ラオス民主共和国 水道公社事業管理能力向上 プロジェクト 詳細計画策定調査 報告書

平成24年3月 (2012年)

独立行政法人国際協力機構 地球環境部

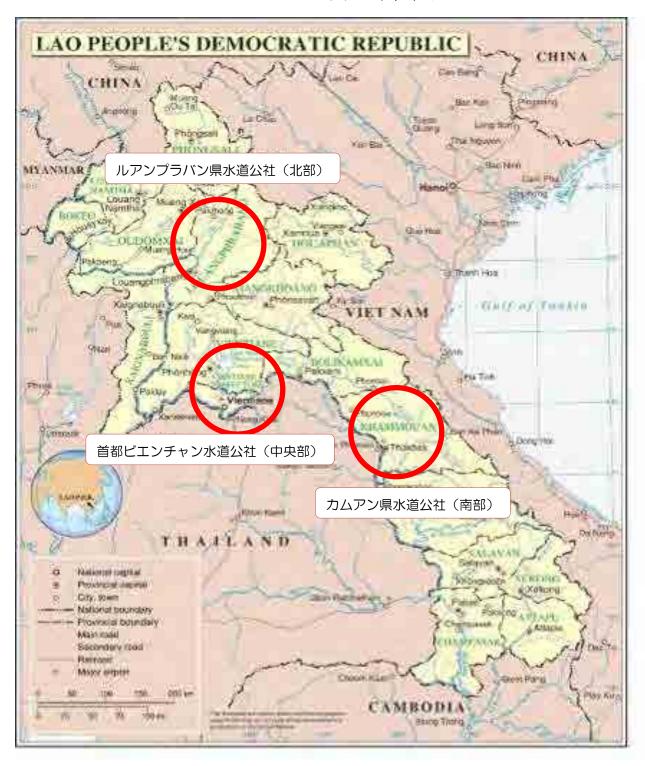
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プロジェクト対象地域位置図



現地写真



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图

プロジェクト対象地域位置図	j
現地写真	ii
目 次	ii
略語表	vi
第1章 詳細計画策定調査の概要	1.1
1-1 本プロジェクトの要請及び調査の背景	
1-1 本クロフェクトの安晴及の両重の自京	
1-2 調査団の構成	
1-4 調査日程	
1-5 主な面談者	
1-6 ラオス国政府からの本プロジェクトに係る要請内容	
1-6-1 上位目標	
1-6-2 プロジェクト目標	
1-6-3 成果、活動	
1-6-4 具体的な強化対象能力	
1-7 調査結果概要	
1-8 プロジェクト実施に向けた留意事項	
1-9 総括・団員所感	
1-9-1 総括所感	
1-9-2 所感:持続的かつ健全な水道事業体経営に向けた取組み	
第2章 調査結果とプロジェクト概要	
2-1 プロジェクト目的	
2-2 プロジェクトデザイン	
2-2-1 プロジェクトサイト/対象地域名	
2-2-2 ラオス国側実施機関	
2-2-3 受益者 (ターゲットグループ)	
2-2-4 上位目標	
2-2-5 プロジェクト目標	
2-2-6 アウトプット及び活動	
2-2-7 投入	
2-2-8 前提条件・外部条件 2-3 協力期間	
2-3 肠刀朔目 2-4 実施体制	2-7 2-7
← ¬ ¬¬ ¬¬ ¬¬ ¬¬ ¬¬ ¬¬ ¬¬ ¬¬ ¬¬ ¬¬ ¬¬ ¬¬ ¬	

2-5 プロジェクト実施上の留意点	2-8
第 3 章 事前評価結果	3-1
3-1 妥当性	3-1
3-1-1 必要性	3-1
3-1-2 優先度	3-1
3-1-3 手段としての適切性	3-2
3-2 有効性(予測)	3-3
3-2-1 プロジェクト目標の内容	3-3
3-2-2 因果関係	3-3
3-3 効率性 (予測)	3-3
3-3-1 アウトプットの内容	3-3
3-3-2 活動	3-4
3-3-3 投入の質・量・タイミング	3-4
3-3-4 外部条件·前提条件	3-4
3-3-5 その他、効率性を促進する要因	3-4
3-3-6 留意事項	3-4
3-4 インパクト (予測)	3-5
3-4-1 上位目標レベルのインパクト	3-5
3-4-2 その他の正のインパクト	3-5
3-4-3 負のインパクト	3-5
3-5 持続性(見込み)	3-5
3-5-1 政策・制度面	3-5
3-5-2 組織・財政面	3-5
3-5-3 技術面	3-6
3-6 モニタリングと評価	3-6
3-6-1 モニタリング	3-6
3-6-2 評価	3-7
第4章 プロジェクト実施の背景	4-1
4-1 国家政策におけるプロジェクトの位置づけ	4-1
4-1-1 ラオス国政策における位置づけ	4-1
4-1-2 我が国援助政策との関連	4-1
4-2 上水道セクターの概要	4-1
4-2-1 都市部における水道普及率	4-1
4-2-2 関連法・政策	4-1
4-2-3 当該セクターの関連機関	4-4
4-2-4 日本側の協力実績	4-10
4-2-5 他援助機関による協力実施状況	4-11
4-3 パイロット水道公社	4-13
4-3-1 首都ビエンチャン水道公社	4-13

-3-2 ルアンプラバン県水道公社	4-20
-3-3 カムアン県水道公社	4-26

[付属資料]

- 1. R/D (PDM 及び PO 含む)
- 2. M/M
- 3. 事業事前評価表
- 4. 調査日程表 (英語)
- 5. 収集資料リスト

略語表

ADB Asian Development Bank

AFD Agence Française de Développement

APO Annual plan of Operation BOT Built-Operate-Transfer

DHUP Departmen of Housing and Urban Development

DMA District Metered Area

DPWT Department of Public Works and Transport

JCC Joint Coordinating Committee

JICA Japan International Cooperation Agency

M/M Minutes of Meeting

MPWT Ministry of Public Works and Transport

NORAD Norwegian Agency for Development Cooperation

NRW Non-Revenue Water

ODA Official Development Assistance

O&M Operation and Maintenance
PDCA Plan-Do-Check-Action
PDM Project Design Matrix
PI Performance Indicator

PO Plan of Operation

PPP Public-Private Partnership
R/D Record of Discussions

SWSSP Small Towns Water Supply and Sanitaion Project

WASRO Water Supply Regulatory Office

WSD Water Supply Division

WSRC Water Supply Regulatory Committee

WTP Water Treatment Plant

第1章 詳細計画策定調査の概要

1-1 本プロジェクトの要請及び調査の背景

ラオス国では、1999年に出された首相令により、2020年までに都市人口の8割に対して24時間の安全で安定的な都市給水を行うことを目標としており、そのために一郡につき一つの水道システム整備を目指している。また、2015年までに67%の都市人口への24時間給水を目指している。JICAは、上記首相令を受けた水道施設の拡充に対応できる技術人材を育成するため、2003年から2006年まで技術協力プロジェクトを通じた研修強化支援を行い、その結果主要水道施設においては一定レベルでの運転が可能な状況となっている。しかしながら、目標水道普及率の達成には未だ遠い状況であり、2010年の都市における水道普及率は56%にとどまっている。

今後、国が掲げる目標値を達成するためには、水道施設のさらなる拡張・更新、そのための事業運営の効率化を通じた投資資金の確保が必要となっている。事業運営の効率化に向けて、1999年の首相令は水道公社に対し、施設の維持管理等に係るコストを賄いつつ、短期計画(3カ年のローリング事業計画)に基づき効率的かつ独立採算での経営を行うよう義務付けているほか、2010年には公共事業運輸省(MPWT)内の水道規制室(WASRO)が、水道公社のサービス状況を数値化した業務指標「について、毎年の目標設定とモニタリング及び報告を各水道公社に課し、水道普及率等の所与の国家目標を目指した事業実施を促進している。

このように短期的な計画策定とモニタリングの枠組みは整備されたものの、①自力では短期計画を 策定できない、②ドナーの支援により短期計画を策定したもののそれを自ら更新できない、③短期計 画はおろか年間予算計画すら作成していない、といった水道公社がまだまだ多く、さらに短期計画は 策定したものの、業務指標とそれに基づくモニタリングが計画と関連づけられていないというケース もあり、実効性に乏しい枠組みとなっている。

さらには、水道施設の拡張・更新に必要な、中長期的な水需要予測や財務収支見通しに基づく事業計画の策定とモニタリングは、MPWTによる制度化すらされておらず、現にほとんどの水道公社は中長期事業計画を有していない。

こうした状況では、中長期的な水需要の増とそれに対応したサービス拡充方針が不明確であるため、水道施設の拡張・更新も場当たり的にならざるを得ず、ある程度精緻な計画が求められるドナーの支援が得にくい上、短絡的な PPP 事業の導入が長期的に公社の財政に悪影響を与えることが懸念されている。事業運営の効率化もほとんど進んでおらず、2009 年には 17 都県の水道公社のうち黒字経営はわずか 4 社のみである。

1 WASRO は 2010 年「水道のサービス・パフォーマンス・ターゲット及びサービス・レベルの規制モニタリングに係るガイドライン (以下「規制ガイドライン」)」にて、9項目指標(水道普及率、水質、給水時間、水圧、断水、料金支払いと使用水量の測定、キャッシュフロー、顧客対応、漏水)のターゲットを決め、毎年県水道公社から目標値と結果、改善するためのアクションプランを WASRO と県政府公共事業運輸局 (DPWT) ヘレポートするよう指示して

いる。当事業の中で、当ガイドラインの改訂を予定しており、単年の業務指標数値やアクションプランだけでなく、財源に基づいた中長期の水道事業計画に基づきモニタリングする仕組みを導入することで、長期的な国家政策との整合性を国政府や県政府がモニタリング・承認・管理することが可能となる。

今後、ラオス国において、水道施設の拡充と事業運営効率化を真に適正な形で進めていくためには、水道公社による中長期的な水需要及び財務収支見通しに基づく事業計画の導入が不可欠であり、それらを MPWT や DPWT がモニタリングし、事業運営状況を的確に把握した上で、水道公社に対して経営面・技術面での支援を行っていく体制を構築する必要がある。

このような背景からラオス国政府は上記の課題に対処するため、我が国厚生労働省が 2010 年に実施した「水道事業体の能力向上を目的とした人材育成プロジェクト」調査報告書に基づき、技術協力プロジェクトを我が国に要請してきた。

1-2 調査の目的

本詳細計画策定調査は、ラオス国政府より要請のあった技術協力プロジェクト「水道公社事業管理能力向上プロジェクト」の実施に向けて、ラオス国からの協力要請の背景・内容を確認すること、対処方針をもとに先方政府関係機関との協議を通してプロジェクトの枠組みについて協議し、PDM(案)、PO(案)の作成及び M/M への署名を行うこと、プロジェクトの事前評価を行うために必要な情報を収集し、評価 5 項目(妥当性、有効性、効率性、インパクト、自立発展性)の観点から分析することを目的として実施された。

