. Novita
88	7-Oct-09	<u>Ruang Sidang Jatiluhur, Departmen PU</u> 1.Widagdo, Dipl. HE, Director of River, Lake, and Reservoir, DG. Water	Joint Coordination Meeting and Signing of Minutes of Terminal Evaluation Report	Mr. Watanabe Mr. Shingu Mr. Kusakabe

	日時	会議場所/ 接触相手	議題	JICA 専門家
		Resources, as Project Manager 2. Ir. Widodo Hadi, SP, Head of Bappeda (Regional Planning and Development Board) Banten, as member of Coordination Team 3., Ir. Winarjono, Ces, MM, Head of Water Resources and Settlement Public Works Agency of Banten, as member of Coordination Team 4. Suhartono, ME, Head Sub-Dit. O&M and Natural Disaster Fighting, Dit. River, Lake, and Reservoir, DG. Water Resources, as Coordinator of Counterpart 5. Febri Iman Harta, ME Head of Sector Planning and O&M, BBWS Ciliwung-Cisadane, as Coordinator of flood control activity 6. Ir. Slamet Budi Santoso, Dipl. HE, Head of Sub-Dit. Technical Planning, Dit. River, Lake and Reservoir, as Coordinator of flood activity And other Counterparts (total 58 participants)		Mr. Tsukahara Mr. Kobayashi Ms. Akiko Mr. Sarwono Ms. Novita Ms. Dian Ms. Destri
89	22-Oct-09	<u>Departemen PU</u> Ir. Widagdo, Dipl. HE, Director of River, Lake and Reservoir <u>DPU DKI Jakarta</u> Tarjuki, MT, Head of Water Resources Maintenance Sector	Discussion the preparation of Seminar on Urban Flood Management on Nov, 23rd 2009 Inform about Seminar on Urban Flood Management on Nov, 23rd 2009	Mr. Shingu Mr. Kusakabe Mr. Sarwono Ms. Novita
90	23-Nov-10	<u>Grand Kemang Hotel</u> 1. Ir. Widgado, Dipl. HE, Director of River, Lake & Reservoir 2. Suhartono, ME, Head of Sub-dit. O&M and Natural Disaster Fighting 3. Ir. Subardjo, Head of East Region Section, Dit. O&M and Natural Disaster Fighting 4. Endar Margono, Secretary of Water Resources and Settlement Agency, 5. Arifin Kertayasa, Head Section of Lake and Reservoir from BBWS Citarum, 6. Eko Djuli Sasongko-Head of Sub-Dit. Building Codes, DG. Human Settlement, 7. Sulad Srihartono-Head Sub-Dit. of Controlling of Water Resources Management, 8. Budi Widianoro-Head of Public Works Agency of DKI Jakarta 9. Sri Apriatini Director of Spatial Planning Region II, DG. Spatial Planning. 10. Makoto IYORI, Counselor of Japan Embassy 11. Kiichi TOMIYA, Deputy Resident Representative of JICA Other Provinces and Regencies	Seminar on Urban Flood Management • Presentation • Panel Discussion	Mr. Shingu Mr. Kusakabe Mr. Baba Mr. Yonekura MR. Imagawa Project Staffs

	日時	会議場所/ 接触相手	議題	JICA 専門家
		Government Officers from related institutions_		
91	1-Dec-09	<u>Project Office, Departmen PU</u> Indonesian Engineers from BBWS Solo and ITB Bandung	Transfer of knowledge about Flood Inundation Analysis Model to support River Basin Organization (RBO) activity	Mr. Yonekura Mr. Sugimura
92	2-Dec-09	<u>BBWS Ciliwung-Cisadane</u> 1. Teguh Triyono, Head of O&M Section, 2. Heru Purnomo, Fucntional Officer, also as FT CP) Engineers from BBWS Cil-Cis	Simulation of Hydrometric Observation using current meter	Mr. Sarwono Mr. Laode
93	4-Dec-09	Meeting Room Biro Keuangan, Departemen PU 1. Ayu, Sub-dit. Hydrology & Water Quality 2. Fikri, BBWS Cil-Cis 3. Kiki, Sub-dit. O&M and Natural Disaster 4. Dwimurti, DPU DKI Jakarta 5. Ambar, Sub-dit. Policy & Strategy	On the Job Training (Discussion of Manuals & Guideline)	Mr. Shingu Mr. Yonekura Mr. Sarwono Ms. Novita
94	4-Dec-09	<u>Directorate River, Lake and Reservoir</u> 1. Ir. Widgado, Dipl. HE, Director of River, Lake & Reservoir 2. Ir. Subardjo, Head of East Region Section, Sub-dit. O&M and Natural Disaster Fighting 3. Lufiandi, ST, Staff of Sub-dit. O&M and Natural Disaster Fighting 4. Ir. Slamet Budi Santoso, Head of Sub-dit. Technical Planning 5. Budi Widianor, Head of DPU DKI Jakarta 6. Tarjuki, MT, Head of Water Resources Maintenance Sector	Meeting Reconstruction of Pluit Pumping Station	Mr. Shingu Mr. Sarwono Pluit Preparatory Team
95	10-Feb-2010	Meeting Room Biro Keuangan , Departemen PU 1. Heru P., BBWS Cil-Cis 2. Romelan, BBWS Cil-Cis 3. Sumarno, Sub-dit. Hydrology & Water Quality 4. Taufan, Sub-dit. O&M and Natural Disaster Fighting 5. Ambar, Sub-dit. Policy & Strategy 6. Pilas, Sub-dit. Spatial Planning Region II 7. Fikri, BBWS Cil-Cis 8. Dina, BBWS Cil-Cis 9. Lina, BBWS Cil-Cis 10. Ayu, Sub-dit. Hydrology & Water Quality	Full Time Counterpart Meeting: <ul style="list-style-type: none"> • Explanation of Project last activities • Discussion of finalization manuals and guideline 	Mr. Shingu Mr. Sarwono Ms. Novita
96	16-Feb-2010	<u>Situ Gintung Dam</u> 1. Ir. Anwar, Project Manager 2. Ir. Bambang Wiyono, PPK Pengembangan Konservasi & SDA, BBWS Cil-Cis 3. Contractor and Consultant 4. Fulltime Counterparts :	Site visit to Situ Gintung Reconstruction <ul style="list-style-type: none"> • Presentation by Project Manager • Discussion • Site survey 	Mr. Shingu Mr. Sarwono Ms. Novita

	日時	会議場所/ 接触相手	議題	JICA 専門家
		<ul style="list-style-type: none"> * Fikri, BBWS Cil-Cis * Heru Purnomo, BBWS Cil-Cis * Romelan, BBWS Cil-Cis * Hendra, Sub-dit. Technical Planning * Nila, Sub-dit. Implementer of West Region * Ayu, Sub-dit. Hydrology & Water Quality * Sumarno, Sub-dit. Hydrlogy and Water Quality * Ambar, Sub-dit. Policy & Strategy * Pilas, Sub-dit. Spatial Planning Region II * Taufan, Sub-dit. O&M and Natural Disaster Fighting 		
97	18-Feb-2010	<u>Project Office, Departemen PU</u> 1. Hendra, Sub-dit. Technical Planning 2. Nila, Sub-dit. Implementer of West Region 3. Ambar, Sub-dit. Policy & Strategy 4. Pilas Sub-dit. Spatial Planning RegionII 5. Heru, BBWS Cil-Cis 6. Taufan, Sub-dit. O&M and Natural Disaster Fighting 7. Sumarno Sub-dit. Hydrology and Water Quality	Preparation of Workshop on Manual Finalization on 23-25Feb, 2010 and Discussion about Situ Gintung (site visit result)	Mr. Shingu Mr. Sarwono
98	23-25 Feb-2010	<u>Yasmin Hotel & Ressor,Puncak</u> 1. Ir. Subardjo, Head of East Region Section, Sub-dit.O&M and Natural Disaster Fighting 2. Ir. Slamet Budi Santoso, Head of Sub-dit.Technical Planning 3. Dani, ST, Staff of Sub-dit.O&M and Natural Disaster Fighting 4. Full Time Counterparts: <ul style="list-style-type: none"> * Fikri, BBWS Cil-Cis * Heru Purnomo, BBWS Cil-Cis * Romelan, BBWS Cil-Cis * Hendra, Sub-dit. Technical Planning * Nila, Sub-dit. Implementer of West Region * Ayu, Sub-dit. Hydrlogy and Water Quality * Sumarno, Sub-dit. Hydrlogy and Water Quality * Ambar, Sub-dit. Policy & Strategy * Pilas, Sub-dit. Spatial Planning Region II * Taufan, Sub-dit. O&M and Natural Disaster Fighting * Puji Sutarto, BBWS Cil-Cis * Lina Fitriani, BBWS Cil-Cis 	Workshop on Manual(and Guideline) Finalization	Mr. Shingu Mr. Sarwono Mrs. Novita Ms. Destri
99	5-Mar-2010	<u>Meeting Room.of DG. Water Resources Building 7th fl</u>	Joint Coordination Committee Meeting: Opening Address	Mr. Watanabe

	日時	会議場所/ 接触相手	議題	JICA 専門家
		1. Widagdo, Dipl. HE, Director of River, Lake and Reservoir 2. Ir. S. Budi Santoso, Head of Subdit. Technical Planning 3. Ir. Pitoyo Subandrio, Head of BBWS Ciliwung-Cisadane 4. Ir. Eko Djuli Sasongko, Head of Sub-dit. Building Management, DG. Human Settlement 5. Herning, Head Section of Water Resources Management DPU DKI Jakarta 6. Counterparts & Full Time Counterparts (in total 39 participants)	General Introduction of the Project General Review of Project Activity Activity Report Discussion Conclusion Signing of Preface of the Draft Closing Remark	Mr. Shingu Mr. Baba Mrs. Hiraoka Mr. Sarwono Mrs. Novita Ms. Destri
100	9-Mar-2010	<u>Hotel Mulia</u> 1. Widagdo, Dipl. HE, Director of River, Lake and Reservoir	Final Meeting	Mr. Watanabe Mr. Shingu Mr. Sarwono Mrs. Novita

第3章 プロジェクト成果

3.1 技術移転項目

本技術協力プロジェクトは、「イ」国の洪水対策関連機関の職員に対し、非構造物対策の技術移転を行うことを目的としている。技術移転の手法としては、非構造物対策の各分野に関するマニュアル及びガイドラインを作成することを最終目標として、その作成過程でカウンターパートと JICA 専門家が協働することや、講義や議論、セミナーやワークショップでの発表、現地調査等の活動をとおして技術移転する手法で実施したものである。本技プロで対象とする非構造物対策は、氾濫原管理、河川管理、流域管理の3分野で構成されており、一般的に非構造物対策というと洪水予警報や住民避難、ハザードマップ整備などの氾濫原管理をイメージするが、本技プロでは、河川構造物の維持管理や操作、雨水貯留浸透施設等の流出抑制についても技術移転対象としていることが特徴である。活動対象範囲は、図-2.1 の非構造物対策とマニュアル及びガイドラインの関係図に示すとおりであり、技術移転項目は、表-3.1 に示すとおりである。

表-3.1 非構造物対策技術移転項目

技術移転項目	
(1)	河川及び河川構造物台帳
(2)	河川及び河川構造物維持管理
(3)	河川及び河川構造物評価
(4)	ゲート及び排水ポンプ施設操作
(5)	洪水氾濫想定区域図作成
(6)	洪水氾濫調査
(7)	洪水警報
(8)	流出抑制

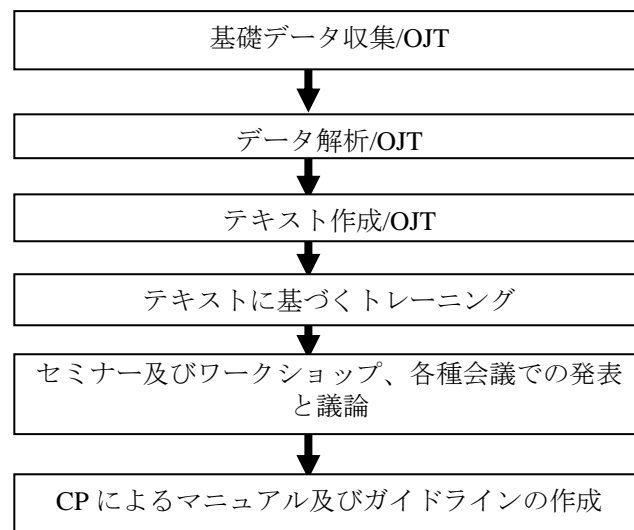


図-3.1 技術移転手法

3.2 技術移転の内容、期間、技術移転の状況

非構造物対策の8項目の各技術移転項目について、プロジェクト成果との関連を含め内容、期間、移転状況をまとめて、表-3.2 から表-3.9 に示す。

表-3.2 技術移転内容 (1/8)

項 目	河川及び河川構造物整備台帳整備
プロジェクト成果	成果 2) ジャカルタ首都圏において治水に関するデータの収集・分析が継続的に行われる体制が整う。
目 的	洪水対策施設の計画や建設において、河川構造物の位置やその規模を把握することは基本事項である。また、それらの諸元やデータを保存しておくことも重要である。この技術移転においては、施設の調査手順やデータ保管方法について技術移転することを目的としている。また、河川及び河川構造物台帳フォームの提案も行った。 対象としている施設は、チリウン川の河川システム、河川構造物及びため池、護岸、ポンプ、ゲート等である。
移転内容	技術移転内容は以下のとおりである。 ①現地調査 ②河川及び河川構造物の規模を把握するための測量 ベンチマーク設置、横断面、縦断面図 ③台帳整備 整備対象は以下のとおりである。 ▶河川、河川構造物位置図 ▶河川リスト ▶ゲートリスト及び位置 ▶ポンプリスト及び位置 ▶護岸設置位置と構造
期 間	2007年7月～2010年2月
状 況	技術移転状況は以下のとおりである。 ① チリウン川の河川、排水路、ゲート、排水ポンプのデータが収集された。 ② 台帳の形式が作成され、データ入力を行った。 ③ 河川及び河川台帳整備のためのテキストが作成された。 ④ マニュアルがカウンターパートにより作成された。 ⑤ OJTの結果をセミナー及びワークショップで発表した。 ⑥ テキストとマニュアルはワークショップやセミナー開催時に配布した。 ⑦ データベースを作成した。

表-3.3 技術移転内容 (2/8)

項 目	河川及び河川構造物維持管理
プロジェクト成果	<p>成果 1) ジャカルタ首都圏の洪水事業関連組織の河川維持管理能力および排水施設の運用能力が向上する。</p> <p>成果 2) ジャカルタ首都圏において治水に関するデータの収集・分析が継続的に行われる体制が整う。</p>
目 的	<p>本活動は、維持管理に関する手順、手法を技術移転することを目的としている。チリウン河川流域においては、数多くの護岸、ゲート、ポンプ場などが河川に配置されている。</p> <p>その多くの構造物は、建設から長時間が経過しており機能が低下している。また、洪水により破壊あるいは破損されたまま、放置されているものや、耐用年数を経過しているものも多く見られ、再建設が必要なものもある。しかし、老朽化した施設を再建設するには莫大な費用と時間がかかり、今後、老朽化施設はますます増加していくと想定される。そのため、既存施設を責任官庁により維持管理して、できるだけ機能を維持することが重要である。それらの活動を実施するためには、標準的な維持管理手法を記載したガイドラインやマニュアルを作成することが必要である。</p>
内 容	<p>技術移転項目は以下の通りである。</p> <ul style="list-style-type: none"> ① 巡視点検の手順 ② 点検頻度 ③ 緊急維持管理 ④ 維持管理の分類 ⑤ 河川や排水路の維持管理 ⑥ 河川構造物の維持管理
期 間	2007年5月～2010年2月
移転状況	<p>技術移転の状況は以下のとおりである。</p> <ul style="list-style-type: none"> ① 巡視点検の手順が取りまとめられた。 ② OJTの活動として、ゲート、ポンプ施設の状況点検を実施した。 ③ 河川の状況について点検した。 ④ 維持管理マニュアルがJICA専門家により取りまとめられた。 ⑤ カウンターパートへの技術移転をテキストに基づいて実施した。 ⑥ カウンターパート会議、合同調整委員会、セミナー、ワークショップにおいて、活動結果をカウンターパートが発表した。 ⑦ インドネシア語版のマニュアルがCPにより作成された。 ⑧ 実際の現場での維持管理活動はできなかった。

表-3.4 技術移転項目 (3/8)

項 目	河川及び河川構造物の施設能力評価
プロジェクト成果	<p>成果 1) ジャカルタ首都圏の洪水事業関連組織の河川維持管理能力および排水施設の運用能力が向上する。</p> <p>成果 2) ジャカルタ首都圏において治水に関するデータの収集・分析が継続的に行われる体制が整う。</p>
目 的	<p>本活動は、河川及び河川構造物の解析、評価手法について技術移転することを目的としている。この技術は、治水計画の立案や解析、施設能力評価に必要な技術である。</p> <p>この活動では技術手法や河川流下能力やポンプ能力評価に対する標準的な考え方や技術手法が記載されている。また、コンピューターでの計算手法をカウンターパートに技術移転する。</p>
活 動	<p>技術移転項目は以下のとおりである。</p> <p>①洪水解析</p> <ul style="list-style-type: none"> ・ 合理式 ・ ハイドログラフ <p>②降雨解析</p> <ul style="list-style-type: none"> ・ 雨量観測所と雨量データの整理 ・ 年最大降雨 ・ 確率雨量 ・ 降雨強度式 <p>③河川流下能力評価</p> <ul style="list-style-type: none"> ・ 河川硫化能力計算の手順 ・ 不等流計算 ・ 水位—流量曲線 ・ 流下能力図 <p>④ポンプ施設能力評価</p> <ul style="list-style-type: none"> ・ 流入ハイドログラフの作成 ・ ポンプ能力及び操作規則 <p>⑤不定流計算</p>
期 間	2007年5月～2010年2月
移転状況	<p>技術移転の状況は以下のとおりである。</p> <p>① 洪水解析及びハイドログラフの作成は OJT で技術移転した。</p> <p>② 降雨解析、年最大雨量、確率雨量、降雨強度式は OJT で解析した。</p> <p>③ ポンプ能力評価及び不定流計算を実施した。</p> <p>④ JICA 専門家により施設評価マニュアルのためのテキストが準備された。</p> <p>⑤ テキストに基づいて、CP トレーニングを実施した。</p> <p>⑥ CP ミーティング、JCC 会議、セミナー及びワークショップにおいて CP より発表し、議論された。</p> <p>インドネシア語版のマニュアルが CP により策定された。</p>

表-3.5 技術移転項目 (4/8)

項 目	ゲート及び排水ポンプ操作
プロジェクト成果	<p>成果 1) ジャカルタ首都圏の洪水事業関連組織の河川維持管理能力および排水施設の運用能力が向上する。</p> <p>成果 2) ジャカルタ首都圏において治水に関するデータの収集・分析が継続的に行われる体制が整う。</p>
目 的	<p>本活動の目的は、ポンプ及びゲートの現在の状況を把握し、その操作について検証し、最適なゲート及びポンプ操作についての検討手順を技術移転することである。</p>
内 容	<p>技術移転内容は以下のとおりである。</p> <p>①チリウン川の洪水対策システムについての理解。</p> <p>②ゲート操作</p> <ul style="list-style-type: none"> ・ 低平地の排水システム ・ 防潮ゲート操作 ・ 流量調整ゲート操作 <p>③ポンプ操作</p> <ul style="list-style-type: none"> ・ ポンプ場の概要 ・ プルイットポンプ場操作 ・ チデンポンプ場操作 ・ メラティポンプ場操作 <p>④ポンプ場評価</p> <p>⑤点検</p> <ul style="list-style-type: none"> ・ ゲート点検 ・ ポンプ場点検
期 間	2007年5月～2010年2月
移転状況	<p>技術移転の状況は以下の通りである。</p> <p>① チリウン川の河川システムが現地調査や資料から解析された。</p> <p>② ゲート及びポンプ場のシステムが現地調査により解析された。</p> <p>③ ゲートとポンプ設備の操作が確認され、解析された。</p> <p>④ OJTによりゲートとポンプ場が調査された。</p> <p>⑤ マニュアル作成のためのテキストが JICA 専門家により準備された。</p> <p>⑥ CPトレーニングがテキストに基づいて行われた。</p> <p>⑦ CP会議やJCC会議、セミナー、ワークショップにおいてCPより技術発表し、議論された。</p> <p>⑧ インドネシア語版のマニュアルがCPにより策定された。</p> <p>⑨ 現在ポンプ場やゲートの改造や再建設が行われており、調査やマニュアルのレビューが必要である。</p>

表 3.6 技術移転項目 (5/8)

