

第4章 プロジェクトの評価

4.1 事業実施のための前提条件

(1) 用地取得

本事業で実施される建設工事は、公道下への排水管の敷設、プノンペン都管理下の公園敷地内における地下貯留槽、ポンプ場、機械式自動除塵機の建設である。工事実施期間中は、安全な作業実施のために施工範囲を占有するため、交通整理等の対応は必要だが、工事完了後には地上部を現状復旧して占有を解除する。したがって、本事業実施のための恒久的な住民移転は発生しない。

必要な用地取得としては、トルコク地域における R315 排水幹線（ボックスカルバート）がトルコク 1 ポンプ場に接続する箇所での 1 軒の空き店舗の建物の撤去と民地の取得、及び 1 軒の家屋の工事期間中の一時移転が必要になる。1 軒の空き店舗の撤去と土地収用は、本事業の本体工事の入札までに完了していることが事業実施の前提条件となる。もう 1 軒の一時移転は、工事開始までに完了していることが事業実施の前提条件となる。

その他、現場事務所、資材置場、仮置場、土捨場など建設作業に必要となる用地は、工事着工前に DPWT によって手配が完了されていることが前提条件となる。

(2) 建設許可

プノンペン都内の道路及び公園の管理は、本事業の実施機関である DPWT の管轄である。このため、公道部での排水管敷設、及び公園での地下貯留槽、ポンプ場、自動除塵機の建設工事に関する許可は DPWT より円滑に発行されるので、困難さは特に発生しない。これらの点は、過去の我が国による無償資金協力事業においても確認されている。

(3) 初期環境影響評価承認取得

本事業（JICA 環境社会配慮ガイドラインの環境カテゴリーでは「B」に分類）実施のため、カンボジア国の環境影響アセスメントの関連法規に従い、以下の手続きが必要となる。

- 事業の面積が 5,000ha 未満の公共工事であることから、IEIA 調査を行う。
- カンボジア国の環境省に登録された環境影響評価の専門コンサルタント会社に IEIA 調査を委託する。
- 200 万ドルを超える事業規模であることから、環境省による IEIA の承認を受ける。

上記のとおり、本事業の実施のためには、本事業に対する IEIA に対してカンボジア国の環境省から承認を得ることが前提条件となる。

第四次プノンペン洪水防御・排水改善計画準備調査では、現地再委託により IEIA 調査を実施しており、調査団は IEIA 調査報告書を 2016 年 12 月中旬にプノンペン都に提出し、プノンペン都は 2017 年 1 月にカンボジア国の環境省に IEIA 調査報告書を提出した。環境

省による IEIA 審査には通常 2 ヶ月を必要とすることから、同 IEIA は 2017 年 2 月末から 3 月末頃の間承認を受ける見込みである。

(4) 円滑な事業実施のための前提条件

本事業の建設工事の大部分は、プノンペン都内の公道で実施され、施工対象地域周辺には住宅、商店、レストランなどが多く存在する。したがって施工実施期間中は、これら周辺住民や商店経営者に対して騒音・振動・粉塵の発生など負の影響を与えることが懸念される。このような負の影響が発生する工事に対して、付近住民や商店経営者から了承を取り付けるため、DPWT は工事開始前に住民説明会を開催して、施工業者及び施工監理を担当するコンサルタントと協力して、本事業の目的や予想される排水改善効果、工事内容や期間などについて事前に説明し、工事実施に対する了承が確保されるよう、尽力することが求められる。

4.2 プロジェクト全体計画達成のために必要な相手方投入（負担）事項

プロジェクトの効果を発現・持続させるために相手国側が取り組むべき事項を以下に挙げる。

(1) 適切な予算の確保

プノンペン都の DPWT 傘下の DSD は、毎年プノンペン都に対して管路清掃の計画に基づき予算請求をしているが、計画どおりの管路清掃作業遂行には、計画の内容に見合った予算の割当てと執行が不可欠である。年間の管路清掃の計画作業量は毎年ほぼ一定であることから、計画作業量と整合性を確保できる予算額を毎年一定して割当てることが望ましい。予算の執行についても、DSD の上位組織である DPWT による定期的な確認と、プノンペン都への働きかけが必要である。

(2) DSD 職員の育成及び能力開発

DSD の、管路清掃作業を現場で指揮する職員、及び管路台帳に情報を入力する職員は、排水施設の維持管理活動を効率的かつ円滑に実施するためのキーパーソンである。これらの DSD 職員を積極的に育成し、その技術力を維持することが重要である。職員の異動等が生じた場合でも、確実に管路清掃作業に関する技能を継承し、必要なマンパワーを確保できるよう、若年層の職員を定期的に増員し、職員の教育を積極的に行う必要がある。

(3) 継続的な運営維持管理活動の実施及び報告・監理体制の構築

我が国による無償資金協力援助事業の実施期間終了後も、DSD が持続的に計画立案、活動記録の作成、管渠系統図の更新を実施するよう、DSD から DPWT への定期的かつ自律的な作業実施報告体制、DPWT による監理体制を構築することが望まれる。

(4) 浸水被害モニタリングの実施

今後も排水改善を継続して推し進めるためには、浸水被害発生状況の定点モニタリングを実施してデータを収集し、降雨量・排水管路の清掃状況・排水改善のための事業の効果

等と浸水状況の関連性を確認することで、排水改善事業のマネジメントに活用することが必要と考えられる。本事業では、プノンペン都に対して相手国負担事項の一つとして、**図 R 4.2.1** に示す箇所での浸水被害定点モニタリングを提案している。

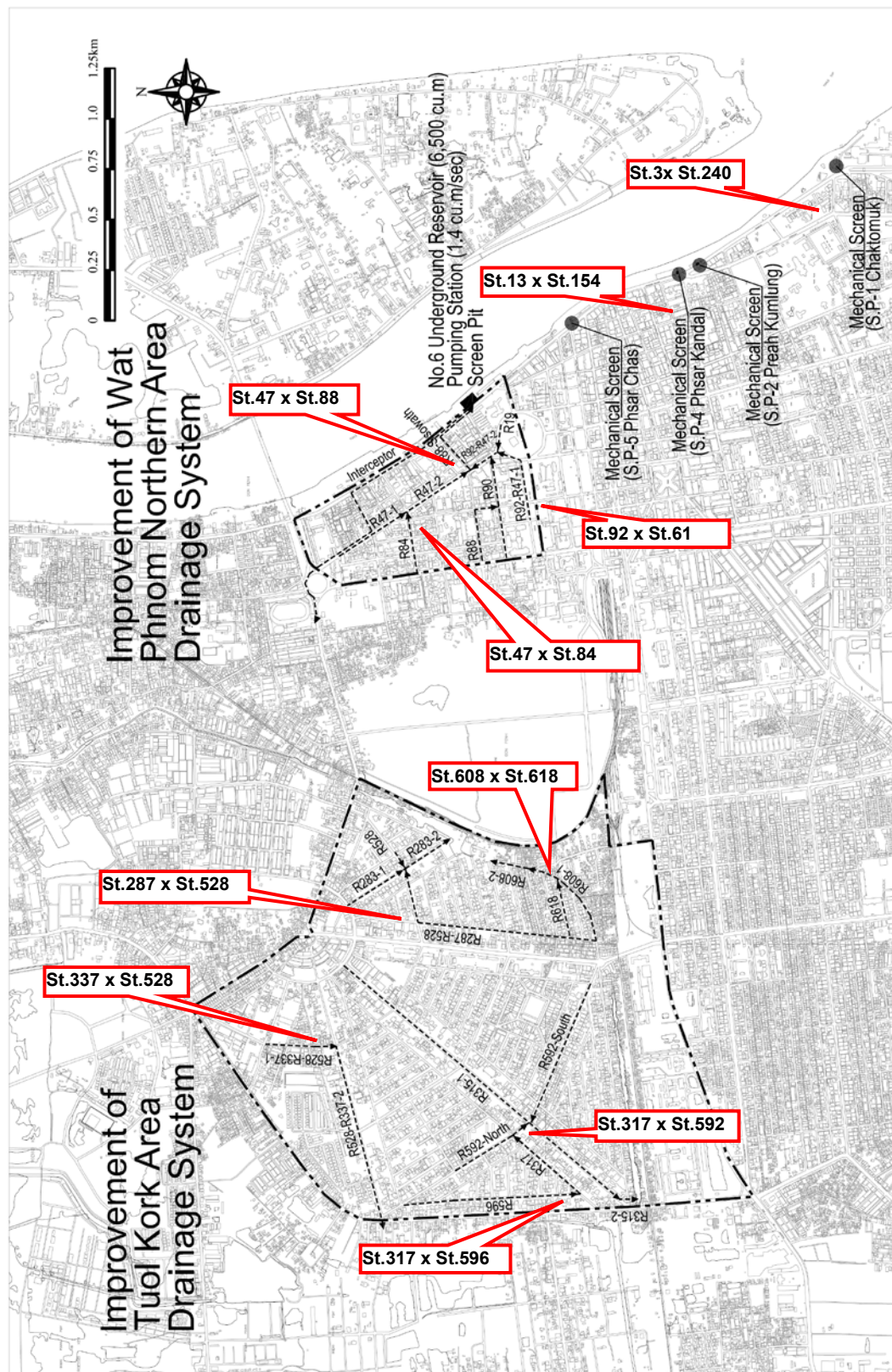


図 R 4.2.1 相手国負担事項として提案した浸水被害モニタリング調査地点

4.3 外部条件

プロジェクトの効果を発現かつその効果が持続することで本プロジェクトの目標が達成されるための外部条件は、下記のとおりである。

- カンボジア国及びプノンペン都の関連政策が大きく変更されない。
- プノンペン都による急激な運営・維持管理予算の縮小が発生しない。
- 治安状況の悪化が発生しない。

4.4 プロジェクトの評価

4.4.1 妥当性

プノンペン都では毎年雨季の度に集中豪雨による浸水被害が頻発している。その排水事情の悪さは、観光ガイドブックで危険情報の一つとして旅行者の注意喚起されるほど深刻である。本事業の対象地域は、以前より排水機能の改善の必要性が指摘されていたが、対策が進んでいない地域である。この浸水被害の問題は、プノンペン都民の生活に支障をきたすのみならず、カンボジア国の首都機能も麻痺させる事態に至ることが予想され、緊急に改善を進める必要がある。

本事業を実施することの妥当性について、裨益対象、人間の安全保障、施設の運営・維持管理、長期開発計画との整合性、環境への影響等の面から検証し、以下に述べる。

(1) 裨益対象の規模から見た妥当性

本事業で排水施設を建設することで直接的に裨益する地区は、プノンペン都中心市街地の北部にあるワットプノン北側エリア及びトルコーク地域、並びにフェーズ2で整備した排水機場の集水域である。これらの地域には住宅、商店事務所などが多く存在し、貧困層を含む多くの一般都民が居住している。特に、プノンペン都内では浸水被害が発生するような場所に居住している都民は、比較的貧困層であることが多い。

本事業の実施による直接的な裨益者数は、ワットプノン北側エリア及びトルコーク地域に居住する人口約8万人、フェーズ2で整備した排水機場の集水域に居住する人口約12万人であり、これはプノンペン都全体の人口169万人（2013年政府統計）の約12%に相当する。この他、公設市場、学校、病院等の公共施設が存在しており、居住者と同様に裨益する。

また、排水関連機材としての移動式排水ポンプ車の調達は、プノンペン都全域における局地的な浸水被害の軽減をもたらす。この効果による裨益者は全プノンペン都民と考えられる。

このように、本事業は裨益効果が大きく、地域住民の生活安定、プノンペン都の都市機能及びカンボジア国の首都機能の維持のために緊急の実施が求められている。

(2) 人間の安全保障から見た妥当性

本事業で排水管路、排水ポンプ場、地下貯留槽等で構成される排水施設を建設することにより、浸水被害が解消・軽減され、対象地域における下痢や腸チフス等の水因性疾病及びマラリアやデング熱など蚊を媒介とする伝染病の抑制などの衛生環境の向上、対象地域に存在する都民の住居や資産の浸水による価値低下の抑制が期待される。この効果は、健康や生活環境の維持、労働環境や雇用環境の確保による所得の継続など“Basic Human Needs”にも合致するものと考えられる。特に低所得者は、水路に近い、標高が低い、排水環境が悪いといった浸水被害が発生しやすい環境で居住している例が多く、彼らの生活環境の改善効果が大きいと考えられる。

(3) 施設の運営・維持管理から見た妥当性

プノンペン都の排水施設の維持管理を担当する、プノンペン都公共事業運輸局 (DPWT) 傘下の排水・下水課 (DSD) は、排水施設の維持管理作業実施のために必要な体制を有している。しかしながら、機材の老朽化による作業の非効率性などの要因もあり、これまでは、浸水が発生した場所を後追いで対処する対症療法的な作業が主となっていた。このような問題を解決するため、フェーズ3ではソフトコンポーネントを導入した技術支援を実施し、DSDの排水管路清掃能力の強化を図った。

本事業においても、排水施設維持管理能力の更なる向上と、本事業で調達される移動式排水ポンプ車の利活用能力を向上させるために、ソフトコンポーネントを導入した技術支援を実施する。この技術指導により、DSDによる排水施設の維持管理能力、及び緊急排水作業能力が向上し、本事業で建設・調達される施設・機材の継続的な有効利用に必要な能力が確保され、適切な運営・維持管理作業が実現可能となることが期待されることから、その妥当性は高いと判断される。また予算面についても、プノンペン都は独自の予算内で排水施設の維持管理費のための財源を確保している。

(4) カンボジアの長期開発計画との整合性から見た妥当性

本事業は、1999年にJICA開発調査で策定されたマスタープランで提案された内容に沿って実施されるものである。また、カンボジア国の国家戦略的開発計画 (NSDP 2014-2018) における戦略の一つである「インフラの整備」の中で提案されている行動計画「洪水対策と都市インフラの整備」への寄与が期待される。一方プノンペン都は、2015年を目標年とする都市開発戦略を独自に策定し、重点分野「社会資本整備と交通」の目的のひとつに「排水システムの改善」を挙げており、本事業の目的と合致する。

本事業は、洪水防御・排水改善に関する施設建設及び機材調達といった都市インフラを整備することで、プノンペン都の排水システムの改善を行い、浸水被害を軽減し、プノンペン都民の生活環境の改善と首都機能の安定的維持を図ることを目標としており、カンボジアの国家戦略やプノンペン都の長期開発計画に整合していることから、その妥当性は高い。

(5) 環境への影響から見た妥当性

本事業の実施による、環境や社会に対する重大かつ永続的な負の影響は想定されない。むしろ、排水施設の建設及び排水関連機材の調達により浸水被害が改善され、衛生面、住環境及び社会経済活動などで正の影響が期待される。

(6) 我が国の援助政策・方針との整合性から見た妥当性

本事業は、1999年のJICA開発調査によって立案されたマスタープランに沿って実施されており、2014年8月から実施されたJICA開発調査「プノンペン都下水・排水改善プロジェクト」で策定したマスタープランの長期計画にも合致している。

したがって、本事業は、我が国の援助政策・方針と整合性を持った事業であり、高い妥当性を有している。

(7) 国際的取組から見た妥当性

2015年3月に採択された「仙台防災枠組 2015-2030」において、4つの優先行動と7つのターゲットが合意されている。本事業は、優先行動のひとつである「レジリエンスのための災害リスク軽減への投資」と整合している。また、2015年9月に採択された「我々の世界を変革する：持続可能な開発のための 2030 アジェンダ」が採択され、17項目ある持続可能な開発のための目標（SDGs）のひとつである「包摂的で安全かつ強靱（レジリエント）で持続可能な都市及び人間居住を実現する」との目標と本事業の目的と一致する。このことから、本事業は国際的取組から見て妥当性は高い。

4.4.2 有効性

(1) 定量的効果

プノンペン都のワットプノン北側エリア及びトルコーク地域では、本協力対象事業で提案される排水施設が建設されることにより、2年確率以下の規模の降雨発生時における浸水深が20cm以下、浸水継続時間が2時間以下となり、浸水被害規模が改善される。更に、浸水被害の発生頻度の軽減も期待される。

表 R 4.4.1 事業実施による排水改善効果指標

指標名		基準値 (2015 年実績値)	目標値 (2023 年) 【事業完成 3 年後】
浸水面積	ワットプノン北側エリア (m ²)	111,600	49,500
	トルコーク地域 (m ²)	460,800	169,200
浸水深 (上記両地区を対象) (cm)		最大 50	最大 20
浸水継続時間 (同上) (時間)		最長 9	最長 2

注1) 上記目標値は、2年確率降雨（平均して2年に一度発生する規模の降雨）以下の規模の降雨発生時における値。2年確率降雨の強度は、44.8mm/hr.、87.8mm/日。

注2) 浸水面積は、浸水継続時間が10分以上となる面積。

注3) 排水改善効果指標の確認地点は、図 R 4.2.1 に示した浸水被害モニタリング調査地点のうち、主要道路であり交通量が多く視認効果の高い地点として、下記の5地点を選定した。

ワットプノン北側エリア：St.47×St.84、St.47×St.88

トルコーク地域：St.337×St.528、St.317×St.592、St.287×St.528

(2) 定性的効果

(a) 経済的効果

本事業において実施する排水施設の建設及び移動式排水ポンプ車の調達による浸水被害の解消・軽減は、プノンペンで発生している浸水被害による経済的被害発生の防止に寄与し、下記のような経済的効果が期待でき、プノンペン都の都市開発戦略の目標の一つである「プノンペン都民の生計が安定する」にも寄与する。