1-3 調査団の構成

団員氏名	担当分野	所属			
		7, 1.7			
沖浦 文彦	総括	独立行政法人国際協力機構地球環境部水資源·			
		防災グループ水資源第一課 課長			
下村 政裕	上水道政策	さいたま市水道局業務部参事			
廣内 靖世 評価分析		株式会社国際開発アソシエイツ			
板谷 秀史	上水道施設管理	独立行政法人国際協力機構地球環境部水資源·			
		防災グループ水資源第一課			
濱野 聡	協力企画/水道事業体	独立行政法人国際協力機構地球環境部水資源・			
	能力評価	防災グループ水資源第一課			

1-4 調査日程

付属資料4のとおり。

1-5 主な面談者

MPWT DHUP:公共事業運輸省 都市住宅計画局

Mr. Khamthavy Thaiphachanh, Director General

Mr. Noupheuak Virabouth, Deputy Director General

Mr. Khanthone Vorachith, Chief of WSD

MPWT WASRO:公共事業運輸省水道規制室

Mr.Somvan Mongphachan, Director

Khammhan Province DPWT:カムアン県公共事業運輸局

Mr. Chanh Bouphalivanh, Director General

Khammhan Provincial water supply state enterprise: カムアン県水道公社

Mr. Khanngeun Sengiem, General Manager

Vientiane Capital water supply state enterprise: 首都ビエンチャン水道公社

Mr. Khampheuy Vongsakhamphoui, General Manager

Luang Prabang Province DPWT:ルアンプラバン県公共事業運輸局

Mr. Asween Inphithack, Deputy Director

Luang Prabang Provincial water supply state enterprise: ルアンプラバン県水道公社

Mr. Soulith Chindamany, General Manager

Mr. Chanthone Sanaphay, Deputy General Manager

ADB:アジア開発銀行

Ms. Anupma Jain, Senior Social Sector Specialist, Urban Development & Water Div, Southeast Asia Dep.

Mr. Phomma Chanthirath, Senior Project Officer (Infrastructure), Lao PDR Resident Mission

ADB Project Team

Mr. Mike Beauchamp, Deputy Team Leader, Small Town project

1-6 ラオス国政府からの本プロジェクトに係る要請内容

ラオス国政府の要請内容は以下のとおりである。

1-6-1 上位目標

中央政府、地方政府、水道公社において、上水道に係る政策策定、計画能力、運営能力が改善する。

1-6-2 プロジェクト目標

短期的:全国の水道公社の運営能力が改善する。

長期的:業務指標のシステムが整備され、継続的に活用することで効率的な経営が確立する。

1-6-3 成果、活動

国家戦略および人材育成システムの強化 首都の上水道技術トレーニングセンターの実施能力向上 地域トレーニングセンターの実施能力向上

1-6-4 具体的な強化対象能力

人材育成管理能力の向上 水道事業計画策定能力の確立 無収水量管理に係る管理技術の向上 浄水場管理に係る管理技術の向上 水道事業運営能力の向上(企業会計、料金徴収、広報)

1-7 調査結果概要

ラオス国では、2020年までに都市人口の8割に対して24時間の安全で安定的な都市給水を行うことを目標としている。また、2015年までに67%の都市人口への24時間給水を目指している。目標給水率の達成にはまだ遠い状況であり、給水率(水道施設の存在する郡のみ対象)は首都ビエンチャン61%(2011年)、ルアンプラバン県34%、カムアン県タケク郡50%である。

現在の状況から、国が掲げる目標値を達成するために、公共事業運輸省や各県政府の公共事業運輸局を中心として、開発パートナーに対して郡レベルへの水道施設支援または施設投資を誘致している。また、それらは長期ローンや民間企業との PPP による 30 年間契約という形態をとっているケースが散見された。このように、中長期的な水需要予測や、それに伴う施設拡張計画、財政計画、人材育成計画等に基づく経営が求められる状況下において、現在の水道公社は中長期的な計画を有しておらず、またいくつかの水道公社では年間予算計画を有していない状況であり、計画的な事業経営の導入が急務な状況にある。

以上を踏まえ、公共事業運輸省住宅都市計画局及びパイロット対象候補の首都ビエンチャン水道公社、ルアンプラバン県水道公社、カムアン県水道公社との協議を行い、ラオス国のセクター政策や開発計画をベースとした各水道公社の長期事業計画(10年以上)および中期事業計画(5年間)、短期事業計画(1年間の詳細な計画に加えて2年間分の概要が記載されている3 year Rolling Corporate Plan)に基づく事業経営の必要性が確認された。また、それらをラオス側にて作成出来るようになることへの強い意欲を確認することができた。

また、公共事業運輸省水道規制室から、事業計画を作るだけではなく、水道公社内部および国レベルでのモニタリングを行うことが重要であり、計画・実施・モニタリング・次の計画への反映というサイクルが必要であることが言及された。

上記協議を通じて、第2章記載の内容にて公共事業運輸省と合意に至った。当案件を通じて事業計画策定に必要なデータ管理の強化、またそのデータに基づく長期、中期、短期の事業計画を策定し、それらの実施およびモニタリングを行い、その結果を次の計画へ反映していくというマネージメントの仕組みをラオス国の水道公社へ導入する。このマネージメント手法を導入し、計画的で健全な事業経営を水道公社が行うことで、今後より多くの住民が安定的に安全な水へアクセス可能となることを目指す。

1-8 プロジェクト実施に向けた留意事項

今後、本プロジェクトを実施するにあたり、留意事項と考えられた点について、M/M にてラオス国公共事業運輸省住宅都市計画局(DHUP)と以下のとおり合意した。

(1) 他開発パートナー機関との重複回避について

ノルウェーの ODA 実施機関である NORAD の技術協力プロジェクトが予定されており、当初 首都ビエンチャン、ルアンプラバン県、カムアン県を含む 1 都 6 県の水道公社における Corporate Plan の作成支援を検討していたが、公共事業運輸省住宅都市計画局から首都ビエンチャン、ルア

ンプラバン県、カムアン県については JICA による支援を要望する旨説明があり、重複を避けるため住宅都市計画局から NORAD に対して説明を行う。

(2) 他開発パートナー機関との協調

3 year Rolling Corporate Plan の策定支援について、現在 ADB が 10 県にて行っており、今後 NORAD も支援を検討していることから、一年に一度住宅都市計画局がこれら開発パートナー機関を集め、情報共有を行う場を設ける。

1-9 総括·団員所感

1-9-1 総括所感

- (1) 本件調査の過程で改めて驚かされたのは、ラオス水道セクターでの各国、国際機関などドナーの活動量の多さであった。人口 600 万人強の国の都市型水道 (所謂村落給水を除く) に対して、フランス、タイ、中国、ADB など従来から関係が深い国・機関に加えて、韓国、更にはノルウェー等が相当量の援助をつぎ込んでおり、主要都市のみならず、地方の小規模都市(郡) に対しても支援の手が重層的に入っている。本調査においても、それら他ドナーとの重複回避には気を遣うこととなった。
- (2) 本件プロジェクトは「ラオスの水道セクターが、自らの計画を他者の手によるのではなく、自ら立案できるようになることが必要」という問題意識(これは日本側のみならず DHUP なども同様の認識を保有していた)を出発点としている。ラオスが依然 LLDC に留まっていることに加えて、上述の援助量の多さは、結果的に本件プロジェクトの問題意識が醸成される要因となっていると言えるのではないか。
- (3) 独自財源や人材が手薄な国に対して各ドナーが相当量の援助を実施して各種計画立案、ハードウェアの整備などをおこなった結果、地方水道局は自らのキャパシティを開発する暇も余裕(予算的、人的)も十分でないままに援助を受け取る構造となっている部分が多い。各ドナーの立場からは相手方に十分なキャパシティがないため、共同で計画立案・実施するには手間と時間がかかりすぎ、ドナー側に定められた要件(期間、達成目標・成果など)を満たすことが困難となることから、ドナー側が短期間に効率的に成果物(計画など)を作成することが繰り返された面があるように思われる。その結果、ラオス側は多くの援助を受けながらも依然として自らの計画を立案、実施、モニター、見直しというサイクルを構築ができない状況に留まっていると言えよう。
- (4) 本件調査の過程で、ラオス側に自国の会計年度の開始月を質問しても即座に回答がなく、また 年間予算計画も存在しない水道事業体が存在するなど、良い表現ではないが「いきあたりばっ たり」でこれまで、事業を運営してきた様子が垣間見える。また、水需要増加への対応、首相 令で掲げる目標実現をするために、水供給および施設投資を得る必要があり、中長期計画がな いままに水道公社と民間企業とが長期契約を結んでいるケースが散見された。以上から長期的 視野に基づく経営実現が急務な状況にある。
- (5) かかる現状認識の下で本プロジェクトは、短期・中期・長期の計画立案、そのために必要なデータ取得とモニタリング、計画立案ガイドラインの作成、その普及メカニズムの検討などをおこなうこととなっている。これまで述べた問題意識のとおりこれらは根幹的な事項と考えているが、同時に同じく経緯やラオス側の現状のキャパシティを鑑みると、相当難易度の高い事項

に取り組もうとしていると認識すべきである。本プロジェクトは、国や地域が異なっても共通する側面の多い水道エンジニア技術的な内容(物理的、化学的な内容は、国や地域の状況に依存しない)ではなく、ラオスという固有の国・地域の状況と文脈に依存する内容に取り組むものである。