項 目	洪水想定氾濫区域図作成
プロジェクト成果	成果 2)ジャカルタ首都圏において治水に関するデータの収集・分析が継続的に 行われる体制が整う。 成果 3)住民避難のための情報提供に関するデータ収集・分析が継続的に行われ る体制が整う。
目 的	この活動は氾濫が想定される区域について、想定氾濫区域図作成の手順を技術 移転することを目的としている。想定氾濫区域図はチリウン川流域の洪水ハザ ードマップの策定および洪水予警報に資するものである。 また、洪水氾濫シュミレーションモデルを開発し、その技術を移転することも 目的としている。プログラムとソフトはCP機関に譲渡される。
内 容	技術移転項目は以下のとおりである。 ①氾濫モデル ➤ データ収集整理 ➤ 氾濫原の形態解析 ➤ 洪水氾濫モデルの基本構造 ➤ 降雨モデル、河道モデル、流域流出モデル、氾濫区域モデル ②洪水統合解析モデルの開発 ③洪水危険区域図 ➤ 洪水危険区域図の開発 ➤ 水深ごとの氾濫区域 ➤ 洪水危険区域図の作成 ④チリウン川の洪水流出量
期 間	2007年5月～2010年2月
移転状況	技術移転の状況は以下のとおりである。 ① シュミレーションのために地盤標高が測量され、修正された。 ② 降雨データが整理された。 ③ 氾濫シュミレーションモデルが準備された。 ④ 統合洪水解析モデルが開発された。 ⑤ シュミレーションモデルが過去の洪水により検証された。 ⑥ デポックとマンガライの流出ハイドログラフが整備された。 ⑦ 洪水想定氾濫図が作成された。 ⑧ JICA 専門家によりテキストが作成された。 ⑨ テキストに基づいて、CP トレーニングを実施した。 ⑩ CP 会議、JCC 会議及びセミナーやワークショップにおいて、CP により発 表し議論された。 ⑪ インドネシア語版のマニュアルが CP により作成された。

表-3.7 技術移転内容 (6/8)

項 目	洪水氾濫調査
プロジェクト成果	<p>成果 2) ジャカルタ首都圏において治水に関するデータの収集・分析が継続的に行われる体制が整う。</p> <p>成果 3) 住民避難のための情報提供に関するデータ収集・分析が継続的に行われる体制が整う。</p>
目 的	<p>洪水被害を軽減するために、洪水被害の原因を把握し、適切な対応を取ることが重要である。</p> <p>洪水氾濫調査の目的は、実際の洪水のデータや情報を収集し、今後の調査や計画、設計及び洪水軽減活動を容易にすることである。</p> <p>一般的に、洪水データや情報は適切な洪水軽減計画策定に必要となるものである。これらの活動成果は洪水解析や洪水予警報、洪水ハザードマップ、住民避難等対応にも利用されるものである。</p>
内 容	<p>活動内容は以下のとおりである。</p> <p>①既存の水理水文観測所のシステムを確認する。</p> <ul style="list-style-type: none"> ➤ リアルタイムモニタリングステーション ➤ 水位観測所 ➤ 早期警報洪水警報システム ➤ Flood monitoring station <p>②水理水文データの収集整理</p> <p>③洪水氾濫調査の実施および洪水警報水位の検証</p>
期 間	2007年5月～2010年2月
技術移転状況	<p>技術移転の状況は以下のとおりである。</p> <ol style="list-style-type: none"> ① 水理水文観測所の位置と状況を調査しとりまとめた。 ② 水理水文データの収集、整理及び保存について OJT で協議し、フォームを作成した。 ③ OJT で過去の氾濫を調査し、洪水氾濫マップが作成された。 ④ 防災活動の手順や組織を調査し、とりまとめた。 ⑤ 洪水氾濫調査マニュアル作成のためのテキストが JICA 専門家により作成された。 ⑥ テキストに基づいて、CP トレーニングを実施した。 ⑦ CP 会議や JCC 会議、セミナーやワークショップにおいて CP より発表し議論された。 ⑧ インドネシア語版のマニュアルが CP により策定された。

表-3.8 技術移転項目(7/8)

項 目	洪水警報
プロジェクト成果	成果 3) 住民避難のための情報提供に関するデータ収集・分析が継続的に行われる体制が整う。
目 的	<p>洪水対策としては通常 2 つの方法がとられる。一つは洪水調節池、河川改修、ショートカット、ポンプやゲートなどの河川構造物による洪水制御、一般的に構造物対策といわれている。もう一つは非構造物対策といわれるもので、住民避難に資するための情報発信である。</p> <p>洪水に対する安全度は構造物対策により向上するが、それだけでは絶対的な信頼を得ることができない。そのため、住民が洪水の危険性から避難できるように早期警報システムを確立することによって洪水被害を軽減することは重要な対策と考えられている。</p>
内 容	<p>技術移転内容は以下のとおりである。</p> <p>①現在の洪水警報の状況確認</p> <p>②解析し、洪水警報の水位を再検討する。</p> <p>➢ 洪水危険水位の算定</p> <ul style="list-style-type: none"> ・ 各河川断面における洪水危険水位 ・ 洪水観測所の洪水危険水位の想定 ・ 既存データを使った計算手順 ・ 洪水危険水位の設定 <p>➢ 水位評価</p> <ul style="list-style-type: none"> ・ 避難および手順のための水位の定義 ・ 水位観測及び洪水危険水位 ・ 洪水特性(水位上昇速度) ・ リードタイム ・ 避難水位の計算
期 間	2007 年 5 月 ～ 2010 年 2 月
移転状況	<p>技術移転の状況は以下のとおりである。</p> <p>① 現在の洪水警報水位と警報避難システムが収集され、OJT をとおして解析した。</p> <p>② 洪水危険水位の手順が JICA 専門家により作成された。</p> <p>③ マニュアル作成のためのテキストが JICA 専門家により作成された。</p> <p>④ CP トレーニングがテキストに基づき実施された。</p> <p>⑤ CP 会議や JCC 会議、セミナーやワークショップにおいて CP より発表し議論された。</p> <p>⑥ インドネシア語版のマニュアルが CP により策定された。</p>

表-3.9 技術移転項目 (8/8)

項 目	流出抑制
プロジェクト成果	成果 4) 流域流出量抑制に係わる課題が提示され、治水関連機関の流域流出対応能力が向上する。
目 的	<p>流出抑制は、流域に一時的に降雨を貯留することにより河川への流出を遅らせることを目的とした治水対策手法の一つである。</p> <p>都市化の著しい河川において、流域の保水湧水機能は低下しており、一方で人口や資産の集中により洪水被害ポテンシャルは増加している。そのような状況の下では、洪水に対する安全度を向上させるために、河道改修や堤防建設などの洪水対策施設の建設が強く求められる。同様に、河道への洪水負担を減らすために調整池や雨水貯留施設、浸透施設などの流出抑制施設を配置し、流域の保水湧水機能を保全することも必要である。改修は環境や経済的理由等により制限を受けることがあるが、それに対し、流出抑制施設は、比較的容易に設置できるという、以下のメリットを有している。</p> <ul style="list-style-type: none"> ▶ 雨水貯留施設は既存及び開発中の敷地に適用できる。 ▶ 浸透施設は建設が比較的容易である。 ▶ 流出抑制効果はすぐに発現できる。
内 容	<p>技術移転内容は以下のとおりである。</p> <ol style="list-style-type: none"> ① 流出抑制施設の分類と形式 ② 雨水貯留浸透施設の機能と効果 ③ 流出抑制計画 ④ 貯留施設の設置計画 ⑤ パサングラハン川における流出抑制の検討 ⑥ JABODETABEKにおける総合治水の適用性 ⑦ 流出抑制のための規則
期 間	2007年5月～2010年2月
移転状況	<p>技術移転の状況は以下のとおりである。</p> <ol style="list-style-type: none"> ① インドネシア国での流出抑制施設を調査した。 ② 過去、現在、未来の土地利用を解析した。 ③ 流出抑制の問題を解析された。 ④ JICA専門家がマニュアル作成のためのテキストを作成した。 ⑤ テキストに基づいてCPトレーニングを実施した。 ⑥ CP会議やJCC会議、セミナーやワークショップにおいてCPより発表し議論された。 ⑦ インドネシア語版のマニュアルがCPにより策定された。

3.3 PDMによる成果達成

3.3.1 実施のプロセス

< 2007年3月—2008年8月 >

- この期間は主に基礎データの収集及び統合洪水解析モデルの構築を行った。
- 水理水文データ収集、データ解析を行った。
- 河川及び河川構造物測量を行った。
- 土地利用解析も行った。
- 河川及び河川構造物の台帳が整備された。
- また、以下の理由等によりプロジェクト工程が約半年遅れた。

①データ収集対象機関が多く、また、データの整理ができていなかったため、データ収集に時間を要した。

②既往の地盤標高データ、河川構造物データが地盤沈下の影響によりかなり現状が変化しており、解析等に使える状態ではなかったため、測量調査が必要になった。

< 2008年9月—2009年3月 >

- 前期までの活動によりデータ収集がほぼ終了したことから洪水解析等に取り掛かれる状態となり、2008/2009年の雨季前には、ある程度の解析結果が示せた。
- 活動結果の発表と洪水関連機関がジャカルタ首都圏の洪水の現状を共有認識し、各機関が連携した対策をとる必要性を協議するため2008年12月4日に第1回セミナーを開催した。
- また、マニュアル類作成のためのテキストのドラフトが2008/2009年雨季の期間中に作成され、2009年3月の合同調整会議において発表した。

< 2009年5月—2009年8月 >

- 2009年度に入り、前期までの活動により作成したドラフトテキストにより技術協力プロジェクトの具体的な活動内容を把握した「イ」国側実施機関はその重要性を理解し、フルタイムカウンターパートをこれまでの10人から23人に増加した。
- 本技術協力プロジェクトで作成するマニュアル類は7マニュアル、1ガイドラインであり、23人のフルタイムカウンターパートを彼らの現在の業務にそって4グループに分割してOJTトレーニングを実施した。
- 特に、2009年5月～7月の2ヶ月間においては、マニュアル類のテキストを完成させるため集中的にOJTトレーニングを実施した。その成果は2009年7月29日～30日の2日間実施されたワークショップによりカウンターパートから発表され、技術の水平展開を図るとともに、内容について関連機関で議論を行った。その結果として8テキストがまとめられた。

< 2009年8月—2010年3月 >

- 2009年8月以降は、テキストをもとにマニュアル及びガイドラインを作成するための活動を主に実施し、2010年2月23日～25日の3日間開催したワークショップにおいて、7マニュアル1ガイドラインがまとめられた。
- また、この期間は実際の洪水に対してテキストの有効性を確認する予定であったが、洪水が発生しなかったため実施できなかった。

▶ 2009年11月23日には、都市の洪水制御のためには流域流出抑制が必要であるとの共通認識を高めるセミナーを実施した。

<総括>

総括して、プロジェクト開始当初は業務実施工程に遅れが生じたものの、その後「イ」国側実施機関のPMの強いイニシアティブが発揮され、またフルタイムカウンターパートも精力的に技術協力プロジェクト活動に取り組んだことにより、概ね目標は達成した。ただ、2008/2009年雨季、2009/2010年雨季の期間に洪水が発生しなかったためマニュアル類の適用性の確認ができなかった。今後、「イ」自ら、その適用性を検証し、改訂していく活動が期待される。

3.3.2 プロジェクト目標に対する成果

上位目標 ジャカルタ首都圏の洪水被害を軽減するための非構造物対策が計画、実施される。

上位目標に対する成果は、技術協力プロジェクトで作成したマニュアル類に記載されている非構造物対策が「イ」国洪水対策関連機関により、実践されることにより、達成されるものである。本技術協力プロジェクトで作成したマニュアル類は、パイロット河川（チリウン川）を対象として作成されたものであるが、現在「イ」国公共事業省水資源総局長や河川湖沼局長の承認を得ており、今後地方政府を含むジャカルタ首都圏の洪水対策関係機関へ水平展開するという「イ」国側の強い意思も確認された。したがって、上位目標に対する成果は、非構造物対策の技術がジャカルタ首都圏に水平展開され、実際に非構造物対策が実施されることにより達成されると期待される。

プロジェクト目標 ジャカルタ首都圏において、非構造物による洪水対応能力が向上する。

技術移転対象としていた全ての項目について、カウンターパートが自らマニュアル類を整備した。その過程において、カウンターパートは、必要とされる基礎技術を習得している。また、セミナーやワークショップをとおして、洪水関連機関で非構造物対策の重要性とその推進が協議された。また、非構造物対策を推進するための流域協議会の設立についても、2008年12月4日のセミナーにおいて洪水関連機関の代表によるパネルディスカッションで採択された。したがって、プロジェクト目標は技術協力プロジェクトで作成された洪水想定氾濫区域図や洪水警報が関係機関で実際に住民避難活動等に利用されることや、ゲート・排水ポンプ操作の最適運用の実施等が実施されることにより達成すると期待される。また、通常、マニュアル類は既往洪水を対象として作成されるが、その有効性を確認するためには将来発生する洪水を対象として引き続き「イ」国自らの手によって検討・改訂することにより、能力の向上が期待される。

3.3.3 プロジェクト成果に対する達成

PDMにより期待される成果の達成は以下のとおりである。なお、以下の内容は、2009年9月にJICAにより実施されたプロジェクト終了時点評価の評価内容をフォローしたものである。

1) 成果1及び成果2

- 成果 1) ジャカルタ首都圏の洪水事業関連組織の河川維持管理能力および排水施設の運用能力が向上する。
- 成果 2) ジャカルタ首都圏において治水に関するデータの収集・分析が継続的に行われる体制が整う。

プロジェクト成果1及び2は、ジャカルタ首都圏（JABODETABEK）における洪水対策に対する組織の河川管理能力を改善し、洪水被害を軽減することを目的としている。プロジェクト活動をとおしてインドネシアサイドは、関係機関による河川管理施設の適正な管理と運用操作の重要性に理解を示した。また、インドネシア側は、それを推進するための政策を立ち上げることに強い意欲を示した。また、河川構造物の維持管理、操作を含む非構造物対策に関するドラフトマニュアルが2010年2月にカウンターパートにより作成された。2008年と2009年の洪水時にマニュアルの有効性を確認し改訂する計画であったが、その期間、洪水が発生しなかったためマニュアル更新に資するデータ収集ができなかった。JICA 専門家チームは、カウンターパートに対し、洪水が発生したときにデータ収集を行い、マニュアルの適用性を確認し、改訂することを今後の課題とした。

表-3.10 PDM 分類による達成度 (1/3)

成果1及び成果2の指標	2010年3月時点の状況
1) 河川、排水路河川構造物台帳整備	<ul style="list-style-type: none"> ▶ OJT をとおしてパイロット区域の河川、排水路及び河川構造物のデータを収集した。 ▶ 河川及び河川構造物台帳整備マニュアルのテキストを整備した。 ▶ 維持管理マニュアルのテキストを整備した。 ▶ CPにより2010年2月にドラフトマニュアルが整備された。
2) 河川流下能力の解明	<ul style="list-style-type: none"> ▶ 洪水流出と河川流下能力の解析を実施した。 ▶ 河川及び河川構造物評価マニュアルのテキストを作成した。 ▶ また、2010年2月にドラフトマニュアルがCPにより作成された。
3) 洪水メカニズムの解明	<ul style="list-style-type: none"> ▶ 河川および排水路の流下能力を評価し、流下能力が不足していることを確認した。 ▶ また、ゴミや土砂が堆積していることが、流下能力を減少させている原因であることがわかった。 ▶ (河川及び河川構造物台帳及び維持管理マニュアル、ゲート及びポンプ操作マニュアルのテキスト) ▶ 上記のドラフトマニュアルが2010年2月にCPが作成した。
4) 河川管理及びゲート・ポンプ操作	<ul style="list-style-type: none"> ▶ ゲート及びポンプ操作の現状把握と適正操作について検討を行った。 ▶ ゲート及びポンプ操作マニュアルのテキスト及び河川維持管理マニュアルのテキストが洪水時に適用性を確認する計画となっていたが、洪水が発生しなかったため確認はできなかった。 ▶ 2010年2月にCPがドラフトマニュアルを作成した。

2) 成果3

成果 3) 住民避難のための情報提供に関するデータ収集・分析が継続的に行われる体制が整う。

成果3は洪水被害を軽減するために、洪水予警報、洪水想定氾濫区域図、洪水ハザードマップ等の整備のために洪水関連機関の職員の能力、技術を高めることを目的としている。

OJT 活動をとおして住民避難を円滑にするためのデータ及び情報を収集しとりまとめた。また、流出抑制モデル、洪水氾濫モデル、洪水危険区域図を作成した。流量及び水位測定も実施し、洪水警報についても提案した。

表-3.11 PDM 分類による達成 (2/3)

成果3に対する指標	2010年3月時点の状況
1)水理水文データの収集	<ul style="list-style-type: none"> ▶ 雨量観測所及び流量観測所の全てのデータを収集し、解析した。 ▶ 活動結果は、河川及び河川構造物評価マニュアルのテキストおよび洪水氾濫調査にまとめてある。 ▶ ドラフトマニュアルが2010年2月にCPにより作成された。
2) 流出モデル	<ul style="list-style-type: none"> ▶ GISを利用して土地利用変化を調査し解析した。 ▶ その結果は、想定洪水氾濫区域図作成テキストにとりまとめた。 ▶ ドラフトマニュアルが、CPにより2010年2月に作成された。
3) 洪水氾濫モデル	<ul style="list-style-type: none"> ▶ GPSを利用しチリウン川の地盤標高調査を行った。 ▶ また、洪水氾濫モデルを作成した。 ▶ それらの結果は、想定氾濫区域図作成テキストに取りまとめている。 ▶ 2010年2月にCPによりドラフトマニュアルが整備された。
4) 洪水危険区域図の改訂	<ul style="list-style-type: none"> ▶ チリウン川流域を対象に、確率降雨が算定され、また想定氾濫区域図を作成した。 ▶ その結果は、想定氾濫区域図作成テキストにまとめてある。また、洪水ハザードマップのサンプルを作成した。 ▶ ドラフトマニュアルがCPにより2010年2月に作成された。
5) 洪水警報基準の改定	<ul style="list-style-type: none"> ▶ チリウン川の流下能力と水位を解析し、洪水警報基準を提案した。 ▶ その結果は洪水警報マニュアルにまとめている。 ▶ また、2010年2月にドラフトマニュアルがCPにより、作成された。

3) 成果4

成果 4) 流域流出量抑制に係わる課題が提示され、治水関連機関の流域流出対応能力が向上する。

成果4は、開発による流域流出増の抑制することの重要を確認し、その対策について治水関連職員の能力を向上させることを目的としている。

関係機関の流出抑制に関する能力を改善するために流域流出増加抑制の課題を提示した。また、2008年12月4日のセミナーにおいて、流域流出抑制関係機関の調整機関の設立を提案し、パネルディスカッションにおいて採択され、公共事業省水資源総局河川局長から調整機関設立を進めることが宣言された。また、2009年11月23日に開催したセミナーにおいて、流出抑制の施策を進める必要があるとの合意が行われた。

しかし、調整組織は、2010年3月時点では、まだ設立されていない。総合治水を進めるためにも、流域の関連機関やステークホルダー等で構成する調整組織は必要であり今後の課題として残された。

表-3.12 PDM分類による達成 (3/3)

成果4の指標	2010年3月時点の状況
1) 関連機関による流出抑制の活動開始	<ul style="list-style-type: none"> ▶ SITU（ため池）は現在宅等への転換が図られており減少しているが、流域の保水・湧水機能としての価値が見直されて、防災調節池化への改善がスタートした。 ▶ 流域流出抑制のテキストを作成した。 ▶ 流出抑制の課題についてとりまとめ協議した。 ▶ 2010年2月にCPによりドラフトガイドラインが作成された。 ▶ 水資源協議会（TKPSDA）の設立準備が開始された。
2) 流出増対策手法の提案	<ul style="list-style-type: none"> ▶ 上述の SITU の改善を提案した。また、流域流出抑制テキストで、様々な手法提案をおこなった。 ▶ 日本の施設を提案するとともに、CP自ら「イ」国で実施されている雨水貯留浸透施設の情報を収集した。 ▶ 2010年2月にCPによりドラフトガイドラインが作成された。
3) その他	<ul style="list-style-type: none"> ▶ 洪水氾濫区域を確認し、上流部での流出抑制の重要性を確認した。 ▶ また、流域の開発が進んでいることから氾濫区域が拡大していることを確認した。 ▶ セミナーやワークショップにおいて、流域流出抑制の必要性を関連機関間で確認した。