- ワットプノン北側エリアにある商業エリア、観光エリア、官公庁エリア及びトルコーク地域の商業エリア、居住エリアにおける洪水・浸水被害による経済的損失の低減
- ワットプノン北側エリア及びトルコーク地域における地域浸水被害の軽減による商業活動の活発化や観光産業の振興

(b) 環境・衛生改善効果

本事業の実施による浸水被害の解消・軽減の効果として、下記のような都市環境・衛生環境の改善効果が期待できる。

- ワットプノン北側エリア及びトルコーク地域の雨水を効率的に排水し内水氾濫被害の最小化を図ることによる都市環境（悪臭発生、合流管からの土砂・汚泥・ゴミの散乱）の改善
- ワットプノン北側エリア及びトルコーク地域の衛生環境が改善されることによる長期間の浸水による皮膚病や風邪、下痢、腸チフス、赤痢等の水因性疾病の発生、蔓延の状況の改善

これらの都市環境・衛生環境の改善は、プノンペン都の都市開発戦略の目標の一つである「衛生・環境状況の改善」に合致している。

(c) 交通状況改善効果

現在プノンペン都では、中心市街地に限らず郊外においても、浸水が発生して道路交通が遮断され、これを迂回する交通が浸水していない道路に集中し、交通渋滞が頻発する事態になっている。また、事業対象地域には市内でも特に交通量の多い道路が含まれ、多数の都民が朝夕の通勤・通学時に道路を利用している。そのため、この時間帯に浸水被害が発生した場合、交通渋滞は極めて深刻な状態となり、商業活動のみならず行政活動にも支障をきたす状態となっている。

これに対し、本事業の効果として、ワットプノン北側エリア及びトルコーク地域において浸水による交通遮断が解消・軽減されることによる主要道路や迂回路で発生する交通渋滞の改善、及び交通渋滞緩和による副次的な効果として、交通事故の減少や道路利用者の走行の快適性の改善が期待できる。

これらの効果は、プノンペン都の都市開発戦略の目標の一つである「洪水被害の軽減を考慮した都市開発」の実現へ寄与する。

4.4.3 結論

以上の内容により、本事業の実施の妥当性は高く、また有効性が見込まれると判断されることから、早期の実施が望まれる。

[資 料]

- 資料 1. 調査団員氏名、所属
- 資料 2. 調査行程
- 資料 3. 相手国関係者（面会者）リスト
- 資料 4. 討議議事録（M/D）
- 資料 5. ソフトコンポーネント計画書
- 資料 6. 洪水被害調査結果
- 資料 7. JICA ガイドラインとの比較

資料 1. 調査団員氏名、所属

(1) 現地調査時 (現地調査期間：2016年3月28日～6月17日)

氏名	担当	所属	現地調査期間
相馬 厚	総括	独立行政法人 国際協力機構 地球環境部 防災第一チーム 主任調査役/課長補佐	4月24日 ～4月30日
松下 剛	業務主任/洪水対策計画 /運営維持管理	株式会社 建設技研インターナショナル	3月28日 ～5月21日
下河内 仁	排水施設計画1 (施設計画/設計)	株式会社 建設技研インターナショナル	3月28日 ～5月8日
永田 将	排水施設計画2 (排水解析)	株式会社 建設技研インターナショナル	4月27日 ～5月17日
佐藤 修二	排水施設計画3 (ポンプ機器/除塵機)	株式会社 建設技研インターナショナル	4月18日 ～5月8日
前田 英男	施工計画/積算	株式会社 建設技研インターナショナル	4月18日 ～5月8日
羽田 智	機材計画/自然条件調査	株式会社 建設技研インターナショナル	4月19日 ～6月9日
伊藤 恵悟	環境社会配慮	株式会社 建設技研インターナショナル	4月18日 ～5月8日

(2) 概略設計概要現地説明時 (現地調査期間：2016年10月8日～10月16日)

氏名	担当	所属	現地調査期間
荒津 有紀	総括	独立行政法人 国際協力機構 地球環境部 水資源・防災グループ 専任参事	10月9日 ～10月15日
相馬 厚	調査計画	独立行政法人 国際協力機構 地球環境部 防災第一チーム 主任調査役/課長補佐	10月9日 ～10月15日
松下 剛	業務主任/洪水対策計画 /運営維持管理	株式会社 建設技研インターナショナル	10月8日 ～10月16日
下河内 仁	排水施設計画1 (施設計画/設計)	株式会社 建設技研インターナショナル	10月8日 ～10月16日

資料 2. 調査行程

(1) 現地調査時 (現地調査期間：2016年3月28日～6月9日)

No.	Date	Leader	Consultant's PM / Flood Protection Planning / O&M Planning	Drainage Facility Planning (Facilities Plan/Design)	Drainage Facility Planning (Drainage Analysis)	Drainage Facility Planning (Pump / Mechanical Screen)	Construction Planning / Cost Estimate	Environmental and Social Consideration	Equipment Planning/Natural Condition Survey	
			SOMA Atsushi	MATSUSHITA Tsuyoshi	SHIMOKOCHI Hitoshi	NAGATA Hitoshi	SATO Shuji	MAEDA Hideo	ITO Keigo	HADA Satoru
1	28-Mar	Mon	★							
2	29-Mar	Tue	Meeting with JICA Cambodia / Meeting with DPWT							
3	30-Mar	Wed	Data Collection / Preparation for Subcontract Survey							
4	31-Mar	Thu	Data Collection / Preparation for Subcontract Survey							
5	1-Apr	Fri	Meeting with DPWT							
6	2-Apr	Sat	Site Survey							
7	3-Apr	Sun	ditto							
8	4-Apr	Mon	Data Collection / Selection of Subcontractor							
9	5-Apr	Tue	Meeting with DOEPP							
10	6-Apr	Wed	Meeting with PPWSA / Site Survey							
11	7-Apr	Thu	Meeting with DSD / Contract of Inundation Condition (E/S) Survey							
12	8-Apr	Fri	Data Collection / Meeting with PPCC							
13	9-Apr	Sat	Data Arrangement							
14	10-Apr	Sun	ditto							
15	11-Apr	Mon	Inundation Condition (E/S) Survey / Site Survey							
16	12-Apr	Tue	Preparation of Topo., Geo., Manhole & Test Excavation Survey							
17	13-Apr	Wed	Confirmation of Schedule & TOR / Bid for Topo., Geo., Manhole & Test Excavation Survey							
18	14-Apr	Thu	Selection of Contractor & Contract for Topo., Geo., Manhole & Test Excavation Survey							
19	15-Apr	Fri	Site Survey							
20	16-Apr	Sat	Data Arrangement							
21	17-Apr	Sun	Data Arrangement							
22	18-Apr	Mon	Study of the Project Components							★
23	19-Apr	Tue	Team Meeting / Site Survey							★/Meeting
24	20-Apr	Wed	Data Collection / Study of the Project Components							Site Survey Site Survey Meeting with MOE Site Survey
25	21-Apr	Thu	Meeting with DPWT							Meeting with DPWT
26	22-Apr	Fri	Data Collection / Study of the Project Components							Data Collection Data Collection Data Collection Survey Supervision
27	23-Apr	Sat	Data Arrangement							
28	24-Apr	Sun	★ ditto							

No.	Date		Leader	Consultant's PM / Flood Protection Planning / O&M Planning	Drainage Facility Planning (Facilities Plan/Design)	Drainage Facility Planning (Drainage Analysis)	Drainage Facility Planning (Pump/Mechanical Screen)	Construction Planning / Cost Estimate	Environmental and Social Consideration	Equipment Planning/Natural Condition Survey
			SOMA Atsushi	MATSUSHITA Tsuyoshi	SHIMOKOCHI Hitoshi	NAGATA Hitoshi	SATO Shuji	MAEDA Hideo	ITO Keigo	HADA Satoru
29	25-Apr	Mon	AM: Meeting in JICA and DPWT, PM: Courtesy Call on PPCC, Kick-off Meeting on IC/R		Planning Design		Site Survey	Data Collection	Data Collection	Data Collection
30	26-Apr	Tue	AM: Discussion on M/D with PPCC PM: Site Survey		ditto		ditto	ditto	ditto	ditto
31	27-Apr	Wed	AM: Discussion on M/D with PPCC PM: Site Survey		ditto	★	Planning Design	ditto	ditto	ditto
32	28-Apr	Thu	Signing on M/D		Team Meeting					
33	29-Apr	Fri	AM: Report to EOJ and JICA		Planning Design	Data Collection	Planning Design	Data Collection	Data Collection	Data Collection
34	30-Apr	Sat	Report to EOJ and JICA		ditto					
			●	Data Arrangement						
35	1-May	Sun	Data Arrangement							
36	2-May	Mon	Planning & Design		Planning Design	Data Collection	Planning Design	Data Collection	Data Collection	Survey Supervision
37	3-May	Tue	ditto		ditto	Data Collection	ditto	ditto	ditto	ditto
38	4-May	Wed	Meeting with DPWT							
39	5-May	Thu	Planning & Design		Planning Design	Data Collection	Planning Design	Data Collection	Data Collection	Data Collection
40	6-May	Fri	ditto		Reporting	Analysis	Reporting			ditto
41	7-May	Sat	ditto		Reporting	ditto	Reporting			Progress Check
42	8-May	Sun	Data arrangement		●	Data arrangement	●			Data arrangement
43	9-May	Mon	Planning & Design			Analysis				Interim Report
44	10-May	Tue	Reporting			ditto				Survey Supervision
45	11-May	Wed	Reporting			ditto				ditto
46	12-May	Thu	Report of Site Survey Result to DPWT/PPCC			ditto				ditto
47	13-May	Fri	Data Arrangement			ditto				ditto
48	14-May	Sat	Data Arrangement			Data Arrangement				ditto
49	15-May	Sun	ditto			ditto				ditto
50	16-May	Mon	Reporting			Analysis				ditto
51	17-May	Tue	Reporting			●				ditto
52	18-May	Wed	Reporting							ditto
53	19-May	Thu	Reporting							ditto
54	20-May	Fri	Report to JICA, EOJ							ditto
55	21-May	Sat	●							ditto
~	~	~								ditto
60	4-Jun	Sat								Data arrangement
61	5-Jun	Sun								Summarize Survey Result
62	6-Jun	Mon								ditto
63	7-Jun	Tue								ditto
64	8-Jun	Wed								ditto
65	9-Jun	Thu								●

PPCC : Phnom Penh Capital City

DPWT : Department of Public Works and Transport

★ Mobilization to Phnom Penh

● Demobilization from Phnom Penh

Saturday	Saturday
Sunday	Sunday
Holiday	Holiday

(2) 概略設計概要現地説明時 (現地調査期間：2016年10月8日～10月16日)

No.	Date		Team Leader	Survey Planning	Consultant's PM / Flood Protection Planning / O&M Planning	Drainage Facility Planning (Facilities Plan/Design)
			ARATSU Yuki	SOMA Atsushi	MATSUSHITA Tsuyoshi	SHIMOKOCHI Hitoshi
1	8-Oct	Sat				Mobilization from Japan to Phnom Penh
2	9-Oct	Sun	Arrive in Phnom Penh			Preparation for M/D Discussion
3	10-Oct	Mon	a.m.	Meeting with JICA Cambodia Office (@JICA Cambodia Office)		
			p.m.	Internal Meeting (@JICA Cambodia Office)		
4	11-Oct	Tue	a.m.	Meeting with DPWT (@DPWT Office)		
			p.m.	Courtesy Call on Vice Governor of PPCC		
5	12-Oct	Wed	a.m.	Explanation of the Draft Report and Discussion of M/D (@PPCH)		
			p.m.	Finalization of M/D and Preparation for Signing on M/D		
6	13-Oct	Thu	a.m.	Signing on M/D (@PPCH)		
			p.m.	Site Visit		
7	14-Oct	Fri	a.m.	Site Visit		
			p.m.	Meeting with IRC of MEF on Land Acquisition and Temporary House Relocation		
8	15-Oct	Sat	a.m.	Report to Embassy of Japan in Cambodia		
			p.m.	Meeting with Department of Bilateral Cooperation of MEF on Project Implementation		
9	16-Oct	Sun	Depart from Phnom Penh			Site Visit
			Arrive in Japan			Depart from Phnom Penh
						Arrive in Japan

M/D : Minutes of Discussion

PPCC : Phnom Penh Capital City

PPCH : Phnom Penh Capital Hall

DPWT : Department of Public Works and Transport

MEF : Ministry of Economy and Finance

IRC : Inter-ministerial Resettlement Committee

JICA : Japan International Cooperation Agency

Saturday
Sunday

資料 3. 相手国関係者(面会者)リスト

表敬・打合せを行ったカンボジア国関係者のリストを以下に示す。

氏名 (敬称略)	役職	所属
プノンペン都庁 (Phnom Penh Capital City: PPCC (Head Office))		
H.E. Pa Socheatevong	Governor	PPCC
H.E. Ieng Aunny	Vice Governor	PPCC
H.E. Suy Serith	Vice Governor	PPCC
Mean Chanyada	Director	Administration
Huot Hay	Deputy Director	Administration
Yut Longdy	Deputy Director	Administration
So Phannara	Director	Administration Division
Sok Chamroeun	Deputy Director	Administration Division
Chhay Sopheara	Assistant	Assistant of H.E. Suy Serith
Seng Vannak	Deputy Director	City Management
Chou Meangchan	Director	Planning and Investment Division
Uk Sophal	Director	Financial Division
Sin Boramey	Director	Urbanization Division
Phal Sophak	Deputy Director	Urbanization Division
Suos Chormoni	Director	Accounting Office
Nuon Samnavuth	Deputy Director	Waste Management Division
Phan Sopheaknita	Chief	Public Relations and International Cooperation Office
プノンペン都公共事業運輸局 (Department of Public Works & Transport : DPWT/PPCC)		
Sam Piseth	Director	DPWT/PPCC
Chou Kimtry	Deputy Director	DPWT/PPCC
Peov Meng Hai	Deputy Director	DPWT/PPCC
Moeung Sophan	Advisor	DPWT/PPCC
Pheng Pharinet	Officer	DPWT/PPCC
プノンペン都公共事業運輸局下水道課 (Drainage and Sewerage Division : DSD-DPWT)		
Dourng Chansarath	Cheif	DSD
Chhorng Vantha	Deputy Cheif	DSD
Men Sokkhen	Deputy Cheif	DSD
Sim Lyda	Engineer	DSD
プノンペン都環境局 (Department of Environment : DOE/PPCC)		
Choeun Sothon	Director	DOE
Khuon Dara	Deputy Director	DOE
プノンペン都土地管理・都市計画・建設局 (Department of Land Management, Urban Planning and Construction: DLMUPC/PPCC)		
Saren Vanna	Director	DLMUPC/PPCC
Dy Sanith	Deputy Director	DLMUPC/PPCC
Sean Soyany	Chief of Cadastral Office	DLMUPC/PPCC
プノンペン都計画局 (Department of Planning: DOP/PPCC)		
Kim Chandina	Director	Department of Planning
プノンペン経済財務局 (Department of Economy and Finance: DEF/PPCC)		
Va Sothea	Director	DFE/PPCC
Chey Vimearithe	Deputy Director	DFE/PPCC
プノンペン都水資源気象局 (Department of Water Resources and Meteorology : DOWRAM/PPCC)		
Mao Bundheurn	Director	DOWRAM/PPCC
Chea Ahuchit	Office Head	DOWRAM/PPCC
プノンペン都行政区		
Phang Lyda	Deputy Governor	Khan Toul Kork
Yous Yuthy	Deputy Governor	Khan Daun Penh
Lay Oudom	Deputy Governor	Khan Sen Sok

プノンペン警察 (Phnom Penh Police)

Ouk Samrach	Deputy Chief	
Chom Socheat	Deputy Chief	Military Police

カンボジア経済財務省 (Ministry of Economy and Finance : MEF)

Chhuon Samrith	Director	General Department of Budget
Im Sethyra	Director	Resettlement Department
Yen Sophan	Deputy Director	Resettlement Department

カンボジア環境省 (Ministry of Environment : MOE)

Pak Sokharavuth	Director	Department of Air and Noise Quality Management
Thiv Sophearith	Deputy Director	Department of Air and Noise Quality Management
Danh Serey	Director	Environmental Impact Assessment Department

プノンペン水道公社 (Phnom Penh Water Supply Authority : PPWSA)

Samreth Sovithiea	Deputy General Director	
Chea Satephoat	Director	Planning and Project Department

カンボジア電力公社 (Electricité du Cambodge)

Iv Visal	Deputy Director	Distribution Department
Somarith Sam	Chief	Project Planning of Distribution Technical Office

在カンボジア日本国大使館 (Embassy of Japan in Cambodia)

Taizo Chiba	Second Secretary	Embassy of Japan
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JICA カンボジア事務所 (JICA Cambodia)

Itsu ADACHI	Chief Representative	JICA, Cambodia Office
Takashi ITO	Senior Representative	JICA, Cambodia Office
Togo UCHIDA	Project Formulation Advisor	JICA, Cambodia Office
Say Bora	Program Officer	JICA, Cambodia Office
Seng Solady	Program Officer	JICA, Cambodia Office

資料 4. 討議議事録(M/D)


4.1 現地調査時 (サイン : 2016 年 4 月 28 日)

MINUTES OF DISCUSSIONS ON THE PREPARATORY SURVEY ON THE PROJECT FOR FLOOD PROTECTION AND DRAINAGE IMPROVEMENT IN THE PHNOM PENH CAPITAL CITY (Phase IV)

In response to the request from the Government of the Kingdom of Cambodia (hereinafter referred to as " Cambodia "), the Government of Japan decided to conduct a Preparatory Survey on the Project for Flood Protection and Drainage Improvement in the Phnom Penh Capital City (Phase IV) (hereinafter referred to as "the Project"), and entrusted the Preparatory Survey to Japan International Cooperation Agency (hereinafter referred to as "JICA").