- (6) 丁寧な対応の必要性が想定されることから、プロジェクト実施期間は5年間と長めに確保するとともに、計画立案経験のある日本の水道事業体(さいたま市水道局を中心とした布陣を想定) 関係者から、相当量の経験のある専門家の派遣を想定している。これらにより、「JICAが計画を作成する」のではなく、「ラオス側が JICA の支援を受けた結果、自ら計画を策定し、そのモニタリング、見直しなどができるようになる」ことを目標としている。
- (7) 本プロジェクトの枠組みに特徴的なこととして、Project Director (PD) を DHUP 局長 (WASRO のボードメンバーでもある) として、Deputy PD を、DHUP 水道担当副局長とともに WASRO の Director の 2 名体制としたことが挙げられる。従来 WASRO はモニタリングに特化しその独立性に留意するあまり DHUP の活動との関連性がわかりにくい面があったが、共同でプロジェクトを実施することにより「水道事業改善のためのモニタリング」という機能を一層発揮できるようになることが期待されている。
- (8) この協力過程は「効率的に短期間で実施し成果をあげてしまう」ためのものではなく、日本人専門家が「ラオス側に寄り添い、丁寧に状況を把握しながらその認識やシステムの改善を促しつつ、新たなしくみの定着を図る」という、試行錯誤を伴う手間のかかるものとなろう。しかし、そのようなプロセスこそが必要であり、これらを経た後にラオス側のキャパシティが向上するとともに日本側との信頼関係が一層強固となることを期待するものである。
- (9) このような本プロジェクトの性格と投入に必要な専門家の資質等について、専門家派遣元(調整元)となる、さいたま市水道局は十分ご理解いただいているものの、専門家が効果的に活動できるように、そのリクルート段階、準備段階、現地活動段階などそれぞれにおいて、JICA(地球環境部、事務所)としても、できる限りきめ細かいサポートをおこなうことが重要である。
- (10) パイロット事業体として、首都ビエンチャン、ルアンプラバン県、カムアン県の3つの事業体が本プロジェクトに参加することとなったが、これらの間の能力にも相当の差異がある。首都ビエンチャンはラオス国内で別格と言える存在であり、技術レベルも高く、人材も豊富である。ルアンプラバン県も相対的には良好な状態にある(問題も多いが)が、これに対してカムアン県水道局は人材や既存情報も手薄であり、相当の梃入れが必要である。しかしカムアン県水道局はラオスで5番目に大きい水道局であるという実際を考えると、その他水道局のレベルを底上げするためには、カムアン県において本プロジェクトが成功する必要がある。
- (11) ラオス側関係者の本プロジェクトに対する期待と意気込みは大きいものがあると感じた。これは、さいたま市とラオスの長年の良好な関係を中心として、ラオスの日本側に対する期待と親近感に裏打ちされたものと言えるが、それに加えて本プロジェクトの意図するものが、ラオス側のモチベーションを掻き立てる面があることを感じた。
- (12) ラオス側のプロジェクト関係者も多く、日本側からの投入も多くなる(専門家派遣人数など) と思われるが、情報共有を緊密におこなうほか目標達成に向けて不断のプロジェクトのモニタ リングが必要と思われる。特にプロジェクト前半2年間程度にどこまで達成できるかが重要に なると考えられ。これらプロセスを適切に実施し、最終的に目標達成が可能となるよう、関係 各位のご協力をお願いしたい。

1-9-2 所感:持続的かつ健全な水道事業体経営に向けた取組み

(下村政裕 さいたま市水道局業務部参事)

1992年からラオス国の水道セクターに関わり、現地にも何度か足を運び、1994年には、6ヶ月間、短期専門家として滞在したが、今回は2004年以来、約8年ぶりの現地入りとなった。

都市化が進み、学校や公園、道路の整備が進み、車、特に新車や日本でもあまり見ないような高級車が街中を走り、朝夕は渋滞が発生しているなど、この10年に渡る経済成長は著しいものがあるなというのが、今回の最初の印象である。一方で、10年前、20年前とさほど変わらないものも、ラオス人らしさや彼らの文化として依然として残っているという印象を、たくさんの友人と再会した時や、市場や車でたった10分ほど走った街外れを訪れた時などに感じられた。

ラオス国における水道事業も同様に、給水人口規模や水道システム数は、増加しているものの、運営管理の実態は、20 年前とさほど変わっていないのではないかという印象を受けた。これは、この20 年間、「量」の拡大に追われてきたこと、そして、その多くの新規開発や拡張が、国レベルからNGO にいたるまでの様々なドナーの手により行われてきたことが原因の一つとして考えられる。さらに、肝心の事業運営管理の部分においても、そのためのシステムの導入からその運営に関わるまで、海外からのサポートにかなりの部分で頼っていることなどに起因しているといえる。

つまり、厳しくいえば、主体的に、現状を把握分析し、問題を抽出して解決に当たるという習慣がなく、困ったときのドナー頼みという仕組みが当たり前になっているのではないだろうか。

ここから脱皮し、彼らが自ら積極的に「持続的かつ健全な水道事業体経営」を行うことは相当にハードルが高いが、真にそのことを成すためには、彼らの意識を変えていかなければならない。そうした思いを持ちながら、現地での、ラオス側も含めたプロジェクト形成の議論に望んだ。

結果として、ラオス国水道事業体の事業運営管理能力の向上を目指し、① 現状分析、問題分析としてのデータ管理のあり方、② そのデータ管理をベースに長期的視点を持った水道事業計画の立案と実施能力の移転というアウトプットに集約することができた。一方で、水道事業体より歴史の浅い、行政レベルの水道事業体への関与についても、その支援、指導、規制体制を充実させ、水道事業体と車の両輪のごとく機能させることにより、真の水道サービスの供給体制の確立を目指し、モニタリングマネジメントの確立を③のアウトプットとして集約することができた。

当該プロジェクトでは、これらについて、抽出された3つのパイロット事業体を対象にアプトプットを目指した活動を行うことになるが、これらの成果に至る過程をガイドラインとして構築することが④のアウトプットであり、パイロット事業体をコアとして、全国の官民の水道事業体を育成していく仕組みの構築が⑤のアウトプットである。

ラオス側、日本側双方の積極的かつ適正な協議により、ラオス国の持続的かつ健全な水道事業体経営に向けて、本プロジェクト計画案は、十二分にトリガーと成り得るものに仕上がったという自負を持てるものである。

今後は実行あるのみであるが、いずれにせよ、プロジェクトの実施に当たっては、水道事業体のワーカーレベルから経営層まで、そして水道のパートナー企業はもちろんのこと、現在のそして将来の

水道使用者であるラオス国民全ての水道に対する意識を変えていくことを強く念頭におき、各活動の 目標達成のため、固い意思と自信を持って、彼らをサポートしていくことが重要であると強く感じた 調査であった。

第2章 調査結果とプロジェクト概要

2-1 プロジェクト目的

本事業は、ラオス国において、①パイロット水道公社における事業計画策定に必要なデータ管理²強化、②パイロット水道公社における短期・中期・長期事業計画³策定/実施能力強化、③パイロット水道公社内部及び国レベルでの事業計画モニタリング強化、④以上を踏まえた水道事業計画技術ガイドライン(以下「技術ガイドライン」)⁴整備、⑤パイロット以外の水道公社における事業計画策定を促進するためのメカニズム構築を行うことにより、水道公社の中長期的視野に基づいた事業管理能力強化の仕組み整備を図るものである。本事業を通じて、将来、ラオス国の全水道公社が中長期の事業計画に基づいて、施設の拡張・更新及び給水の安定化を図れるようになり、持続可能な水道体制を実現することに寄与する。

2-2 プロジェクトデザイン

2-2-1 プロジェクトサイト/対象地域名

首都ビエンチャン、ルアンプラバン県、カムアン県(パイロット水道公社管轄地域)5

2-2-2 ラオス国側実施機関

1) 責任機関: DHUP/MPWT

2) 実施機関:水道課(WSD)/DHUP/MPWT、WASRO/MPWT、首都ビエンチャン水道公社、ルアンプラバン県水道公社、カムアン県水道公社⁶

<u>WSD/DHUP/MPWT</u>: 上水道セクター開発政策策定、技術ガイドライン策定、水道公社人材育成の調整・計画、開発援助機関窓口

WASRO: 規制ガイドラインの策定、毎年の業務指標のモニタリングおよび水道公社へのフィードバックおよび承認、水道公社への監査等の実施、(本事業後からは毎年の事業計画のモニタリング及び承認)

<u>県水道公社</u>:独立採算制に基づき、水道事業を実施、県政府メンバーを中心とした理事会が事業計画の承認やモニタリングを行う。パイロット水道公社は本事業実施中及び本事業後に、事業計画策定方法について他県への研修を行う。

² <u>対象となるデータ</u>は、送配水管や浄水場等の施設情報、取水量、配水量、水質検査、新規給水管接続、財務情報等を想定。詳細はプロジェクト内で確認していく。

³ <u>長期事業計画</u>は「PI のターゲットを含む 10 カ年戦略計画であり、そのサイクルは国家/県の 5 カ年計画のサイクルと一致する(例:2011-2020 年、2021-2030 年・・・)」と定義される。 <u>中期事業計画は</u>「アクションプランを含んだ 5 カ年計画であり、国家/県の 5 カ年計画と整合性があり、そのサイクル(例:2011-15 年、2016-2020 年・・・)と一致する」と定義される。 <u>短期事業計画</u>は「1999 年首相令 37 号に規定される 3 カ年ローリング事業計画であり、初年 度の詳細アクションプランを含む」と定義される。 毎年更新される事業計画であり、詳細な単年事業計画に加え、二年間分の将来予想値等が添付される。 事業計画対象の管理分野には、各水道公社のニーズ/優先度によって、財務、施設管理、運転維持管理、人材開発、無収水管理、危機管理、顧客サービス、広報等が含まれる。

⁴ 現在、ラオス国では水道公社に対して、3 カ年ローリング事業計画(短期事業計画)を策定し、それに基づいて事業経営を実施するよう定めているが、記載内容については特に規定されていない。本事業では、水道事業計画技術ガイドラインを作成支援し、当ガイドラインでは短期事業計画に加え、長期・中期事業計画の策定を推進し、さらに各事業計画の記載内容を規定する。

⁵ パイロットサイトの選定については、中部:首都ビエンチャン水道公社、北部:ルアンプラバン県水道公社、南部:カムアン県水道公社と各地域から一つずつ選出し、周囲の県へ技術移転を行うことを想定。カムアン県については、無償資金協力との連携を見据え選出。その他の地域については過去のプロジェクトで対象となった水道公社と同じ水道公社を選定。

⁶ それぞれの機関の主な役割は以下のとおり。

2-2-3 受益者 (ターゲットグループ)

DHUP、WASRO、首都ビエンチャン水道公社(附属研修センターを含む)、ルアンプラバン県水道公社、カムアン県水道公社の職員

2-2-4 上位目標

ラオス国上水道セクターにおける持続可能かつ安定的な開発に向けた管理体制が強化される。

【指標】

- a. 2020年末までに、全ての水道公社にて長期・中期・短期の事業計画が、プロジェクトで作成 した技術ガイドラインやデータ管理マニュアル⁷・事業計画策定マニュアルを基に更新され承 認される。
- b. 2020 年末までに、パイロット水道公社にて長期事業計画にて定めた業務指標目標のうち X% の項目が達成される。

2-2-5 プロジェクト目標

ラオス国において、水道公社の中長期的視野に基づく事業管理能力を強化する体制が整備される。

【指標】

- a. プロジェクト終了までに、パイロット水道公社がプロジェクトで作成した技術ガイドライン やデータ管理マニュアル・事業計画策定マニュアル⁸を基に長期・中期・短期の事業計画を策 定・更新する能力を習得する。(第二回のプロジェクト運営チーム会議にて評価基準を設定 する)
- b. 2016 年末時点で、パイロット水道公社にて長期事業計画にて定めた 2016 年の業務指標目標のうち X%の項目が達成される。
- c. 水道事業計画技術ガイドラインが公共事業運輸大臣に承認される。
- d. プロジェクト終了時までに、事業計画策定普及計画(以下「普及計画」)⁹に沿って各パイロット水道公社にてプロジェクト終了以降も継続的に事業計画作成のための研修コースを実施していくための実施計画(予算措置を含む)が策定される。