第4章 プロジェクトの実施運営上の工夫・教訓

(1) 官民連携によるプロジェクト目標達成

プロジェクト目標を達成するためには、政策と技術を並行して実施する必要があった。TOR において官民の役割が明確でない所もあったが、本技術協力プロジェクトでは、主に政策及び対外折衝を官の役割とし、マニュアル及びガイドライン作成を民の役割として実施した。また、官がいることで他の業務で派遣されている長期専門家との連携も容易となり、セミナーの共同開催や氾濫シミュレーション技術の水平展開などが実施できた。「イ」国側からも政策に強い官と技術を有する民の協働により幅広い視点からの業務対応ができていたと概ね良好な評価を得た。

官と民が使う使われるの関係ではなく、対等な立場で議論し、両方の長所、欠点を、お互いの立場から補間することができたと実感している。また、今後の海外プロジェクトの方向性としては、プロジェクト規模にもよるが官と民、さらには学を加えて、協働して実施するオールジャパン体制で取り組むことも必要であると考えている。本プロジェクト活動中に、河川ゴミ処理の研究のため、日本から大学教授がチリウン川に調査に来ており、本プロジェクトでは意見交換するとともに、所有する資料を提供した。今後の教訓としては、官民ジョイントのプロジェクトとする場合、官民の役割を明確にすることがあげられる。

(2) 広報誌の作成

プロジェクトの活動を関係機関やカウンターパートの所属部所に周知するためニュースレターを作成し配布した。記載内容は、通常の会議やセミナー、ワークショップ、現地調査状況などの活動を取りあげた。また、カウンターパートが本技プロに参加していることに誇りを持つように、ニュースレターにカウンターパート名を明記した。ニュースレターは、主にセミナーやワークショップで配布した。その結果、本技術協力プロジェクトの活動内容の認識が高まり、治水関係のトラブル発生時等に本技術協力プロジェクトに支援を求める連絡が入るようになった。

今後の教訓としては、技術協力プロジェクトは活動内容を知ってもらうことから始まるといっても過言ではない。そのためには、活動内容を記載したニュースレター等を作成し、機会あるごとに配布するなど、関連機関に対する粘り強い広報活動が必要であると感じた。

(3) ファシリテーターの採用

技プロを効率よく進めるためには、組織（PU）の活動システムに熟知していることや PU の職員と良好な関係を築くことが重要である。またインドネシア語のコミュニケーションも重要である。カウンターパートとのコミュニケーションを円滑にするため、公共事業省のOBをファシリテーターとして採用し、調整連絡に専念させた。また、カウンターパートトレーニング時の通訳として活動してもらった。その結果として、フルタイムカウンターパートの理解度が深まり、技術に対する興味を持つようになった。また、気軽に本技術協力プロジェクトの事務所に顔を出すようになるなど、プロジェクトの推進が良好となった。

教訓として、本技術協力プロジェクトの開始当初は、有能なファシリテーターの不在により、「イ」国側とのコミュニケーションが良好ではなかった。オランダの技術協力プロジェクトにおいても現地人ファシリテーターが、主導的に活動しており、今後、このようなプロジェクトを円滑に進めるた

めには、有能なファシリテーターを確保することが望ましい。

(4) カウンターパートグルーピング

2008年度の活動成果が「イ」国側から高く評価されたことにより、2009年度から、フルタイムカウンターパートが10人から23人に増えた。技術移転を効果的にするために、カウンターパートを4つのグループに分け、各グループ毎に2科目のマニュアル及びガイドライン作成の責任を与えた。各グループのメンバーは、彼らの通常業務に応じて振り分けた。グルーピングの結果、カウンターパートはマニュアルやガイドラインの作成に対する成果を各グループ間で競争するようになり、プロジェクトの進捗速度が上がった。

教訓として、フルタイムカウンターパートに競争意識を持たせる工夫が必要である。

(5) ワークショップ、セミナーの活用

プロジェクトの活動を周知することや洪水対策に向けて関連機関の調整を促進するためにセミナー2回、ワークショップ2回を開催した。また、セミナーは本技プロ活動成果を他の機関に周知することにも利用した。ワークショップでは、カウンターパートがOJT結果を発表、議論し、他のグループへ技術移転を行った。

教訓として、OJTトレーニングに節目をつけるためにもセミナーやワークショップを企画することは重要である。また、フルタイムカウンターパートが技術協力プロジェクトに専属でない場合、協働することは難しい。しかし、「イ」国の場合、ワークショップ等の研修として離れた場所にカウンターパートを囲い込むことは比較的認められることから、積極的にワークショップを利用して技術移転の集中トレーニングを計画することをすすめる。

また、ワークショップによって、カウンターパート同士やJICA専門家と親密な関係が構築されたこともプロジェクトを円滑にすすめる重要な要素である。

(6) テキストの作成

マニュアル作成や技術移転を効率的に実施するためには、ある程度の技術を系統立てて説明する資料が必要である。そのため、マニュアルに先んじて、テキストを作成し、それに基づき、技術移転を実施した。テキストを作成する段階では、カウンターパートとデータ収集や解析を行った。また2週間に1回程度の割合で、各技術局面での講義を行った。テキストが完成後には、テキストに基づいて各グループで週1回のCPトレーニングを実施した。

その結果として、カウンターパートはテキストをもとに、自らマニュアルやガイドラインを作成するのに有効に利用された。

教訓としては、技術移転の進行に応じて技術移転することは、カウンターパートにとって終点が見えず、何を目標としてやっているのか理解でないこともある。そのため、目的とする技術移転項目を体系的にまとめたテキストを示し、ゴールが見える状態することはカウンターパートのやる気出させる上で重要である。また、テキストがあれば、自宅学習ができるため、発表原稿などある程度作成してOJTトレーニングに来るようになった。

第5章 今後の「イ」国における洪水対策に対する提言

(1) 背景

インドネシアでは、地震、火山噴火、土石流、洪水等がもたらす自然災害が非常に多い。その中でも、洪水災害は毎年、国のどこかで発生し、国の社会経済に与える打撃は計り知れないほど大きい。このような洪水災害からもたらされる被害を軽減し、河川流域の人命と資産を守るために、中央政府や地方政府は、ダム洪水調節事業、河川改修事業、排水機場等の洪水対策事業（構造物対策：ハード対策）を非構造物対策（ソフト対策）と平行して実施しているところである。

一方、河川流域には近年の経済発展がもたらす都市化により、人口や多くの資産が集中している。さらに、この都市化が土地利用の形態を変化させ、洪水を発生させ易い状況に変えている。例えば、本プロジェクトの対象流域に含まれるチリウン川流域（537km²）では、都市域・居住域の現状は約50%であるが、20年前は約30%であり、20年後は約70%程度と予見されている。この都市化により、洪水のピーク流量は20年ごとに約10%増加するものと推定できる。本来洪水調節機能を持った田畑が宅地化されることにより、洪水流量の増大化が年々進んでいることを意味する。

このような状況下、構造物対策は必ずしも洪水問題を解決できるとは限らない。何故ならば、予算配分や社会問題の都合で、予定通りに事業が実施できない。このような時、効果的な非構造物対策の実施が重要になってくる。従って、本プロジェクト（ジャカルタ首都圏水害軽減組織強化プロジェクト）は、洪水・排水対策の組織対応能力の向上をプロジェクト目標として実施されてきた。本プロジェクトのアウトプットとして次の4成果が挙げられる。

- 成果1： 洪水事業関連組織の河川維持管理能力と排水施設の運用能力の向上
- 成果2： 洪水対策に関するデータの収集・分析が継続的に行われる体制の整備
- 成果3： 迅速な避難のための洪水情報の提供体制の整備
- 成果4： 流域流出抑制に関わる課題の提示と洪水事業関連機関の流域流出対応能力の向上

これらの成果は、7冊のマニュアル（成果1-成果3）と1冊のガイドライン（成果4）の作成過程を通して達成された。これらのマニュアルとガイドラインは、日本人専門家と23名の専任カウンターパート・39名の兼任カウンターパートとの共同作業で作成されたもので、その活用価値は高い。

(2) 提言

上述の背景を踏まえ、本プロジェクトの活動成果に基づいて、「イ」国の今後の洪水対策（特に、ソフト対策）へ以下の通り提言する。

① マニュアルに基づいたソフト対策の実践

マニュアル類は、ジャカルタ首都圏の洪水管理-ソフト対策として作成されたものである。洪水事業関連組織・機関は、垂直展開（上級管理者→中級管理者→担当者）を図りながら、洪水管理の実践で活用すべきである。活用の有効性を高めるため、ジャカルタ首都圏内の関連組織・機関間の必要に応じた情報交換や定期的な意見交換（あるいは研究発表会）が必要である。

② マニュアルのアップデート・リバイス

上記①の実践において、マニュアルのアップデートやリバイスが必要な場合は、上述の定期的な意見交換の場で、関連組織・機関の合意のもとに改定する。

本技術協力プロジェクトの活動エリアにおいては、プルート排水機場の東、中央、西のポンプ場のうち、東ポンプ場が破壊したことにより、故障期間中の操作ルール、また、新ポンプ場完成後の操作ルールに変更が生じる。またチデンポンプ場においても、追加のポンプ設備が建設されていることから、操作ルールの変更が必要である。

③ マニュアルの水平展開

洪水管理の観点から、流域人口や資産は別として、ジャカルタ首都圏に類似した河川流域がインドネシア各地にあると思える。ジャカルタ首都圏用に整備されたマニュアル類は、それぞれの流域の特性に応じて若干の修正を加えれば十分に適応可能である。このような水平展開を図るため、洪水ソフト対策マニュアルの存在を地方の洪水事業関連組織・機関に知らしめる必要がある。

本技術協力プロジェクトで作成したマニュアル類は、チリウン川を対象としているが、その検討手法は他河川にも応用できるものである。現在マニュアル類は、水資源総局長及び河川湖沼局長の承認を得ている状況であるが、地方政府等に利用されるためには大臣承認が必要である。

④ 流域流出抑制策のための体制整備

流域流出抑制策については、本プロジェクトでは、ガイドラインのレベルに止まっている。今後は、河川管理者と都市計画部局と連携により、より具体的な流域流出抑制策のための体制整備が重要になる。宅地開発者等への適切な行政指導内容やSITU等の既存施設の流域流出抑制策としての再活用等が今後の課題である。あわせて、行政的な体制整備も今後の課題として重要である。

特に、本技術協力プロジェクトでは、パサングラハン流域を対象として流域流出抑制の調査をした。その結果、SITU（ため池）の防災調節池化が流域流出抑制に最も効果があることが判明しており、ため池の保全と調節池化を政策的に進めることが重要である。

⑤ 構造物対策

ジャカルタ首都圏では、治水構造物の絶対的不足も氾濫を助長する要因であり、河道拡幅、排水ポンプ、ゲート設備などの構造物対策の推進が不可欠である。また、地盤沈下の影響により洪水氾濫域や氾濫水深も増加しており、防潮ゲートの配置と排水ポンプの拡充も不可欠であり、抜本的な構造物対策計画策定と施設建設が望まれる。

添付資料

資料-1 活動実績スケジュール

資料-2 カウンターパート及び機関リスト

資料-3 合同調整会議議事録

資料-4 セミナー及びワークショップ議事録

資料-5 ニュースレター

資料 - 1:

活動実績スケジュール

Table-A.1 Study Time Schedule (2/6)

Work Item	FY2006												FY 2007												FY 2008												FY 2009											
	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	4	5	6	7	8	9	10	11	12				
					1th				2nd				3rd				4th				5th				6th																							
[3-5] Establishment of One Dimensional Flow Model													Plan: 4-5, 6-7, 8-9, 10-11 Actual: 4-5, 6-7, 8-9, 10-11																																			
1) Review of Tidal Data													Plan: 4-5, 6-7, 8-9, 10-11 Actual: 4-5, 6-7, 8-9, 10-11																																			
2) Rainfall Analysis													Plan: 4-5, 6-7, 8-9, 10-11 Actual: 4-5, 6-7, 8-9, 10-11																																			
3) Establishment of One Dimensional Flow Model													Plan: 4-5, 6-7, 8-9, 10-11 Actual: 4-5, 6-7, 8-9, 10-11																																			
[3-6] Establishment of Two Dimensional Inundation Model													Plan: 4-5, 6-7, 8-9, 10-11 Actual: 4-5, 6-7, 8-9, 10-11																																			
[3-7] Study on Policy of Runoff Control Measures													Plan: 4-5, 6-7, 8-9, 10-11 Actual: 4-5, 6-7, 8-9, 10-11																																			
[3-8] Establishment of Runoff Model													Plan: 4-5, 6-7, 8-9, 10-11 Actual: 4-5, 6-7, 8-9, 10-11																																			
[3-9] Establishment of Comprehensive Flood Analysis Mode													Plan: 4-5, 6-7, 8-9, 10-11 Actual: 4-5, 6-7, 8-9, 10-11																																			
[3-10] Preparation and Discussion of Progress Report 1													Plan: 4-5, 6-7, 8-9, 10-11 Actual: 4-5, 6-7, 8-9, 10-11																																			
Second Works in Japan	[Green shaded area]																																															
[4-1] Explanation of Progress Report 1 and Reporting of Project Progress													Plan: 4-5, 6-7, 8-9, 10-11 Actual: 4-5, 6-7, 8-9, 10-11																																			
Third activities in Indonesia	[Green shaded area]																																															
[5-1] Implementation of Post Flood Survey													Plan: 4-5, 6-7, 8-9, 10-11 Actual: 4-5, 6-7, 8-9, 10-11																																			
1) Workshop													Plan: 4-5, 6-7, 8-9, 10-11 Actual: 4-5, 6-7, 8-9, 10-11																																			
2) Execution of Discharge Observation													Plan: 4-5, 6-7, 8-9, 10-11 Actual: 4-5, 6-7, 8-9, 10-11																																			
3) Survey on Operation and Damage Condition of Structures													Plan: 4-5, 6-7, 8-9, 10-11 Actual: 4-5, 6-7, 8-9, 10-11																																			

資料 - 2:

カウンターパート及び機関リスト

List of Counterpart 2007			
No.	Name	Function	Status
A	Counterpart Coordinator		
1	Ir. Sulad Sriharto, Dipl. HE	Head of Sub-Directorate of O&M River, Lake and Reservoir Dir. of Guidance of Water Resources Development, Dir. Gen. of Water Resources	Coordinator of Counterpart
2	Ir. Slamet Budi Santoso, Dipl.HE	Head of Sub-Directorate of Technical Planning Dir. of River, Lake and Resources Dir. Gen. of Water Resources	Coordinator for the activity of flood Management and hydrology
3	Ir. Lila Noerhayati	Head of Sub-Directorate of Spatial Planning Province & Regency Dir. Spatial Planning Area II, Dir. Gen. of Spatial Planning	Coordinator for spatial planning activity
4	Ir. Joesair Lubis, CES	Head of Sub-Dit. of Building Construction, Dir. Building and environment Management	Coordinator for Environment drainage and building codes activity
5	Ir. Hari Suprayogi, M. Eng	Head of Division of Planning and O&M BBWS Ciliwung-Cisadane	Coordinator for flood control activity
B	Member of Counterpart Team		
	Dit. Gen. Water Resources		
	Dit. of Water Resources Management		
1	Ir. Heru Setiawan M. Eng	Head of Section East Area, Sub-Dit O&M river, Lake and Reservoir	Member
2	Gatut Bayuadji, S. Sii, MT	Staff of Sub.Dit. O&M River, Lake and Reservoir	Member
3	Maria Ulfa Permatasari, ST	Staff of Sub.Dit. O&M River, Lake and Reservoir	Member
4	Didi Junaedi, BE	Staff of Sub.Dit. O&M River, Lake and Reservoir	Member
	Dit. River, Lake & Reservoir		

1	Ir. Anggia Satrini, M Eng	Head of Section East Area of Technical Planning	Member
2	Surendro Andi Wibowo, ST	Staff Sub.Dir Technical Planning	Member
▪ BBWS Ciliwung - Cisadane			
1	Ir. Putu Wirawan	Head Section of Planning	Member
2	Dina Noviadriana, ST., MT	Staff of Commitment Maker Functionary for Eastern Banjir Canal	Member
3	Fikri Abdurachman, ST	Staff of Conservation Development of Water Resources	Member
▪ BBWS Cidanau - Ciujung - Cidurian			
1	Imam Budiman, BE, SP, M.Si	Head of Section of Lake&Reservoir Implementation in Water Implementer Network Sector	Member
2	Dedi Mashudi, ST	Staff of Commitment Maker nary for River&Coast Implementation	Member
3	Budi Muhidin Budiana, ST	Staff of Planning and Programming	Member
▪ BBWS Citarum			
1	Arifin Kertayasa, ST	Head of Section Lake and Reservoir Implementation	Member
Dit.Gen Cipta Karya			
▪ Directorate of Building and Construction			
1	Ir. RG. Eko Djuli Sasongko, MM	Head of Section of Building Construction Area II	Member
2	Rogydesa, ST	Staff of Sub-Dir. Building Construction Area II	Member
▪ Directorate of Sanitation of Environment and Settlement Development			
1	Ir. Tulus R. Suhandono, MM	Head of Section of Operation Technical Guidance	Member
Dit. Gen. of Spatial Planning			
▪ Directorate. Spatial Planning Area II			
1	Reny Windyawati, ST, M.Sc	Head of Section Management of Metropolitan Spatial Planning	Member
2	Ida Ayu Gede Mirah ST,MT	Staff of Management Province	Member

		Spatial Planning Section	
3	Andri Hari Rochayanto, ST	Staff of Management of Metropolitan Spatial Planning Section	Member
4	Liza Soraya Kusumadevi, ST	Staff of Management of Regency Spatial Planning Section	Member
	▪ Public Work Agency of DKI		
1	Ir. Tri Djoko S.M., ME	Head of section of Water Resources Development, Sub-Agency of Water Resources and Coastal Dev.	Member
2	Ir. Dudi Gardesi Asikin, MUM	Head of Section Restoration of Water Pollution, Sub-Agency Environmental Technique and Facility Management	Member
	▪ Agency of Water Resources Development of West Java		
1	Ir. Eman Sulaeman, ME	Head of Section Flood and Dryness Control of Sub-Agency O&M	Member
2	Ir. Jajat Sudrajat, M. Si.	Head of Section of Control and Securing of Water Resources Dev. Office Ciliwung-Cisadane	Member
	▪ Public Work Agency of Banten		
1	H. Djoko Suryanto, ME	Head of Water Resour. Dev. Office River Area Cidurian-Cisadane	Member
2	H. Bai Iskandar, ATP. MM.	Head of Section of River & Coast	Member
	▪ Regional Development Board of DKI Jakarta		
1	Ir. Vera Revina Sari, M. Eng	Sub-Head of Spatial Planning & Construction Management	Member
2	Ir. Sri Mahendra, MM, MT.	Sub-Head of Water, Facility and Urban Utility	Member
	▪ Regional Development Board of West Java		
1	Ir. H. Djoddy Budhie Akbar, MT	Sub-Head of Area Infrastructure on Spatial Planning & Environmental	Member

	Regional Development Board of Banten		
1	Ir. Indro Sarwono, M.Sc	Sub-Head of Area Facility Sector	Member
2	Khairuddin, ST, M. Si	Sub-Head of Water Resources Facility Sector	Member
	Agency of Spatial Planning and Settlement of West Java		
1	Ir. Rudi Mahmud Zafrullah, MSP, ST	Sub-Head of Area Spatial Planning	Member
2	Budi Budiman Wahyu, ST, MT	Staff of Sub-Agency Settlement Planning Section	Member
	Agency of City Planning DKI Jakarta		
1	Ir. Izhar Chaidir, MA	Head of Section Planning of Urban Space Structure, Sub-Agency Study of Urban Space Structure	Member
2	Ir. Akstiaji Wibowo Astoto	Head of Section Green-Open Space & Water Management, Sub-Agency Planning of Urban Facility and Infrastructure	Member
C	Full time Counterpart Member		
	Dir. Of Programming, Dir. Gen. Water Resources		
1	Isnaeni Murdi Hartanto, ST	Staff of Sub. Dir. Policy & Strategy	Member
2	Kalmah, ST.	Staff of Sub. Dir. Work Performance Evaluation	Member
	Center of Expertise Management and Construction (BKPSDM)		
1	Juniferanne Natalina Brahmana, S.Psi	Staff of Expertise Management and Construction Technique BPKSDM	Member
	Agency of Public Work DKI Jakarta		
1	Ika Agustin Ningrum, ST	Staff of Sub-Agency of Technical Guidance of Water Resources	Member
2	Astrid Marzia Damayanti, ST	Staff of Sub-Agency Programming	Member