JICA sent the Preparatory Survey Team for the Outline Design (hereinafter referred to as "the Team") to Cambodia, headed by Mr. Atsushi Soma, Deputy Director of Disaster Risk Reduction Team 1, Global Environment Department, and the Team stayed in Cambodia from 25th to 29th April, 2016.

The Team held a series of discussions with the officials concerned of the Government of Cambodia and conducted field surveys in the Project sites. In the course of the discussions, both sides have confirmed the main items described in the attached sheets. The Team will proceed to further works and prepare the Preparatory Survey Report.

Phnom Penh, 28th April, 2016 



Atsushi Soma
Team Leader
Preparatory Survey Team
Japan International Cooperation Agency
Japan



H.E. PA Sotheatevong
Governor
Phnom Penh Capital City
Cambodia

ATTACHMENT

1. Objective of the Project

The objective of the Project is to minimize inundation by local rainfall and to reduce inundation damage.

2. Title of the Preparatory Survey

Both sides confirmed the title of the Preparatory Survey as “the Preparatory Survey for the Project for Flood Protection and Drainage Improvement in the Phnom Penh Capital City (Phase IV)”.

3. Project Site

Both sides confirmed that the sites of the Project are Tuol Kork Area, Wat Phnom Northern Area and Four Pumping Stations which are shown in Annex 1.

4. Line Agency and Executing Agency

Both sides confirmed the line agency and the executing agency as follows:

- 4-1. The line agency is the Phnom Penh Capital City (hereinafter referred to as “PPCC”), which would supervise the executing organization.
- 4-2. The executing agency is the Department of Public Works and Transport of PPCC (hereinafter referred to as “DPWT”), which shall coordinate with all the relevant agencies/departments to ensure smooth implementation of the Project and ensure that the Undertakings are taken by them properly and on schedule. The organization charts are shown in Annex 2.

5. Items requested by the Government of Cambodia

5-1. As a result of discussions, both sides confirmed that the items requested by the Government of Cambodia for the Project are as shown in the Table below.

Components	Category	Detailed Contents (will be studied in the Preparatory Survey)
Improvement of Wat Phnom Northern area drainage system	Construction of Facility	<ul style="list-style-type: none"> - Drainage Pipe (Dia.1,000mm~1,800mm, Length=Max. 3.2km in total) - Pumping Station (Q=1.4m³/s) - Underground Reservoir (V=5,000m³) Interceptor Pipe (Dia.1,000mm, Length=approx. 1.5km)
Mechanical screen cleaning facilities to screen pits at pumping stations constructed in phase 2	Construction of Facility	Mechanical Screen at existing Four Pumping Stations (Chak Tomuk P.S. (P1), Preah Kumulung P.S. (P2), Phsar Kandal P.S. (P4), Phsar Chaas P.S. (P5))
Improvement of Tuol Kork area drainage system	Construction of Facility	<ul style="list-style-type: none"> - Pumping Station (Q=1.4m³/s) - Drainage Pipe (Dia.1,000mm~1,800mm, Length=Max. 7.3km in total) Drainage Box Culvert (2m x 2m ~ 2.5m x 3.5m, Length=Max. 0.7km in total)
Procurement of Detention Pond cleaning equipment	Procurement of Equipment	Vehicle-Mounted Drainage Pump (1~2 units)

Note: The outline of these components is summarized in Annex 3.

- 5-2. JICA will assess the appropriateness of the above requested items through the survey and will report findings to the Government of Japan. The final components of the Project would be decided by the Government of Japan.
6. Japanese Grant Aid Scheme
- 6-1. The Cambodian side understands the Japanese Grant Scheme and its procedures as described in Annex 4, Annex 5 and Annex 6, and necessary measures to be taken by the Government of Cambodia.
- 6-2. The Cambodian side understands to take the necessary measures, as described in Annex 7, for smooth implementation of the Project, as a condition for the Japanese Grant to be implemented. The detailed contents of the Annex 7 will be worked out during the survey and shall be agreed no later than the explanation of a draft Preparatory Survey Report.
The contents of Annex 7 will be used to determine the following:
(1) Scope of the Project.
(2) Schedule of the Project implementation.
(3) Time and possibility of budget allocation.
Contents of Annex 7 will be updated as the Preparatory Survey progresses, and will finally be the Attachment to the Grant Agreement.
7. Schedule of the Survey
- 7-1. The Team will proceed with further survey in Cambodia until June 2016.
- 7-2. JICA will prepare a draft Preparatory Survey Report in English and will dispatch another mission to Cambodia in order to explain its contents around middle of September 2016.
- 7-3. If the contents of the draft Preparatory Survey Report is accepted in principle and the undertakings are fully agreed by the Cambodian side, JICA will complete the final report in English and send it to the Government of Cambodia around December 2016.
- 7-4. The above schedule is tentative and subject to change due to the progress of the Survey.
8. Environmental and Social Considerations
- 8-1. The Cambodian side confirmed to give due environmental and social considerations during implementation of the Project, and after completion of the Project, in accordance with “the JICA Guidelines for Environmental and Social Considerations [April, 2010]”.
- 8-2. The Project is categorized as B because the Project is not located in a sensitive area, nor has it sensitive characteristics, nor falls it into sensitive sectors under “the JICA guidelines for environmental and social considerations [April 2010]”, and its potential adverse impacts on the environment are not likely to be significant. The Cambodian side confirmed to conduct the necessary procedures concerning the environmental assessment (including stakeholder meetings, Environmental Impact Assessment (EIA) /Initial Environmental Examination (IEE) and information disclosure, etc.) and make EIA/IEE report of the Project. The EIA/IEE approval shall be received from the responsible authorities and submitted to JICA by December 2016. And both sides confirmed that the EIA/IEE report shall be submitted to the responsible authorities by the end of August 2016.
- 8-3. For projects that will result in involuntary resettlement, the Cambodian side confirmed to prepare a Resettlement Action Plan (RAP)/Abbreviated Resettlement Action Plan (ARAP) and make it available to the public. In addition, the Cambodian side confirmed to provide the affected people with sufficient compensation and/or support in accordance with RAP/ARAP, in a timely manner.

9. Other Relevant Issues

9-1. Possibility of modification of items, components and detail contents

Both side confirmed that there is a possibility of modifying and/or deleting the requested items, components and detail contents for the Project, described in 5-1. above, according to the result of the Preparatory Survey. The Team will make necessary further survey and will make deep analysis in Japan. Detailed specifications will be explained by next mission team from JICA to be scheduled around the middle of September 2016.

9-2. Implementation of RAP

Both sides confirmed that a necessary procedure of RAP to make available of lands and spaces for the Project must be completed before the Tender of Notice as described in Annex 7. And both side also confirmed that PPCC will submit a tentative schedule of this procedure by the end of August 2016 which will be a precondition for JICA to dispatch next mission to explain the draft Preparatory Survey Report.

9-3. Land acquisition

Both sides confirmed that it will be necessary to secure enough lands and spaces mentioned below for constructing a new drainage pumping station and drainage pipelines in Tuol Kork area in the Project. PPCC agreed that a land acquisition plan shall be submitted to JICA by the end of August 2016 which will also be a precondition for JICA to dispatch next mission to explain the draft Preparatory Survey Report. And PPCC also confirmed that it is necessary to complete the acquisitions before the notice Tender, otherwise the schedule of the Project may be affected.

- At least 20m x 40m land at the area of the intersection of St.337 and St.592
- A parking shelter at the corner between St.315 and St.608

9-4. Soft component

Both sides confirmed that initial guidance for operation and maintenance of the facilities, equipment and machinery will be included in the Project to support smooth operation and maintenance by DPWT. And both side confirmed that these are idea of the soft component requested by Cambodia and these will be studied further by the Team and proposed in the draft Preparatory Survey Report.

- Capacity building of Drainage and Sewerage Division of DPWT (hereinafter referred to as "DSD") to execute systematic and scheduled cleaning work of the drainage system
- Capacity building of DSD to execute appropriate utilization and maintenance of the equipment procured by the Project
- Enlightening activities by PPCC, DPWT, Department of Environment of PPCC (hereinafter referred to as "DOE"), Local authorities and the Consultant to reduce illegal dumping of solid waste into drainage facilities by Community Participation

9-5. Taxes borne by Cambodian side and its budget allocation

With reference to Annex-4 and Annex-7, both sides confirmed that customs duties, internal taxes and other fiscal levies which may be imposed in the country of the recipient with respect to the purchase of the products and/or the services be exempted by its designated authority without using the Grant.

9-6. Monitoring during the implementation

PPCC and DPWT agreed to monitor the Project every three (3) months during the implementation by using the Project Monitoring Report form as attached in Annex-8

9-7. Confidentiality of the Project

The Team explained that the Preparatory Survey Report to be prepared at the end of the survey would be disclosed to the public in Japan. However, the Team also explained that a confidential part which might affect bidding process such as cost estimation should be kept undisclosed until the bidding has been completed.

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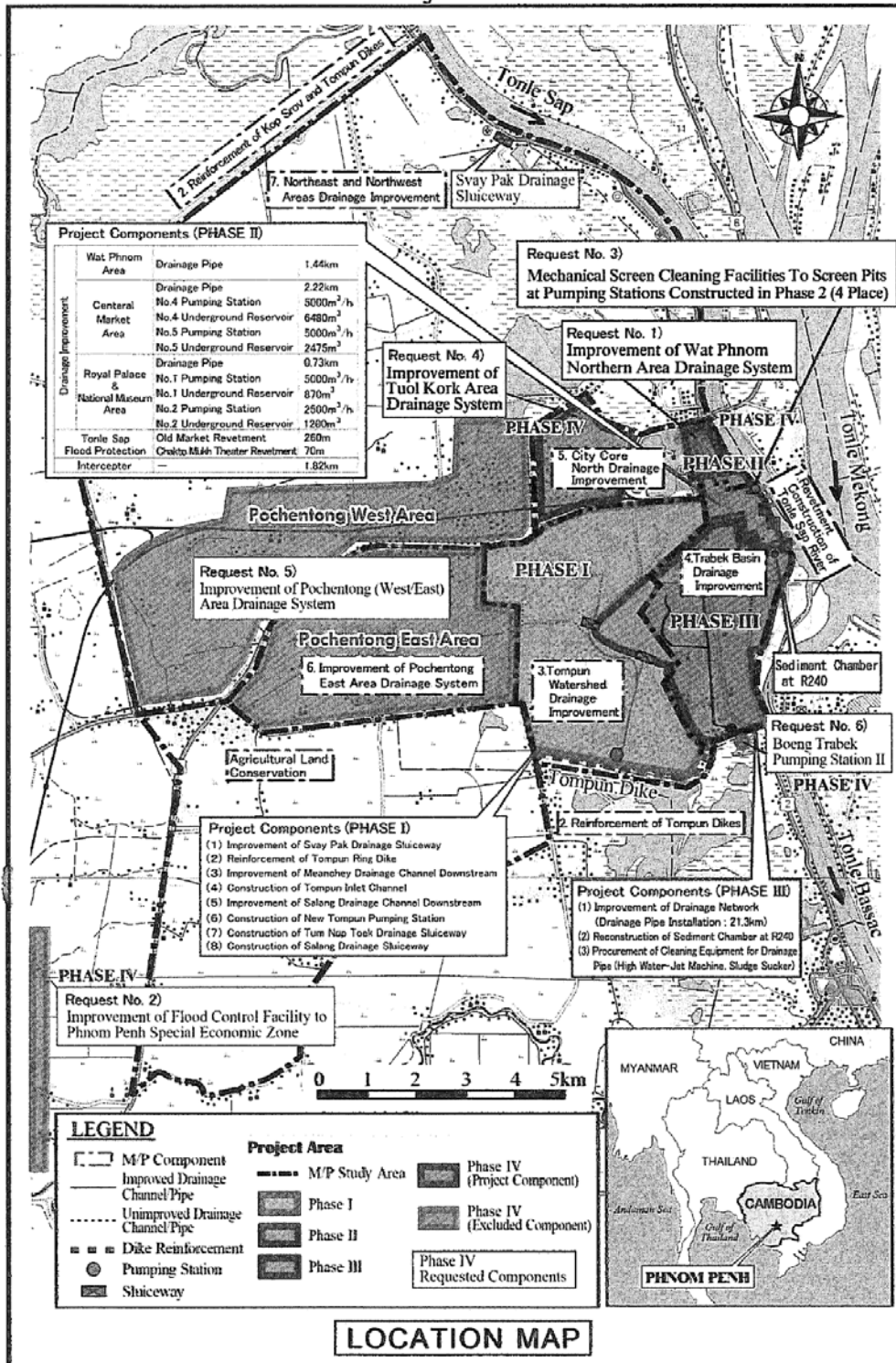
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- Annex 1 Project Sites
- Annex 2 Organization Chart
- Annex 3 Location Map
- Annex 4 Japanese Grant
- Annex 5 Flow Chart of Japan's Grant and Procedures
- Annex 6 Financial Flow of Grant Aid
- Annex 7 Major Undertakings to be taken by Recipient Government
- Annex 8 Project Monitoring Report (template)

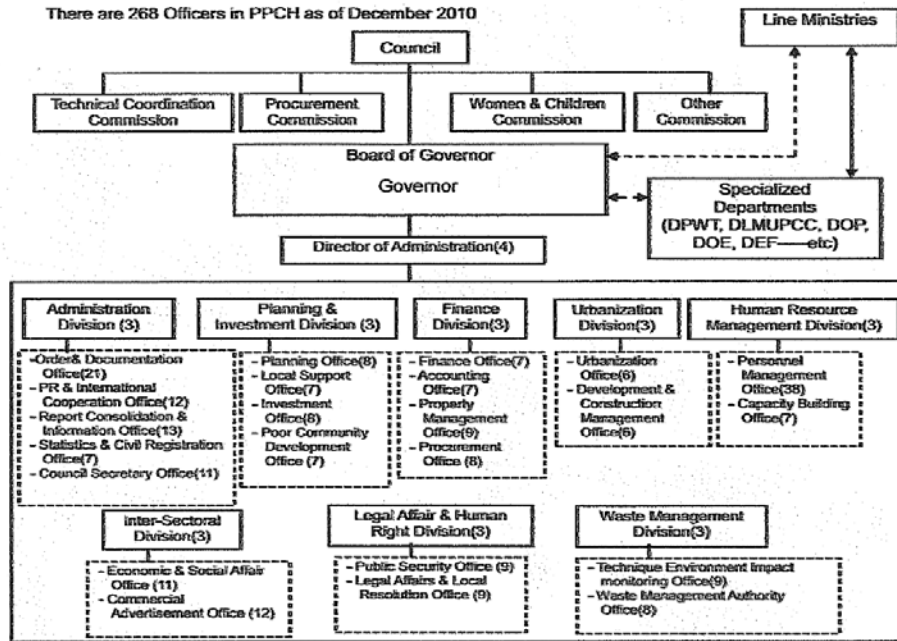
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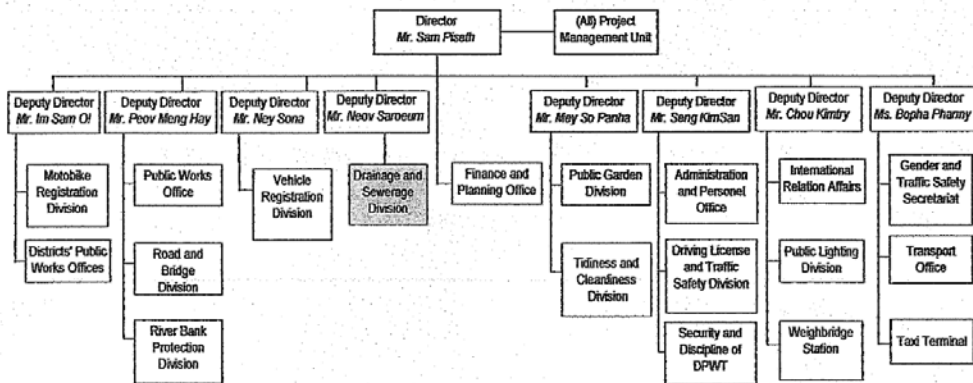
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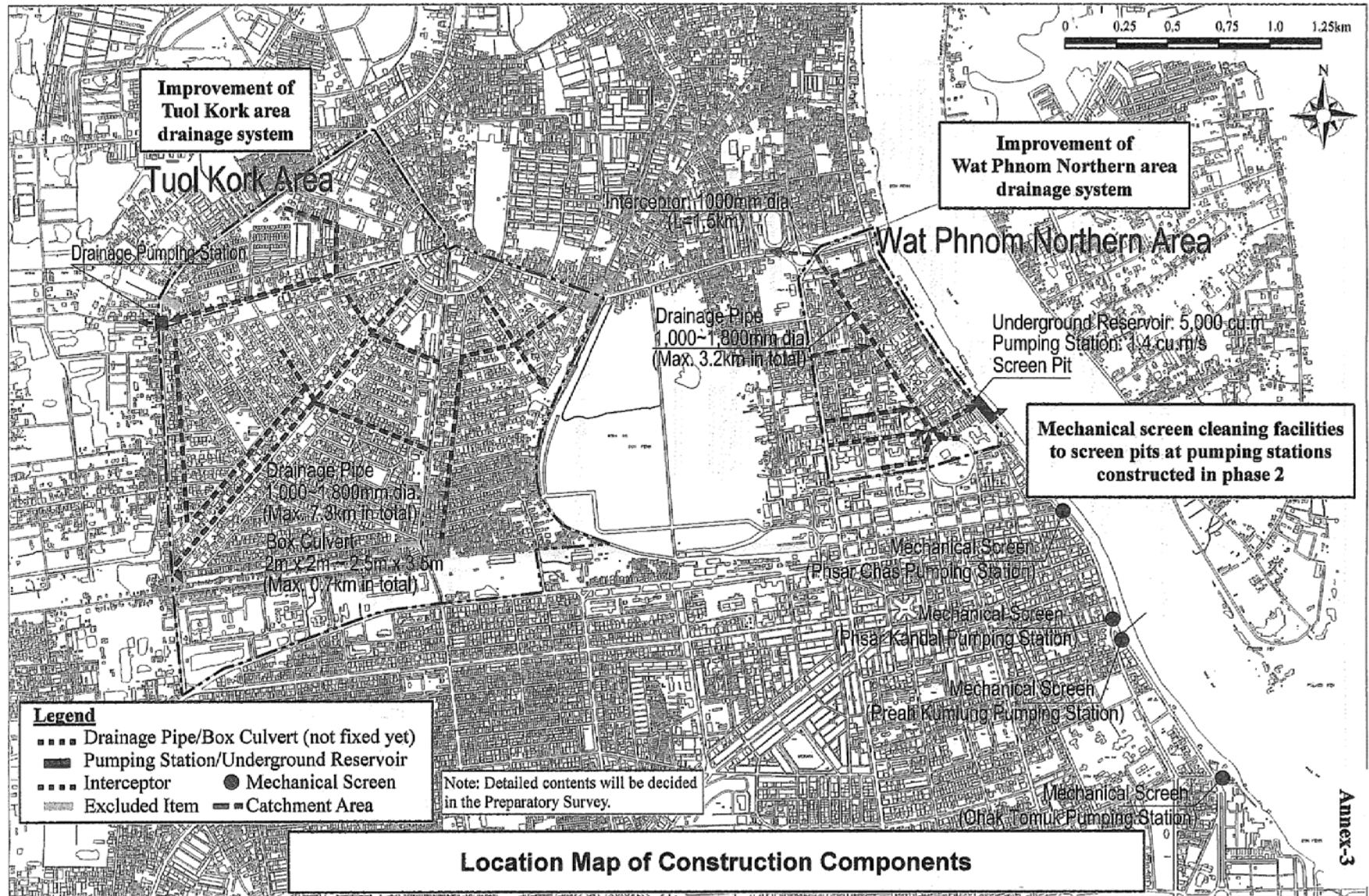