2-2-6 アウトプット及び活動

- アウトプット1:パイロット水道公社において、長期・中期・短期の事業計画策定に必要なデータが継続的に利用可能になる

【指標】

1a. 首都ビエンチャン水道公社及びルアンプラバン県水道公社では 2013 年 12 月までに、カムア

⁷ <u>データ管理マニュアル:</u>事業計画策定に必要なデータを正確に取得し、管理するためのマニュアル。本事業実施中 に作成し、全国の技術レベルの異なる水道公社にて使用できる汎用性のあるマニュアルを想定している。

^{* &}lt;u>事業計画策定マニュアル</u>は長期・中期・短期事業計画を策定するために、アウトプット1にて整備した情報を基に 水需要予測や財務収支分析、施設拡張/更新需要等の把握の方法をはじめ、事業計画策定の各項目の作成方法について 説明を行う全国の水道公社で利用可能である汎用性のあるマニュアルを想定。

^{9 &}lt;u>普及計画:</u>全国の水道公社における長期・中期・短期各事業計画策定を普及するための計画。パイロット水道公社 が本事業を通じて得た知見を、本事業後に他の県水道公社へ普及するためのシナリオと実施計画を想定。

- ン県水道公社では2014年12月までに、パイロット水道公社において、データ管理改善計画¹⁰ に含まれている必要情報リスト記載の情報が、データ管理マニュアルまたはその案に基づき取得される。
- 1b. パイロット水道公社において、データ管理マニュアルまたはその案に基づき必要情報リスト 記載の情報が毎年取得、蓄積される。
- 1c. 2016年3月までに、データ管理マニュアルが公共事業運輸省住宅都市計画局長によって承認される。

【活動】

- 1-1 各パイロット水道公社にて、事業計画策定に必要なデータの有無及び現行のデータ管理をレビューする
- 1-2 各パイロット水道公社にて、日本の水道セクターの「アセット・マネジメント」アプローチ¹¹ を現地に適用する方法を含む、必要情報リストつきのデータ管理改善計画を策定する
- 1-3 各パイロット水道公社にて、データ管理改善計画を実施する
- 1-4 事業計画策定のためのデータ管理マニュアル (ラオス語・英語) を作成し、DHUP 局長の承認を受ける
- アウトプット2:パイロット水道公社において、長期・中期・短期事業計画に基づいた事業実施管理が、Plan-Do-Check-Action (PDCA) サイクルを用いて行われる

【指標】

- 2a. パイロット水道公社において、2015年までに長期事業計画(2020年まで)が作成され承認される。
- 2b. パイロット水道公社において、2015 年までに中期事業計画(2016 年-2020 年)が作成され承認される。
- 2c. パイロット水道公社において、2013年以降、短期事業計画が毎年作成され承認される。
- 2d. 2014年以降、パイロット水道公社において、毎年の業務指標目標のうち年平均 X%の項目が達成される。
- 2e. 2016年3月までに、事業計画策定マニュアルが策定され、公共事業運輸省住宅都市計画局長によって承認される。

【活動】

- 2-1 各パイロット水道公社にて、既存の事業計画、計画プロセス、事業運営・管理の実態をレビューする
- 2-2 各パイロット水道公社にて、10 カ年、5 カ年、3 カ年事業計画のアウトラインを含む改善のための改善提案事項が取りまとめられる
- 2-3 各パイロット水道公社にて、アウトプット1で得られるデータを活用して、長期的な水需要、

^{10 &}lt;u>データ管理改善計画:</u>パイロット水道公社毎に、現在有しているデータやその入手・管理状況を確認し、事業計画 策定に必要な正確なデータを整備するために、どのように業務改善する必要があるかを示す改善計画を想定している。 この改善計画には、事業計画策定のために入手する必要がある情報リストを添付する予定。

^{11 &}lt;u>日本の水道セクターの「アセット・マネジメント」</u>については、「水道事業におけるアセットマネジメント(資産管理)に関する手引き」を参照。http://www.mhlw.go.jp/za/0723/c02/c02-01.html

水道施設¹²の更新需要、及び財務バランス(歳入と支出)を予測する

- 2-4 各パイロット水道公社にて、10 カ年事業計画 (~2020 年) を策定し、理事会の承認を得るために提出する
- 2-5 各パイロット水道公社にて、5 カ年事業計画(~2015 年, 2016-2020 年)を策定し、理事会の承認を得るために提出する
- 2-6 各パイロット水道公社にて、3 カ年ローリング事業計画を策定/毎年更新し、理事会の承認を得るために提出する
- 2-7 各パイロット水道公社にて、3 カ年ローリング事業計画の年間アクションプランを実施する
- 2-8 各パイロット水道公社にて、10 カ年計画をレビュー及び適宜更新し、理事会の承認を得るために提出する
- 2-9 水道事業計画策定マニュアル (特定分野の個別マニュアル含む) を作成し、DHUP 局長の承認を受ける
- アウトプット3:業務指標(PI)を含む事業計画のモニタリングが強化される

【指標】

- 3a. パイロット水道公社において、内部モニタリングの結果が次年度以降の事業計画の作成に反映される。
- 3b. パイロット水道公社において、WASRO のモニタリング結果が次年度以降の事業計画の作成に反映される。
- 3c. プロジェクト終了までに、規制ガイドラインの見直し(目標値の修正と事業計画と業務指標の関連を公式化する)を行い、水道規制委員会(WSRC)によって承認される。

【活動】

<県レベル>

- 3-1 各パイロット水道公社にて、既存の事業計画及び業務指標の内部モニタリング・システム¹³を レビューする
- 3-2 各パイロット水道公社にて、レビューに基づき、業務指標を含む事業計画の内部モニタリング・システムを設計する
- 3-3 各パイロット水道公社にて、上記システムに基づき、業務指標を含む事業計画のモニタリングを行う(モニタリングの結果はアウトプット1のデータ管理、アウトプット2の事業計画 策定に反映される)
- 3-4 各パイロット水道公社にて、業務指標を含む事業計画の内部モニタリング・システムを適宜 改良する

<国レベル>

- 3-5 WASRO における各水道公社の業務指標のモニタリング・システムを事業計画との関連でレビューする
- 3-6 業務指標を含む各水道公社の事業計画のモニタリング・システムを設計する

¹² 水道施設 は「取水口から顧客水道メーター間の施設」と定義される。

^{13 &}lt;u>モニタリング・システム</u>は (i) モニタリング項目及び (ii) 各項目のデータ収集・集計・分析・報告・意思決定・フィードバックに係る方法・時期・頻度・担当者を含む。<u>水道公社の内部モニタリング</u>には公社理事会によるモニタリングも含まれる。

- 3-7 上記システムに基づき、パイロット水道公社の業務指標を含む事業計画のモニタリングを実施する
- 3-8 業務指標を含む事業計画のモニタリング・システムを、全水道公社に適用するために、活動 3-7 の結果に基づき、改良する
- 3-9 「水道のサービス・パフォーマンス・ターゲット及びサービス・レベルの規制モニタリング に係るガイドライン (規制ガイドライン)」(2010年) をレビューする
- 3-10 改訂ガイドラインのドラフトを作成し、WSRC に検討・承認を受けるために提出する
- アウトプット4:アウトプット1~3の成果を踏まえ、水道事業計画技術ガイドライン(技術ガイドライン)が策定される

【指標】

4a. 水道事業計画技術ガイドライン案が作成される。

【活動】

- 4-1 技術ガイドライン委員会14を設立する
- 4-2 技術ガイドラインのアウトライン案を作成し、最終化のために委員会に提出する
- **4-3** アウトプット $1 \sim$ アウトプット 3 の成果を踏まえて技術ガイドラインのドラフトを作成し、 委員会のコメントを得る
- 4-4 上記コメントを基にドラフトを修正し、委員会に承認を得るために提出する
- 4-5 委員会に承認されたドラフトを、公共事業大臣の承認 (endorsement) を得るために提出する
- 4-6 技術ガイドラインまたはその案をラオス語・英語で発行し各水道公社へ配布する
- アウトプット5:アウトプット1~4の成果を活用し、全国の水道公社及び民間企業における 事業計画策定及びモニタリング体制の構築を促進するための仕組みが構築される

【指標】

- 5a. プロジェクト終了時までに、パイロット水道公社内の移転知識/技術の公社内外への将来的な 普及の中核となるリソース・パーソン (コア・リソース・パーソン) が事業計画作成につい て、他県水道公社に対して技術指導出来る能力を有す (第二回のプロジェクト運営チーム会 議にて基準を設定する)。
- 5b. パイロット水道公社で実施する事業計画策定に係る研修に係る参加者の X%が理解度、適用 度が三段階評価にて二段以上の評価を行う。
- 5c. 普及計画が公共事業運輸省住宅都市計画局にて承認される。

【活動】

- 5-1 各パイロット水道公社にて、 コア・リソース・パーソンを特定する
- 5-2 各パイロット水道公社にて、アウトプット $1 \sim 3$ を通じ、コア・リソース・パーソンに実地 研修 (OJT) を行う
- 5-3 コア・リソース・パーソンに教授法の研修を行う
- 5-4 各パイロット水道公社にて、周辺県水道公社を対象とした長期・中期・短期事業計画に係る

¹⁴ <u>技術ガイドライン委員会</u> は、委員長(DHUPの副局長)及び委員(事業計画策定を支援する他本事業の担当者を 含む DHUPの代表、WASROの代表、専門家チームの代表)から構成される。

リージョナル入門セミナーを1回開催する

- 5-5 首都ビエンチャン水道公社研修センターの既存研修プログラムを、新水道事業計画策定/更新 に係る技術ガイドラインに照らし、レビューする
- 5-6 上記研修センターにて、レビューに基づき、既存コースの改訂及び/または新規コースの開発 を行う
- 5-7 各パイロット水道公社にて、改訂及び/または新規研修コースを実施する
- 5-8 受講生のフィードバックを基に、上記研修コースを改良する
- 5-9 プロジェクトの成果を踏まえ、普及計画を策定し、DHUP 局長の承認を受ける

2-2-7 投入

- (1) 日本側
 - (a) 専門家
 - 長期専門家:チーフ・アドバイザー、業務調整/モニタリング管理/研修管理
 - 短期専門家:財務分野、施設管理分野、人材開発分野、その他の分野(必要に応じて)
 - (b) 機材
 - 研修用プロジェクター、スクリーン等
 - (c) ラオス側プロジェクト関係者の研修員受け入れ:水道事業管理、その他の水道事業管理関連 分野
 - (d) 在外事業強化費
- (2) ラオス国側
 - (a) 人員配置
 - (b) 本事業実施に必要な土地・建物・施設(MPWT 及び各パイロット水道公社における専門家チームの執務スペース及び会議室を含む)
 - (c) 経常費