List of Counterpart 2008

No.	Name	Function	Status
A	Counterpart Coordinator		
1	Drs. Harmadi, ST, Sp1, MT	Head of Sub-Dir. River, Lake and Reservoir & Natural Disaster Fighting Dit. River, Lake and Reservoir, Dit.Gen. Water Resources	Coordinator of Counterpart
2	Ir. Leonarda B. Ibnu Said, M.Eng	Head of Sub-Dir. Hydrology, Dit. Water Resources Development	Coordinator for hydrology activity
3	Ir. Slamet Budi Santoso, Dipl. HE	Head of Sub-Dir. Technical Planning, Dit. Of River, Lake and Reservoir	Coordinator for flood management activity
4	Ir. Firman Mulia Hutapea, MUM	Head of Sub-Dir. Spatial Planning Programming & Dir. Spatial Planning Area II, Dit. Gen. Spatial Planning	Coordinator for spatial planning activity
5	Ir. Sumirat, MM	Head of Sub-Dit Building Construction Dir. Planning of Construction & Environment, Dit. Gen Cipta Karya	Coordinator for Environment drainage building codes activity
6	Febri Iman Harta, ME	Head of Section of Planning and O & M, BBWS Ciliwung-Cisadane	Coordinator for flood control activity
B	Member of Counterpart Team		
	Dit. Gen Water Resources		
	▪ Directorate Water Resources Management		
1	Ir. Sulad Sriharto, Dipl. HE	Head of Sub-Dir. Of Controlling of Water Resources Management Dir. Water Resources Management	Member
2	Gatut Bayuadji, S. Si, MT.	Head of Section Hydrology, Dit Water Resources Management	Member
3		Head of Section West Area, Sub-dit. River Area Planning	Member
	▪ Directorate of River, Lake and Reservoir		
1	Anggia Satriani, M. Eng	Section Head of east Area, Sub-dit. Technical Planning	Member
2	Ir. Surya Dewanto	Section Head of WestArea, sub-dit. O&M, River,Lake and Reservoir	Member

	▪ BBWS Ciliwung - Cisadane		
1	Ir. Bastari, MT	Head Section of Planning	Member
2	Dina Noviadriana, ST, MT	Staf of Commitment Maker Functionary Of Eastern Banjir Canal	Member
3	Fikri Abdurrachman, ST	Staff of Development and Conservation Of Water Resources	Member
	▪ BBWS Cidanau - Ciujung - Cidurian		
1	Imam Budiman, BE, SP, M.Si	Head of Section of Lake&Reservoir in Water Implementation Network Sector	Member
2	Dedi Mashudi, ST	Staf of Commitment Maker Functionary for River&Coast Implementation	Member
3	Budi Muhibudin Budiana, ST	Staff of Planning and Programming	Member
	▪ BBWS Citarum		
1	Arifin Kertayasa, ST	Head of Section Lake and Reservoir Implementation	Member
	Ditjen Cipta Karya (Human Settlement)		
	▪ Directorate of Construction & Environment Management		
1	Ir. RG. Eko Djuli Sasongko MM	Head of Section of Building Construction Area II	Member
2	Rogydesa, ST	Staff of Sub-Dir. Building Construction Area II	Member
	▪ Directorate of Sanitation of Environment and Settlement Development		
1	R.G. Hari Susanto	Section Head of Operation Technical Guidance	Member
	Dit. Gen. of Spatial Planning		
1	Reny Windyawati, ST, M.Sc	Head of Section Management of Metropolitan Spatial Planning	Member
2	Ida Ayu Gede Mirah Arnadi, ST, MT	Staff of Management Province Spatial Planning Section	Member
3	Liza Soraya Kusumadevi , ST	Staff of Management of Regency Spatial Planning Section	Member
	▪ Public Work Agency of DKI		

1	Ir. Tri Djoko S.M., ME	Head of section of Water Resources Development, Sub-Agency of Water Resources and Coastal Dev.	Member
2	Ir. Dudi Gardesi Asikin, MUM	Head of Section Restoration of Water Pollution, Sub-Agency Environmental Technique and Facility Management	Member
3	Ir. Maman Suparman, ME	Head of Section of Maintenance and Water Control, Sub-Agency of Water Resources Development .	Member
▪ Agency of Water Resources Development of West Java			
1	Ir. Eman Sulaeman, ME	Head of Section Flood and Drought Control of Sub-Agency O&M	Member
2	Ir. Jajat Sudrajat, M. Si.	Head of Section of Control and Protection of Water Resources Dev. Balai PSDA Ciliwung-Cisadane	Member
▪ Public Work Agency of Banten			
1	H. Djoko Suryanto, ME	Head of Water Resource Development Balai PSDA Cidurian-Cisadane	Member
2	H. Bai Iskandar, ATP. MM.	Head of Section of River & Coastal	Member
▪ Regional Planning and Development Board of DKI Jakarta			
1	Ir. Sri Mahendra, MM, MT	Sub Head of Water Management, Facility, and ciy utilities	Member
2	Ir. Vera Revina Sari, M. Eng	Sub Head of Spatial planning and construction	Member
Regional Development Board of West Java			
1	Ir. Djoddy Budhie Akbar, MT	Head of Sub-sector Regional Infrastructure	Member
▪ Regional Development Board of Banten			
1	Ir. Indro Sarwono, M.Sc	Sub-Head of Area Facility Sector	Member
2	Khairuddin, ST, M. Si	Sub-Head of Water Resources Facility Sector	Member
Agency of Spatial Planning and Settlement of West Java			
1			Member

2			Member
	Agency of City Planning DKI Jakarta		
1	I Ketut Dharmika, BAP	Section Head of Green-Open Space & Water Municipal, Sub-Agency Planning of City Facility & Infrastructure	Member
2	Desy Meilayanti ST., MT.	Section Head of <i>P</i> and <i>PPK</i> Sub-Agency of Infrastructure Management	Member
C	Full time Counterpart Member		
	Dir. Of Programming, Dir. Gen. Water Resources		
1	Isnaeni Murdi Hartanto, ST	Staff of Sub. Dir. Policy & Strategy	Member
2	Kalmah, ST.	Staff of Sub. Dir. Work Performance	Member
			Evaluation
	Agency of Public Work DKI Jakarta		
1	Ika Agustin Ningrum, ST	Staff of Sub-Agency of Technical Guidance of Water Resources	Member
2	Dwi Murti Nuraili, MT.	Staff of Sub-Agency of Technical Guidance of Water Resources	Member
3	Eko B. Santoso	Staff of Maintenance and Water Control Sub-Agency of Water Resources Dev.	Member
4	Purwanti Suryandari	Staff of Sub-Agency of Technical Guidance of Water Resources	Member
	Dir. of Water Resources Development		
1	Juniferanne N. Brahmana, S. Psi	Staff of Sub-Dir. Controlling of Water Resources Management	Member
2	Andi Widiyanto, ST.	Staff of Sub-Dir. Controlling of Water Resources Management	Member
	BBWS Ciliwung-Cisadane		
1	Heriyanto Waluyadi, ST, MT	Principal Supervisor of Situ Rehabilitation	Member
	Dir. River, Lake & Reservoir, Dir. Gen. Water Resources		

1	Inneke Dwi Wahyuni, ST.	Staff of Sub-Dir. Conservation & Dam Dir. River, Lake and Reservoir	Member
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List of Counterpart 2009 - 2010			
No.	Name	Function	Status
A Counterpart Coordinator			
1	Suhartono, ME	Head of Sub-Dir. River, Lake and Reservoir & Natural Disaster Fighting Dir. River, Lake and Reservoir, Dir.Gen. Water Resources	Coordinator of Counterpart
2	Ir. Leonarda B. Ibnu Said, M.Eng	Head of Sub-Dir. Hydrology, Dir. Water Resources Development	Coordinator for hydrology activity
3	Ir. Slamet Budi Santoso, Dipl. HE	Head of Sub-Dir. Technical Planning, Dir. Of River, Lake and Reservoir	Coordinator for flood management activity
4	Ir. Firman Mulia Hutapea, MUM	Head of Sub-Dir. Spatial Planning Programing and Dit Spatial Planning Area II, Dir. Gen. Spatial Planning	Coordinator for Spatial planning activity
5	Ir. Eko Djuli Sasongko	Head of Sub-Dir. Bulding Construction, Dir. Planning of Construction & Environment, Dir. Gen Cipta Karya	Coordinator for Environment drainage building codes activity
6	Febri Iman Harta, ME	Head of Section of Planning and O & M, BBWS Ciliwung-Cisadane	Coordinator for flood control activity
B Member of Counterpart Team			
Dit. Gen Water Resources			
▪ Directorate. Water Resources Management			
1	Ir. Sulad Sriharto, Dipl. HE	Head of Sub-Dir. Of Controlling of Water Resources Management Dir. Water Resources Management	Member
2	Gatut Bayuadji, S. Si, MT.	Head of Section Hydrology, Dir. Water Resources Management	Member
▪ Directorate of River, Lake and Reservoir			
1	Anggia Satriani, M. Eng	Section Head of east Area, Sub-dit. Technical Planning	Member
2	Ir. Surya Dewanto	Section Head of WestArea, sub-dit. O&M, River,Lake and Reservoir	Member

	▪ BBWS Ciliwung - Cisadane		
1	Ir. Susiolawati, MT	Head Section of Planning	Member
2	Dina Noviadriana, ST, MT	Staff of Technical Implementer, Commitment Maker of Flood Safety and River Improvement	Member
3	Fikri Abdurrachman, ST	Main Supervisor in Situ Gintung Dam Reconstruction	Member
	▪ BBWS Cidanau - Ciujung - Cidurian		
1	Imam Budiman, BE, SP, M.Si	Head of Section of Lake&Reservoir in Water Implementation Network Sector	Member
2	Dedi Mashudi, ST	Staff Commitment Maker Functionary for River & Coast Implementation	Member
3	Budi Muhibudin Budiana, ST	Staff of Planning and Programming	Member
	▪ BBWS Citarum		
1	Arifin Kertayasa, ST	Head of Section Lake and Reservoir Implementation	Member
	DG. Cipta Karva (Human Settlement)		
	▪ Directorate of Construction & Environment Management		
1	Ir. Kartoko	Head of Section of Building Construction Area II	Member
2	Rogydesa, ST	Staff of Sub-Dir. Building Construction Area II	Member
	▪ Directorate of Sanitation of Environment and Settlement Development		
1	R.G. Hari Susanto	Section Head of Operation Technical Guidance	Member
	Dir. Gen. of Spatial Planning		
1	Reny Windyawati, ST, M.Sc	Head of Section Management of Metropolitan Spatial Planning	Member
3	Liza Soraya Kusumadevi , ST	Staff of Management of Regency Spatial Planning Section	Member
	▪ Public Work Agency of DKI		
1	Herning Wahyuningsih, MSc	Head of Implementation & Controlling of Flood Control Facility Section	Member

2	Ir. Budi Mulyanto	Head of Maintenance of Conservation And Utilization of Water Resources Facility & Infrastructure Section	Member
3	Ir. Dudi Gardesi Asikin, MUM	Head of Planning of Water Resources Maintenance Section	Member
▪ Agency of Water Resources Development of West Java			
1	Endang Kusnadi, MT	Head of Operation and Maintenance Sector	Member
2		Head of Section of Control and Protection of Water Resources Dev. Balai PSDA Ciliwung-Cisadane	Member
▪ Public Work Agency of Banten			
1	H. Djoko Suryanto, ME	Head of Water Resource Development Balai PSDA Cidurian-Cisadane	Member
2	H. Bai Iskandar, ATP. MM.	Head of Section of River & Coastal	Member
▪ Regional Planning and Development Board of DKI Jakarta			
1	Ir. Beny Agus Chandra	Head of Sub-sector Spatial Planning and construction	Member
2	Ir. Hendradman Dewantoro, MM	Sub Head of Spatial planning and Construction	Member
Regional Development Board of West Java			
1	Eko Priastono, ST, MPPM	Head of Sub-sector Spatial Planning and Environmental	Member
2	Linda Al-Amin, SH, MM	Head of Sub-sector Regional Infrastructure	Member
▪ Regional Development Board of Banten			
1	Ir. Indro Sarwono, M.Sc	Head of Sub-sector Area Facility	Member
2	Khairuddin, ST, M. Si	Head of Sub-sector Water Resources Facility	Member
Agency of Spatial Planning and Settlement of West Java			
1	Ir. Rudi Mahmud, MSP, MT	Head of Sub-sector Regional Spatial Planning	Member

2	Budi Budiman Wahyu, ST, MT	Staff of Settlement Sector	Member
	Agency of City Planning DKI Jakarta		
1		Head of Green-Open Space & Water Municipal, Sub-Agency Planning Section of City Facility & Infrastructure	Member
2	Yanuar Riady	Head of Section Maker and Guidance Of Working Program, Sub-Agency Programming	Member
C	Full time Counterpart Member		
	Dit. Programming, DG. Water Resources		
1	Ambar Puspitosari, ST	Staff of Sub. Dir. Policy & Strategy	Member
	Agency of Public Work DKI Jakarta		
1	Heria Suwandi	Staff of Implementation & Controlling of Flood Control Facility Section	Member
2	Dwi Murti Nuraili, MT.	Staff of Implementation & Controlling of Flood Control Facility Section	Member
3	Eko B. Santoso	Staff of Maintenance of Conservation And Utilization of Water Resources Facility	Member
4	Purwanti Suryandari	Staff of Implementation & Controlling of Flood Control Facility Section	Member
5	Mariana, ST	Staff of Maintenance of Conservation of Flood Control Facility Section	
	Dit. of Water Resources Development		
1	Juniferanne N. Brahmana, S. Psi	Staff of Sub-Dir. Controlling of Water Resources Management	Member
2	Andi Widiyanto, ST.	Staff of Sub-Dir. Controlling of Water Resources Management	Member
3	Ayu Suci Wijayanti, ST	Staff of Sub-dit. Hydrology and Water Quality	
4	Sumarno, ST	Staff of Sub-dit. Hydrology and Water Quality	
	BBWS Ciliwung-Cisadane		

1	Heriyantono Waluyadi, ST, MT	Principal Supervisor of Situ Rehabilitation	Member
2	Fikri Abdurahman, ST	Supervisor, Commitment Maker Official of East Banjir Canal	Member
3	Dina Noviadriana, ST. MT	Head of Section River and Coastal Implementation, Sector Water Resources Implementation	Member
4	Heru Purnomo	Functional Official of Municipal Irrigation Engineering	Member
5	Lina Fitriani, ST	Staff of Technical Implementer, Commitment Maker Official of Flood Safety and River Development	Member
6	Puji Sutarto, SST. MT	Head of Sub-Division Programming	Member
7	Pujiono, ST	Principal Supervisor	Member
8	Ir. Romelan	Functional Official of Municipal Irrigation Engineering	Member
Dit. River, Lake & Reservoir, Dit. Gen. Water Resources			
1	Hendra Ramadhani, ST	Staff of Sub-Dit. Technical Planning	Member
2	Kiki Marina Murdiani, AMD	Staff of Sub-Dit. Operation & Maintenance and Natural Disaster Fighting	Member
3	Nila Aliefila Fadli, ST. MT.	Staff of Sub-Dit. Management of West Region Implementer	Member
4	Taufan Andrianto, ST	Staff of Sub-Dit. Operation & Maintenance and Natural Disaster Fighting	Member

資料 – 3:

合同調整会議議事録

- ATTACHMENT 3-1 JCC Meeting on March 30th, 2007
- ATTACHMENT 3-2 JCC Meeting on December 18th, 2007
- ATTACHMENT 3-3 JCC Meeting on February, 29th 2008
- ATTACHMENT 3-4 JCC Meeting on March 13th, 2009
- ATTACHMENT 3-5 JCC Meeting on October 7th, 2009
- ATTACHMENT 3-6 JCC Meeting on March 5, 2010

**MINUTES OF MEETING
FOR
JOINT COORDINATION COMMITTEE
ON
THE INCEPTION REPORT
FOR
THE INSTITUTIONAL REVITALIZATION PROJECT FOR
FLOOD MANAGEMENT IN JABODETABEK
IN
THE REPUBLIC OF INDONESIA**

AGREED UPON BETWEEN

**MINISTRY OF PUBLIC WORKS
AND
JAPAN INTERNATIONAL COOPERATION AGENCY**

Jakarta, March 30, 2007

Ir. Siswoko, Dipl. HE
Director General of Water Resources
Ministry of Public Works
Indonesia

Mr. Susumu HEISHI
Leader
Japanese Experts Team
Japan International Cooperation Agency
Japan

Mr. Satoru MIMURA
Leader
Advisory Mission
Japan International Cooperation Agency
Japan

In accordance with the Record of Discussions (R/D) between the Governments of Japan and Indonesia dated on October 19, 2006 on the Institutional Revitalization Project for Flood Management in JABODETABEK (the Project), the Joint Coordination Committee (JCC) meeting on the Inception Report was held on March 30, 2007. Function and composition of the Joint Coordination Committee specified in the R/D are shown in the Attachment-1.

The meeting was chaired by Ir. Imam Anshori, Director of Water Resources Management, on behalf of Director General of Water Resources, Ministry of Public Works. The participants of the meeting are listed on the Attachment-2.

After the opening remarks by Ir. Imam Anshori, Mr. Satoru MIMURA, Leader of the Advisory Mission by Japan International Cooperation Agency (JICA), explained the outline of the project. Then Mr. Susumu HEISHI, Leader of the Japanese Experts Team, followed the explanation of the plan of operation of the project. After the explanations, the participants exchanged views and had discussions for the successful implementation of the project.

Through the meeting, JCC agreed with the contents of the Inception Report with the following notes:

- (1) It is effective and efficient to implement the non-structural measures in addition to the structural ones in order to mitigate the flood damaged in JABODETABEK. In this context, JCC fully agreed with the overall goal and purpose of the project.
- (2) The outputs and activities of the project were modified in order to clarify the details of activities of the project. JCC agreed with these modifications.
- (3) In order to contribute to the successful implementation of the project, JICA dispatches the Japanese Experts consisting of one (1) long-term expert as the Chief Advisor and four (4) short-term experts, specified as follows:
 - Chief Advisor
 - Leader/Expert on river and drainage structure management plan
 - Expert on flood management and flood preparedness
 - Expert on runoff control, land use and spatial planning
 - Expert on digital mapping and survey

JCC welcomed this determination.

- (4) The plan of operation of the project in the Inception Report includes the implementation policies, methodologies and schedule of activities. JCC basically agreed with those in the Inception Report.
- (5) The counterpart team was established by the Indonesian side as shown in the Attachment-3.

- (6) The Japanese side requested to provide the appropriate office space, required facilities and required budget to implement the project. The Indonesian side promised to reply those requests certainly.
- (7) The Indonesian side suggested the following issues on the project, and the Japanese side replied that those issues will be paid attention on:
- There is a absence period of the Japanese experts in the first year. To avoid such absence, the Indonesian side requested to rearrange the assignment schedule of the Japanese experts.
 - Model river basins in the provinces of Banten and West Java will be selected through the discussions with the respective provincial governments.
 - It is important for the counterpart agencies to understand the objectives and results of the project. In this context, the Indonesian side request to hold the workshops frequently.
 - Presidential decree regarding the spatial planning in JABODETABEK is scheduled to enact in 2007. During the study on the runoff control, this spatial planning shall be considered. The study results will be used as a reference to revise the regional spatial planning.
 - There are two types of counterparts, namely fulltime and part time. The counterpart with the fulltime basis will be the hydrologists from the DGWR, DKI, the provinces of West Java and Banten. The respective agencies will select the candidates.
 - There are several studies and the project works for the drainage improvement in the JABODETABEK. The project team shall consider these situations and use the results of these plans and studies.
 - There are some sample countermeasures specified in the Inception Report. Some of the countermeasures do not seem applicable in JABODETABEK.

Attachment-1 Functions and Composition of Joint Coordination Committee

(Source R/D dated on October 19, 2006)

ANNEX V JOINT COORDINATING COMMITTEE

1. Functions

A Joint Coordinating Committee will be created, which will meet at least once a year and whenever the need arises.

The functions of the Committee are as follow.

- (1) To supervise the annual work plan of the Project in line with the Project Design Matrix and the Plan of Operations.
- (2) To review the annual and overall progress of the Project and to evaluate the accomplishment of the annual targets and achievement of the objectives.
- (3) To find out proper ways and means for solution of the major issues arising from or in connection with the Project.

2. Composition of the Committee

(1) Chairperson

Director General of Water Resources, Ministry of Public Works

(2) Members

a. Indonesian Side

1. Secretariat Directorate General of Water Resources
2. Director of Water Resource Management, Directorate General of Water Resources
3. Director of Rivers, Lakes and Reservoirs, Directorate General of Water Resources
4. Representative, Directorate General of Human Settlement
5. Representative, Directorate General of Spatial Planning
6. Representative, Dinas of Public Works Special State Capital Jakarta
7. Representative, Dinas of Water Resources West Java Province
8. Representative, Dinas of Public Works Banten Province
9. Representative, BAPPEDA of Special State Capital Jakarta
10. Representative, BAPPEDA of West Java Province
11. Representative, BAPPEDA of Banten Province
12. Representative, Dinas of City Planning and Control, Special State Capital Jakarta
13. Representative, Dinas of Land Use and Settlement, West Java Province

b. Japanese Side

1. Chief Advisor
2. Coordinator
3. Other Japanese experts
4. Member(s) of missions dispatched by JICA
5. Representative(s) of JICA Indonesia Office
6. Other person(s) concerned appointed by Chief Advisor

Note: Official(s) of the Embassy of Japan may attend the Committee meetings as observer(s).