Organization Chart of PPCC



Organization Chart of DPWT





JAPANESE GRANT

The Japanese Grant (hereinafter referred to as the "Grant") is non-reimbursable fund provided to a recipient country to procure the facilities, equipment and services (engineering services and transportation of the products, etc.) for its economic and social development in accordance with the relevant laws and regulations of Japan. The Grant is not supplied through the donation of materials as such.

Based on a JICA law which was entered into effect on October 1, 2008 and the decision of the GOJ, JICA has become the executing agency of the Japanese Grant for Projects for construction of facilities, purchase of equipment, etc.

1. Grant Procedures

The Grant is supplied through following procedures:

- Preparatory Survey
 - The Survey conducted by JICA
- Appraisal & Approval
 - Appraisal by the GOJ and JICA, and Approval by the Japanese Cabinet
- Authority for Determining Implementation
 - The Notes exchanged between the GOJ and a recipient country
- Grant Agreement (hereinafter referred to as "the G/A")
 - Agreement concluded between JICA and a recipient country
- Implementation
 - Implementation of the Project on the basis of the G/A

2. Preparatory Survey

(1) Contents of the Survey

The aim of the preparatory Survey is to provide a basic document necessary for the appraisal of the Project made by the GOJ and JICA. The contents of the Survey are as follows:

- Confirmation of the background, objectives, and benefits of the Project and also institutional capacity of relevant agencies of the recipient country necessary for the implementation of the Project.
- Evaluation of the appropriateness of the Project to be implemented under the Grant Scheme from a technical, financial, social and economic point of view.
- Confirmation of items agreed between both parties concerning the basic concept of the Project.
- Preparation of an outline design of the Project.
- Estimation of costs of the Project.

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The contents of the original request by the recipient country are not necessarily approved in their initial form as the contents of the Grant project. The Outline Design of the Project is confirmed based on the guidelines of the Japanese Grant scheme.

JICA requests the Government of the recipient country to take whatever measures necessary to achieve its self-reliance in the implementation of the Project. Such measures must be guaranteed even though they may fall outside of the jurisdiction of the organization of the recipient country which actually implements the Project. Therefore, the implementation of the Project is confirmed by all relevant organizations of the recipient country based on the Minutes of Discussions.

(2) Selection of Consultants

For smooth implementation of the Survey, JICA employs (a) consulting firm(s). JICA selects (a) firm(s) based on proposals submitted by interested firms.

(3) Result of the Survey

JICA reviews the Report on the results of the Survey and recommends the GOJ to appraise the implementation of the Project after confirming the appropriateness of the Project.

3. Japanese Grant Scheme

(1) The E/N and the G/A

After the Project is approved by the Cabinet of Japan, the Exchange of Notes (hereinafter referred to as "the E/N") will be signed between the GOJ and the Government of the recipient country to make a pledge for assistance, which is followed by the conclusion of the G/A between JICA and the Government of the recipient country to define the necessary articles, in accordance with the E/N, to implement the Project, such as payment conditions, responsibilities of the Government of the recipient country, and procurement conditions.

(2) Selection of Consultants

In order to maintain technical consistency, the consulting firm(s) which conducted the Survey will be recommended by JICA to the recipient country to continue to work on the Project's implementation after the E/N and G/A.

(3) Eligible source country

Under the Grant, in principle, Japanese products and services including transport or those of the recipient country are to be purchased. The Grant may be used for the purchase of the products or services of a third country, if necessary, taking into account the quality, competitiveness and economic rationality of products and services necessary for achieving the objective of the Project. However, the prime contractors, namely, constructing and procurement firms, and the prime consulting firm are limited to "Japanese nationals", in principle.

(4) Necessity of "Verification"

The Government of the recipient country or its designated authority will conclude contracts denominated in Japanese yen with Japanese nationals, in principle. Those contracts shall be verified by JICA. This "Verification" is deemed necessary to fulfill accountability to Japanese taxpayers.

(5) Major undertakings to be taken by the Government of the Recipient Country

In the implementation of the Grant Project, the recipient country is required to undertake such necessary measures as Annex. The Japanese Government requests the Government of the recipient country to exempt all customs duties, internal taxes and other fiscal levies such as VAT, commercial tax, income tax, corporate tax, resident tax, fuel tax, but not limited, which may be imposed in the recipient country with respect to the supply of the products and services under the verified contract, since the Grant fund comes from the Japanese taxpayers.

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(6) "Proper Use"

The Government of the recipient country is required to maintain and use properly and effectively the facilities constructed and the equipment purchased under the Grant, to assign staff necessary for this operation and maintenance and to bear all the expenses other than those covered by the Grant.

(7) "Export and Re-export"

The products purchased under the Grant should not be exported or re-exported from the recipient country.

(8) Banking Arrangements (B/A)

a) The Government of the recipient country or its designated authority should open an account under the name of the Government of the recipient country in a bank in Japan (hereinafter referred to as "the Bank"), in principle. JICA will execute the Grant by making payments in Japanese yen, in principle, to cover the obligations incurred by the Government of the recipient country or its designated authority under the Verified Contracts.

b) The payments will be made when payment requests are presented by the Bank to JICA under an Authorization to Pay (A/P) issued by the Government of the recipient country or its designated authority.

(9) Authorization to Pay (A/P)

The Government of the recipient country should bear an advising commission of an Authorization to Pay and payment commissions paid to the Bank.

(10) Environmental and Social Considerations

The Government of the recipient country must carefully consider environmental and social impacts by the Project and must comply with the environmental regulations of the recipient country and JICA Guidelines for Environmental and Social Consideration (April, 2010) .

(11) Monitoring

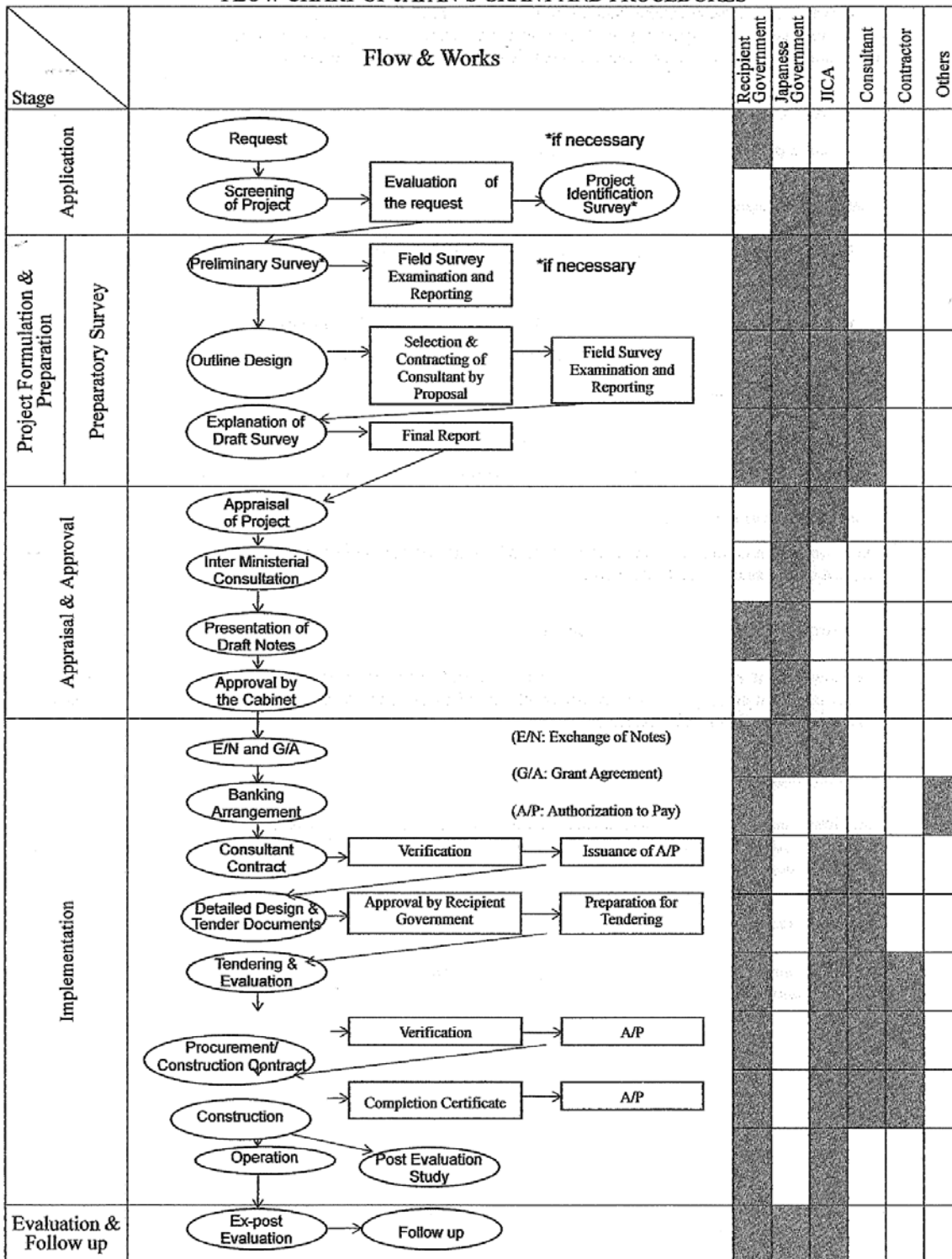
The Government of the recipient country must take their initiative to carefully monitor the progress of the Project in order to ensure its smooth implementation as part of their responsibility in the G/A, and must regularly report to JICA about its status by using the Project Monitoring Report (PMR).

(12) Safety Measures

The Government of the recipient country must ensure that the safety is highly observed during the implementation of the Project.



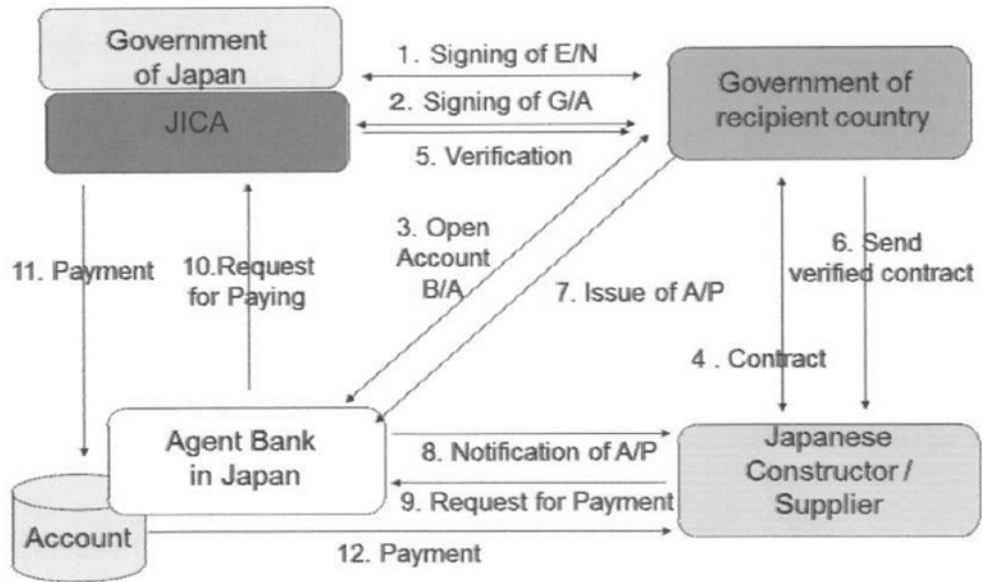
FLOW CHART OF JAPAN'S GRANT AND PROCEDURES



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Financial Flow of Grant Aid



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Major Undertakings to be taken by Recipient Government

1) Before the Tender

NO	Items	Deadline	In charge	Cost	Ref.
1	To open Bank Account (Banking Arrangement (B/A))	within 1 month after G/A	PPCC		
2	To approve IEE (Conditions of approval should be fulfilled, if any) and secure the necessary budget for implementation	within 1 month after G/A	PPCC		
3	To secure the necessary budget and implement land acquisition and resettlement (including preparation of resettlement sites), and compensation with full replacement cost in accordance with RAP	before start of the construction	MEF, PPCC		
4	To secure sufficient spaces at the respective Project site/s for temporary facilities such as a contractor's office, workshop, building materials storage, etc. needed for the construction work.	before notice of of the Tender	PPCC		
5	To obtain basic agreement from the residents who will be requested to resettle for the implementation of the Project	within 1 month after G/A	IRC, PPCC, DPWT		
6	To secure enough lands and spaces for the construction of a new drainage pumping station and drainage pipelines in Tuol Kork area	before notice of of the Tender	PPCC		
7	To submit the required application to the Electricite Du Cambodge (EDC) for Commercial Power Supply for the New Pumping Station to be constructed in front of Sap river at north east of the Wat Phnom and Tuol Kork area	before notice of the Tender	PPCC, DPWT		

2) During the Project

NO	Items	Deadline	In charge	Cost	Ref.
1	To bear the following commissions to a bank of Japan for the banking services based upon the B/A				
	1) Advising commission of A/P	within 1 month after the signing of the contract	PPCC		
	2) Payment commission for A/P	every payment	PPCC		
2	To ensure prompt unloading, customs clearance of the products at ports of disembarkation in the recipient country and to assist internal transportation in the country of the Recipient of the products	during the Project	PPCC		
3	To accord Japanese nationals whose services may be required in connection with the supply of the products and the services under the verified contract such facilities as may be necessary for their entry into the recipient country and stay therein for the performance of their work	during the Project	PPCC		
4	To ensure that customs duties, internal taxes and other fiscal levies which may be imposed in the country of the Recipient with respect to the purchase of the Products and/or the Services be exempted by its designated authority without using the Grant	during the Project	PPCC		
5	To bear all the expenses, other than those to be borne by the Japanese Grant, necessary for construction of the facilities as well as for the transportation and installation of the equipment	during the Project	PPCC		
6	To provide temporary facilities for the availability or accessibility of electricity, water, etc. for the construction work	prior to commencement of the construction	PPCC		
7	To provide facilities for distribution of electricity, water supply, drainage and other incidental facilities necessary for the implementation of the Project outside the site(s)				
	1) Electricity				
	Distribution lines to the site		PPCC		
	2) Water Supply				
	City water distribution main to the site		PPCC		

8	To implement EMP and EMoP	during the construction	PPCC, DOE		
9	To submit results of environmental monitoring to JICA, by using the monitoring form, on a quarterly basis as a part of Project Monitoring Report	during the construction	PPCC		
10	To implement RAP (livelihood restoration program, if needed)	for a period based on livelihood restoration program	PPCC		
11	To implement social monitoring, and to submit the monitoring results to JICA, by using the monitoring form, on a quarterly basis as a part of Project Monitoring Report - Period of the monitoring may be extended if affected persons' livelihoods are not sufficiently restored. Extension of the monitoring will be decided based on agreement between PPCC and JICA.	- until the end of livelihood restoration program (In case that livelihood restoration program is provided) - for two years after land acquisition and resettlement complete (In case that livelihood restoration program is not provided)	PPCC, DPWT		
12	To secure necessary conditions and environments on the site(s) in cooperation with related authorities and local residents (e.g. Security guards, traffic control, etc.)	during the construction	PPCC		

(EMP: Environmental Management Plan, EMoP: Environmental Monitoring Plan)

3) After the Project

NO	Items	Deadline	In charge	Estimated Cost	Ref.
1	To implement EMP and EMoP	for a period based on EMP and EMoP	PPCC, DOE		
	To submit results of environmental monitoring to JICA, by using the monitoring form, semiannually - The period of environmental monitoring may be extended if any significant negative impacts on the environment are found. The extension of environmental monitoring will be decided based on the agreement between PPCC and JICA.	for three years after the Project	PPCC, DOE		
2	To maintain and use properly and effectively the facilities constructed and equipment provided under the Grant Aid 1) Allocation of maintenance cost 2) Operation and maintenance structure 3) Routine check/Periodic inspection	after completion of the construction	PPCC, DPWT		

(B/A: Banking Arrangement, A/P: Authorization to pay, N/A: Not Applicable)

(Note) Progress of the specific obligations of the Recipient may be confirmed and updated from time to time with written agreement between JICA and the Recipient in the form other than the amendment of the G/A.