2-2-8 前提条件·外部条件

- (1) 事業実施のための前提 特になし。
- (2) アウトプット達成のための外部条件
- パイロット水道公社において、多数のスタッフが職場を離れない(現状、可能性は低いが、プロジェクトの中でモニタリングを行っていく)。
- (3) プロジェクト目標達成のための外部条件
- 本事業を通じて作成支援を行う技術ガイドライン案が公共事業運輸省大臣によって、速やかに承認される。
- (4) 上位目標達成のための外部条件 特になし。

2-3 協力期間

2012年8月~2017年7月を予定(計60ヶ月)

2-4 実施体制

本プロジェクトの5つの実施機関及び専門家チームの連携・調整の促進のために、異なるレベルの内部定期会合が活動として組み込まれているが、これらを有効に活用し、効率的なプロジェクト管理を行うことが望まれる。プロジェクトの運営会合、実施体制は以下のとおり。

【プロジェクト運営会合】

- JCC
- プロジェクト管理チーム会合
- パイロット水道公社ごとのパイロット・プロジェクト管理チーム会合
- パイロット水道公社調整会合

【ラオス側実施体制】

- マネージメント・スタッフ

<MPWT レベル>

- ① プロジェクト・ディレクター
- DHUP 局長
- ② 副プロジェクト・ディレクター
 - DHUP 副局長:アウトプット 1,2,4,5,0 担当
- WASRO 室長 : アウトプット 3 担当
- ③ プロジェクト・マネージャー
 - WSD 部長/DHUP: アウトプット 1,2,4,5,0 担当
 - WASRO 副室長(技術規制担当): アウトプット 3 担当

<水道公社レベル>

- ① パイロット・プロジェクト・マネージャー
 - 首都ビエンチャン、ルアンプラバン県、カムアン県の水道公社総裁
- ② 副パイロット・プロジェクト・マネージャー (管理部門)
 - 各パイロット水道公社において配置される
- ③ 副パイロット・プロジェクト・マネージャー(技術部門)
- 各パイロット水道公社において配置される
- 技術スタッフ
 - ① DHUP: 事業計画策定分野の担当スタッフ
 - ② WASRO: 事業計画モニタリング分野担当スタッフ
 - ③ 各パイロット水道公社:事業計画策定、財務管理、人材開発、浄水場管理、及び配水網管理 分野の SIC
 - ④ 首都ビエンチャン水道公社研修センター: センター所長 (研修管理分野 SIC を兼任)、研修計画・調整分野の SIC

2-5 プロジェクト実施上の留意点

- (1) 指標の計画値:今回計画値が設定されていない指標に関しては、本事業開始から6か月以内に、 現況調査を踏まえて設定し、関連実施機関と協議の上、第1回合同調整員会(JCC)で決定す る。
- (2) ADB 及び NORAD との調整:「4-2-5 他援助機関による協力実施状況」で後述するように、本プロジェクトと並行し、ADB 及び NORAD が水道公社の3カ年事業管理計画策定を支援中/支援予定である。主たる調整は各プロジェクトの責任機関である DHUP が担うことで DHUP と合意しているが、技術ガイドラインや事業管理モニタリング・システムの全国適用において、ADB 及び NORAD の支援を受けた水道公社の混乱を招くことにならぬよう、通常から、ADB 及び NORAD 関係者(コンサルタントを含む)と積極的な情報共有・意見交換を行うことが重要である。

第3章 事前評価結果

3-1 妥当性

本件は、以下に示すように必要性・優先度が高く、課題解決の手段としても適切であることから、 妥当性が高いと判断できる。

3-1-1 必要性

本件の上位目標及びプロジェクト目標は、ラオス国、及び水道開発行政を担当する MPWT の住宅都市計画局 (DHUP)、水道規制行政を担当する水道規制室 (WASRO)、水道事業者である県水道公社のニーズと合致するといえる。

◆ ラオス国では、2020年までに都市人口の8割に対して24時間の安全で安定的な都市給水を行うことを目標としている。また、2015年までに67%の都市人口への24時間給水を目指している。目標給水率の達成にはまだ遠い状況であり、給水率(水道施設の存在する郡のみ対象)は、たとえば首都ビエンチャン61%(2011年)、ルアンプラバン県34%、カムアン県タケク郡50%である。国が掲げる目標値を達成するために、公共事業運輸省(MPWT)や各県公共事業運輸局(DPWT)を中心として、開発パートナーに対して郡レベルへの水道施設支援または施設投資を誘致している。また、それらは長期ローンや民間企業とのPPPによる30年間契約という形態をとっているケースが散見される。このように、中長期的な水需要予測や、それに伴う施設拡張計画、財政計画、人材育成計画等に基づく事業管理が求められる状況下において、①現在の水道公社は中長期的な事業計画を有しておらず、②一部の水道公社では、他ドナーの支援により政府の定める短期計画(3カ年のローリング事業計画)を有するものの、自力では策定/更新することができず、③短期計画はおろか年間予算計画すらない水道公社もある、という現状であり、長中期的な視野に基づく計画的な事業管理の導入が急務となっている。

3-1-2 優先度

本件の上位目標はラオス国及び我が国の開発政策と整合性がある。

- ◆ <u>ラオス国開発政策との整合性</u>: ラオスでは、1996年の第6回人民革命党大会において、開発目標として「2020年までにLDC(後発発展途上国)を脱却する」ことが決議された。これを受け、都市水道セクターでは、公共事業運輸省が1997年に策定した「通信・運輸・郵便・建設開発計画1996~2020」において、2020年までに都市部の水道普及率を80%とする開発目標が掲げられた。これらの開発目標を受けて、最新の第7次「社会経済5ヵ年開発計画(2011~2015)」は、2015年までに都市人口の67%に給水されること、及び全人口の80%が安全な水にアクセスできることを、それぞれ経済分野、社会分野の目標の一つとして挙げている。本件は、ラオス国の主要な水道事業体である県水道公社の中長期的視野に基づく事業運営能力の向上を図ることにより、都市部における給水率の増加及び安全な水供給に寄与するものであり、ラオス国の開発政策に合致している。
- ◆ 我が国の援助政策との整合性:「対ラオス国別援助計画」(2009年7月)では、6大重点分

野の一つである「社会経済インフラ整備及び既存インフラの有効活用」において、「都市 住民の生活環境改善に資する都市の環境インフラ(上下水道)の整備」を実施すべき援助 の一つに位置付けられており、我が国の援助政策とも合致している。

3-1-3 手段としての適切性

- ◆ プロジェクトの戦略:関係機関における調査・協議を通して、セクターの開発目標達成の ための主要課題は、水道公社の事業運営能力、特に中長期的視野に基づいた事業運営能力 が不十分であることが確認された。さらに、その主要原因であり、本件で取り組むべき課 題は、a.水道公社の事業計画策定/更新に必要なデータ整備が不十分であること、b.水道公 社において、首相決定に定める3カ年ローリング事業計画(短期計画)策定/更新能力が不 十分であること(一部公社は事業計画策定自体の経験がなく、これまでドナー支援プロジ ェクトを通して策定経験のある公社においても、ドナー主導で策定されたため、自力で策 定。更新ができない状態であること)、c. 水道公社の事業計画において長中期的視野が欠 落していること、d. 業務指標によるモニタリングと事業計画のモニタリングの関連づけが 不十分であること、e. 水道公社内部(理事会を含む)及び国レベルの事業計画モニタリン グが不十分であり、モニタリング結果が計画の修正・更新に十分反映されていないこと、 f. 事業計画策定に係るガイドラインが未整備であること、g. 事業計画策定普及の仕組み が未整備であること、であると特定された。これに対して、本件は、5つの手段(① パ イロット水道公社のデータ整備強化(課題a、c)、② パイロット水道公社の事業計画策定 /実施能力強化(課題b、c)、③ PIを含む事業計画の県レベル・国レベルのモニタリング強 化(課題d、e)、④ パイロット水道公社での成果を踏まえた事業計画策定ガイドライン整 備(課題f)、⑤ パイロット水道公社を中核とする事業計画策定普及の仕組み構築(課題g)) によって、上位の課題が解決した状態(中長期的視野に基づいた事業管理能力の強化)の 達成を目指すよう設計されてあり、プロジェクト戦略として適切である。
- ◆ パイロット水道公社の選定:本件において、パイロット水道公社は、計画的な事業管理導入のモデルとなること、及び協力後に、事業計画策定普及の拠点となること、が期待される。首都ビエンチャン、ルアンプラバン県、及びカムアン県の水道公社がパイロット水道公社として選定されたが、以下の理由から選定は適切だと思われる。
 - 首都ビエンチャン水道公社は、中部に位置し、年間事業計画による管理しか経験がないものの、全国的にも別格的に高い基礎能力を有し、人材も相対的に豊富である。政府からは全国の技術移転の拠点に定められており(首相決定37号)、傘下に研修センターを有し、水道公社幹部・技術者対象に、年間約50コースを実施している。また、他県の水道公社に請われて、職員を技術指導に派遣している。以上から、事業計画策定に関して全国的な先進モデル公社となると同時に、関連技術移転の拠点となることが期待できる。
 - ルアンプラバン県水道公社は、北部に位置し、ADBの支援を通じて3カ年ローリング 事業計画 (2009~2011) を有するが自力では更新できない、等の課題もあるものの、 相対的に高い基礎能力を有する。公社幹部は北部の技術移転の拠点となることを目 指しており、他県水道公社への技術指導・視察受け入れの実績もある。以上から、 北部におけるモデルになると同時に、関連技術移転の拠点となることが期待できる。

- カムアン県水道公社は、南部(あるいは南部よりの中部)に位置する。一定の基礎能力は有するが、事業計画はおろか年間予算計画もないなど、計画的な事業管理の経験を有さず、本件の課題を体現する水道公社である。課題を共有する多くの小規模な水道公社にとって、標準的なモデルとなり、関連技術の移転の拠点となることが期待される。
- ◆ <u>日本の技術優位性</u>:日本は、安全な水の安定した供給、そのための、中長期視野に基づいた事業管理に関するノウハウ・経験を有しており、分野における技術優位性が存在する。特にラオス国においては、2003年から技術協力を実施しており、関係機関における評価が極めて高いことから、日本の技術優位性は高いといえる。

3-2 有効性 (予測)

プロジェクト目標の内容が明確であり、プロジェクト目標達成に必要なアウトプットが設計され、 さらに外部条件の設定も適切であることから、本件は有効だと判断できる。

3-2-1 プロジェクト目標の内容

プロジェクト目標は、ターゲット・グループにもたらされる便益として明確に示されており、指標には、プロジェクト目標の内容が的確に捉えられている。指標は客観的に検証可能であり、関連データは実施機関の通常業務から容易に入手可能あるいは本件を通して入手可能になる見込みである。モニタリングの手段としても有効であり、プロジェクト目標の設定は明確であるといえる¹⁵。