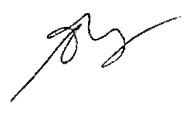
DAFTAR HADIR
PRESENTASI PROGRESS REPORT I
KEGIATAN PEMBERDAYAAN KELEMBAGAAN UNTUK PENGELOLAAN BANJIR DI WILAYAH JABODETABEK
(THE INSTITUTIONAL REVITALIZATION FOR FLOOD MANAGEMENT IN JABODETABEK)

Hari / Tanggal : Selasa / 18 Desember 2007

Waktu : 10.00 - selesai

Tempat : Ruang Sidang Jatiluhur

NO	NAMA	INSTANSI	TANDA TANGAN	
1	Indro Jatwono .	Bapeda Banten	1.	2.
2	Linda Al Amin	Bapeda Jabar		
3	Suherman, Mh	PERDA Prop Jabar	3.	4.
4	Sri Apriatini	Dit Taruwil II		
5	Reny Windyawati-	Dit. Taruwil II	5.	6.
6	Sulad Sriharto	Dit Bina PSDA		
7	Iman Auskoni	Bit. Bina PSDA	7.	8.
8	Takao ki KUSAKABE	JICA Expert		BTFP
9	Y. Utsui	=	9.	10.
10	Sihar Simangjuntak	JICA staff .		
11	Hemu Setiawan .	Dit. Bina PSDA	11.	12.
12	Widayo	Dit SDW		
13	Surendro A.v.	Ditjen. SDA	13.	14.
14	Ardhyta A	Ditjen SDA		

15	Mulendra	Byggeda DKI	15	16
16	Wahyu Imam S	PBL DJCK		
17	@ Sembiring	Dit. SDW	17	18
18	SUWARDI S.S.	OPU DKI		
19	Novita, Nababan, S.Pd.	JICA staff	19	20
20	Dian MayLanny	JICA Staff		
21			21	22
22				
23			23	24
24				
25			25	26
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DAFTAR HADIR
 RAPAT PEMBAHASAN PROGRESS KEGIATAN PEMBERDAYAAN KELEMBAGAAN
 UNTUK PENGELOLAAN BANJIR DI WILAYAH JABODETABEK
 (THE INSTITUTIONAL REVITALIZATION FOR FLOOD MANAGEMENT IN JABODETABEK)

Hari / Tanggal : Jumat / 29 Februari 2008

Waktu : 09.30 - selesai

Tempat : Ruang Rapat Ditjen SDA

NO	NAMA	INSTANSI	TANDA TANGAN	
1	Imam Anshari	Dit. BPSOA - Ditjen SDA	1. 	2.
2				
3	Djoko Suryanto	DINAS SDA & PEMULIHAN PROV. BANTEN	3. 	4.
4	WIDIANTO	BAPEDA JABAR		
5	Wiharyono	Dit. PANGKALIN CIPRA KARAYA	5. 	6.
6	Edward A.	Subdit Metropolitan Dit. Bangkok CK		
7	JOHN C.T.	SDPU TATA AIR JAKARTA PUSAT	7. 	8.
8	Sula Sriharto	Subdit PPSOA		
9	Ipa Ayu Mirah	SUBDIT PRODUKSI & PASAR DIT. TARUWIL II	9. 	10.
10	Reny Windyawati	Subdit Kota & Metro DIT. TARUWIL II		
11	DOBIE KRIPRATMANI	Subdit Pengembangan Persep & Drainase, DIT PPLP	11. 	12.
12	BONA PANJAITAV	SUBDIT. P. SAMPAH & DRAINASE DIT. PPLP / DJCIC		
13	AGUNG PUJO W.	DINAS TATA KOTA	13. 	14.
14	Mahendra	Dinas Dili Jakarta		

15	NOVITA Nababan	JICA staff	15	16
16	Sahit Bayuadi	DA BPSDA	16	17
17	RIZALI	DINAS PSDA PROV. JABAR	17	18
18	SAHALA Pratomo	SD PU RI selatan	18	19
19	SORIMUDA.H	DRU DKI	19	20
20	FEBRI IMAN HARFA	BBWS Cil-Cis	20	21
21	TEGUNT T	BBWS CC	21	22
22	U. Usui	JICA Expert	22	23
23	Silvan Sumanjaya	JICA staff	23	24
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MINUTES OF MEETING
Joint Coordination Meeting
(Discussion of Progress Report 3)
of

The Institutional Revitalization Project for Flood Management in JABODETABEK

1. Day/date : Friday, March 13th, 2009
2. Time : 09.00am-11.35 am
3. Venue : Meeting Room Jati Luhur, Ditjen SDA, 3rd fl
4. Chairman of Meeting : Direktur BPSDA, Direktorat BPSDA, Dirjen SDA, Sugiyanto,
5. Agenda : a. Explanation of Outline & Progress of Report
b. Explanation of Spatial Planning for Jabodetabekpunjur Area
c. Explanation of Maintenance Manual on the River Structure
d. Explanation of Study on WBC and the Ciliwung
e. Explanation of Operation Manual on Pumps and Gates
f. Report on Conclusion of Seminar on flood Mitigation in JABODETABEK on December 4th, 2008
g. Explanation of Follow up Activities
h. Explanation of Flood Inundation Analysis Model
i. Explanation the Program of Project in Next Fiscal Year
j. Discussion of Project Activities
6. Participants : a. Direktur PSDA, Ditjen SDA
(Director of Water Resources Management, DG. Water Resources)
b. Direktur SDW, Ditjen SDA
(Director of River, Lake and Reservoir, DG. Water Resources)
c. Kasubdit OP & PBA, Dit. SDW, Ditjen SDA
(Head of Sub-Directorate Operation and Maintenance & Natural Disaster Fighting, Dit. River, Lake and Reservoir, DG. Water Resources)
d. Kasubdit Bangunan Gedung, Dit. PBL, Ditjen Cipta Karya
(Head of Sub-Directorate Building Codes, Dit.Planning of Building and Environment, DG. Human Settlement)
e. Kasubdit Pembinaan Perencanaan Tata Ruang Perkotaan dan Metropolitan, Dit. Wilayah II, Ditjen. Penataan Ruang (Head of Sub-Directorate Urban and Metropolitan Spatial Planning, Dit. Regional II, DG. Spatial Planning)
f. Bappeda DKI Jakarta (Planning & Development Board of DKI Jakarta Province)
g. Bappeda Banten (Planning & Development Board of Banten Province)
h. BBWS Ciliwung Cisadane
i. Dinas PSDA Provinsi Jawa Barat (Agency of Water Resources Management of West Java Province)
j. JICA Resident Representative & JICA Expert
k. Staff OP & PBA, Dit. SDW, Ditjen. SDA
(Staff of Operation and Maintenance & Natural Disaster Fighting, Dit. River, Lake and Reservoir, DG. Water Resources)
l. Staff DTR, Ditjen. Penataan Ruang
(Staff of Spatial Planning, DG. Spatial Planning)
m. Fulltime Counterparts:
 1. Juniferanne
 2. Ayu
 3. Ambar
 4. Heriantono
 5. Andi

k. JICA team

(In total, 31 persons attended the meeting)

Progress of Meeting:

A. Opening Remarks

Joint Coordination Meeting on The Institutional Revitalization Project for Flood Management in Jabodetabek was opened by Director of PSDA, Ir. Sugiyanto, at 09.15am.

After opening remarks, Mr. WATANABE Masatomo as team leader introduced the member of JICA team.

B. Outline & Progress of Report

Explanation the Outline & Progress Report, by Mr. WATANABE Masatomo. (09.20am-09.25am)

C. Special Topics of Activities (Presentation by Counterpart and Fulltime Counterpart)

(1) **Spatial Planning for Jabodetabekpunjur Area**, by Ir. Firman M Hutapea (09.25-09.50am)

(2) **Maintenance Manual on the River Structure**, by Anne, supported by Ambar and Ayu (09.50-10.05)

(3) **Operation Manual on Pumps and Gates**, by Mr. SHINGU Tamotsu (10.05-10.25am)

(4) **Study on WBC and the Ciliwung**, by Heriantono, supported by Andi (10.25-10.45am)

D. Seminar on December 4th, 2009 and follow up

(1) **Conclusion of Seminar**, by Mr. KUSAKABE Takaaki (10.45-10.48am)

(2) **Follow up Activities**, by Sarwono (10.48-10.50am)

E. Flood Inundation Analysis Model & Program of Project in Next Fiscal Year

Explanation the flood inundation analysis model and program of project in next fiscal year, by Mr. SHINGU Tamotsu (10.50-11.00am).

F. Discussion of Project Activities

Discussion session was opened for all participants by Mr. Sugiyanto at 11.00am.

Question 1: by Mr. Suherman, Head of Water Resources Management Balai CiliwungCisadane, Water Resources Management Agency of West Java

Greetings.

First of all, I want to introduce my self. I come from Water Resources Management Agency of West Java Province. I was assigned to attend this meeting since the Head of Development & Planning Board of West Java Province, the counterparts from Housing and Settlement of West Java Province and also the Head of Water Resources Management Agency of west Java Province could not come.

In this opportunity, I will not discuss or add what already explained. On behalf of the Provincial Governemnt and Regency/ Municipal Governemnt of West Java Province, we want to be involved in the activity of non structural flood mitigation. What we meant is about the spatial planning in the area of upstream Ciliwung. We ask for the recommendation of the important things to be considered for spatial planning regarding the available regulations are not optimal yet.

Then, due to our weaknesses which should be improved regarding the Local Government Regulation on Spatial Planning either in Province or Regency are not optimal yet. We hope that the recommendations from all of you may improve the effort to reduce the run-off in the upstream; also about the institutional role of the Provincial Governement and Regency/ Municipal Government in controlling the spatial planning.

The last thing is the recommendation about the role of Central Governemnt and DKI Jakarta Government to participate in controlling the spatial planning in upstream of Ciliwung. Beforehand, I would like to ask apologize to Mr. Widagdo, I have no intention to reveal the bad things among the Government institution in DKI Jakarta and West Java. I only expect that we shall have the same consideration for non-structural measure in controlling.

Those are all of my questions. Thank you.

Question 2: by Ir. Eko Djuli Sasongko (Head of Sub-Directorate Building Codes, Dit.Planning of Building and Environment, DG. Human Settlement)

Greetings.

My name is Eko Djuli Sasongko from DG. Human Settlement, Dit. Planning of Building and Environment. As the instruction of Director General of Human Settlement that the main duties of Directorate General of Human Settlement are regulation, management, supervision and development. For water and land conservation, we also make regulation to reduce the damages resulted from human actions by reducing the run-off, particularly in the areal of buildings. Since we joined in this team, we realized and made draft to control the run-off in the areal of buildings. Hopefully within this year we compromise it into Minister Regulation which can be used as consideration for the construction of buildings in the district. As we can see that the run-off due to malls and house-store is 100 percent coming out of the lot, moreover if the water is mixed withsoil. That dirty water will enter the drainage channel and cause sedimentation. Therefore, the regulation to reduce run-off is necessary.

In this opportunity, I want to invite the Direcorate of Water Resources Management to consent that regulation for its effectiveness. Thank you.

Review of Question:

1. by Mr. Sugiyanto

●) The answer of 1st question by Mr. Sugiyanto about recommendation for the development in the upstream of Ciliwung is by applying the regulation of spatial planning. But the application of spatial planning regulation should be integrated among the spatial planning in Province Level and Regency/ Municipal Level; however the the application in each level is not optimal yet and should be improved beforehand. Beside that is applying Incentive and Disincentive systems. I think it is very good, because the downstream area also gives contribution to the condition in upstream and vice versa. Unfortunately, the National Policy about flood management does not cover about that. That is why, I also need comments from my colleague, Mr. Widagdo and also friends from consultant.

●) for Mr. Eko, I think it is only additional information about preparation of regulation to control run-off.

Now Mr. Widagdo will give some comments, please.

2. by Mr. Widagdo

Thank you for the opportunity. As a participant, I also want to give comment for the questions and presentations delivered.

For Mr. Suherman, thank you for your question. It is right that coordination among regions is very important. To regulate the spatial planning in the upstream area of Ciliwung, as mentioned by Mr. Firman Mulia, there are Regulation of Government Number 26 and President Decree Number 54. This Decree is a reference for the Regulations of Local Government which related with Spatial Planning in JABODETABEK area, also for us to have coordination among the regions.

About the revision of regulations, I think we need to conduct seminar. We can discuss, what kind of regulations is needed, which regulation should be adjusted to control the spatial planning, etc.

What did you mean before, “Tata Ruang (Spatial Planning) or Tata Uang (Money Planning)”? If we are talking about Money Planning, as mentioned previous that through Dewan SDA Nasional (National Water Resources Council) we campaign the non-structural measures by giving compensation upstream-dowstream for the environment conservation. It is one of the ways for downstream area to be responsible to upstream area which laready conducted conservation by giving compensation. It is also assessable for controlling the degradation of environment toward certain river basin area, following the studies made by Mr. Emil Salim (Former Environment Minister of Indonesia) with The Minister of Economy and Regional Planning & Development Board (BAPPEDA). They apply the system of Upstream – Downstream Compensation for several lakes. The downstream area is subjected for tax which will be given to upstream area which conducting conservation.

For Mr. Eko, I agree with you. I really appreciate the regulation about the reducing of run off. Though the catchment area was increased, but the building run-off also increased. It is always a problem. One of the ways to control run-off coeeficient is called run-off management. As

mentioned in the previous presentations, there are on stream management and off stream management. Run-off management is included in off stream management. Run-off management can be applied through compensation system. If some land developed, the space for water should be calculated. So, the load of run-off which enters the river is balance. I also hope that the developer in Jakarta is eco-developer which means that developer is encouraged to construct the space for water which can not be entered. So, dike becomes the storage for water parking. Regulation for developer is needed to apply this. At least for the space utilization of 100 hectare, calculation of space for water is necessary. The developer should be responsible for the water management in that developed area. It has been implemented in area of PIK (Panati Indah Kapuk). But, seems they forget that in the former that area was a channel for water from upstream to downstream. Maybe that area is safe, but becomes backwater to the upstream. That is what I and Mr. Firman concerned about.

Mr. Firman already mentioned which called “Tata Ruang Jabodetabekpunjur” (Spatial Planning of Jabodetabekpunjur), but it is only from the view of economic and demand driven. I think also should be concern about Spatial Planning based on resources capacity. Therefore, I want to ask Mr. Sarwono to have environmental supporting capacity, particularly supporting capacity toward the cathment areas. We have drainage system which one of its activity is Operation and & Maintenance (walkthrough). By conducting walkthrough, we can know the every point in certain catchment.

Then we can know the load of each river which is affected by every catchment. Supporting capacity that mentioned by Mr. Firman is environmental supporting capacity only. What I expect is the supporting capacity to receive water. So we can give warning to the related Local Government. If the occupation of catchment area in certain area changed some percent, it would cause flood in certain area. If in certain area was developed for industrial activity, they should consider where the water will be channeled since the capacity of the river is limited. The assumption is, if the occupation of certain area changed then the parking for water should be considered. Moreover, we already have new system DYSGS two dimension (explained by Mr. Shingu), which projecting the certain occupation of catchment with certain load due to the limited river capacity. I really impress with Tsurumi Retarding Basin in Tokyo. They prepared some compensation area to receive the water, because basically we can not avoid the changing of land use. 20 years ago the occupation area was only 10% in Tsurumi area, but now became 85%.

The development in Jakarta area can not be easily stopped, but we also have to give warning about this run-off management by giving compensation to developers and society. This also should be explained to journalist or society when asked when the flood problem will be over. If there was no awareness of how to manage run-off, then the flood problem would never be over. This kind of thinking and concept should be developed. For Mr. Shingu and Mr. Watanabe, I think those are very presentations. I really appreciated it. I hope we can combine all of the components into one strategy; like spatial planning and river capacity, the environmental capacity to receive water, and how can we develop this kind of awareness to the Local Government or event the area management.

About the presentation from spatial planning, the space of water explained above should be related with the analysis and simulation. I think it would be good, if there was illustration showing the worse condition when permit for the developing the settlement or building. And the coordination with the colleagues from DG of Cipta Karya is also necessary.

About the Operation and Maintenance of river structure, I think it is better if the definition of Macro, Sub-macro and Micro drainage is correlated with flood control and flood drainage, urban flood and urban drainage. So it is not only about the jurisdiction.

The explanation about walkthrough inspection was good, but I want to add some thing. I think we do not only to know about the condition of the structure, but also the function. Because, sometimes the structures still well functioned though some parts are broken. Therefore, the information about function of the structures shall be explained, such as how many percent the decrease of function due to the decrease of structure condition (broken), whether the structure need to be rehabilitated instead only maintenance, etc. By having this kind of information, we can give recommendation to the Management Institution. Besides that, I hope the Manual of Operation and Maintenance also give recommendations for “Do and Don’t” things and also prevention for the countermeasures.

Then, about the presentation of Study on WBC; I think it is about Standard Operation Procedure of drainage system. I also heard that this team prepares 7-8 manuals about this. I think those

manuals should be socialized. And the expected output of this JICA study is strategic recommendation of flood management related with the existing structures. It is important, because many people only think about developing without concern about maintenance.

Back to the topic of Off-stream and On-stream as explained by Mr. Shingu, On-stream is flood management which related with the distribution of flow. Off-stream is about run-off management which should relate with environmental capacity and spatial planning with load factor. The most important of water flow to the river is the occupation of catchment due to the changes of land use. About the presentation of Mr. Heriantono, I think it was very good. It shows that bottlenecks may cause backwater which affects the surrounded area. This kind of information is very important as early warning for the inhabitants especially in flood prone area.

Unfortunately, this kind of information is not realized though by our colleagues in this Public Works Department. I am sure that the Dirjen Bina Marga (Directorate General of Highway and Bridge) does not know about the bottleneck problem. For example is about Manggarai Bridge. They only know that the bridge is obstructed with bamboos and may cause when flood comes.

About the facilitate activity of TKPSDA establishment, we (Directorate of River, Lake and Reservoir) will assist and support that activity.

I think if those of all the presentations were summarized into a big framework will be suitable with that action plan. That is all of my comments, the honour of Chairman.

In this opportunity, I also ask for apologize for bringing my staffs from the West Region Section of River, Lake and Reservoir Directorate. The reason I invited them is because I noticed that the Section was not invited, in fact the project area is belonged to them. I also want to propose them as the counterparts for this project, as Mr. Shingu said that there is possibility to welcome for the new counterpart. It is a bit embarrassing for me knowing that the presentation of Operation and Maintenance of River and River Structure was delivered by staffs from PSDA (Water Resources Management) and Bina Program (Programming) Directorates and none from Directorate of River, Lake and Reservoir. I am really sorry for that and hope that there is a possibility to propose my staff as the counterpart of this project.

by. Mr. Shingu

No problem, we understand that your staffs are very busy.

by. Mr. Widagdo

But it is not because of the opportunity to go to Japan for the training. I only think there is possibility that my staff can learn a lot, because it is very good concept and strategy for the young engineer. They should know not only how to design but also how to manage the infrastructures, or how to keep the infrastructures to be functioned and sustainable.

by. Mr. Sugiyanto

As mentioned by Mr. Widagdo also our colleagues from West Java Province and DG of Cipta Karya that all the things related with non structural measures have been proposed. I think our proposal is good.

For the next presentation maybe we will have one presentation which combines all the things to get more benefit

We hope there is any comment from JICA about the meeting today.

By. Mr. Hiraoka

Thank you very much for Mr. Sugiyanto and Mr. Widagdo. I am very happy to see the report of this team today. And I really appreciate the cooperation of DG Water Resources, DG of River, Lake and Reservoir, DG of Cipta Karya, and DG of Spatial Planning also other provinces such as West Java and Banten. I am very happy to see the result of today and maybe some of you know that the end of March is the end of Fiscal Year in Japan. It means that we will new start from

April and we call it next term. So we still have nearly one year to go, so we can see a lot of improvement from that we have now. So, thank you very much for today.

By. Mr. Watanabe

(the voice could not hear well since the microphone was not used)

By. Mr. Shingu

(the voice could not hear well since the microphone was not used)

By. Mr. Watanabe

(the voice could not hear well since the microphone was not used)

By. Mr. Sugiyanto

(the voice could not hear well since the microphone was not used)

By. Mr. Watanabe

(the voice could not hear well since the microphone was not used)

Another matter, we hope the contribution from many organization to improve the result of our project; especially from PU Agency of DKI Jakarta Province and PU Department as the most important organization.