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Project Monitoring Report
on
Project for Flood Protection and Drainage Improvement in the Phnom Penh
Capital City (Phase IV)
Grant Agreement No. XXXXXXXX
 20XX, Month

Organization Information

Authority (Signer of the G/A)	Person in Charge Contacts Address: Phone/FAX: Email:
Executing Agency	Person in Charge Contacts Address: Phone/FAX: Email:
Line Agency	Person in Charge Contacts Address: Phone/FAX: Email:

Outline of Grant Agreement:

Source of Finance	Government of Japan: Not exceeding JPY . Government of Cambodia:
Project Title	
E/N	Signed date: Duration:
G/A	Signed date: Duration:




1: Project Description

1-1 Project Objective

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1-2 Necessity and Priority of the Project

- Consistency with development policy, sector plan, national/regional development plans and demand of target group and the recipient country.

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1-3 Effectiveness and the indicators

- Effectiveness by the project

Quantitative Effect (Operation and Effect indicators)		
Indicators	Original (Yr 2013)	Target (Yr 2021)
Qualitative Effect		

2: Project Implementation

2-1 Project Scope

Table 2-1-1a: Comparison of Original and Actual Location

Location	Original: (MD)	Actual: (PMR)
	Attachment(s):Map	Attachment(s):Map

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Table 2-1-1b: Comparison of Original and Actual Scope

Items	Original	Actual

2-1-2 Reason(s) for the modification if there have been any.

2-2 Implementation Schedule

2-2-1 Implementation Schedule

Table 2-2-1: Comparison of Original and Actual Schedule

Items	Original		Actual
	DOD	G/A	
Cabinet Approval E/N G/A Approval of consultant contract Early Mobilization of consultant Detailed Design Budget Request for FY2016 Tender Process of contractor and supplier Approval of contractor and supplier contract Budget Appropriation and Issuance of A/P Construction Period Shipment Custom Clearance Installation and acceptance Check Soft component Project Completion Date Defect Liability Period		-	-

*Project Completion was defined as Completion of Soft component at the time of G/A.

2-2-2 Reasons for any changes of the schedule, and their effects on the project.

2-3 Undertakings by each Government

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2-3-1 Major Undertakings
See Attachment 2.

2-3-2 Activities
See Attachment 3.

2-3-3 Report on RD
See Attachment 4.

2-4 Project Cost

2-4-1 Project Cost

Table 2-4-1a Comparison of Original and Actual Cost by the Government of Japan
(Confidential until the Tender)

	Items		Cost (Million Yen)	
	Original	Actual	Original	Actual
Construction of Facilities				
Equipment				
Soft Component				
Consulting Services				
Contingency				
Total				

Note: 1) Date of estimation:
2) Exchange rate: 1 US Dollar =**Yen

Table 2-4-1b Comparison of Original and Actual Cost by the Government of **

	Items		Cost (Thousand MMK)	
	Original	Actual	Original	Actual
				Please state not only the most updated schedule but also other past revisions

Note: 1) Date of estimation:
2) Exchange rate: 1 US Dollar =(local currency)

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2-4-2 Reason(s) for the wide gap between the original and actual, if there have been any, the remedies you have taken, and their results.

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2-5 Organizations for Implementation

2-5-1 Executing Agency:

- Organization's role, financial position, capacity, cost recovery etc,
- Organization Chart including the unit in charge of the implementation and number of employees.

Original: (M/D)
Actual, if changed: (PMR)

2-6 Environmental and Social Impacts

- The environmental monitoring is not required in the Project as this project was categorized as category C in accordance with the GUIDELINES FOR ENVIRONMENTAL AND SOCIAL CONSIDERATIONS of JICA as of April 2010.

3: Operation and Maintenance (O&M)

3-1 O&M and Management

- Organization chart of O&M
- Operational and maintenance system (structure and the number, qualification and skill of staff or other conditions necessary to maintain the outputs and benefits of the project soundly, such as manuals, facilities and equipment for maintenance, and spare part stocks etc)

Original: (M/D)
Actual: (PMR)

3-2 O&M Cost and Budget

- The actual annual O&M cost for the duration of the project up to today, as well as the annual O&M budget.

Original: (M/D)
Actual: (PMR)

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[Signature]

4: Precautions (Risk Management)

- Risks and issues, if any, which may affect the project implementation, outcome, sustainability and planned countermeasures to be adapted are below.

Original Issues and Countermeasure(s): (M/D)	
Potential Project Risks	Assessment
1. Delay of budget appropriation	Probability: H/M/L
	Impact: H/M/L
	Analysis of Probability and Impact:
	Mitigation Measures:
	Action during the Implementation:
	Contingency Plan (if applicable):
2.	Probability: H/M/L
(Description of Risk)	Impact: H/M/L
	Analysis of Probability and Impact:
	Mitigation Measures:
	Action during the Implementation:
	Contingency Plan (if applicable):
3.	Probability: H/M/L
(Description of Risk)	Impact: H/M/L
	Analysis of Probability and Impact:
	Mitigation Measures:
	Action during the Implementation:
	Contingency Plan (if applicable):
Actual issues and Countermeasure(s)	
(PMR)	

5: Evaluation at Project Completion and Monitoring Plan

5-1 Overall evaluation

Please describe your overall evaluation on the project.

5-2 Lessons Learnt and Recommendations

Please raise any lessons learned from the project experience, which might be valuable for the future assistance or similar type of projects, as well as any recommendations, which might be beneficial for better realization of the project effect, impact and assurance of sustainability.

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[Signature]

5-3 Monitoring Plan for the Indicators for Post-Evaluation

Please describe monitoring methods, section(s)/department(s) in charge of monitoring, frequency, the term to monitor the indicators stipulated in 1-3.

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Attachment

1. Project Location Map
 2. Undertakings to be taken by each Government
 3. Monthly Report
 4. Report on RD
 5. Yearly disbursement plan
 6. Monitoring sheet on price of specified materials (Quarterly)
 7. Report on Proportion of Procurement (Recipient Country, Japan and Third Countries)
- (Final Report Only)




MINUTES OF DISCUSSIONS
ON THE PREPARATORY SURVEY FOR
THE PROJECT FOR FLOOD PROTECTION AND
DRAINAGE IMPROVEMENT
IN THE PHNOM PENH CAPITAL CITY (Phase IV)
(Explanation on Draft Preparatory Survey Report)


On the basis of the discussions and field survey in the Kingdom of Cambodia (hereinafter referred to as "Cambodia") from April to June in 2016, and the subsequent technical examination of the results in Japan, the Japan International Cooperation Agency (hereinafter referred to as "JICA") prepared a draft Preparatory Survey Report (hereinafter referred to as "the Draft Report") on the Project for Flood Protection and Drainage Improvement in the Phnom Penh Capital City (Phase IV) (hereinafter referred to as "the Project").

In order to explain the Draft Report and to consult with the concerned officials of the Government of Cambodia on its contents, JICA dispatched the Preparatory Survey Team (hereinafter referred to as "the Team") to Cambodia, headed by Mr. Yuki Aratsu, Senior Assistant Director, Global Environment Dept., JICA HQ, and the team stayed in the country from 10 to 14 October, 2016.

As a result of the discussions, both sides confirmed the main items described in the attached sheets.

Phnom Penh, 12 October, 2016✓

	
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Yuki Aratsu Team Leader Preparatory Survey Team Japan International Cooperation Agency Japan	H.E. PA Socheatevong Governor Phnom Penh Capital City Cambodia



ATTACHMENT

- Objective of the Project**
The objective of the Project is to minimize inundation by local rainfall and to reduce inundation damage through improvement of drainage system and facilities in Wat Phnom Northern area and Tuol Kork area, thereby contributing to improvement of urban environment in Phnom Penh Capital City (hereinafter referred to as “PPCC”).
- Contents of the Draft Report**
After the explanation of the contents of the Draft Report by the Team, the Cambodian side agreed in principle to its contents.
- Cost Estimation**
Both sides confirmed that the cost estimate including the contingency described in the Draft Report is provisional and will be examined further by the Government of Japan for its approval. The contingency would cover the additional cost against natural disaster, unexpected natural conditions, etc.
- Confidentiality of the Cost Estimation and Specifications**
Both sides confirmed that the Project cost estimation and technical specifications in the Draft Report should never be duplicated or disclosed to any third parties until all the contracts of the Project are concluded.
- Japanese Grant Scheme**
The Cambodian side understands the Japanese Grant Scheme and its procedures as described in Annex 2, Annex 3 and Annex 4, and necessary measures to be taken by the Government of Cambodia.
- Project Implementation Schedule**
The Team explained to the Cambodian side that the expected implementation schedule is as attached in Annex 5.
- Expected outcomes and Indicators**
Both sides agreed that key indicators for expected outcomes are as follows. The Cambodian side has responsibility to monitor the progress of the indicators and achieve the target in year 2023.

[Quantitative Effect]

With the improvement of drainage facilities with a planning scale of 2-year probability rainfall (44.8mm/hr., 87.8mm/day), following effect shall be expected.

Indicator		Present Condition (in 2015)	Target After Improvement (Target Year: 2023)
Inundation Area ^(*1)	Wat Phnom Northern Area	111,600m ²	49,500m ²
	Tuol Kork Area	460,800m ²	169,200m ²
Inundation Depth		50cm Max.	20cm Max.
Duration of Inundation		9 hour Max.	2 hour Max.

Note: (*1) Duration of inundation will be more than 10 minutes in “Inundation Area” shown in the table.

[Qualitative Effect]

- The Project will improve urban environment by minimization of inundation damage in the Project area caused by local rainfall by improving the drainage system and providing equipment for emergency drainage works.
- The Project will contribute to the avoidance of occurrence of economic damage caused by flood/inundation in the Project area encompasses commercial, tourist, residential, and public office areas.
- The Project will contribute activation of commercial activity and promotion of tourism industry by mitigation of regional inundation damage in the Project area. The Project will also be able to contribute poverty alleviation by promotion of income of citizens engaged in those economic activities.
- The Project will contribute improvement of hygienic environment by reducing occurrence and spread of epidemics, such as cold, skin disease, diarrhea, typhoid and dysentery, due to long duration of inundation.
- The Project will improve traffic condition of major streets and branch streets in the Project area by resolving and reducing traffic congestion and traffic interruption caused by inundation. The Project will also be able to contribute reduction of traffic accident and improvement of traffic comfortableness.
- Water flow at screen pits, constructed in the Phase II, will not be disturbed by garbage, and then underground reservoirs and pumps will work as designed.

8. Technical assistance (“Soft Component” of the Project)

Considering the sustainable operation and maintenance of the provided facility, following technical assistance is planned to be provided under the Project. The Cambodian side confirmed that it will assign necessary number of competent and appropriate C/Ps as described in the Draft Report.

- Capacity building of the Drainage and Sewerage Division (hereinafter referred to as “DSD”) of Department of Public Works and Transport (hereinafter referred to as “DPWT”) of PPCC to execute systematic and scheduled cleaning work of the drainage system
- Capacity building of DSD to execute appropriate utilization and maintenance of the equipment procured by the Project
- Enlightening activities by PPCC, DPWT, Department of Environment of PPCC (hereinafter referred to as “DOE”), Local authorities and the Consultant to reduce illegal dumping of solid waste into drainage facilities by Community Participation in the area described in the Draft Report

9. Undertakings Taken by Both Sides

Both sides confirmed undertakings described in Annex 6. The Cambodian side assured to take the necessary measures and coordination including allocation of the necessary budget which is precondition of implementation of the Project. It is further agreed that the costs are indicative, i.e. at Outline Design level. More accurate costs will be calculated at the Detailed Design stage. Contents of Annex 6 will be updated as the Detailed Design progresses, and will finally be used in the contract document.

10. Monitoring during the Implementation

The Project will be monitored and reported to JICA every month by the executing agency using the Project Monitoring Report (PMR) in Annex 7.

11. Project completion

Both sides confirmed that the project completes when all the facilities constructed and equipment procured by the grant are in operation. The completion of the project will be reported to JICA promptly.

12. Ex-Post Evaluation

JICA will conduct an ex-post evaluation three (3) years after the project completion with respect to five evaluation criteria (Relevance, Effectiveness, Efficiency, Impact, Sustainability) of the Project. Result of the evaluation will be publicized. The Cambodian side will be required to provide necessary support for it.

13. Schedule of the Study

JICA will complete the Final Report of the Preparatory Survey in accordance with the confirmed items and send it to the Cambodian side around the middle of December 2016.

14. Environmental and Social Considerations

14-1-1. Environmental Guidelines and Environmental Category

The JICA mission explained that 'JICA Guidelines for Environmental and Social Considerations (April 2010)' (hereinafter referred to as 'the Guidelines') is applicable for the Project. The Project is categorized as B because the Project is not located in a sensitive area, nor has it sensitive characteristics, nor falls it into sensitive sectors under the Guidelines, and its potential adverse impacts on the environment are not likely to be significant.

14-1-2. Environmental Checklist

The environmental and social considerations including major impacts and mitigation measures for the Project are summarized in the Environmental Checklist attached as Annex 8. Both sides confirmed that in case of major modification of the content of the Environmental Checklist, The Cambodian side shall submit the modified version to JICA in a timely manner.

14-2-1. Initial Environmental Impact Assessment (IEIA)

Both sides confirmed the IEIA report will be approved by the Ministry of Environment in January 2017.

14-2-2. Environmental Management Plan and Environmental Monitoring Plan

Both sides confirmed Environmental Management Plan (EMP) and Environmental Monitoring Plan (EMoP) of the Project is as Annex 9, respectively. Both side agreed that environmental mitigation measures and monitoring shall be conducted based on the EMP and EMoP, which may be updated during the detailed design stage.

14-3. Social Environment

14-3-1. Land Acquisition and Resettlement

Both sides confirmed the around 63m² of land would be acquired and one household would temporarily be relocated due to the implementation of the Project.

Such land acquisition and resettlement shall be implemented based on the Abbreviated Resettlement Action Plan (ARAP) which will be authorized by the Inter-ministerial Resettlement Committee (hereinafter referred to as "IRC") in January 2017.

14-3-2. Entitlement Matrix

Both sides agreed that all project affected people will be eligible for compensation, rehabilitation/resettlement assistance, and disturbance allowance based on the Entitlement Matrix as per Annex 11.

14-4. Environmental and Social Monitoring

14-4-1. Environmental Monitoring

Both sides agreed that the Cambodian side will submit results of environmental monitoring to JICA by using the monitoring form attached as Annex 10.

14-4-2. Information Disclosure of Monitoring Results

Both sides confirmed that the Cambodian side will disclose results of environmental and social monitoring to local stakeholders on request basis.

The Cambodian side agreed JICA will disclose results of environmental and social monitoring submitted by the Cambodian side as the monitoring forms attached as Annex 10 on its website.

15. Other Relevant Issues

15-1. Operation and Maintenance of the Facilities (Equipment)

The team explained the importance of operation and maintenance of the facilities constructed by the Project considering that proper asset management impacts greatly on life-span of the facilities and its maintenance cost. The Cambodian side shall secure enough staff and budgets necessary for appropriate operation and maintenance of the facilities. The annual operation and maintenance costs are estimated and shown in Annex 6.