3-2-2 因果関係

「3-1 妥当性」の「手段としての適切性」の中の「プロジェクトの戦略」で示したように、本件のアウトプットは、「水道公社の中長期的視野に基づく運営能力の不十分さ」を解決する手段として設定されており、プロジェクト目標とアウトプットの間には論理的整合性が存在する。また、プロジェクト目標にいたる外部条件は、実施機関との確認の結果、満たされる可能性が高い。従って、プロジェクト目標は、プロジェクト終了時に、プロジェクト実施の効果として発現されることが見込まれる。

3-3 効率性(予測)

アウトプットの内容が妥当であり、プロジェクト期間内のアウトプット産出に必要な活動・投入が 適切に計画されていること、外部条件の設定が適切であることなどから、効率的な実施が見込まれる。

3-3-1 <u>アウトプットの</u>内容

アウトプットの指標には、データ管理の改善度、長期・中期・短期事業実施計画による運営管理の 向上度、PIを含む事業計画モニタリングの改善度、ガイドライン策定の達成度、普及メカニズムの 仕組みの改善度を測るものが設定されており、アウトプットの内容が的確に捉えられている。指標は 客観的に検証可能であり、関連データは実施機関の通常業務から容易に入手可能、あるいは本件の活 動を通して入手可能になる見込みである。達成度モニタリングの手段としても有効であり、アウトプットの内容は明確であるといえる。

15 なお、指標及びその判断基準(目標値)は、プロジェクト開始から6ヶ月以内に、ベースライン・データに照らし合わせて設定/修正することとなっており、適切性がより確保される見込みである。

3-3-2 活動

各アウトプットには、関係者間の協議を通して、必要かつ十分な活動が計画されており、POには 各パイロット水道公社のスケジュールが明確に示されている。

3-3-3 投入の質・量・タイミング

活動に必要な投入は、PDM 及び PO に基づき、関係者間の協議を通して決定されている、あるいはその予定である。

- ◆ <u>ラオス側</u>: プロジェクト・スタッフについては、既に暫定リストが作成されており、プロジェクト開始時から配置されると見込まれる。スタッフは専任ではないが、プロジェクトの活動は各機関の本来業務であることから、プロジェクト活動に従事する時間は確保されると見込まれる。
- ◆ <u>日本側</u>:主な専門家派遣元及び研修員受け入れ先としては、先行案件の実施に関わり、本件の事前調査にも参加した、さいたま市水道局が予定されている。同水道局は、ラオス国の水道事情及び水道公社の課題に良く通じ、豊富な研修員受け入れ経験も有している。これまで派遣された専門家ならびに研修に対するラオス側の評価も高いことから、本件においても適切な投入が行われると期待される。現地で適切な人材確保が可能な一部分野(教授法研修等)には、ローカル・リソース活用が検討されている。

3-3-4 外部条件 前提条件

実施機関との確認の結果、満たされる可能性が高い。

3-3-5 その他、効率性を促進する要因

効率性を促進する要因として、①パイロット水道公社への技術移転は、各公社の技術力・受容力に応じて、段階的に行われること、②パイロット水道公社間の調整会合等、現場交流を含む相互訪問の際に、公社間の経験の共有や先行公社職員による技術移転がはかられること、③パイロット水道公社を管轄する DPWT が、JCC のメンバーに含まれていること、④首都ビエンチャン水道公社研修センターにおいて改訂/開発される研修コースの教材には、プロジェクトで作成されたマニュアル、ガイドライン類が利用される予定であること、が挙げられる。

3-3-6 留意事項

- ◆ アジア開発銀行 (ADB) 及びノルウェー開発協力庁 (NORAD) との調整:本件と並行し、ADB及びNORADが、水道公社に対し、3カ年ローリング事業管理計画策定を含めた能力強化を支援している/支援する予定である (「4-2-5 他援助機関による協力実施状況」参照)。主たる調整は各プロジェクトの責任機関であるDHUPが担うことでDHUPと合意しているが、事業計画策定ガイドラインや事業管理モニタリング・システムの全国適用において、ADB及びNORADの支援を受けた水道公社の混乱を招くことにならぬよう、通常から、ADB及びNORAD関係者 (コンサルタントを含む)と積極的な情報共有・意見交換を行うことが重要である。
- ◆ プロジェクト管理・調整:本件の5つの実施機関及び専門家チームの連携・調整の促進のた

めに、異なるレベルでの内部定期会合が活動として組み込まれているが、これらを有効に活用することにより、効率性をより高めることが望まれる。

3-4 インパクト (予測)

上位目標は、本件の効果として、プロジェクト終了から3年以内に発現すると見込まれる。また、 その他正のインパクトが予測される。負のインパクトは現時点で予測されない。

3-4-1 上位目標レベルのインパクト

プロジェクト終了後には、本件の効果として、持続可能で安定的な水道体制の強化が、①パイロット水道公社において長期・中期・短期事業計画が自力で策定/更新され、②他の水道公社においては、DHUPの普及計画に基づき、事業計画策定ガイドライン・関連マニュアルの活用、NPNL研修センターを含むパイロット水道公社による必要に応じた技術的支援により、長期・中期・短期事業計画が策定/更新されるという形で発現すると期待される。指標には、プロジェクト終了から3年後の他水道公社における長期・中期・短期事業計画策定状況、及びパイロット水道公社における事業計画策定/達成状況が設定されており、上位目標の内容は的確にとらえられている。指標は客観的に検証可能であり、関連データは、本件を通して、実施機関の通常業務から容易に入手可能になる見込みである。モニタリングの手段としても有効であり、上位目標の設定は明確であるといえる。また、上位目標にいたる外部条件は、実施機関との確認の結果、満たされる可能性が高い。以上から、上位目標は本件の効果として、プロジェクト終了から3年後に達成されると見込まれる。

3-4-2 その他の正のインパクト

①パイロット水道公社の給水区の住民に対してより安全で安定した水供給が可能になる、②普及メカニズム構築の一環として実施されるワークショップや研修の参加を通して、他県水道公社において、長中期的視野に基づく事業管理の知識が向上する、等のインパクトが期待できる。

3-4-3 負のインパクト

現時点で、特記すべき負のインパクトは予測されない。

3-5 持続性(見込み)

本件による正の効果は、相手国政府によりプロジェクト終了後も継続されるものと見込まれる。主要ポイントは以下の通り

3-5-1 政策・制度面

水道公社の事業計画に基づく管理能力強化に対する法的・政策支援は継続すると見込まれる

3-5-2 組織・財政面

プロジェクト活動は、基本的に各実施機関の本来業務であり、組織ニーズと合致している。オーナーシップも高く、プロジェクト後の活動の継続が見込まれる。一方、プロジェクト・スタッフは正規職員であることから雇用は確保されており、専門性も高いことから、引き続き関連活動に従事することが見込まれる。さらに、ポスト・プロジェクト戦略として、DHUPが事業計画策定普及計画を策定

することになっており、この中でプロジェクト終了後の各機関の組織的役割・責任、予算措置の負担 等が明確にされる見込みである。

3-5-3 技術面

本件では、先行案件を通じて効果的であることが実証された OJT を中心とした技術移転を実施する。また、特に、パイロット水道公社においては、プロジェクト期間中に、データ整備/事業計画策定→計画実施→モニタリング→データ管理/計画見直しのサイクルを複数回経験することにより、関連スタッフが、自力で事業計画策定/更新関連活動を継続し、公社内外に技術普及を行う能力が着実に身につくと期待される。さらに、水道事業計画に基づく管理は水道公社の本来業務であることから、移転技術、事業計画・データベース・マニュアル等の成果品は、協力終了後も引き続き活用/更新されると見込まれる。また、他の水道公社において、「3-4 インパクト」の「上位目標レベルのインパクト」で記したように、移転技術及びプロジェクト成果品を活用した事業計画策定の普及が期待される。

3-6 モニタリングと評価

3-6-1 モニタリング

本件においては、実施機関のプロジェクト・スタッフと日本人専門家とが合同で、最新 PDM 及び PO/年間 PO (APO) に基づき、主として活動の進捗度及びアウトプットの達成度に関する定期モニタリングを行う。全体的なモニタリングは、プロジェクト管理チームが行い、パイロット水道公社レベルのモニタリングはパイロット・プロジェクト管理チームが行う。

プロジェクト管理チームは、プロジェクト・ディレクター、副プロジェクト・ディレクター (2名)、プロジェクト・マネージャー (2名)、パイロット・プロジェクト・マネージャー (3名)、長期専門家から構成される。定例会合は、半期に一度開催され、半期報告書 (①APO 及び指標の当該期の進捗、②次半期の活動・投入計画、③プロジェクト実施上の課題及び対策等が含まれる) 16 のレビュー、その他関連事項の情報共有・意見交換等を目的とする。また、年1回の合同調整委員会(JCC)定例会合の前に、年間報告書及び次年度のAPO案をとりまとめる。

パイロット・プロジェクト管理チームは、各水道公社のパイロット・プロジェクト・マネージャー、副パイロット・プロジェクト・マネージャー(2名)、スタッフ・イン・チャージ、及び長期専門家から構成される。定例会合は月1回開催され、①当該月の進捗、②今後の計画、③プロジェクト実施上の課題及び対策、④その他関連事項の情報共有と意見交換等を目的とする。現地派遣中の短期専門家及び水道公社を管轄する県公共事業運輸局代表も、情報共有と意見交換のため招かれる。

なお、指標のモニタリングは、PDM の指標ごとにデータの収集→集約整理→判断決定→フィードバックの担当者・頻度等を決めて、プロジェクト内部で行う(下表のモニタリング・チャートのフォーマット例参照)。本件において、指標はプロジェクト開始から 6 ヶ月に最終化することが計画されているが、このときにモニタリング・チャートもあわせて作成することが望ましい。

^{1.0}

¹⁶ 半期事業進捗報告書の英語版(全部あるいは一部)と兼ねることも可能である

表 3-1 アウトプット1のモニタリング・チャートのフォーマット例

Indicator	Means of	Data Collection		Data Summarization			Judgment/Decision		Feedback		
of PDM	Verification	Person	Timing/	Method	Person	Timing/	Method	Person/	Timing/	Timing	Method
	of PDM	in	frequency		in	frequency		meeting	frequency		
		charge			charge			in			
								charge			
1a****	***										
1b***	***										

参考: JICA『事業マネジメントハンドブック』(2007)

3-6-2 評価

Date:

本件の評価調査は、JICA 職員を中心とする日本側調査団と、ラオス側が選定したラオス側評価メンバーによって構成される合同評価調査として実施され、「JICA 新事業評価ガイドライン」に沿って、評価5項目の観点から行われる。評価調査はプロジェクトの中間地点(中間レビュー調査)及びプロジェクト終了の約半年前(終了時評価調査)の二度行われる。中間レビューにおいては、プロジェクト活動の改善を図るための対策についての提言と他の類似案件への教訓を引き出される。終了時評価においては、プロジェクトの残り期間の活動の改善を図るための対策についての短期的提言及びプロジェクトの効果を持続させるための長期的提言、さらに他の類似案件への教訓が引き出される。さらに、プロジェクト終了後3年を目処に、事後評価調査が実施され、プロジェクトの上位目標の達成やその他のインパクト及び自立発展性/持続性について検証が行われる。