G. Closing Remarks

Joint Coordination Meeting (Discussion of Progress Report 3) on The Institutional Revitalization Project for Flood Management in Jabodetabek was closed by the Director of Water Resources, Ir. Sugiyanto, and was continued with lunch.



**D E P A R T E M E N P E K E R J A A N U M U M
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
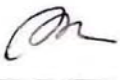
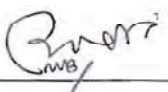





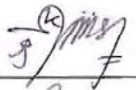

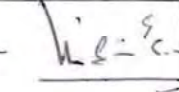
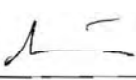

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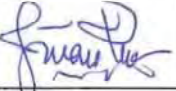
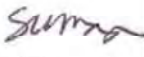

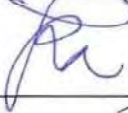
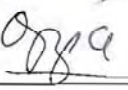

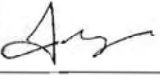

RAPAT : Pertemuan Joint Coordination Committee
 HARI / TANGGAL : Rabu / 7 Oktober 2009
 JAM : 10.00 - Selesai
 TEMPAT : Ruang Sidang Jatiluhur Direktorat Jenderal Sumber Daya Air
 PEMIMPIN RAPAT : Iwan Nursyirwan. – Direktur Jenderal Sumber Daya Air

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24	WINARJONO	Kepala Dinas SDA & P Air Banten		0811127757	
25	DEDI MASHUDI	PPK PBPS BBWS CIPANAU - CIPUNING - CIPR		081389541016	
26	BUDI MUHIBBUDIN B	PELAKSANA PERENCANAAN BBWS CIPANAU - CIPUNING CIPURBAN		081317896970	
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30	Heru Purnomo	Pejabat Pensiunan BBWS .cc.		08129232692	
31	BUDI SANTOSO	CANTIK SDN		0818815611	
32	Kiki Marina Murdiani	Subdit OP4 PBA		0856751558	
33	Reny Windyawati	Kasi Kasi Metro Dit. Taruwil II DJPR	renywindy@yahoo.com	0811.176773	
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MINUTES OF MEETING
JOINT COORDINATION COMMITTEE MEETING
ON
FINAL REPORT
THE INSTITUTIONAL REVITALIZATION PROJECT
FOR FLOOD MITIGATION IN JABODETABEK
Jakarta, March 5, 2010

- 1 Day/ Date : Friday, March 5th, 2010
- 2 Time : 09.00 am ~ 12.00 am
- 3 Venue : Ruang Sidang Direktorat Jenderal Sumber Daya Air, 7th floor
- 4 Chairman : Director of River, Lake and Reservoir, Ir. Widagdo, DiplHE.
On behalf of Director General of Water Resources
- 5 Agenda :
 - a. Opening Address, by Chairman
 - b. General Introduction of the Project, by Mr. Widagdo
Director of River, Lake and Reservoir
 - c. Opening Speech, by Ms. Kanako HIRAOKA, Assistant Resident
Representative JICA Indonesia
 - d. General Review of the Project, by Mr. Masatomo WATANABE
Team Leader of the Institutional Revitalization Project for Flood
Management in Jabodetabek
 - e. Activity Report, by Mr. Tamotsu SHINGU,
Deputy Team Leader of the Institutional Revitalization Project for
Flood Management in Jabodetabek
 - f. Discussion
 - g. Signing of Preface
 - h. Conclusion
 - i. Closing Remarks
- 6 Participant : 39 persons (see attachment)

A. Opening Address

Mr. Widagdo, the Director of River, Lake and Reservoir on behalf of the Director General of Water Resources delivered opening address, to welcome all participant and appreciated their participation on the meeting.

He also stated that this Institutional Revitalization is very important not only for the Ministry of Public Works, but also for the Counterpart themselves, to improve their competency, especially in the field of *Non-structural Measure for Flood Management*.

Any possibility of the extension or continuation of such Project will be very much expected and appreciated.

B. General Introduction of the Project

Mr. Widagdo explained briefly about the Project up to the last stage (6th stage), and appreciated very much to JICA Expert and Full-time Counterparts for their contribution in conducting transfer of technology, especially their product in form of 7 (seven) Manuals and 1 (one) Guideline. Although this is the end of technical cooperation between JICA and the Government of Indonesia, the internal cooperation among Counterparts hopefully can be continued and maybe extended among their Indonesian colleagues.

He was looking forward to having those Manuals and Guideline being improved from time to time and to be applied in other area outside Jabodetabek as well.

He was wondering if JICA and DGWR would like to issue Certificate to certify that Full-time Counterparts had completed On The Job Training and produced Manuals and Guideline.

C. Opening Speech

Ms. Kanako HIRAOKA, Assistant Resident Representative JICA Indonesia expressed her happiness and appreciation for the successful cooperation between JICA and the Ministry of Public Works.

She confirmed that the Government of Japan had approved to implement **Capacity Development Project for Comprehensive Flood Control in JABODETABEK** in the coming Japanese Fiscal Year (April 2010 ~ March 2011) for 3 (three) years, as continuation of technical cooperation between JICA and the Ministry of Public Works.

She also agreed with Mr. Widagdo, on the issue of Certificate for Full-time Counterparts.

D. General Review of the Project

Mr. Masatomo WATANABE delivered a general review of the Project, including:

1. The important of the Project from the point of view of transfer of technology, and the output that was produced by either JICA Expert as well as the Counterparts.
2. However, he reminded us that such Manual and Guideline have to be improved from time to time to keep them applicable, based on the experience in the field.
3. It is also important to disseminate the Manuals and Guideline to get wider implementation to decrease flood disaster in wider area. Such dissemination can be done by means of internet, magazines or any other official publication.
4. It is recommended that Full-time Counterparts should conduct regular discussion to improve their capability and to transfer their knowledge to other persons in charge of flood management in all institutions.
5. He stated that JICA Expert will be available in case some help dealing with the Manuals and Guideline is required by the Counterparts.

E. Activity Report

Mr. Tamotsu SHINGU reported the Project Activity during 3 years of implementation, such as:

1. Schedule, Main Activity and Objectives of the Project, as well as the Outputs of Activities.
2. Methodology of Technical Transfer and Achievement of Output.
3. Relation among Manuals and Guideline, which described three most important aspects as Non-Structural Methodology for Flood Disaster Mitigation, that are:
 - a. Flood Plain Management
 - b. River Management
 - c. Basin Management
4. At the end of his presentation, he recommended:
 - a. Practice of Soft Measures Application Based on Manuals
 - b. Up-date and Revision of the Manuals
 - c. Horizontal Development of the Manuals
 - d. Establishment of System for Run-off Increase Prevention in Basin.

F. Discussion

1. During the discussion, some counterparts expressed their opinion about On The Job Training, as follows:
 - a. At the beginning, some counterparts wondered what will be the advantage for them in attending such training, but now everybody agreed that the training had improved their knowledge, ability, and most important thing is improved their confidence, at least of being able to finish writing Manuals and Guideline.
 - b. They were also happy to experience in writing presentation and deliver their presentation as speakers in the Seminar, Workshop, Working-group and internal discussions conducted by the Project.
 - c. Two out of twenty-three Counterparts were very very happy to get the opportunity to join Training-in-Japan, the other expected to have the next opportunities.
2. Mr. Eko Djuli Sasongko, representing the Directorate General of Housing and Resettlement (DitJen. Cipta Karya) said that he improved his knowledge after attending all meetings, seminars and workshop conducted by the Project, especially in the field of run-off management, and it helped a lot in preparing draft of Ministry Decree on Storm-water Management on Private Property which will be finalized next month.
3. Mr. Eko Hariadi, the representative of Bappeda DKI Jakarta said that h expected all Manuals and Guideline will be useful for his staff to know better about flood management in Jabodetabek, especially to decide its priority.

4. Mr. Indro Sarwono, the representative of Bappeda Banten proposed to include Banten as Pilot Project Area (in the coming activity), so that person in charge of flood management in Banten may improve their capability and decrease flood occurrence in the area.

5. Ms. Linda Al Amin, the representative of Bappeda West Jawa said that the Manuals and Guideline are very important to be implemented not only in Jabodetabek area, but also in West Jawa, as up-stream part of many rivers that flow through Jabodetabek, mostly originated from West Jawa.

G. Conclusion

1. It is agreed that The Institutional Revitalization Project for Flood Management in Jabodetabek as JICA-MPW Technical Cooperation Project had produced many important out-put dealing with Non-Structural Measure for Flood Management in Jabodetabek.

2. The implementation of the coming project. i.e. **Capacity Development Project for Comprehensive Flood Control in JABODETABEK** (2010/2011 ~ 2012/2013 Japanese Fiscal Year) is necessary to consider Banten and West Jawa Provinces as its Project Area. More number of Training in Japan for Indonesian Engineers will be favorable.

3. JICA and DGWR will issue Certificate for Full-time Counterparts for having completed On The Job Training.

4. It is recommended that Group discussion among Full-time Counterparts to be conducted regularly (maybe be-monthly, quarterly, etc.). Such discussion may be extended by including persons in charge of flood management in related institutional.

5. It is also recommended that Manuals and Guideline are to be improved from time to time due to the experience in the implementation. Such Group discussion may lead to achieve improvement of the Manuals and Guideline

H. Closing Remarks

Mr. Widagdo, on behalf of the Director General of Water Resources, express gratitude and appreciation to all parties related to this project, especially to JICA, Experts and all Counterparts for their cooperation and contribution in this project. He believed that all output will lead to better outcome in the field of flood-disaster management.

He also hoped that all Counterpart's activities should not stop due to the end of this project, but should begin a new start of self improvement of their capabilities.

資料 - 4:

セミナー及びワークショップ議事録

Seminar on Flood Mitigation in Jabodetabek on Dec 4th, 2010

Workshop on Flood Mitigation in Jabodetabek on July 29th – 30th 2009

Report on Seminar on Urban Flood Management on November 23rd – 25th, 2010

**SEMINAR ON FLOOD MITIGATION IN JABODETABEK
DECEMBER 4, 2008
MINISTRY OF PUBLIC WORKS – DIRECTORATE GENERAL OF WATER
RESOURCES IN COOPERATION WITH JAPAN INTERNATIONAL
COOPERATION AGENCY**

Venue : MUTIARA 1 ROOM, GRAN MELIA HOTEL, JAKARTA

Time : 9.00 a.m – 5:30 p.m

Participants: 123 persons from various agencies (list of attendance attached)

- Opening ceremony
- Report from the Organizing Committee, by *Mr. Harmadi*
Indonesia, especially Jakarta experienced flood several times and the last flood causes lots of damage. The purpose of the seminar is to get contribution from institutions and agencies on how to anticipate flood. 120 participants are invited and 90 are coming that morning.
- Opening Speech
 1. Opening address by *Mr. Takeshi MURONAGA*, on behalf of The Ambassador of Japan, Mr. SHIOJIRI Kojiro.
For many years, because of many factors, Indonesia experienced many disasters, such as flood. The disasters have impacts on economic situation. Japan also experienced disasters but has been able to overcome them. Based on its experience in flood mitigation, Japan get the idea of assisting flood reduction in Jabodetabek since the damage cost trillions rupiahs with a hope that Jakarta has no flood again.
 2. Opening address by Representative of JICA, *Mr. Takeshi SAKAMOTO*
The presence of JICA is to introduce new system or strategy to increase the development and to give assistance to the need of Indonesia. The assistance is in the forms of foreign projects, such as Disaster Management Project. This project is to reduce natural disaster in Jakarta since rural area suffered from flood damage and it cost a lot. Moreover, the project is also to implement disaster management. This seminar will discuss how implementing flood mitigation in Jabodetabek.
 3. Opening address by *Mr. Iwan Nursyirwan Diar, Dipl. HE*, Directorate General of Water Resources on behalf of the minister of Public Works
Flood problem is very complex in Indonesia. Flood can be caused by either tidal or high rain fall. Flood is also the effect of urbanization development. The solution is that we need flood control and food mitigation to control flood flow and flood stream.

The development is based on the plan such as Banjir Kanal Timur (East Flood Way). The objective of the seminar is to get information on how to maintain flood control system. It is expected that the contribution will improve the effectiveness of flood control and flood mitigation in Jabodetabek.

- The Seminar was opened by the Directorate General of Water Resources, *Mr. Iwan Nursyirwan Diar, Dipl. HE.*

4. *Mr. Samsir* led the prayer

5. *Keynote speech: Director of River Reservoir, Mr. Widagdo on behalf of DG-WR*

Flood is our problem to solve. As seen at the map from satellite, some areas in Jakarta are under sea level and easily flooded. Flood then, causes damage to our society. Several projects have been done on flood mitigation for major flows since 1600s. The projects were to find out the strategy for flood mitigation. They were not successful yet. There were problems such as operational problem in the area, land, and decreasing of “situ-situ”. Those problems led to the continuous flood. We see this as a challenge to come to solution. One solution is by conducting collaboration and coordination among institutions and foreign agencies. This seminar hopefully could collect contribution from participants and institutions on how to collaborate and coordinate works on flood mitigation.

Coffee break

SEMINAR SESSIONS

(For complete details of presentations you could look at the presentation slide.)

SESSION I: ISSUES AND ACTIVITIES FOR FLOOD MITIGATION IN MINISTRY OF PUBLIC WORKS

Speakers: Head of BBWS Ciliwung-Cisadane, Director General of Cipta Karya, and Director General of Penataan Ruang

Moderator: Mr. Imam Anshori

1. *Mr. Pitoyo, Head of BBWS Ciliwung-Cisadane*

- Master plan 1973, 1997
- Land subsidence: 25 cm in 2025
- Banjir Kanal Barat: after Banjir Kanal Barat Project finished, the government will focus and solve Ciliwung River problem.
- Waiting for Minister’s approval for the proposal on river revitalization. Some rivers are not done yet. There are hundreds of ‘situ’ (small pond) made to retain flood water.

2. *Mr. Soesmono*, Director of Development of Settlement Sanitation, Directorate of Human Settlement.

Issues and activities for flood mitigation in DGHS ministry of Public Work Directorate General

- Target of drainage sector (RPJM 2004-2005):
 1. To improve drainage system function
 2. To decrease temporary flood area up to 75% from existing condition
- Strategic issues on drainage
- Change (on community participation), constrain (the economical crisis), and opportunity of drainage aspects; consider affordable healthy living, institution weakness
- 3R program
- Paradigm change. New paradigm is to hold and recharge water run off to the ground using.
- Action: plan matrix
- Start from home: In Indonesia there are 100 sanitation environment groups. It is suggested to start from little scale (home) and getting bigger to regional scale (city or district/kotamadya)so each area has on site drainage system.

3. *Ms. Sri Apriatini Soekardi*, Director General of Penataan Ruang (Spatial Planning) Jawa dan Bali

Title: The Role of Spatial Management on Jabodetabek Flood Mitigation.

- Special planning is one solution to prevent flood.
- Jabodetabek: its role and spatial issues in each area of Jabodetabek together with how they influence each other.
- Issues: urbanization is very high, high population growth, and density. They are raising tension of space and environment, land use change, housing development. The impacts are on (1) the decreasing function of river basin and change of climate.
- Flood area is expanding. Identification: each area has spatial plan, focus on economic factor, weak and no connection to DAS system.
- Requirement: sustainable development in economic, social and environmental aspects.
- Integration of development. Policy refers to spatial management on forest area, green open space in urban area.
- PP 26/2008. Policy development on natural productive soil: maintain conservation area, pro to area protection.
- Direction on controlling natural spatial utilization: need regulation
- Maintain Jawa as resource of food and other resources.
- Presidential Regulation number 54 Year 2008: Jabodetabek spatial management, lead to spatial structure and pattern plan.

- Land use plan: up stream is protected for water and environment.
- Improvement steps in spatial management are done by execution and supervision.

Highlight:

- Focus to add and maintain infrastructure for the last plan.
- How to cover garbage.
- The need of change, need policy
- There is different interest in using the space
- How to improve teamwork
- spatial usage

Discussion:

1. Mr. Suherman from Balai PSDA Ciliwung Cisadane to Mr. Soesmono

It's the effort on maintaining environment, garbage, drainage, and housing. How far is the effort of teamwork between government provinces, kotamadya or kota in applying the activity, adjust with technology, law, and human empowerment.

Answer:

From *Cipta Karya*: promoting pilot project in 100 locations.

SESSION II: ISSUES AND ACTIVITIES FOR FLOOD MITIGATION IN PROVINCES

Speakers: BAPPEDA Provinsi DKI Jakarta, BAPPEDA Provinsi Jawa Barat, and BAPPEDA Provinsi Banten

There was no discussion or Questions and Answer

Lunch Break

SESSION III: TRAINING REPORT IN JAPAN

Speakers: Ir. Sulad Sriharto, Dipl. HE., and Ida Ayu Gede Mirah Arnadi, ST, MT

There was no discussion or Question and Answer

SESSION IV: COMPREHENSIVE FLOOD MITIGATION IN JAPAN

Speakers: Mr. KUSAKABE Takaaki, Chief Advisor of the Institutional Revitalization Project for Flood Management in Jabodetabek

There was no discussion or Question and Answer

SESSION V: REPORT OF JICA PROJECT ACTIVITIES

Speaker: *Mr. SHINGU Tamotsu*, Deputy Team Leader of the Institutional Revitalization Project for Flood Management in Jabodetabek

There was no discussion or Question and Answer

SESSION VI: NON STRUCTURAL MEASURES, CHALLENGES AND INTERAGENCY COLLABORATION ON FLOOD MANAGEMENT JAKARTA

Speaker: *Mr. Roy Timmer*

There was no discussion or Question and Answer

Coffee break

SESSION VII: PANEL DISCUSSION

After listened to all presentation, the audience is invited to think about how to coordinate and collaborate all agencies and institutions to work in a team and design a program on flood mitigation. The objective of this panel discussion is to establish coordination among authority concerned about mitigation measures to be applied in Jabodetabek.

Speakers:

1. Director of Building and Environment, DG Cipta Karya;
2. DG Spatial Planning;
3. Head of Public Works Agency of DKI Jakarta;
4. Head of Water Resources Development of Public Works Agency of West Java;
5. Head of Water Resources Development of Public Works Agency of Banten.

Moderator: Ir. Widagdo, Dipl. HE

The problem is based on master plan covering spatial management, environment management, and drainage technique. The scope is BAPPEDA DKI, with having concerned on local area and the neighbor provinces. Also, the expectation is that conservation is done with forestry ministry. The agency's role is on the regulation making, etc. Plan management of structural measures is needed to implement in short, middle, and long term. Then the approved substance is put into matrix set coordination.

1. Public Works Agency of DKI Jakarta: *Mr. Budi Widiantoro*
 - Jabodetabek could not be separated because DKI is closed with other areas.
 - It is lucky that high rain fall, tidal, up stream and rain fall never come together.
 - Cipta Karya should cover the problem on garbage in river which has arrived in Seribu islands
 - Cipta Karya should be able to cover garbage in 13 big rivers

2. Spatial Planning: *Mr Raymon Kemur*
 - Regulation on absorption well to prevent flood is not appropriate anymore. We may check the volume of water in the ground.
 - One solution is probably by giving tax for rich people regarding land use and water absorption. To support high absorption near river and housing area, one way is by planting trees.
 - Regulation for absorption area. Government should not provide any facilities in certain area (near river) so people do not move and build houses there. When government builds road above rivers, people will build house near it. If government builds rail road above rivers, people will not stay there. The next step is to build plan to reduce water flow to river.
 - All city sectors should develop and discuss the priority.

3. Director of Building and Environment, DG Cipta Karya, Mr. Soesmono
 - PBL (Penataan Bangunan dan Lingkungan) is involved in flood management. The problem is on the regulation for building houses and any other buildings. With high rain fall, water will go out off the building because the drainage is weak. Right now we are waiting the approval of ministry regulation on how to build buildings.
 - We can feel that cities are hotter than villages, about 8 degrees hotter. When trees absorb water, its effect is on the temperature change. There will be more regulation in province and city regarding this because temperature change will create another problem.
 - The function of Sertifikat Layak Fungsi (Functional Appropriateness Certificate)

4. Head of Water Resources & Settlement Public Works Agency of Banten, *Mr. Winarjono*
 - Banten has consistency to handle flood. The concern is both on structural and non structural 2008 -2009 for Cisadane river.
 - Pasar baru weir improvement. Planning program for other rivers. The recent problem is that implementation of land aquisition is not maximal.
 - Suggestion: Pasar Baru weir design should be reviewed. It needs further analysis on how long will it survive.
 - River development of Cisadane and situ Cipondoh about 116 ha to control flood and drinking water conservation.
 - The need to improve the teamwork capacity since DKI and Banten are closed each other. People in Jakarta work in Banten and vice versa. There is also need for socialization.
 - DKI needs to build Ciawi and Cisadane dams to supply drinking water.
 - Institutions matters: partnership among agency.
 - River Mokervart is half in Jakarta and half in Banten. It needs standard operational between DKI and Banten.