15-2. Safety Measures

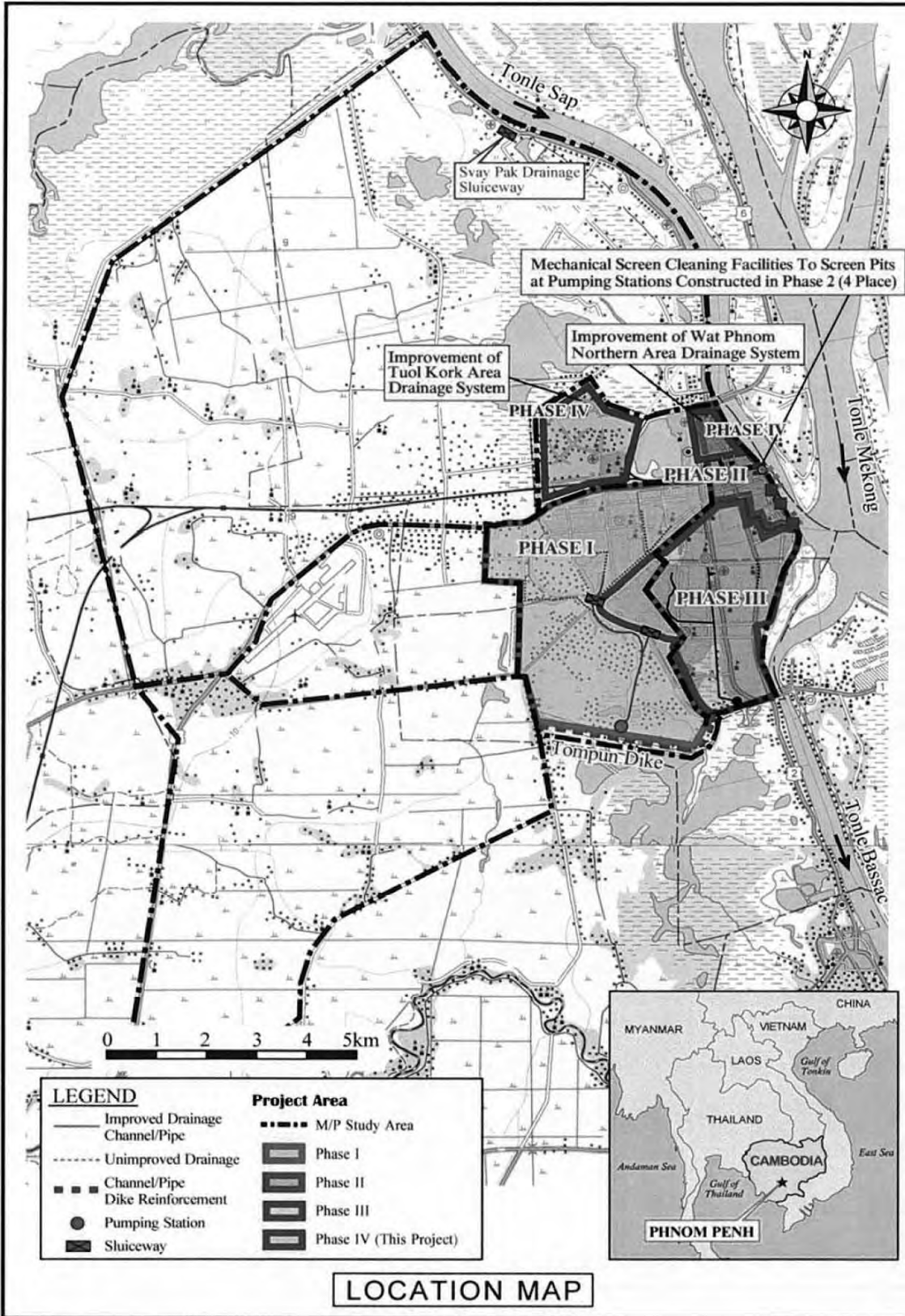
Both sides confirmed that PPCC has a responsibility to take necessary measures to secure safety in the construction sites of the Project in cooperation with relevant authorities and communities described in Annex 6.

15-3. Disclosure of Information

Both sides confirmed that the study results excluding the Project cost will be disclosed to the public after completion of the Preparatory Survey. All the study results including the project cost will be disclosed to the public after all the contracts for the Project are concluded.

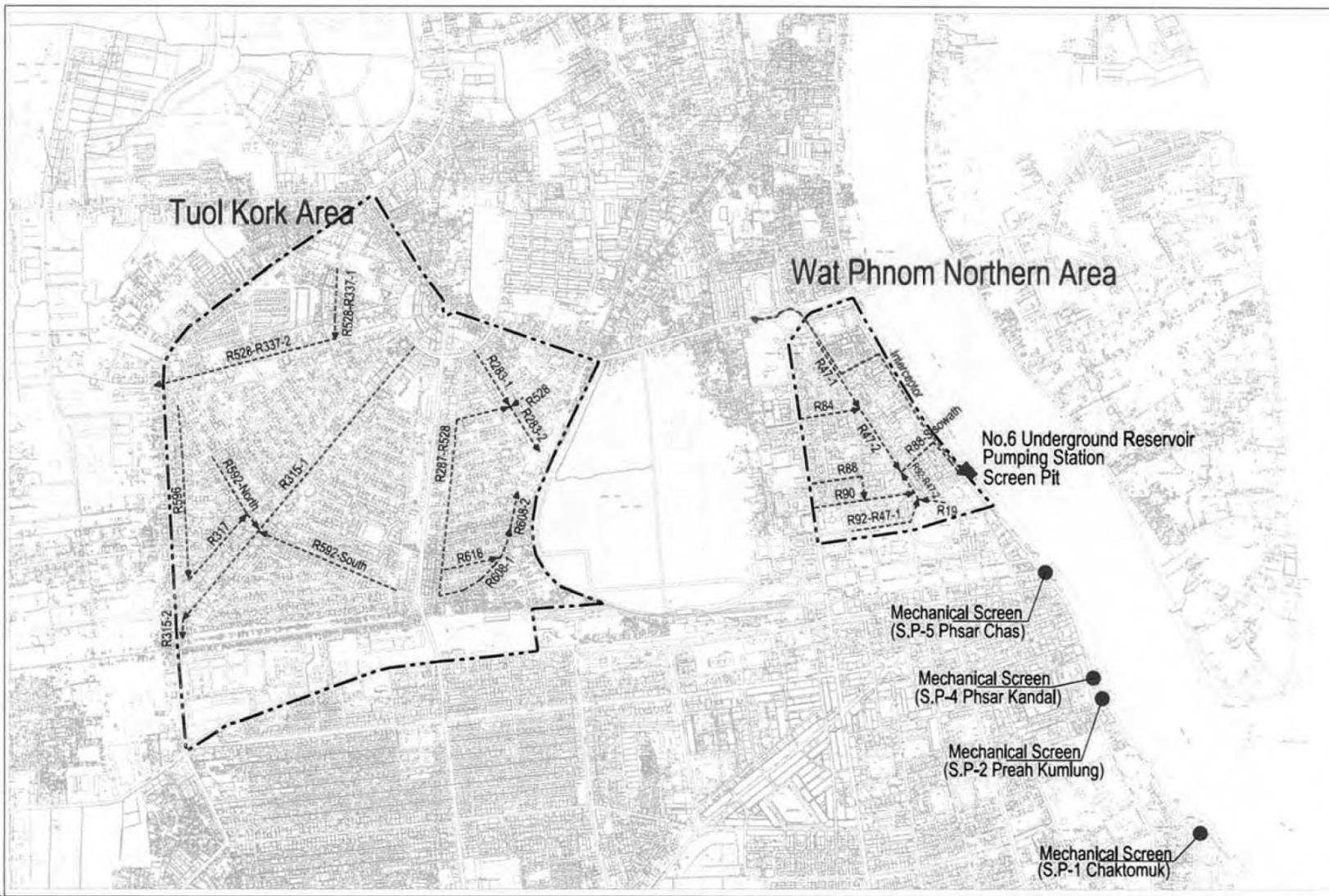
- Annex 1 Location Maps
- Annex 2 Japanese Grant
- Annex 3 Flow Chart of Japanese Grant Procedures
- Annex 4 Financial Flow of Japanese Grant
- Annex 5 Project Implementation Schedule
- Annex 6 Major Undertakings to be taken by Each Government
- Annex 7 Project Monitoring Report (template)
- Annex 8 Environmental Check List
- Annex 9 Environmental Management Plan/Environmental Monitoring Plan
- Annex 10 Environmental and Social Monitoring Form
- Annex 11 Entitlement Matrix

Location Map [1]



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Location Map [2]

JAPANESE GRANT

The Japanese Grant (hereinafter referred to as the “Grant”) is non-reimbursable fund provided to a recipient country to procure the facilities, equipment and services (engineering services and transportation of the products, etc.) for its economic and social development in accordance with the relevant laws and regulations of Japan. The Grant is not supplied through the donation of materials as such.

Based on a JICA law which was entered into effect on October 1, 2008 and the decision of the GOJ, JICA has become the executing agency of the Japanese Grant for Projects for construction of facilities, purchase of equipment, etc.

1. Grant Procedures

The Grant is supplied through following procedures:

- Preparatory Survey
 - The Survey conducted by JICA
- Appraisal & Approval
 - Appraisal by the GOJ and JICA, and Approval by the Japanese Cabinet
- Authority for Determining Implementation
 - The Notes exchanged between the GOJ and a recipient country
- Grant Agreement (hereinafter referred to as “the G/A”)
 - Agreement concluded between JICA and a recipient country
- Implementation
 - Implementation of the Project on the basis of the G/A

2. Preparatory Survey

(1) Contents of the Survey

The aim of the preparatory Survey is to provide a basic document necessary for the appraisal of the Project made by the GOJ and JICA. The contents of the Survey are as follows:

- Confirmation of the background, objectives, and benefits of the Project and also institutional capacity of relevant agencies of the recipient country necessary for the implementation of the Project.
- Evaluation of the appropriateness of the Project to be implemented under the Grant Scheme from a technical, financial, social and economic point of view.
- Confirmation of items agreed between both parties concerning the basic concept of the Project.

- Preparation of an outline design of the Project.
- Estimation of costs of the Project.

The contents of the original request by the recipient country are not necessarily approved in their initial form as the contents of the Grant project. The Outline Design of the Project is confirmed based on the guidelines of the Japanese Grant scheme.

JICA requests the Government of the recipient country to take whatever measures necessary to achieve its self-reliance in the implementation of the Project. Such measures must be guaranteed even though they may fall outside the jurisdiction of the organization of the recipient country which actually implements the Project. Therefore, the implementation of the Project is confirmed by all relevant organizations of the recipient country based on the Minutes of Discussions.

(2) Selection of Consultants

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(3) Result of the Survey

JICA reviews the Report on the results of the Survey and recommends the GOJ to appraise the implementation of the Project after confirming the appropriateness of the Project.

3. Japanese Grant Scheme

(1) The E/N and the G/A

After the Project is approved by the Cabinet of Japan, the Exchange of Notes(hereinafter referred to as "the E/N") will be signed between the GOJ and the Government of the recipient country to make a pledge for assistance, which is followed by the conclusion of the G/A between JICA and the Government of the recipient country to define the necessary articles, in accordance with the E/N, to implement the Project, such as payment conditions, responsibilities of the Government of the recipient country, and procurement conditions.

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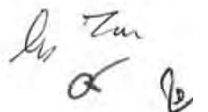
(3) Eligible source country

Under the Grant, in principle, Japanese products and services including transport or those of the recipient country are to be purchased. The Grant may be used for the purchase of the products or services of a third country, if necessary, taking into account the quality, competitiveness and economic rationality of products and services necessary for achieving the objective of the Project. However, the prime contractors, namely, constructing and procurement firms, and the prime consulting firm are limited to "Japanese nationals", in principle.

(4) Necessity of "Verification"

The Government of the recipient country or its designated authority will conclude contracts denominated in Japanese yen with Japanese nationals, in principle. Those contracts shall be verified by JICA. This "Verification" is deemed necessary to fulfill accountability to Japanese taxpayers.

(5) Major undertakings to be taken by the Government of the Recipient Country



In the implementation of the Grant Project, the recipient country is required to undertake such necessary measures as Annex. The Japanese Government requests the Government of the recipient country to exempt all customs duties, internal taxes and other fiscal levies such as VAT, commercial tax, income tax, corporate tax, resident tax, fuel tax, but not limited, which may be imposed in the recipient country with respect to the supply of the products and services under the verified contract, since the Grant fund comes from the Japanese taxpayers.

(6) "Proper Use"

The Government of the recipient country is required to maintain and use properly and effectively the facilities constructed and the equipment purchased under the Grant, to assign staff necessary for this operation and maintenance and to bear all the expenses other than those covered by the Grant.

(7) "Export and Re-export"

The products purchased under the Grant should not be exported or re-exported from the recipient country.

(8) Banking Arrangements (B/A)

a) The Government of the recipient country or its designated authority should open an account under the name of the Government of the recipient country in a bank in Japan (hereinafter referred to as "the Bank"), in principle. JICA will execute the Grant by making payments in Japanese yen, in principle, to cover the obligations incurred by the Government of the recipient country or its designated authority under the Verified Contracts.

b) The payments will be made when payment requests are presented by the Bank to JICA under an Authorization to Pay (A/P) issued by the Government of the recipient country or its designated authority.

(9) Authorization to Pay (A/P)

The Government of the recipient country should bear an advising commission of an Authorization to Pay and payment commissions paid to the Bank.

(10) Environmental and Social Considerations

The Government of the recipient country must carefully consider environmental and social impacts by the Project and must comply with the environmental regulations of the recipient country and JICA Guidelines for Environmental and Social Consideration (April, 2010) .

(11) Monitoring

The Government of the recipient country must take their initiative to carefully monitor the progress of the Project in order to ensure its smooth implementation as part of their responsibility in the G/A, and must regularly report to JICA about its status by using the Project Monitoring Report (PMR).

(12) Safety Measures

The Government of the recipient country must ensure that the safety is highly observed during the implementation of the Project.

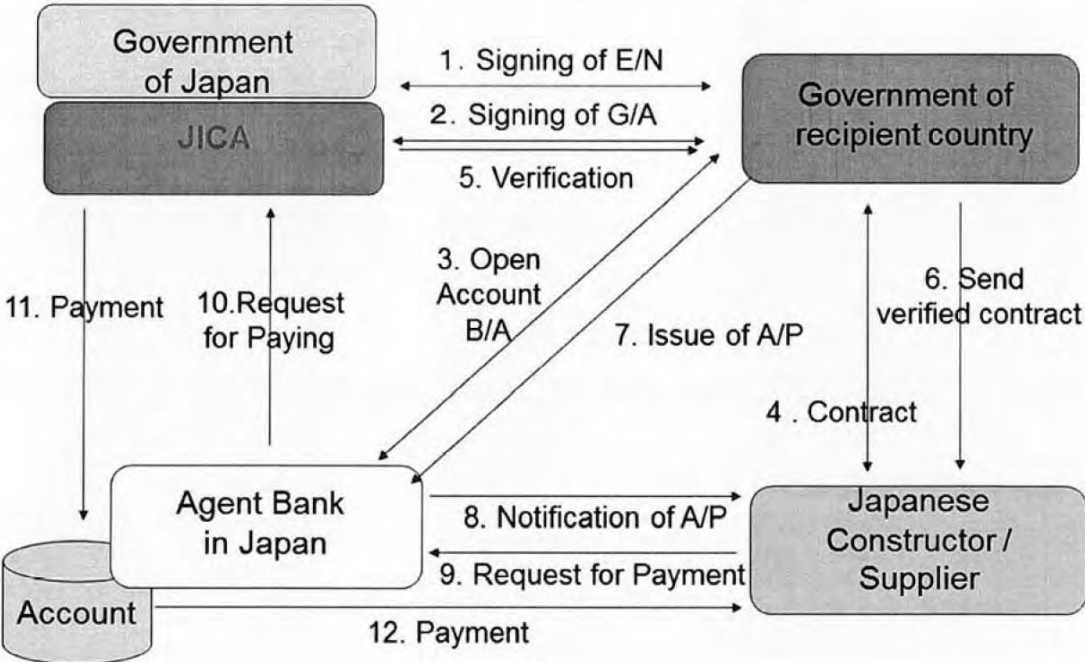


FLOW CHART OF JAPAN'S GRANT AND PROCEDURES

Stage	Flow & Works	Recipient Government	Japanese Government	JICA	Consultant	Contractor	Others
Application							
Project Formulation & Preparation Preparatory Survey							
Appraisal & Approval							
Implementation	<p>(E/N: Exchange of Notes) (G/A: Grant Agreement) (A/P: Authorization to Pay)</p>						
Evaluation & Follow up							