なお、中間レビュー評価、終了時評価の提言のフォローアップに関するモニタリングはプロジェクト管理チーム (パイロット水道公社レベルはパイロット・プロジェクト管理チーム) が中心となって行い、結果を JCC に報告する (年間報告書に記載する)。また、専門家チームはこれに加え、JICA に対するプロジェクト事業進捗報告書にて上記モニタリング結果を報告することが望ましい。参考までに、フォローアップ状況に関するモニタリング・フォーマット例を以下に示す。

表 3-2 評価の提言のフォローアップ状況のモニタリング・フォーマット例

	Degree of Progress: A=Achieved、B=Ongoing、C=Action not yet taken、D=Others							
		Suggestions/ Recommendations of Joint Evaluation			Current Situation/Remarks			
	1.							
	2.							
	•							

第4章 プロジェクト実施の背景

4-1 国家政策におけるプロジェクトの位置づけ

4-1-1 ラオス国政策における位置づけ

ラオス国では、1996年の第6回人民革命党大会において、開発目標として「2020年までにLDC(後発発展途上国)を脱却する」ことが決議された。これを受け、都市水道セクターでは、公共事業運輸省が1997年に策定した「通信・運輸・郵便・建設開発計画1996~2020」及び1999年の上水道整備に関する首相令において、2020年までに都市部の水道普及率を80%とする開発目標が掲げられた。これらの開発目標を受けて、第7次国家社会経済開発計画(2011~2015)においては、2015年までに都市人口の67%が安全な水にアクセスできることを、経済分野の目標の一つとして挙げている。

本プロジェクトは、ラオス国の主要な水道事業体である県水道公社の中長期的視野に基づく事業運営能力の向上を図ることにより、都市部における給水率の増加及び安全な水供給に寄与するものであり、ラオス国の開発政策に合致している。

4-1-2 我が国援助政策との関連

我が国の『対ラオス人民民主共和国 国別援助方針』において、「経済・社会インフラ整備」は援助重点分野と位置づけられており、上水道分野については、バランスの取れた経済発展を実現するため、環境と調和した快適な社会構築に資することを目的として支援を行っていく方針を掲げており、本件は我が国の援助政策とも合致している。

4-2 上水道セクターの概要

4-2-1 都市部における水道普及率

上述のとおり、ラオス国政府は 2020 年に都市部人口の 80%、2015 年に 67%について都市水道を普及させる計画を有している。他方、2010 年時点での値は以下のとおりである。

2010年 都市部人口 1.760.500 人

- ❖ 水道による給水を受けている人口 985,872 (56%)
- ❖ 水道による給水を受けていない人口 774.628 (44%)

4-2-2 関連法·政策

水道に係る法令等に関しては以下に整備された法制度があり、これらの法制度及び関連規定の下、 行政側は水道にかかる指導・監督を水道事業体はその運営を実施している。

- 水道法が2009年7月9日国会で承認
- 2005年7月の首相命令 No.191

「都市水道運営に関する規制: Regulation of Urban Water Supply Operations」

- 1999 年 9 月の首相決定 No.37

「水道セクターに関する管理と開発:Management and Development of the Water Supply Sector」

- 2004年4月の公共事業省決定 No.5336「Water Supply Tariff Policy of Lao PDR」
- 2005年7月公共事業省住宅都市計画局決定 No.8027「WSD's roles and responsibilities」
- 水道に関する方針では、2003 年 10 月の ADB TA 3006 (No.19/WRCC)「Water Sector Strategy and Action Plan」及び 2007 年 DHUP「Water Sector Investment Plan (WSIP)」
- 2010年6月15日にWSRC No.07「Guidelines on Service Performance Targets for Water Suppliers and Regulatory Monitoring of Service Level」

本プロジェクトに係る事業経営、人材育成、財務面(水道料金等)、無収水、料金徴収等のキーワードとラオスの関連法令の関係を以下に整理する。

(1) 水道事業運営及び職務

- 水道法44条(水道事業者の義務)
 - 4:事業実施結果を常に公共事業省へ報告
- 首相命令 No. 191 3条 (水道事業規制) 技術規制と財務規制からなり、DHUP は WSRC の指示のもと、事業規制を履行
- 首相命令 No. 191 4条-17条(技術規制)

MPWT による給水区域の承認 (4条)、事業の許可申請 (5条)、水道サービス (6条)、水道システムの開発と維持 (7条)、技術性能基準 (8条)、水質基準の維持と検査手続き (9条)、サービス性能水準の監視 (10条)、技術性能の評価 (11条)、地図、図面、資産明細書の保管 (12条)、利用者との関係 (13条)、地役権 (14条)、損害補償 (15条)、強制執行通知と通知の順守 (16条、17条)

- 首相命令 No. 191 18条-27条 (財務規制) 料金設定の策定と修正 (18条)、料金設定ガイドライン (19条)、料金承認権限 (20条)、料金決定プロセス (21条)、水道料金の承認 (22条)、料金の見直し (23条)、水道利用料金の徴収権利と不払い者への強制措置 (24条)、財務実績の評価 (26条)、財務諸表の継続作成 (27

- 首相決定 No.37 2条(水道セクターの役割)
 - 1: MPWT、DHUP、WASA の職務
 - 5: 県行政(公共事業省)、水道局の職務
- 首相決定 No.37 5条(水道事業者の事業運営)
 - 5: 水利用効率、水質、供給信頼度、職員業務効率、利用者からの苦情発生率の各業務指標に 基づいた事業運営と維持の実施
- WSRC No.07 水道事業基準及びモニタリング
- (2) 人材育成

条)

- 水道法4条(水道事業に対する行政の方針)人材開発への投資促進
- 水道法 59条(公共事業省の権利と義務)
 - 7:水道事業者の知識を高める
- 首相決定 No.37 2条
 - 1: DHUP による水道の計画と管理にあたる人材の訓練計画の策定

- 首相決定 No.37 7条

定

1:首都ビエンチャン水道局の人材育成に関する取り組み

首都ビエンチャン水道公社は技術開発を行い、さらにトレーニングや情報提供を広く行なわなければならない。さらに、県水道公社にてプロジェクトを実施する際には、技術支援を行わなければならない 17 。

- 2: 県水道局の人材育成に関する予算の確保等の取り組み
- (3) 独立採算、水道料金、水道料金による給水コスト回収率、資本利益率
- 水道法 40 条 (水道料金の規定) 料金規定方針の承認、料金に含める主要構成 (維持管理費、借り入れ資本費、利息等)の規
- 水道法 42 条 (水道料金の承認) 水道料金の承認は都知事、県知事が有する
- 水道法 59条 (公共事業省の権利と義務)
 - 10: 水道事業者の事業実施結果を常に政府へ報告
- 首相決定 No.37 4条 1-8 (事業運営の資金調達と資金回収) 1-8: 水道事業者による資本投資とその資金源、運転管理費・減価償却回収に見合う・世帯 収入に見合う料金設定、国による投資支援等
- 首相決定 No.37 5条(事業運営)
 - 1:3か年ローリング事業計画見直し、企業ベースの会計システムの適用、年度財務諸表の作成とDHUPへの報告
- 公共事業省決定 No.5336 2条(水道料金政策) 家庭接続と商業接続等へのクロスサブシディーの適用促進
- 公共事業省決定 No.5336 3条(コストリカバリー) 長期間の平均コストアプローチによる水道料金設定 長期アセット・マネジメント計画に基づく水道料金設定 減価償却の水道料金への計上 税部分の水道料金への計上
- 首相決定 No.37 5条(事業運営)6 :減価償却の繰入
- (4) 料金徵収率
- 首相決定 No.37 5条(事業運営)4 : 水道料金請求後3ヶ月間以内に回収を行う。料金徴収率目標90%
- (5) 無収水
 - 首相決定 No.37 5条(事業運営)2 : 無収水率の30%未満水準維持

^{17 2011} 年カムアン県無償資金協力プロジェクトにて、実際に首都ビエンチャン水道公社からカムアン県へ技術者を派遣した。旅費・宿泊費等の実費のみ、サービスを受ける水道公社が負担し、派遣者の人件費等は首都ビエンチャン水道公社が負担していた。

4-2-3 当該セクターの関連機関

(1) 概観

国レベルの水道行政は公共事業省(MPWT)が管轄しており、水道整備行政を住宅都市計画局(DHUP)下の水道部(WSD)が、規制行政を水道規制委員会(WSRC)下の水道規制室(WASRO)が担当している。一方、地方(1 都 16 県)レベルの水道行政は、MPWT の出先機関である都/県公共事業運輸局(DPWT)が担っている。また、DPWT の監督下、各都/県の水道公社が管内の水道施設の管理・運転に責任を負っている。なお、ラオス政府の会計年度は 10 月~翌年 9 月だが、水道公社の会計年度は 1~12 月である。

水道セクター関連機関の組織と機能は、下表のとおり、首相令を中心とする法規類によって定められている。

	年月	タイトル
1.	1994	企業法
2.	1999	首相決定 37 号「水道セクターの管理と整備」
3.	2003	地方行政法
4.	2005.7	首相令 191 号「都市水道事業の規制」
5.	2005.7	住宅都市計画局(DHUP)決定 8027 号
6.	2005.9	改正企業法
7.	2007.10	首相令 373 号「公共事業運輸省(MPWT)の組織と活動」
8.	2008.10	大臣決定 13265 号「水道規制委員会(WSRC)の組織と
		活動」
9.	2008.10	大臣決定 13266 号 「水道規制室 (WASRO) の組織と活動」

表 4-1 ラオス国水道セクター関連機関の機能を定める法規類

(2) 国レベルの水道行政

概観で記したように、ラオス国の都市水道行政は MPWT が管轄しており、水道整備行政を DHUP 下の WSD が、規制行政を WSRC 下の WASRO が担当している。 DHUP の水道担当副局長 と WASRO 室長は同格である。

1) DHUP 及び WSD

DHUP は、WSD を通して、水道セクターの開発戦略・投資計画策定を担っている。WSD は、都市水道セクターの長期資本投資プログラムを管理し、多様な実施機関・ドナー・プランナー・業者間の調整を確保する。WSD はまた、技術基準及び技術ガイドラインを担当している。WSD の機能は以下に示す通り。

WSD の機能

- ① 投資プロジェクトの管理と調整
- ② 県政府機関 (provincial agencies) の作成したプロジェクト/サブ・プロジェクトの審査
- ③ セクターの人的資源開発
- ④ 水道システム・現場衛生(site sanitation)の計画作成・管理にかかる職員研修を計画・調整する
- ⑤ 適正技術を含むセクターの技術進歩にかかる最新情報を把握し、関連機関に情報を普及する
- ⑥ 水供給者(県水道公社、民間セクター、PPP、コミュニティ供給者)に対する技術支援と助言
- ⑦ 「水道投資計画(Water Supply Investment Plan)」の定期的更新に基づき、水道に関する計画作成・管理・モニタリングを調整する
- ⑧ 民間セクター・イニシアティブのフォーカル・ポイントとなる
- ⑨ 水道及びオンサイト衛生セクターの政策・整備の実施の管理・監督・モニタリング