5. Secretary of Dewan Nasional Sumber Daya Air (National Council of Water Resources), *Mr. Imam Anshori*
- Wonder whether this collaboration could happen. It is expected to build agency to handle flood in DKI but it is not formed yet till now. There is a suggestion to establish team as embryo to handle 6 big rivers which members involve government and non government participations.
 - a. The team can be integrated and focuses on flood. To support the work, there is a need to set a secretariat to facilitate dialogue and materials. DKSP is available to be the secretariat. After building team, the next step is to set the vision. The team will formulate all material and consult to Dewan Sumber Daya Air Nasional (National Council of Water Resources). There is another sector that can be involved in the team or as consultant. For example: PLN, Gas, etc.
 - b. To formulate program and substance we need:
 1. Policy
 2. Structural
 3. Non structural
 - This plan needs commitment from all members. At first the team is just small, and later it will grow to be a big team. The team has two parts: core team and support team.
6. *Mr. Djoko Sasongko*; Head of Water Resources Development of Public Works Agency of West Java;
- How to implement revitalization in 2008. Focus is not on concept anymore but how to execute regulation.
 - Master plan 1973 is for DKI while master plan 1997 is for Jabodetabek
 - Delta Q policy, building absorption well is stated in regulation.
 - To utilize technology in coordination.
 - Curious whether master plan 1973 is still valid.
 - Concern on how to utilize grant from developed countries such as JICA projects
 - Agree that developer should consider drainage conservation.
7. *Mr. Imam Anshori*
- The collaboration is a process which has one vision and each institution does its function. JICA and Dutch hopefully will support.
 - Many regulations are not executed and there is not up to date.
 - The result of this seminar: we need collaboration to handle flood.

SUMMARY/RECAPITULATION *by Mr. Widagdo*

Summary: how to build effective flood mitigation, how to coordinate all agencies and components, how to collaborate policy.

Questions from participants:

1. How to make inventory
 - Using Structural method, integrating lesson plan 1973 and 1997. Structural method covers on stream and off stream.
 - Apply strategic policy and non structural.
2. All related agencies have commitment. We need team or board as embryo, not only not only for agency but also donor institutions.
 - There are two components: integrating plans and how to establish disaster handling

As closing it is stated that a team will be established involving all agencies and the committee needs time for doing it.

CLOSING REMARKS *by Mr. Widagdo*

**NOTULEN
WORKSHOP ON FLOOD MITIGATION IN JABODETABEK**

1. Day/date : Wednesday-Thursday, July 29th-30th, 2009
2. Time : July 29th, 10.30am - July 30th 13.00 pm
3. Venue : Salak Hotel, Bogor
4. Agenda : ***Day-1***
 - a. Report of Workshop
 - b. Objective of the Workshop
 - c. Flood Management and National Development Program
 - d. Presentation and Discussion on Topic 1 (Manual for Inventory and River Structures)
 - e. Presentation and Discussion on Topic 2 (Maintenance manual on River Structures)
 - f. Presentation and Discussion on Topic 3 (Facility Evaluation Manual for River and River Structures)
 - g. Presentation and Discussion on Topic 4 (Operation Manual on Gates and Pumps)
 - h. Presentation and Discussion on Topic 5 (Manual for Post Flood Survey)
 - i. Presentation and Discussion on Topic 7 (Manual for Drawing up Probable Flood Area)

Day-2

 - j. Presentation and Discussion on Topic 6 (Flood Alert Manual)
 - k. Presentation and Discussion on Topic 8 (Guideline for Run-off Control in Basin)
 - l. Conclusion of Workshop
5. Participants :
 1. Direktur Sundawa, Ditjen SDA
(Director of River, Lake and Reservoir, DG. Water Resources, **Ir. Widagdo, Dipl. HE**)
 2. Kasubdit OP&PBA, Dit. Sundawa, Ditjen. SDA
(Head of Sub-Dit. Operation and Maintenance and Natural Disaster Fighting, Dit. River, Lake and Reservoir, **Suhartono, ME**)
 3. Kepala Seksi Wilayah Timur, Sub-Dit. OP & PBA, Dit. Sundawa, Ditjen. SDA
(Section Head of East Region, Dit. O&M and Natural Disaster Fighting, DG. Water Resources, **Ir. Subardjo**)
 4. Kepala Seksi Wilayah Barat, Sub-Dit. OP & PBA, Dit. Sundawa, Ditjen. SDA
(Section Head of West Region, Dit. O&M and Natural Disaster Fighting, DG. Water Resources, **Ir. Surya Dewanto, Sp.1**)

● **MODERATOR**

 5. Kasubdit Perencanaan Teknik, Dit. Sundawa, Ditjen. SDA
(Head of Sub-Dit. Technical Planning, Dit. River, Lake and Reservoir, DG. Water Resources, **Ir. Slamet Budi Santoso, Dipl. HE**)

6. Kasubdit Hidrologi dan Kualitas Air, Dit. BPSDA
(Head of Sub-Dit. Hydrology and Water Quality, Dit. Water Resources Management, DG. Water Resources, **Ir. Leonarda Ibnu Said, M. Eng.**)
7. Kasubdit Bangunan dan Gedung, Dit. Penataan Bangunan dan Lingkungan
(Head of Sub-Dit. Building and Structure, Dit. Building and Environment Arrangement, **Ir. Eko Djuli Sasongko, MM**)
8. Kepala Bidang Perencanaan dan OP, BBWS Ciliwung-Cisadane
(Head of Sector Planning and Operation & Maintenance, BBWS Ciliwung-Cisadane, **Febri Iman Harta, ME**)
9. Kepala Bidang Bina Manfaat, Dinas PSDA Jawa Barat
(Sector Head of Water Resources Management Agency of West Java, **Ruchimat, ME**)

● *PRESENTER TEAM*

10. **Ambar Puspitosari**, Staff of Sub-Dit. Policy and Strategy, Dit. Programming, DG. Water Resources
11. **Hendra Ramdhani**, Staff of Sub-Dit. Technical Planning, Dit. River, Lake and Reservoir, DG. Water Resources
12. **Nila Aliefia Fadli**, Staff of Sub-Dit. Implementer of West Regional, Dit. River, Lake and Regional, DG. Water Resources
13. **Pujiono**, Supervisor of East Banjir Canal construction, BBWS Ciliwung-Cisadane
14. **Heru Purnomo**, Supervisor of East Banjir Canal construction, BBWS Ciliwung-Cisadane
15. **Taufan Andrianto**, Staff of Sub-Dit. Operation & Maintenance and Natural Disaster Fighting, Dit. River, Lake and Reservoir, DG. Water Resources
16. **Romelan**, Supervisor of East Banjir Canal construction, BBWS Ciliwung-Cisadane
17. **Kiki Murdiani**, Staff of Sub-Dit. Operation & Maintenance and Natural Disaster Fighting, Dit. River, Lake and Reservoir, DG. Water Resources
18. **Andwi Widyanto**, Staff of Sub-Dit. Controlling Water Resources Management, Dit. Water Resources Management
19. **Sumarno**, Staff of Sub-Dit. Hydrology and Water Quality, Dit. Water Resources Management, DG. Water Resources
20. **Fikri Abdurahman**, Staff of East Banjir Canal construction, BBWS Ciliwung - Cisadane
21. **Juniferanne Brahmana**, Staff of Sub-Dit. Controlling Water Resources Management, Dit. Water Resources Management
22. **AyuSuci**, Staff of Sub-Dit. Hydrology and Water Quality, Dit. Water Resources Management, DG. Water Resources
23. **Pilas Agita**, Staff of Dit. Spatial Planning Regional II, DG. Spatial Planning
24. **Lina Fitriani**, Staff of East Banjir Canal construction, BBWS Ciliwung- Cisadane

- *PARTICIPANT*

- * *DG. Water Resources*

25. **Widyayuni Nur**, Staff of Sub-Dit. Institutional, Dit. Water Resources Management
26. **Anggia Satriani, M.Eng.**, Section Head East Regional, Sub-Dit. Technical Planning
27. **Surendro, ST**, Particular Staff of DG. Water Resources
28. **Lufiandi, ST**, Staff of. Sub-Dit. O&M and Natural Disaster Fighting, Dit. River, Lake and Reservoir
29. **Agus Priyono**, Staff of. Sub-Dit. O&M and Natural Disaster Fighting, Dit. River, Lake and Reservoir
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33. **Anggrahini, B.Ac.**, Staff of Work Unit of Dit. River, Lake and Reservoir
34. **Drs. Sutisna**, Staff of Work Unit of Dit. River, Lake and Reservoir
35. **Adi Sutjipto**, Staff of Work Unit of Dit. River, Lake and Reservoir
36. **Asman, BA**, Staff of Work Unit of Dit. River, Lake and Reservoir
37. **Hemiyarti**, Staff of Work Unit of Dit. River, Lake and Reservoir
38. **Arlinsyah, MT.**, Head of Sub-Dit. Public Relation

- * *DG. Human Settlement (Dirjen.Cipta Karya)*

39. **RG. Hari Susanto**, Section Head of Technical Operation Management, Sub-Dit. Development of Drainage and Garbage System, Dit. Development of Settlement Sanitation
40. **Rogydesa, ST**, Staff of Building and Structure, Dit. Building and Environment Arrangement

- * *DG. Spatial Planning (Dirjen. Penataan Ruang)*

41. **Reny Windyawati, S.Si, MSc.**, Section Head of Management Metropolitan Spatial Planning

- * *Public Works Agency of DKI Jakarta (DPU DKI Jakarta)*

42. **Ir. Herning Wahyuningsih, MT**, Section Head of Implementation and Controlling of Facility & Infrastructure of Flood Control

- * *Regional Development and Planning Board of DKI Jakarta (BAPPEDA DKI Jakarta)*

43. **Ir. Hendradman Dewantoro, MM**, Head of Sub-Sector Water Facility and City Utility

** City Planning Agency (Dinas Tata Kota)*

44. **Yanuar Riady**, Section Head of Preparation and Guidance of Work Program
 45. **Budi Haryadi**, Section Head of Green-Opened Space and Spatial Building

** Water Resources and Settlement Agency of Banten Province (Dinas SDAP Banten)*

46. **Endang Sudrajat, ST,M.Si**, Staff of River and Coastal Section
 47. **Yusuf Sugiman, ST**, Staff of Balai PSDA Cidurian-Cisadane
 48. **Herry Syafari, ST**, Staff of Balai PSDA Cijung-Ciliman
 49. **Budi Muhibudin Budiana**, Staff of Planning and Programming Section, BBWS Cidanau-Cijung-Cidurian
 50. **Dedi Masudi, ST**, Staff of River and Coastal Implementer, BBWS Cidanau-Cijung-Cidurian
 51. **Imam Budiman, ST, BE, MM**, Section Head of Lake and Reservoir, BBWS Cidanau-Cijung-Cidurian

** Regional Development and Planning Board of Banten Province (BAPPEDA Banten)*

52. **Khairuddin, ST, M.Si**, Head of Sub-Sector Water Resources Infrastructure

- *Other names are listed in attachment (attendance list)*

Progress of Meeting:

Day-1, July 29th 2009

- Welcome Address, by Master of Ceremony
- Report of Workshop by **Mr. Suhartono**, Head of Sub-dit. Operation & Maintenance and Natural Disaster Fighting
- Opening Address by **Mr. Kiichi TOMIYA**, Deputy Resident Representative of JICA
- Opening Address by Director General of Water Resources who was represented by **Mr. Widagdo**, Director of River, Lake and Reservoir
- Objective of the Workshop by **Mr. Tamotsu SHINGU**, Deputy Team Leader of The Institutional Revitalization Project for Flood Management in JABODETABEK
- Flood Management and National Development Program by **Mr. Widagdo**, Director of River, Lake and Reservoir

G. Presentation and Discussion on Topic I: **Manual for Inventory of Rivers and River Structures**

Presenter	: <i>Ambar Puspitosari, Hendra Ramdhani</i>
Resource Person	: Tamotsu SHINGU, Sarwono Sukardi
Moderator	: Slamet Budi Santoso
Presentation time	: 11.40-12.30pm

1. *Iman Budiman (BBWS C3)* :

- It is better that the inventory system of river structures started from downstream to upstream for the ease and following the existing system which related to sea water level.
- What will be happened if after coding, a new structure is constructed between the existing two structures?

Answer :

For coding system in Ciliwung river, it is limited only 4 Orde. At present, the numbering system is from upstream to downstream.

2. *Ajad Sudrajat (BBWS Serayu Opak) :*

- For the background, it is better to include Regulation Minister Number 42 (certain article) as the fundamental for river management.

Answer by Presenter Team:

- We will consider the recommendation about the background.

Additional comment from JICA Team:

Sarwono (JICA):

- Regarding the coding system from upstream to downstream, it is not a problem. Because the coding system of distributary is 3 digits (maximum is 999). So, if Ciliwung river has 56 distributaries, then 56000 numbers are available. For Orde in the end downstream, code of its river/ distributary in the upstream is mentioned behind the coding to avoid the confusion. Regarding the location of distributary, the odd number code is for river on left side of main river and even number code for river on the right side of main river.
- In case of new structure constructed between two existing structures, the coding may use in random. For example between 010 and 020, there are 9 numbers might be used; even if those already used, then additional code might be used at the end, for example 011A, 011B, etc.

3. *Widianto (Bappeda Jabar)*

- From planning point of view, this manual is the fundamental reference and information about the structures existing in the river.
- Keterkaitan mengenai lokasi belum terlihat karena tidak digabung dengan peta sehingga ke depannya perlu digabungkan dengan peta daerah (masukan).
- The relationship of location is not found yet due to map is excluding in this coding system. So, the map of related area shall be included. (Recommendation)

- For the ease of user, the system shall be designed simply and practically. (Recommendation)
It is better that the zoning of structure is divided based on regency/ municipality or District.

4. *Khaeruddin (Bappeda Banten)*

- I really support the making of this inventory system and hope that it could be completed shortly.
- The criteria should be clearly defined. For example, Situ. What kind of data is used, old data or actual data (updated)? It is important for the optimal database.

5. *Rudi Hartanto (BBWS Brantas)*

- The scope of presentation is too general. If the purpose for Operation and Maintenance, then it should be River Inventory Maintenance which informs the broken structures, etc.
- Hopefully in the future, it is connected with GIS

Answer by Hendra :

It is true that if the inventory is good to be mapped. In this database, we already made the coordinate. We hope in the future we can improve it can be developed on the GIS system.

Sarwono :

Regarding the delivery to the user, we strongly agree. Actually we had planned it but because the very short time (only 2 months) it could not be done. For the future it will be implemented and for GIS systems will also be included.

H. Presentation and Discussion on Topic 2: **Maintenance Manual on River Structures**

Presenter : Nila Aliefila Fadli, Pujiono, Ambar P

Resource Person : Tamotsu SHINGU, Sarwono Sukardi

Moderator : M. Ruchimat

Presentation Time : 13.50-14.40 pm

1. *Eko Djuli Sasongko (Ditjen. Cipta Karya)*

- For the background of Law, the reference shall be Government Regulation instead of the Minister Regulation. According to the procedure, making manual starts from Law (UU) then continued to Government Regulation (PP) and after that Minister Regulation. So, please find the Government Regulation concern on river maintenance.
- As the activity is closely related with Local Government, it is better to mention the Local Government Regulations that related with this manual.

Answer from Pujiono:

- We accept your recommendation and will find the Government Regulation which related with this manual.

2. *Adi Susanto (Ditjen. Cipta Karya)*

- Is the scope of this maintenance manual only in Water Resources Agency ? If yes, then how about the other agencies?
- For the other kind of structures (such as gates, pump, etc), are they included in this manual? Because I did not find those structures in the presentation.
- Since the purpose of the inventory is for all rivers in Indonesia , why not all of the assets in the river included?

Answer by Pujiono:

- This manual only focus on Ciliwung Cisadane river basin, so all the structures found in this river basin are included.

Nila :

- Yes, in this case inventory is only for Ciliwung Cisadane river basin. Perhaps, the result can be used as the basis to make manual for the other rivers by modifying based on the characteristic of related river.

Additional answer by Sarwono (JICA) :

- Since thisis draft for manual, so the name of river should be mentioned. It means each river has its own manual.
- The structures being inventory not only for structures which related with Water Resources agency, but for all structures found in the river.

3. *Question by Herning from Dinas PU DKI :*

- Waste is one of bad impacts in river for DKI Jakarta area. Is this manual concern about waste problem? How about the maintenance regarding the waste?

Anwer by Nila :

- Waste is excluded in this manual. Perhaps, in the future it will be included. However, it should be coordinated with the related agencies.

4. *Bappeda Jabar :*

- I think the purpose of making this manual is to facilitate the surveyor/ field officer in monitoring and recording the information. Therefore, simple form is necessary.
- If possible the recording system (form filling) is checklist form. So, the form should make list any of possible conditions.

Answer by Nila:

- We will consideryou reccomendation. For the recording system (form filling), there are two (2) types; however we still study about it.

5. *Kamil Maruf (BBWS Sumatra VIII) :*

- Regarding the budget planning, if possible the budget estimation is made based on the length of river.
- In data collection, percentage of existing situ-situ and polder shall be included.

Additional answer by Sarwono:

- Untuk perencanaan anggaran tidak bisa disamakan karena berbeda-beda tergantung lokasi dan karakteristiknya.
- Situ-situ dan polder sudah dimasukkan namun namanya digabung.

Additional answer by Mr. Sarwono (JICA):

- For the budget planning can not be generalized for every river, it depends on the location and characteristic of the river.
- Data of Situ-situ and Polder have been included, however the names were collected together.

I. Presentation and Discussion on Topic 3: Facility Evaluation Manual for River and Rivers Structures

Presenter : Heru Purnomo, Nila AF, Mariana
 Resource Person : Tamotsu SHINGU, T. SATO, Sarwono Sukardi
 Moderator : M. Ruchimat
 Presentation Time : 14.25-15.20pm
 Tidak ada sesi diskusi.

(No discussion in this session)

J. Presentation and Discussion on Topic 4: Operation Manual on Gates and Pumps

Presenter : Taufan, Nila, Romelan
 Resource Person : Tamotsu SHINGU, T. SATO, Sarwono Sukardi
 Moderator : Suhartono
 Presentation Time : 15.50-16.25pm

Question 1 by Eko Djuli Sasongko (Cipta Karya)

On page 3 was written that this involves PU (public Works), Pertamina, Industrial and Environmental, etc. It means, at least Presidential Regulation or Government Regulation is used as references. In fact, I did not find in this presentation. It is too general. Therefore, it shall be more specific at the Operation of Gates.

Question 2 : (input) by Hendro

The analysis result is pretty good; however no alternative way is recommended if any failure/ problem in pump. For instance in case of pump is broken, what should do? Thus, if necessary add information of alternative in case of pump is broken or has problem.

Question 3 from BBWS

I agreed with Mr. Eko. How about the pump operation, what is the input? Which agency should be coordinated with?

Answer by Taufan

1. To Mr. Eko, it is not included in the manual. I just wanted to explain a little process of making Operation and Maintenance Manual.
2. To Mr. Hendro: the scope was limited; it is assumed that pump is under normal condition. Therefore, maintenance is very important so as to all plans run smoothly. Actually JICA Team now is doing study of pump operation in damage condition. However, it is still in research and need improvement. But the new phase of study, because it must be completed first. Therefore maintenance is very important to all who planned to run smoothly.

Answer by Sarwono:

To Mr. Rendro: I agreed that the alternative operation when pump is broken is necessary. In fact, the actual condition of existing pump is broken. We have made calculation when the pump is damaged. Though we still lack of data, because we only get the reservoir volume data from 4 cross-sections, so the level of accuracy is very worrying. On the other hand, in the middle pump house, 2 of 4 pump units are not working. So the actual condition is the capacity now far below the existing capacity. Fortunately, we have dry season until September and is expected next September emergency operation rule is well prepared. That is the reason why we do not explain about the alternative operation when pump is broken.

Question 4 (rekomendasi) by Ajat Sudrajat

Input: the management of Water Resources no needs to be dismissed; however, regarding the legality of coordination with Agriculture, Forestry, and Public Work agency must cover BKN. It is included in declaration of President April 2005, Decree of three ministers and the Declaration which signed by 11 ministers.

Input 5

If the purpose is to discuss about pump and gate operation, the presentation shall be more specific. Moreover, the output will be manual of pump operation in downstream Ciliwung. Discussion shall be focused on the paradigm of operation, such as start from input, what kind of information/ warning received from Katulampa, operation rule of gate (gate opening), the arrangement, etc. Even better if the actual condition and the countermeasures been taken are also explained.

If you want discuss more about regulation, supposedly Presidential Regulation No. 54 concern on Spatial Planning shall be included.