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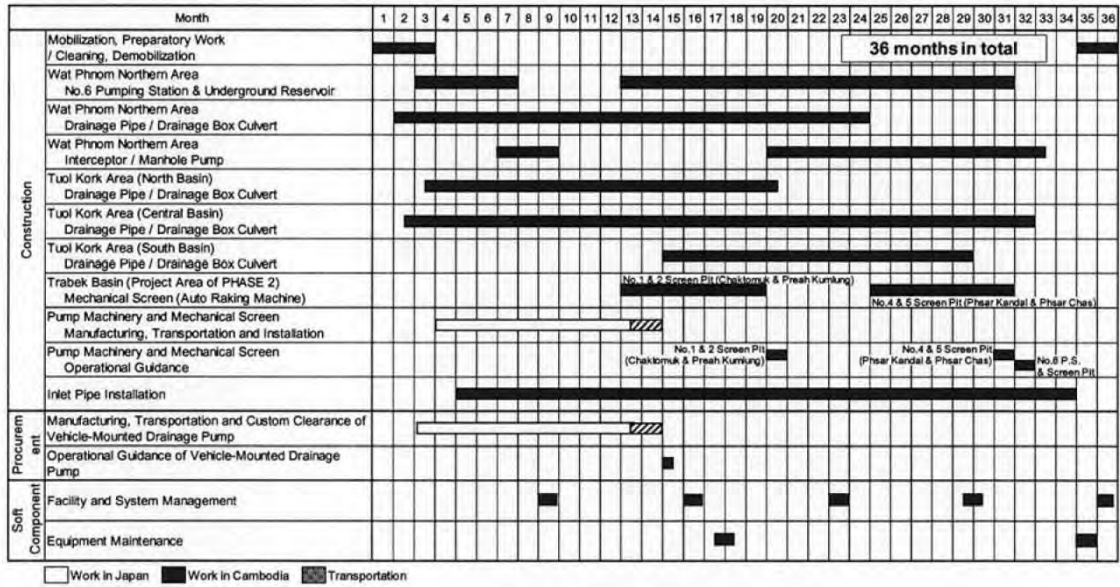
Financial Flow of Grant Aid



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Project Implementation Schedule

Month	1	2	3	4	5	6	7	8	9	10	
Detailed Design / Tendering	8.5 months in total										
Detailed Design	█										
Tendering Procedures							█				



Major Undertakings to be taken by Recipient Government

1) Before the Tender

No.	Items	Deadline	In charge	Cost [US\$]	Ref.
1	To open Bank Account (Banking Arrangement (B/A))	within 1 month after G/A	PPCC		
2	To get approval on IEIA from MOE (Conditions of approval should be fulfilled, if any) and secure the necessary budget for implementation	before G/A	PPCC		
3	To secure the necessary budget and implement land acquisition and resettlement (including preparation of resettlement sites), and compensation with full replacement cost in accordance with ARAP	before the Tender	MEF, PPCC	300,000	
4	To secure sufficient spaces at the respective Project site/s for temporary facilities such as a contractor's office, workshop, building materials storage, etc. needed for the construction work.	before the Tender	PPCC		
5	To obtain basic agreement from the residents who will be requested to resettle for the implementation of the Project	within 1 month after G/A	IRC, PPCC, DPWT		

2) During the Project

No.	Items	Deadline	In charge	Cost [US\$]	Ref.
1	To bear the following commissions to a bank of Japan for the banking services based upon the B/A				
	1) Advising commission of A/P	within 1 month after the signing of the contract	PPCC	76,500	
	2) Payment commission for A/P	every payment			
2	To ensure prompt unloading, customs clearance of the products at ports of disembarkation in the recipient country and to bear internal transportation cost in the country of the Recipient of the products	during the Project	PPCC	4,000	
3	To accord Japanese nationals whose services may be required in connection with the supply of the products and the services under the verified contract such facilities as may be necessary for their entry into the recipient country and stay therein for the performance of their work	during the Project	PPCC		
4	To ensure that customs duties, internal taxes and other fiscal levies which may be imposed in the country of the Recipient with respect to the purchase of the Products and/or the Services be exempted by its designated authority without using the Grant.	during the Project	PPCC		
5	To bear all the expenses, other than those to be borne by the Japanese Grant, necessary for construction of the facilities as well as for the transportation and installation of the equipment	during the Project	PPCC		
6	To provide temporary facilities for the availability or accessibility of electricity, water, etc. for the construction work	Prior to commencement of the construction	PPCC		
7	To submit the required application to the Electricite Du Cambodge (EDC) for Commercial Power Supply for the New Pumping Station to be constructed in front of Sap river at north east of the Wat Phnom	within 1 year after the signing of the contract	PPCC, DPWT	4,000	
8	To submit the required application to the Phnom Penh Water Supply	within 1 year after the	PPCC,	500	

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	Authority (PPWSA) for Water Supply for the New Pumping Station to be constructed in front of Sap river at north east of the Wat Phnom	signing of the contract	DPWT		
9	To implement EMP and EMoP and to submit results of environmental monitoring to JICA, by using the monitoring form, on a quarterly basis as a part of Project Monitoring Report	during the construction	PPCC	13,200	
10	To submit Project Monitoring Report	every month	PPCC		
11	To implement ARAP (livelihood restoration program, if needed)	for a period described in the ARAP	PPCC		
12	To implement social monitoring, and to submit the monitoring results to JICA, by using the monitoring form, on a quarterly basis as a part of Project Monitoring Report - Period of the monitoring may be extended if affected persons' livelihoods are not sufficiently restored. Extension of the monitoring will be decided based on agreement between PPCC and JICA.	Until the completion of the temporary resettlement	PPCC, DPWT		
13	To secure necessary conditions and environments on the site(s) in cooperation with related authorities and local residents (e.g. Security guards, traffic control, etc.)	During the construction	PPCC		
14	To implement enlightening activities to reduce illegal dumping of solid waste into drainage facilities by Community Participation (e.g. Installation of trash box around local market in the project area, study tour of drainage facilities along Tonle Sap river, pick up trash campaign at local market, etc.)	During the Project	PPCC, DPWT, DOE, Local Authorities	20,000	

(EMP: Environmental Management Plan, EMoP: Environmental Monitoring Plan)

3) After the Project

No.	Items	Deadline	In charge	Cost [US\$]	Ref.
1	To implement EMP and EMoP	for a period based on EMP and EMoP	PPCC, DOE		
	To submit results of environmental monitoring to JICA, by using the monitoring form, semiannually - The period of environmental monitoring may be extended if any significant negative impacts on the environment are found. The extension of environmental monitoring will be decided based on the agreement between PPCC and JICA.	for three years after the Project	PPCC, DOE		
2	To maintain and use properly and effectively the facilities constructed and equipment provided under the Grant Aid 1) Allocation of maintenance cost 2) Operation and maintenance structure 3) Routine check/Periodic inspection	after completion of the Project	PPCC, DPWT	72,400 /year	

(B/A: Banking Arrangement, A/P: Authorization to pay, N/A: Not Applicable)

(Note) Progress of the specific obligations of the Recipient may be confirmed and updated from time to time with written agreement between JICA and the Recipient in the form other than the amendment of the G/A.

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Major Undertakings to be covered by the Japanese Grant

No	Items	Deadline	Cost Estimated (Million Japanese Yen)*	
1	To construct following drainage facilities a) Drainage Main (drainage pipes, drainage box culverts) b) Pumping Station & Underground Reservoir c) Interceptor (interceptor pipes, manhole pump) d) Mechanical Screens (auto-raking machines)	November 2020		
2	To procure Vehicle-Mounted Drainage Pumps			
3	To implement detailed design, tender support, construction supervision and technical assistance (soft component) [Consultant]			
4	Contingencies			
	Total		4,119	

*; The cost estimates are provisional. This is subject to the approval of the Government of Japan.

by Zen
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Project Monitoring Report
on
Project for Flood Protection and Drainage Improvement in the Phnom Penh
Capital City (Phase IV)
Grant Agreement No. XXXXXXXX
 20XX, Month

Organization Information

Authority (Signer of the G/A)	Person in Charge Contacts Address: Phone/FAX: Email:
Executing Agency	Person in Charge Contacts Address: Phone/FAX: Email:
Line Agency	Person in Charge Contacts Address: Phone/FAX: Email:

Outline of Grant Agreement:

Source of Finance	Government of Japan: Not exceeding JPY . Government of Cambodia:
Project Title	
E/N	Signed date: Duration:
G/A	Signed date: Duration:

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1: Project Description

1-1 Project Objective

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1-2 Necessity and Priority of the Project

- Consistency with development policy, sector plan, national/regional development plans and demand of target group and the recipient country.

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1-3 Effectiveness and the indicators

- Effectiveness by the project

Quantitative Effect (Operation and Effect indicators)		
Indicators	Original (Yr 2013)	Target (Yr 2021)
Qualitative Effect		

2: Project Implementation

2-1 Project Scope

Table 2-1-1a: Comparison of Original and Actual Location

Location	Original: (M/D)	Actual: (PMR)
	Attachment(s):Map	Attachment(s):Map

Table 2-1-1b: Comparison of Original and Actual Scope

Items	Original	Actual

2-1-2 Reason(s) for the modification if there have been any.

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2-2 Implementation Schedule

2-2-1 Implementation Schedule

Table 2-2-1: Comparison of Original and Actual Schedule

Items	Original		Actual
	DOD	G/A	
Cabinet Approval E/N G/A Approval of consultant contract Early Mobilization of consultant Detailed Design Budget Request for FY2016 Tender Process of contractor and supplier Approval of contractor and supplier contract Budget Appropriation and Issuance of A/P Construction Period Shipment Custom Clearance Installation and acceptance Check Soft component Project Completion Date Defect Liability Period		-	-

*Project Completion was defined as all the facilities constructed and equipment procured by the grant are in operation at the time of G/A.

2-2-2 Reasons for any changes of the schedule, and their effects on the project.

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2-3 Undertakings by each Government

2-3-1 Major Undertakings

See Attachment 2.

2-3-2 Activities

See Attachment 3.

2-3-3 Report on RD

See Attachment 4.

2-4 Project Cost

2-4-1 Project Cost

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Table 2-4-1a Comparison of Original and Actual Cost by the Government of Japan
(Confidential until the Tender)

	Items		Cost (Million Yen)	
	Original	Actual	Original	Actual
Construction of Facilities				
Equipment				
Soft Component				
Consulting Services				
Contingency				
Total				

Note: 1) Date of estimation:
2) Exchange rate: 1 US Dollar =**Yen

Table 2-4-1b Comparison of Original and Actual Cost by the Government of **

	Items		Cost (Thousand MMK)	
	Original	Actual	Original	Actual
				Please state not only the most updated schedule but also other past revisions

Note: 1) Date of estimation:
2) Exchange rate: 1 US Dollar =(local currency)

2-4-2 Reason(s) for the wide gap between the original and actual, if there have been any, the remedies you have taken, and their results.

2-5 Organizations for Implementation

2-5-1 Executing Agency:

- Organization's role, financial position, capacity, cost recovery etc,
- Organization Chart including the unit in charge of the implementation and number of employees.

Original: (M/D)

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Actual, if changed: (PMR)

2-6 Environmental and Social Impacts

- The Project is categorized as B because the Project is not located in a sensitive area, nor has it sensitive characteristics, nor falls it into sensitive sectors under the Guidelines, and its potential adverse impacts on the environment are not likely to be significant.

Both sides agreed that PPCC will submit the results of environmental and social monitoring to JICA as a part of Project Monitoring Report (PMR) by filling in the Environmental and Social Monitoring Form as per Annex 10 of this M/D on a quarterly basis during construction and semiannually after the completion of the Project for three years.

3: Operation and Maintenance (O&M)

3-1 O&M and Management

- Organization chart of O&M
- Operational and maintenance system (structure and the number, qualification and skill of staff or other conditions necessary to maintain the outputs and benefits of the project soundly, such as manuals, facilities and equipment for maintenance, and spare part stocks etc)

Original: (M/D)

Actual: (PMR)

3-2 O&M Cost and Budget

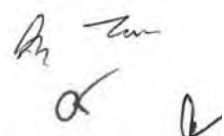
- The actual annual O&M cost for the duration of the project up to today, as well as the annual O&M budget.

Original: (M/D)

Actual: (PMR)

4: Precautions (Risk Management)

- Risks and issues, if any, which may affect the project implementation, outcome, sustainability and planned countermeasures to be adapted are below.



Original Issues and Countermeasure(s): (M/D)	
Potential Project Risks	Assessment
1. Delay of budget appropriation	Probability: H/M/L
	Impact: H/M/L
	Analysis of Probability and Impact:
	Mitigation Measures:
	Action during the Implementation:
	Contingency Plan (if applicable):
2.	Probability: H/M/L
(Description of Risk)	Impact: H/M/L
	Analysis of Probability and Impact:
	Mitigation Measures:
	Action during the Implementation:
	Contingency Plan (if applicable):
3.	Probability: H/M/L
(Description of Risk)	Impact: H/M/L
	Analysis of Probability and Impact:
	Mitigation Measures:
	Action during the Implementation:
	Contingency Plan (if applicable):
Actual issues and Countermeasure(s)	
(PMR)	

5: Evaluation at Project Completion and Monitoring Plan

5-1 Overall evaluation

Please describe your overall evaluation on the project.

5-2 Lessons Learnt and Recommendations

Please raise any lessons learned from the project experience, which might be valuable for the future assistance or similar type of projects, as well as any recommendations, which might be beneficial for better realization of the project effect, impact and assurance of sustainability.

5-3 Monitoring Plan for the Indicators for Post-Evaluation

Please describe monitoring methods, section(s)/department(s) in charge of monitoring, frequency, the term to monitor the indicators stipulated in 1-3.

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Attachment

1. Project Location Map
 2. Undertakings to be taken by each Government
 3. Monthly Report
 4. Report on RD
 5. Yearly disbursement plan
 6. Monitoring sheet on price of specified materials (Quarterly)
 7. Report on Proportion of Procurement (Recipient Country, Japan and Third Countries)
- (Final Report Only)

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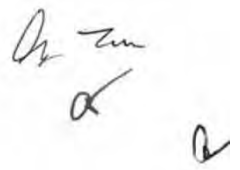
Environmental Checklist for the Project (1/4)

Category	Environmental Item	Main Check Items	Confirmation of Environmental Considerations
1. Approval in Permits and Explanation	(1) IEIA/EIA and Environmental Permits	1) Was IEIA (IEE) or EIA for Phase IV of the Project officially confirmed?	1) In May 6, 2016, the MOE confirmed that IEIA (IEE) report was needed for the Project (Phase IV) not EIA.
	(2) Explanation to the Public	1) Are the contents of the Project and the potential impacts adequately explained to the public based on appropriate procedures, including information disclosure? Is understanding obtained from the public? 2) Are the proper responses made to comments from the public and regulatory authorities?	1) The Project contents and the potential impacts shall be explained to affected people after before and completion of the Draft Final Report of Phase IV to obtain the understanding of the public. 2) In the environmental and social consideration survey for in Phase-IV, twice stakeholder meetings are to be made in May and August 2016 through subletting to comments from the public and regulatory authorities.
2. Pollution Measures	(1) Air Quality	1) Do air pollutants, (such as sulfur oxides (SO _x), nitrogen oxides (NO _x), carbon monoxide (CO), and soot and dust) emitted from the proposed infrastructure facilities and ancillary facilities comply with the country's emission standards and ambient air quality standards?	1) There will no effect on air pollution.
	(2) Water Quality	1) Do effluents or leachates from various facilities, such as infrastructure facilities and the ancillary facilities comply with the country's effluent standards and ambient water quality standards?	1) The Project will flow the waste water from the PPCC.
	(3) Wastes	1) Are wastes from the infrastructure facilities and ancillary facilities properly treated and disposed of in accordance with the country's standards?	1) The Project will not product any wastes.
	(4) Soil Contamination	1) Are adequate measures taken to prevent contamination of soil and groundwater by the effluents or leachates from the infrastructure facilities and the ancillary facilities?	1) There will no effect on soil contamination.
	(5) Noise and Vibration	1) Do noise and vibrations comply with the country's standards?	1) The Project will not make noise and vibrations during the operation stage.
	(6) Subsidence	1) In the case of extraction of a large volume of groundwater, is there a possibility that the extraction of groundwater will cause subsidence?	1) The Project will not extract groundwater.
	(7) Odor	1) Are there any odor sources? Are adequate odor control measures taken?	1) There will no effect on offensive odor.

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Environmental Checklist for the Project (2/4)

Category	Environmental Item	Main Check Items	Confirmation of Environmental Considerations
3. Natural Environment	(1) Protected Areas	1) Is the Project site located in protected areas designated by the country's laws or international treaties and conventions? Is there a possibility that the Project will affect the protected areas?	1) The Project is not located in protected areas. There is no possibility that the Project will affect the protected areas.
	(2) Ecosystem	1) Does the Project site encompass primeval forests, tropical rain forests, ecologically valuable habitats (e.g., coral reefs, mangroves, or tidal flats)? 2) Does the project site encompass the protected habitats of endangered species designated by the country's laws or international treaties and conventions? 3) If significant ecological impacts are anticipated, are adequate protection measures taken to reduce the impacts on the ecosystem? 4) Is there a possibility that the amount of water (e.g., surface water, groundwater) used by the project will adversely affect aquatic environments, such as rivers? Are adequate measures taken to reduce the impacts on aquatic environments, such as aquatic organisms?	1) The Project site does not encompass ecologically valuable habitats. 2) The Project site does not encompass the protected habitats of endangered species designated by the country's laws or international treaties and conventions. 3) There is no significant ecological impacts. 4) The Project will not use water.
	(3) Hydrology	1) Is there a possibility that hydrologic changes due to the Project will adversely affect surface water and groundwater flows?	1) There are the positive changes on drainage condition in the Project Area.
	(4) Topography and Geology	1) Is there a possibility the Project will cause large-scale alteration of the topographic features and geologic structures in the project site and surrounding areas?	1) There is no possibility the Project will cause large-scale alteration of the topographic features and geologic structures in the Project site and surrounding areas



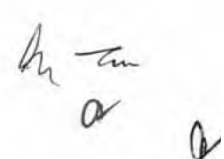
Environmental Checklist for the Project (3/4)

Category	Environmental Item	Main Check Items	Confirmation of Environmental Considerations
4. Social Environment	(1) Resettlement	1) Is involuntary resettlement caused by the Project implementation? If involuntary resettlement is caused, are efforts made to minimize the impacts caused by the resettlement? 2) Is adequate explanation on relocation and compensation given to affected persons prior to resettlement? 3) Is the resettlement plan, including proper compensation, restoration of livelihoods and living standards developed based on socioeconomic studies on resettlement? 4) Does the resettlement plan pay particular attention to vulnerable groups or persons, including women, children, the elderly, people below the poverty line, ethnic minorities, and indigenous peoples? 5) Are agreements with the affected persons obtained prior to resettlement? 6) Is the organizational framework established to properly implement resettlement? Are the capacity and budget secured to implement the plan? 7) Is a plan developed to monitor the impacts of resettlement?	1) In the initial stage of the Preparatory Survey of the Project (Phase IV), more than 20 PAFs were considered. Effort was made to reduce into only 2 structure-owners by proper rearrangement of drainage pipe installation with DPWT/PPCC. 2) Through a subletting contract for relocation the necessary meetings with affected houses & stakeholders were conducted in June and September 2016. 3) Following proper procedure for land acquisition and relocation process with DPWP-PPCC & RD-IRC-MEF, relocation plan and payment will be discussed and carried out. 4) Relocation plan to vulnerable groups is considered by the related law for the Project (Phase IV). 5) Same as the above 4). 6) Proper relocation framework is under process of IRC-GDR-MEF. 7) A monitoring plan on relocation will be developed by the relevant agencies such as DPWT, MOE, etc.
	(2) Living and Livelihood	1) Is there a possibility that the Project will adversely affect the living conditions of inhabitants? Are adequate measures considered to reduce the impacts, if necessary?	1) The Project will improve the living conditions of inhabitants during the operation stage.
	(3) Heritage	1) Is there a possibility that the Project will damage the local archeological, historical, cultural, and religious heritage sites? Are adequate measures considered to protect these sites in accordance with the country's laws?	1) There is no possibility that the Project will damage the local archeological, historical, cultural, and religious heritage sites.
	(4) Landscape	1) Is there a possibility that the Project will adversely affect the local landscape? Are necessary measures taken?	1) There is no possibility that the Project will adversely affect the local landscape.
	(5) Ethnic Minorities and Indigenous Peoples	1) Does the Project comply with the country's laws for rights of ethnic minorities and indigenous peoples? 2) Are considerations given to reduce the impacts on culture and lifestyle of ethnic minorities and indigenous peoples?	1) There are no ethnic minority people living in the Project Area.

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Environmental Checklist for the Project (4/4)

Category	Environmental Item	Main Check Items	Confirmation of Environmental Considerations
5. Others	(1) Impacts during Construction	<ol style="list-style-type: none"> 1) Are adequate measures considered to reduce impacts during construction (e.g., noise, vibrations, turbid water, dust, exhaust gases, and wastes)? 2) If construction activities adversely affect the natural environment (ecosystem), are adequate measures considered to reduce impacts? 3) If construction activities adversely affect the social environment, are adequate measures considered to reduce impacts? 4) If necessary, is health and safety education (e.g., traffic safety, public health) provided for project personnel, including workers? 	<ol style="list-style-type: none"> 1) Adequate measures considered to reduce impacts during construction stage.(Refer to tables of Mitigation Measure for the Key impacts). 2) The construction activities will not adversely affect the natural environment. 3) Adequate measures considered to reduce the impacts. 4) Health and safety education is necessary and provided for project personnel, including workers.
	(2) Monitoring	<ol style="list-style-type: none"> 1) Does the proponent develop and implement monitoring program for the environmental items that are considered to have potential impacts? 2) Are the items, methods and frequencies included in the monitoring program judged to be appropriate? 3) Does the proponent establish an adequate monitoring framework (organization, personnel, equipment, and adequate budget to sustain the monitoring framework)? 4) Are any regulatory requirements pertaining to the monitoring report system identified, such as the format and frequency of reports from the proponent to the regulatory authorities? 	<ol style="list-style-type: none"> 1) The implementation plan of monitoring program for the environmental items will be prepared by the implementation authority (DPWT/PPCC). 2) The items, methods and frequencies included in the monitoring program are judged to be appropriate. 3) DPWT/PPCC will establish an adequate monitoring framework including budget. 4) There are some regulatory requirements pertaining to the monitoring report system identified.



[Draft] Environmental Management Plan and Environmental Monitoring Plan

Environmental Item	Monitoring Item	Location	Frequency	Related Standard	Responsible Organization	Cost
Pre-work						
Noise and Vibration	Noise level	2 points : one is in Tuol Kork area, the other is in Wat Phnom Northern area.	Once	Sub-decree on Air Pollution Control and Noise Disturbance (2000)	Sub-contracting work	Cost involved in the JICA Preparatory Work
Air Pollution	CO, NO2, SO2	-	-	Sub-decree on Air Pollution Control and Noise Disturbance (2000)	MOE Quoted from Existing reports	-
Water Pollution (sampling from sewerage)	10 items (pH, turbidity, conductivity, TSS, DO, BOD5, NO3, PO4, total coliform, oil & grease)	3 sampling points : 1 point at Tuol Kork area, 2 outlet drainage points in Tonle Sap River	Once	Sub-decree on Water Pollution Control (1999)	Sub-contracting work	Cost involved in the JICA Preparatory Work
At-work						
Air Pollution	CO, NO2, SO2	2 points : 1 point in Tuol Kork area, 1 point in Wat Phnom Northern area.	Monthly	Sub-decree on Air Pollution Control and Noise Disturbance (2000)	Contractor	Involved in the Project Cost
Noise and Vibration	Noise level	2 points : 1 point in Tuol Kork area, 1 point in Wat Phnom Northern area.	Monthly	Sub-decree on Air Pollution Control and Noise Disturbance (2000)	Contractor	Involved in the Project Cost
Water Pollution (sampling from sewerage)	Drainage standard of 10 items (pH, turbidity, conductivity, TSS, DO, BOD5, NO3, PO4, total coliform, oil & grease)	3 sampling points : 1 point at Tuol Kork area, 2 outlet drainage points in Tonle Sap River	Monthly	Sub-decree on Water Pollution Control (1999)	Contractor	Involved in the Project Cost
Waste	Site survey for confirming whether or not the process of generated wastes (both general and works) is properly treated.	Waste disposal site	Monthly	Sub-decree on Solid Waste Management, (1999)	Contractor	There is no cost because of field survey.
Ecosystem	Field reconnaissance for confirming presence or	Project area, especially, the	Once	Declaration on Protected Areas (1994)	Contractor	Involved in the Project cost

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Environmental Item	Monitoring Item	Location	Frequency	Related Standard	Responsible Organization	Cost
	absence of protected animals, plants or any precious organisms.	surrounding area of each construction site.		Protected Areas Laws (Royal Decree (2008)		
Local Economy such as Employment and Livelihood, etc.	Hearing survey for confirming presence or absence of any complaints or disturbance on their commercial activities.	Every project site.	Once (every work site)	JICA Guideline (2010)	Contractor	There is no cost because of field survey.
Existing social infrastructures and services	Field reconnaissance for confirming presence or absence of any traffic disturbance.	Each work site and its surrounding. Connecting roads.	Weekly or as work sitemoves	The Traffic Law (2006)	Contractor	Involved in the Project cost
HIV	Holding meetings for providing necessary instructions to workers.	Each construction site.	Weekly or as work site moves	The Law on Prevention and Control of HIV/AIDS	Contractor	There is no cost because of the Contractor's own expences.
Work Environment (incl. Work Safety)	Inspection for construction sites regarding stipulated rules are followed or not.	Each construction site.	Weekly or as work site moves	The Labor Law (2002)	Contractor	There is no cost because of the Contractor's own expences.
Accident	Site investigation as accidents occure.	Each work site	Weekly or as work site moves	The Traffic Law (2006)	Contractor	There is no cost because of the Contractor's own expences.
In use						
Water pollution	Water pollution of 10 items : (pH, turbidity, conductivity, TSS, DO, BOD5, NO3, PO4, total coliform, oil & grease)	3 sampling points : 1 point at Tuol Kork area, 2 outlet drainage points in Tonle Sap River	Semi-annually (for one year after the initial operation period starts.)	Sub-decree on Water Pollution Control (1999)	DPWT/PPCC	Involved in the Project cost

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Environmental Monitoring Form for Construction Stage – Phase IV (1/4)

Date: _____ Place: _____

Item	Unit	Measured Value (Mean)	Measured Value (Max.)	Country's Standards	Referred International Standards ¹⁾	Remarks (Measurement Point, Frequency, Method, etc.)
Noise						
Quiet Area ²⁾ (6 am to 6 pm)	dB (A)			45	85	
Residential Area ³⁾ (6 am to 6 pm)	dB (A)			60	85	
Commercial and service areas and mix (6 am to 6 pm)	dB (A)			70	85	
Small industrial factories, intermingling in residential areas (6 am to 6 pm)	dB (A)			75	85	

- Note: 1) Japanese law for construction works
 2) Hospital, libraries, school and kindergarten
 3) Hotels, administration offices and house

Results of Vibration Measurement – Phase IV (2/4)

Date: _____ Place: _____

Place • Time	Japanese Standard ^(*) , dB(A)	Measurement (dB(A))	
		Average	Maximum
Station 1: Wat Phnom Northern Area			
Day (6:00 - 18:00)	65		
Night (23:00 - 6:00)	60		
Station 2: Toul Kork Area			
Day (6:00 - 18:00)	65		
Night (23:00 - 6:00)	60		

Note : ^(*) Environmental Quality Standard of Japan

Environmental Monitoring Form for Construction Stage – Phase IV (3/4)

Monitoring Item	Monitoring Result during Report Period
Dust generation	
Vibration	
Accident	
Change to drainage pattern	
Soil erosion and slope failure	
Construction waste and general waste	
Effect on amenity of tourism-related development	
Impact on road safety	
Impact on road traffic and vehicle movement	
Risk of infectious diseases such as HIV/AIDS	
Impact on livelihood/income	

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ARAP Monitoring Form– Phase IV (4/4)
Relocation Monitoring Sheet

Name of AH: _____

1. Progress of Tentative Relocation during construction

Progress	Date	Check	Remarks
Official Notice			
Confirmation on survey results of inventory			
Survey on relocation if any			
Negotiation			
1 st			
2 nd			
3 rd			
4 th			
Agreement on compensation and relocation			
Compensation payment			

2. Record of Grievance / Perception and Redress

Date	Record of Grievance / Perception and Redress	Remarks

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Entitlement Matrix

Item No.	Type of Loss	Eligible Persons	Entitlement	Implementation Issues	Responsible Organization
A. Impact on Land					
Inside ROW (Public State Land)					
1.	Partial impact on residential and / or commercial land, in which the remaining land is STILL VIABLE for continued use.	AHs with main house and/or small shop (independent/family-owned business)	<ul style="list-style-type: none"> AHs should be removed entirely from PRW and no cash compensation is available for affected land in ROW. No new permanent structures (i.e. structures on a foundation or wooden house larger than the affected one) are permitted to be constructed in the ROW. 	<ul style="list-style-type: none"> AHs to be notified at least <u>90 days</u> in advance before the start of civil works in the actual date that the land will be acquired by the Project. IRC will ensure the payment of all compensation and allowances for which AHs are entitled to at least <u>30 days</u> prior to the scheduled start of civil works. Remaining ROW is still public state land. 	MEF PPCC
Outside ROW (Private Land)					
2.	Loss of Land (all kinds); Either Partial or Entire Land is Lost	All Affected Households (AHs) with recognized proof of ownership whose land will be acquired (for the project construction).	AHs have two options: <ul style="list-style-type: none"> -Land replacement (land to land): Land replacement will be provided with similar land quality and productivity potential. - Cash compensation at replacement cost. 	<ul style="list-style-type: none"> AHs to be notified at least <u>90 days</u> in advance before the start of civil works in the actual date that the land will be acquired by the project. IRC will ensure payment of all compensation and allowances for which AHs are entitled to at least <u>30 days</u> prior to the scheduled start of civil works. IRC will support the AHs to separate or transform the affected land title certificate. Cost of the procedure will be borne by RGC. 	MEF PPCC
B. Loss of Structures					
1.	I. Loss of Houses or Shop/Store; Either Partial or Entire Structure is Lost	All the AHs confirmed to be residing in, doing business or having right over resources within the project affected area during the conduct of IOL and census of AH (on Cut-off Date)	<ul style="list-style-type: none"> Cash compensation at replacement cost without deduction for depreciation or salvageable materials (i.e. present cost of construction materials in the locality plus cost of labor). AHs are also entitled to have transport (moving) allowance (cf. Item C). 	<ul style="list-style-type: none"> AHs to be notified at least <u>90 days</u> in advance before the start of civil works in the actual date that the land will be acquired by the project. AHs to get cash compensation at least <u>30 days</u> ahead of civil works to have the AHs sufficient time to reorganize the house and/or shop, avoiding any disruption in their livelihood. If the structure is found no longer viable for living, compensation can be paid for the entire structure and the AH will also be entitled to other allowances. 	MEF PPCC
		Renters	<ul style="list-style-type: none"> Renters are entitled to get allowances as below: <ul style="list-style-type: none"> Transportation (moving) allowance: USD200 Disruption allowance: A lump sum cash assistance of USD300 (if it is a renting for business purpose as provided in C.IV Temporary loss of business income during relocation). Local authority will help the renter in finding alternate rental 	<ul style="list-style-type: none"> AHs to be notified at least <u>90 days</u> in advance before the start of civil works in the actual date that the land will be acquired by the project. IRC will ensure a payment of all allowances for which AHs are entitled to at least <u>30 days</u> prior to the scheduled start of civil works. AHs should know that a rent house and/or shop are entitled to a one time transport allowance only. The renter is also entitled for the disruption allowance. 	

By *[Signature]*
at *[Signature]*
2

Item No.	Type of Loss	Eligible Persons	Entitlement	Implementation Issues	Responsible Organization
			accommodation (if requested by the AH).		
2.	II. Other Structures (porch, extended eaves, spirit house, fence, etc.)	All the AHs confirmed to be residing in, doing business or having right over resources within the project affected area during the conduct of IOL and census of AH (Cut-off Date)	<ul style="list-style-type: none"> Cash compensation at replacement cost without deduction for depreciation or salvageable materials. 	<ul style="list-style-type: none"> AHs to be notified at least <u>90 days</u> in advance before the start of civil works in the actual date that the land will be acquired by the project. IRC will ensure a payment of all allowances for which AHs are entitled to at least <u>30 days</u> prior to the scheduled start of civil works. 	MEF PPCC
C. Allowances and Assistsances					
1.	I. Transport (moving) Allowance	<ul style="list-style-type: none"> AHs that relocate their living house Affected Shop 	<ul style="list-style-type: none"> Houses relocating in other village outside the ROW: USD 500 Shop – USD 250 	<ul style="list-style-type: none"> Owners of the living houses are entitled to one time transport allowance only. Remaining ROW is still public state land. 	PPCC
2.	II. Vulnerable AHs Allowance	Vulnerable AHs	<ul style="list-style-type: none"> One time cash assistance equivalent to USD150 per Vulnerable AHs. 	<ul style="list-style-type: none"> As indicated above, relocating landless AHs are entitled to replace a land with title at no cost. 	PPCC
3.	III. Disruption Allowance	<ul style="list-style-type: none"> Relocating shop Relocating AH for renting 	<ul style="list-style-type: none"> Three months of the shop renting fee at one time cash assistance equivalent to USD 1,500. Three months for the renting house fee at one time cash assistance equivalent to USD 750. 	<ul style="list-style-type: none"> Allowance shall be paid at the same time with compensation. 	PPCC
4.	IV. Temporary loss of business income during relocation	Owners of shop who relocate their shop	Lump sum cash assistance of USD300.		PPCC
D. Temporary Impacts due to Project Construction					
1.	I. Temporary Settlement Allowance	Owner of Living House (AH-2) who will temporarily relocate by the project construction work.	<ul style="list-style-type: none"> Living House rental fee is 800 USD/month. Owners of living houses (AH-2) are entitled for rental allowance up to 12 months. 	<ul style="list-style-type: none"> IRC will ensure payment of the allowances for which AHs are entitled to at least <u>60 days</u> prior to the scheduled start of civil works. 	PPCC DPWT/PPCC
2.	II. Affected assets during construction	Owners of assets	<ul style="list-style-type: none"> Compensation for lost assets in cash at replacement cost, or Compensation as leasing fee based on replacement cost, and temporarily affected land will be returned to original owner/occupant. 	<ul style="list-style-type: none"> Contractor will be required by contract to pay these costs. Construction will be carried out so as to minimize damage. Construction will be required by contract to stay within PRW. As part of the civil works contract, all access roads/ driveways to properties affected by the construction work will be repaired or replaced including culverts and other facilities, to a condition equal to or better than at present. 	PPCC DPWT/PPCC
3.	III. Damage private or community infrastructure including walls, drains and channels, etc.	Owners	<ul style="list-style-type: none"> Repair of damage or payment for repair of damage at replacement cost. 	<ul style="list-style-type: none"> The disruption period will be minimized as much as possible. The contractor will repair the land back to its original condition where the construction work is over. 	PPCC DPWT/PPCC