K. Presentation and Discussion on Topic 5: **Manual for Post Flood Survey**

Presenter	: Hendra R, Kiki MM
Resource Person	: Yosuke USUI, T. IMAGAWA, Tamotsu SHINGU, Sarwono Sukardi
Moderator	: Febri Iman Harta

Presentation time : 16.25-17.00 pm

1. *Ruhimat (PSDA Jabar) :*

- I think the most suitable title for the manual is Flood Alert Manual, isn't it? Then, when the manual is used? It should be explained clearly.
- The rationalization of location should be evaluated whether proper or not.
- For reporting, what kind of event should be reported? Regarding to inundation or river overflow?

Answer by Hendra:

- The monitored locations will be researched by including the classification (prone area, dangerous area, etc).
- For monitoring areas will be reviewed to include the classification of area (from vulnerable areas, very vulnerable, etc.).

2. *Ajad Sudrajat(BBWS Serayu Opak)*

- I am still confused with the presentation. At first, it was said that the data collection is still messy. But, the next slide shows that there is flow chart data from bottom to top including the coordination. Please be reviewed in order to avoid confusion, there should have been good coordination of data among institutions.
- Why in the scope of work, the depth of inundation is excluded? In fact at the present Ciliwung River has telemetry system which obtain inundation depth data.

Answer by Hendra:

- For an existing data collection was coordinated (eg SOPs) but for modeling data collected is still difficult. For example is inundation data which the measuring time not clearly mentioned whether at the peak of flooding.
- Regarding the inundation depth, telemetry system only record the depth of river. Hence, the data of inundation depth in the settlement can not found.

3. *Input from Eko Djuli Sasongko (Ditjen. Cipta Karya) :*

- The making of this manual shall be in coordination with BNPB (National Board of Disaster Fighting) also with Spatial Planning Agency in DKI Jakarta.

Answer by Hendra :

- In the making process of this manual, we also involved engineer from DG. Spatial Planning and DG. Cipta Karya as we know that this manual is closely related with RTRW (Spatial Planning).

Additional answer by Sarwono :

- I agreed with Mr. Eko. To enhance the result of this manual, in the next discussion of manuals in November we will invite the representatives from Spatial Planning also from Bina Marga as flood problem often take place on the road.

L. Presentation and Discussion on Topic 7: **Manual for Drawing up Probable Flood Area**

Presenter : Hendra Ramdhani

Resource Person : Makoto YONEKURA, Tamotsu SHINGU, Sarwono

Moderator : Eko Djuli Sasongko

Presentation time : 17.00-17.25pm

Question 1 from Kiki (Subdit. O&M and Natural Disaster Fighting)

1. What is the relationship between map and Manual-5, previous presentation delivered by Mr. Hendra? What is the contribution of M-5 with this manual?
2. Is the map has been calibrated with the actual condition?

Question 2 from Herning -DPU DKI

Is this program has expire date like program from Dutch?

Answer 1 by Hendra:

1. At present we need data from flood prone areas; It is also required for the previous presentation 'Post Flood Survey', those data should be calibrated particularly survey data. Unfortunately, we do not have it yet.
2. Survey was conducted after the inundation occurred, then in the next day re-surveyed for more details.

Answer 2 by Sarwono:

1. This program does not have expired date as the program was specially developed by team JICA for JABODETABEK area named JYEECS.
2. There are many kinds of mapping, such as Flood Mapping (River and Dam), Flood Forecasting Flood (3-6 hours before flood), and Historical Flood (computation result of evacuation plan or hazard map).

Answer 3 by Mr. Shingu

This program is made for this project.

Day-2, July 30th 2009

M. Presentation and Discussion on Topic 6: Flood Alert Manual

Presenter : Andi Widyanto, Sumarno, Fikri A.
 Resource Person : Yosuke USUI, T. IMAGAWA, Tamotsu SHINGU, Sarwono Sukardi
 Moderator : Leonarda BAI
 Presentation Time : 09.25-10.00am

Input 1 from Rizali-BBWS Ciliwung Cisadane:

To know the condition of water level in general, people can access www.jakartacityview.com (for example the water level in Katulampa and Manggarai Station). For the real time database can contact the related agencies. It is expected from those data there is socialization with the stations in downstream.

Input 2 from BBWS Cidanau Cidurian:

How about if in every flood prone area, medium based on alert level (alert 1, 2, 3) is made. For instance in Central Java, Alert 1 is symbolized with Blue, Alert II Yellow, Alert III Red, etc. And it is not technical matter only, but also mentioned in the manual so Local Government/ Central Government/ Autonomy Government can use the manual as reference.

Input 3 from Eko Djuli Sasongko (CK):

Suggestion: The concept of flood early warning should be coordinated with BNPB (National Board of Disaster Fighting), and then BNPB will coordinate with Local Government/ other related agencies.

Input 4:

Please see figure on page 7 slide 1 (on the top), it can not make river with such like dike. Dike shall have flood plain.

Question:

Is it the correct definition of *lead time*? Usually lead time is time from the information accepted by inhabitants to the time of disaster. It is suggested the interval time is 6 hours

Answer by Andi:

1. For Mr. Rizali: Information about website will be added.
2. For BBWS CC: This manual is included for flood information and dissemination, to inform the inhabitants what should to do when flood comes and the condition during flood.
3. For Mr. Eko: We will consider the suggestion to have coordination with BNPB (National Board of Disaster Fighting), as our next target is restructuring.
4. For Mr. Budi: We accept your suggestion. About the lead time we discussed here, it does not mean that 3 hours after lead time flood will occur. But we consider the time for the inhabitants after receiving information to evacuation to safe place is 3 hours. Maybe the term used is not inappropriate, we shall find more appropriate term.

Answer by USUI:

1. Regarding Jakarta City view, we already conducted survey through internet or other media, but no description for existing manual. We want to input their information into manual.
2. Input from BBWC, in case of Katulampa, existing alert water level colored in the stage gate. We can see the water level and color in Jakartacityview.
3. For Mr. Eko: we consider future revision. We consider how to outline the manuals. Now we consider like that.
4. For Mr. Budi: about lead time, now we consider information from the official, and the inhabitant prepare-packing their belongings and then inhabitant run away from their house into safety place. Now, we consider like that. But in case of before that activity, official announced some activity: now that the safe maybe 2-3 hours before the flood, go to evacuation order we issued, like that, maybe it is important issues that information from the official.

5. Relationship between Depok and Manggarai, we already survey. Last time from Depok to Manggarai 3-20 hours. Average is 10,8hour. And there is not so good relationship the discharge from Manggarai and Depok. But almost 1 by 1, for example in Depok 1cubic meter, almost same with Manggarai.

Answer by Sarwono

It is right that there is Law concern on National Board of Disaster Fighting (BNPB), even more the Government Regulation and Minister Decree in form of Standard Operation Procedure (SOP) and disaster management are available. According to the Law, there is a board for local disaster management (BNPB) in province level and regency/ municipality. However, such kind of board is not established yet in DKI Jakarta; it is still Coordination Implementer Unit.

N. Presentation and Discussion on Topic 8: **Guideline for Run-off Control in Basin**

Presenter : Anne, Ayu SW, Pila Agita, Lina F

Resources Person : Takaaki KUSAKABE, M. Yonekura, Tamotsu SHINGU, Sarwono Sukardi

Moderator : Leonarda BAI

Presentation Time : 10.05-11.00am

Input 1 from Ir. Slamet Budi Santoso

I think the presentation is very important issue. As Mr. Leo (Moderator) said that the new paradigm of flood control is not “Flood Fighting”, but “Flood Management”. Flood management is not conducted in river only. I hope that the Japanese experts may introduce and explain to us the “river to basin” system which very famous there. That system means that flood control is not only conducted in river only, but also in all basins. Moreover, it is expected that the team can add some detail information which might be applied in the condition of Jakarta.

Input 2 from Ir. Eko Djuli Sasongko

This is very interesting issue. Beforehand, we from Directorate Building and Environment Management used to think that run-off is not our matter. When we joined site survey to Depok, we realized that many shopping malls disposed of outside the lot their run-off 100%. Though some of our ideas had been rejected, we keep trying and finally were accepted. We prepare some drafts of regulation concern on run-off control such as Decree of Public Works Minister which will be consensus soon. Besides that, we also make regulation for the shopping malls. We will restrain their storage facility by limiting the channel, so the excess discharge will be flooded their own area. Regarding the capacity of storage, we will work together and have coordination with Mr. Bambang from Directorate PLP because he has its guideline.

Question 1 from Ir. Eko Djuli Sasongko

I have question about page 28, on the top of slide number 6 “installation for storage facility”. There is mentioned that that the percentage of storage facility for housing complex, parking lot, etc; how do you get that number? What is the source? Please explain to us, for our reference.

Question 2 from RG. Hari Susanto

From what has been described as a whole this is a theory. Indeed the condition of our city is various, some parts are crowded and some are rare. In manual is expected the separation, how to manage such a crowded city of Jakarta is, because as a whole Jakarta is difficult to apply those methods. How about this manual, the discussion will be in general or more specific?

Answer by Anne

The source of information is survey which conducted by JICA.

Answer by Kusakabe

Actually we make this ration using detailed city plan, but you may know the municipality city planning on the way revised, so we have to use old data, so this is old data, and unfortunately each municipalities using different category of Spatial Planning, so finally we have to classified by our self, so before I ask Pak Firman, for next stage they now making new detailed plan based on National Spatial Planning & JabodetabekPunjur Planning, I want to ask them to use same category to use land use classification. Anyway, this from each municipality Spatial plan in here.

Answer by Shingu

This is standard in Japan which has so many installations. So, Ministry of Construction collects the data of actual facilities, and that is average data in Japan. So, some are small areas, some are big areas, installed storage facilities, so averagely calculated. How much percentage can installed to each purposes. For detailed I can show you later.

Answer by Anne

Masalah penyamarataan, dilihat dari kondisi tiap daerah memang kita tidak bisa meng-generalisir, mungkin nanti kita akan memberikan exception untuk daerah yang seperti ini lebih cocok menggunakan cara yang mana.

Regarding the generalization, we can not generalize the condition of every area. We will make the exception, which method is suitable for certain area.

Input and Question 3 from Reny –Tata Ruang

1. I really appreciate because there are many inputs. Admittedly, thus far Spatial Planning Agency has been focused on economic than environment aspects. However, due to the development condition at present, we also have to concern the environment aspect.
2. In the picture on page 4, of Land Use Changes, the percentage on the picture of future is 89%. Please check this again, because Law of Spatial Planning rules that 30% of River Basin Area should be a protected forest. It means that condition will be impossible.
3. This guideline has to do with the land use of province or regency which can be seen from the detailed designs. Run-off control depends on the condition of certain province or regency. There are housing complexes / areas which Floor Space Ratio (FSR) is high about 80% developed, and some with low FSR. Therefore, it's expected that this guideline would also give guidance for area which has different FSR one to another.
4. DKI Jakarta is mixed-land use, which means not only consist of residential areas, but also business areas, governmental areas, etc. How is the run-off control in this kind of area?

5. For a certain region, how is the minimum area that must use the run-off control?

Input 5 from Rizali-BPSDA

Infiltration from upstream to downstream can take tens of years of travel. The elevation of Jakarta is under sea level. Then, the withdrawal of ground water caused land subsidence. So, it is necessary to control of ground water withdrawal; moreover, ground water recharge can take tens of years. One of the causes of flood is land subsidence resulted by ground water withdrawal and imposition on the ground. Thus, the ground water withdrawal and imposition should be estimated, also the control of infrastructure in downstream.

Input 6 from Herni S-DPU DKI

Nowadays, DKI Jakarta is thinking about clean water issues. There was an idea to make multipurpose tunnel, which could functioned as toll roads, utilities, etc. during dry season and to storage water during flood. So, if you have any plan to make storage please consider this idea as we are in clean water shortage now.

On the topic of Land subsidence, certainly it relates to ground water. In this case Japan make re-tunnels. Maybe in the future JICA consultant can make like that with pilot project Jakarta. If the problem regards the land (space), it can be installed under ground which is cheaper.

Input 7 :

The presentation is about flood control comprehensive in urban area; In fact flood problem is not only about water, but also sedimentation which not mentioned in previous presentation and conservation structures in the upstream. I recommend that the conservation of structures in upstream to be included. If we only deal with water, flood problem will not be solved. Comprehensive flood control means cover all problem from upstream, middle and downstream. There is an Agreement of Eleven (11) Ministers which can be used as reference for run-off control.

Answer by Kusakabe

The only purpose in case in Japan, is to retention the water in the deep tunnel it self. Of course you should select which is better to select one run-off control or expensive deep tunnel.

Answer by Moderator

There was an idea of a deep tunnel built from Manggarai and directed to the west flood canal. I got information, in Jakarta there are 13 rivers, but none of them has clean water. Soon there will be Regulation of President concern on the management of water quality and control of water pollution in Ciliwung. We will divide into 4 parts from downstream to upstream and see what we will achieve in 20 years. It is expected that the abundant water of Ciliwung can be used as raw water and drinking water. Water conditions in Jakarta are abundant, but still we take from the Citarum and Cisadane. Not only concern on the quality, but also the quantity.

Question by Dinas Tata Kota, DKI Jakarta

1. On page 12 'Examples of Onsite Storage'. I agree with Mr. Bambang that in this case we have to distinguish for each region in Indonesia. Jakarta is different with Tangerang, Bogor and Bekasi. At no (2) there are examples of 'Retarding Facility between Buildings', a land that is used when

flood came. Whose responsibility is that? And it is included in GSB or GSC? Because it is difficult to be applied in DKI Jakarta, moreover it is only functioned during flood.

2. For JICA experts, what is the rule if we want to try in our country? What is the detailed plan?

Answer by Shingu

In Japan due to the rule to store, 500 cubic per hectare that means 50ml/hour rainfall. How to store, it needs to make in development area to make some storage areas. In this case, not only the storage facility, but also infiltration facility also installed to store 500 cubic meter per hectare. Actually Cipta karya, sometimes came to our office, to ask how to make regulation. It is important case. In Japan, target of run-off control 15ml/hour to 6ml/hour, if change into volume 500-600 cubic meter. So request to the developer, when they develop some area: please make a storage including infiltration area.

Another matter, if you want to know hydrological matter, hydrological calculation is another matter, please come to our office, I will teach you. Regulation matter and hydrological matter is different. First is Regulation matter, next how to keep is hydrological matter. 50ml/hour should be store per hectare is Japanese regulation of local Government. Run-off control is implemented by in charge of local government, by municipality. When central government asks to the run off control, it has to include flood control plan. So we already said that comprehensive flood control plan is include river improvement, the run off control in the basin. When we improved the flood control 1000cubic meter/sec, but only if the river improvement can not control it, so we ask to river basin to keep 2000 cubic meter/sec. So demarcation of design discharge is needed, when central government conducted.

When we appraise the run off control, there are 3 categories: (page 25)

1. Purpose 1 : have to formulate by Central Government as Flood Control Plan. When you want to conduct this one, it needs master plan for Flood control study. In that case, it needs to establish River Basin Organization, include municipality, province and central government.
2. Purpose 2 : already exist, known as DeltaQ0. This is only regulation, you can ask to developer to regulate DeltaQ0.
3. Purpose 3 : Individual, no plan only store 50 ml/hour per hectare, so everyone have to follow. No 2-3 no need river plan.

Question from Rogydesa-Cipta Karya

1. Related with the policy $0 \Delta Q$, later the solution is not only single purpose but multipurpose, which will be included as policy in scale of River Basin Area, regional, and structure. How much run-off discharge should be managed by every region? How much run-off discharge should be managed by every river basin area? How much run-off discharge should be managed by every structure? In the near future there will be consensus related to water management in the building area; we need the output at the level of the building to know the capacity. Then, we will consider the ability of the society (inhabitants, shopping mall owner, etc) which is not economically burdensome, but systematically.

2. What is the implementation of $0 \Delta Q$ Policy?

Answer by Anne

1. In case of the building, it will be the responsibility of building owner and scope work of DG. Cipta Karya (Human Settlement).
2. Regarding the amount $500 \text{ m}^3/\text{ha}$, it is very possible and might be applied in simple ways and not difficult.

O. Conclusion of Workshop and Closing Remarks, by Pak Widagdo

PANEL DISCUSSION

Coordination among Authority concern

A. THE PANEL

- | | | |
|--------------------|---|---|
| 1. CHAIRMAN | Mr. Widagdo | Director of River, Lake and Reservoir |
| 2. RESOURCE PERSON | Mr. Hitoshi BABA, Ph.D
Mr. Takaaki KUSAKABE | JICA Expert
Chief Advisor |
| 3. MEMBER | Mr. Sulad Sriharto
Mr. Eko Djuli Sasongko
Mr. Budi Widiartoro
Mr. Nana Nasuha
Mr. Endar Margono | Representative of Director of WR Management
Representative of Director Building & Environment
Head of Provincial Public Work Office, DKI Jakarta
Representative of Head of Provincial PWO, West Jawa
Representative of Head of Provincial PWO, Banten |

B. THE DISCUSSION

1. Mr. Widagdo opened the discussion by suggesting whether it is necessary to prepare “Coordination Matrix”, covering inter-sector and inter-regional approach including up-stream and down-stream of the catchment area and Regencies and Municipalities Government. It is also necessary to identify any “vocal-points” and to prepare “Grand Strategy” including development of “activity-model”, as well as any regulation required.
2. Mr. Sulad delivered his suggestion concerning “urban river”, that is:
 - Criteria of urban-river to be simplified,
 - Preparation of draft on Ministry Decree (Rancangan Peraturan Menteri) on Urban River has to follow official procedure
 - Manual on the Management of Urban River has to wait until River Law has been established
 - Rehabilitaion of Situ Gintung can be a good example in applying Spatial Planning approach.
3. Mr. Eko Djuli Sasongko said:
 - Development of a program should follow “bottom-up” procedure, meaning that Local Government prepare the program and the Central Government is sharing.
 - Institutional (legal?) matter: Local Regulation has to be in line with the National Law.
 - Community participation should start from up-stream area, to prepare RTRW (Rencana Tata Ruang Wilayah)
4. Mr. Nana Nasuha

- In the River Basin managed by the Central Government, there are some facilities to be operated by Local Government. Central Government is expected to issue Operational Guideline.
 - Agree the necessity of Grand Strategy
 - National Law No. 7/2004 should have legal-statute (NSPM)
5. Mr. Endar Margono (Water Resources and Settlement Agency of Public Works of Banten)
- He informs that in this moment, Tangerang Regency is preparing Local Regulation on River.
 - Concerning Situ, He suggests that small scale Situ to be managed by Local Government and the big-scale Situ to be managed by Central Government.
 - He inquired about BKSDA (Badan Kerjasama Sumber Daya Air), what is the follow-up program? He considered it might be necessary to encourage Central Government to initiate the forum again.
 - At this moment Tangerang Municipality planed to construct 750 bio-pori
6. Mr. Budi Widianoro (DPU DKI Jakarta)
- He encourage to apply strategy to retain water up-Stream, instead of flowing directly to the sea
 - About BKSDA, he recommend Central Government to take a lead
 - Spatial planning is to be applied in line with Presidential Decree on jabodetabekjur
 - At this moment, PU DKI Jakarta employ 275 persons as operator of Gates and Pumps, he worried that this number will grow bigger in the near future
7. Comment & Questions from Audience
- a. Mr. Bambang Sigit (Project Management Unit)
- Base on Study of BWRM Jakarta conducted by ITB, it is predicted that in the future (2034?) there will be heavy rainfall that will cause a big flood in Jakarta
 - Review Master Plan of 1973 & 1997 conducted by DKI Jakarta is Considered not adequate because it covered only on-stream approach and non-structural measures
- b. Mrs. Reny Windyawati (From DG. Spatial Planning)
- About Macro, Mezzo and Micro-drainage System in DKI Jakarta, it is necessary to generate local regulation based on National Law Concerning RTH (Ruang Terbuka Hijau/ Open Green Space) = 30%
 - It is also necessary to encourage Public Participation.
- c. Mrs. Mulyanel Chaidir (Municipal Public Work Office, South Jakarta)
- She appealed to be given Manual on Check-dam to be constructed in up-stream area, as part of RTH 30%
 - She wonder if injection-well can be applied, especially dealing with land-subsidence
8. As Closing Remark, the Chairman said that it will be necessary to discuss in more detail to formulize coordinator among related agencies, in near future.

資料 - 5:

ニューズレター

ATTACHMENT 5-1	Newsletter Volume 1
ATTACHMENT 5-2	Newsletter Volume 2
ATTACHMENT 5-3	Newsletter Volume 3
ATTACHMENT 5-1	Newsletter Volume 4
ATTACHMENT 5-2	Newsletter Volume 5
ATTACHMENT 5-3	Newsletter Volume 6