参考:DHUP 公式サイト掲載の" Management and Technical Guidelines –LAO PDR Volume A-Water Supply Sector Overview" pA-6~A-7

(http://www.dhup.gov.la/DHUP's_Doc_EN/Technical_EN/Technical%20guideline%20VOLUME%20A%20draft%203%20Feb%202008.pdf 2012 年 3 月 12 日アクセス)

2) WSRC & WASRO

i) WSRC

WSRC は、公共事業運輸大臣直轄の委員会であり、大臣に任命される。2008 年の大臣令で任命されたメンバーの役職は下表のとおり。

WSRC の構成

	役職	備考
1.	MPWT 副大臣	委員長
2.	DHUP 局長	副委員長
3.	財務省国営企業財務管理局局長 (Director General of the	副委員長
	Department for Financial Management o SOE, Ministry of Finance)	
4.	科学技術審議会副総裁(Vice President of Science and Technology	副委員長
	Council)	
5.	首相府ビジネス促進室室長(Director of the Business Promotion	副委員長
	Office, Prime Minister's Office)	
6.	保健省衛生疾病予防局局長(Director General of the Hygiene and	委員
	Disease Prevention Department, Ministry of Public Health)	
7.	商工会議所副書記 (Deputy Secretariat of Commerce and Industry)	委員
8.	首都ビエンチャン水道公社総裁(水道公社代表して)	委員
9.	MPWT 女性ユニオン・チーフ (消費者代表として)	委員
10	WASRO 室長	委員及び WARC
		事務局長

参考: WASRO 提供資料 (Minister's Decision on the Organization and Activities of the Water Supply Regulatory Office No.13266/MPWT)

WSRC の職務は以下の通り。

WSRC の職務

- ① 国家の水道政策に基づき、政策を定義し、全般的な規制活動を監督する
- ② WASRO が策定した規制計画 (regulatory planning) (アクションプラン、人員配置、研修、予算、財務計画を含む)を、MPWT 大臣への提出/承認 (approve) 前に、検討・承認 (endorse) する。
- ③ WASRO が策定した水道事業の規制活動に関するガイドライン、規定 (regulations)、ベンチマーク、及び業務指標 (PI) を承認 (approve) する

参考: WASRO 提供資料 (Minister's Decision on the Organization and Activities of the Water Supply Regulatory Office No.13266/MPWT)

ii) WASRO

WASRO は WSRC の事務局であり、WASRO 室長は WSRC の委員である。WASRO は WSRC の下、水道事業規制を行う。また、全ての経済セクターの水道セクターへの参入促進を担う。WASRO の主な職務・権限は、以下に示す通り。

WASRO の主な職務・権限

<<u>主な職務</u>>

- ① 水道事業の規制に関する政策・計画の草案を検討し、実行の前に承認機関である WSRC に 提出する
- ② 水道事業体のビジネス及び顧客サービスのモニタリング・コントロールのレファレンスとしての、規定 (regulations)、技術的・経済的仕様、種々のガイドラインの草案を検討する
- ③ 全ての経済セクターの参加促進、経済的・財政的・環境的に持続可能な水道事業のモデルと様式の利用について検討する
- ④ 水道事業体の改善のために、事業体がビジネス管理、会計、財務、顧客サービスを体系化する能力をモニタリング・コントロール・評価する
- ⑤ 水道事業体の管理の様々な分野を体系化する能力を改善・向上するために、技術革新を奨励 し、先進技術・適正技術の導入を促進する
- ⑥ 水道事業に関するデータ・統計を収集・管理し、水道事業体のパフォーマンスに関する年次報告を作成・発行する

<主な権限>

- ① 水道事業の規制及び水道セクターへの民間参入促進に係る、オーダー・告知 (notice)・ガイドラインの発令/発布、種々の技術仕様・基準の公布を提案する
- ② 水道事業体の様々な分野の能力について査察及び評価を行う

参考: WASRO 提供資料 (Minister's Decision on the Organization and Activities of the Water Supply Regulatory Office No.13266/MPWT)

- (3) 地方水道行政
- 1) ラオスの地方行政

ラオスの地方行政は、県級(県・都)、郡級(郡・準郡)、村の3段階に分かれる。県級は16

県(Province)1都(Capital¹⁸)から構成され、県庁が置かれる郡(District)が県都とされる。県知事(首都ビエンチャンの場合は市長)は首相の提案に基づき国家主席が任命し、中央省庁の大臣と同格である。郡長は県知事/市長が任命する。県・郡には中央省庁及び省庁同格機関の出先機関が置かれ、県・郡の独自機関と省庁出先機関の集合体が、県知事/市長・郡長の調整の下、連携して地方行政を行っている。地方行政法(2013年)の定める県級(県/都¹⁹)の地方行政機関の役割は以下に示す通り。

ラオス国の県級地方行政機関の役割

<県/都の行政機関>

県/都の行政機関は(i) 県/都内閣(Provincial Cabinet)及び(ii) 中央省庁・省庁同格機関の出先機関から構成される。県/都内閣の役割は、知事/市長の職務管理の補佐(プログラム・プロジェクトの計画策定、書類の精査・草案作成・最終化・編集、関連党機関との調整、情報提供、中央・地方政府機関の法的行為の監督と支援、県/都の運営の促進等)である。一方、出先機関の役割は、関連省庁及び県/都による関連セクター管理の補佐を地方分権の原則に基づいて行うことである。

<知事/市長の責務と権限>

知事の責務と権限には、①県/都行政会議の開催・主宰、②県/都の社会経済開発計画及び予算計画の検討・策定、③社会経済開発計画等の実施、県/都で実施される中央政府のプロジェクトのモニタリングと査察、④法に基づいた決定、命令、指示、通告、その他の規則の発布、⑤中央省庁の県/都の出先機関の Director、Deputy Director 並びに郡の出先機関の Head 任命の提案あるいは同意、⑥中央省庁の郡の出先機関の Deputy Head の任命、異動、解任、⑦関連省庁の職員(公務員)の監督と報告を含む、管轄組織と人員のパフォーマンスの管理、⑧県/都の全体的状況に関する中央政府への定期報告、⑨政府の指示による国際機関への協力、等が含まれる。

<県/都の行政会議>

県/都の行政会議は、知事によって召集され、定例会議は月1回開かれる。会議の参加者は、副知事/副市長、県/都内閣室室長、中央省庁の県/都レベルの出先機関のDirectorであり、必要に応じて、郡長、関連する党の代表が招待される。会合ごとに議事録が作成され、議長(知事)によって承認・署名された後、参加者及び関連党機関による実施のために配布される。重要事項の決定がある場合は、決議(resolution)が作成される。議題には、①県/都の社会経済戦略・開発計画、②県/都の予算、③県/都内の投資プロジェクトの検討、④県/都内における活動の実施報告、⑥甲原財政のの年次報告、⑥国際財政、国際協力、②人事管理等が含まれる。

⑤中央政府への年次報告、⑥国際関係、国際協力、⑦人事管理等が含まれる。 参考:ラオス国首相府行政公務庁(PASCA)公式サイト掲載の Law on Local Administration (2013)

(http://www.pacsa.gov.la/index.php?option=com_content&view=article&id=51&Itemid=88&lang=en 2012年3月12日アクセス)

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 $^{^{18}}$ ビエンチャン県から都市部を分離して設立された首都ビエンチャン(ラオス名: ナコン・ルアン・ビエンチャン)を指し、現在、9 郡から構成される。英語表記は、本件では Vientiane Capital を使っているが、Vientiane Capital City (Law on Local Administration)、 Vientiane Prefecture が使われることがある。また、日本語表記について、本件では、「首都ビエンチャン」で統一しているが、他に、ビエンチャン「都」、ビエンチャン「特別市」、ビエンチャン「市」、ビエンチャン「するおも、が使われることがある。

¹⁹ ラオス国首相府行政公務庁(PASCA)公式サイト掲載の Law on Local Administration における「都」の英語表記は「City」であり、首長は「Mayor」である。

2) 水道分野の地方行政

全国各地の都市水道の開発プロセスの調整の主たる責任機関は MPWT であり、MPWT の出先機関として、県レベルに公共事業運輸局 (DPWT)、郡レベルに公共事業運輸事務所 (OPWT) が設置されて、各レベルの水道事業の指導・監督を行っている。さらに、将来的には、DPWT を都市水道事業体の許認可機関とすることが検討されている。一方、水道料金の承認は、従来通り、事業体の要望及び WSRC の提言に基づき、県知事が行うことになっている。

水道行政における、県の責任は、1999 年の「水道セクターの管理と整備」に係る首相決定 37 号によれば、以下の通り。

- ① 上水道整備に係る調整・促進・投資支援
- ② 県内水道セクターに係る条例策定
- ③ 県内の水道分野のプロジェクトの監督

3) 都/県水道公社の事業管理

ラオスの1都16県には、それぞれ水道公社(Water Supply State Enterprise: WSSE)が置かれており、当該 DPWT の監督下、都/県内の水道施設の管理・運転に責任を負っている。県都の水道施設の管理・運転は県都にある本社が担当するが、他郡の水道施設の運転・管理は、支社(Branch Office)が担当する。

水道公社の責任は、1999 年の「水道セクターの管理と整備」に係る首相決定 37 号によって、 以下の通り定められている。

水道公社の事業管理

- ① 水道公社は、当該県内のメーターのついた全ての水道の管理・運転に責任を負う。公社は商業的原則に基づき、3か年ローリング事業計画に従って運転し、WASAに報告せねばならない。全ての水生産・消費は完全かつ正確に計測されねばならない
- ② 水道公社は、無収水 (NRW) レベルを 30%以内に抑えるために、WASA によって勧告された 無収水対策を実施する
- ③ 水道公社は、商業会計システムを採用・維持し、年間の財務勘定(financial accounts)を作成し、WASA に報告せねばならない

参考:"Prime Ministerial Decision No37/PM on Management and Development of Water Supply Sector"

改正企業法(2005年)によれば、県レベルの公社は、県知事/都市長の承認するバイ・ロー(公社の運営管理、会合と議決方法等含む)の作成が義務付けられ、理事会(Board of Directors)によって運営される。理事会メンバーは、最初、関連セクターの同意を得て知事が任命するが、以降は、株主会合の決議に基づき、知事が任命する。パイロット水道公社においては、副知事が理事長を務め、理事には、関連省庁の県レベルの出先機関(公共事業運輸局、財務局、投資計画局等)の代表、公社総裁、公社従業員代表が含まれている。公社の理事会の主な職務と権限は以下の通り。

改正企業法(2005)の定める公社理事会の主な職務と権限

- ① 中心的な調整機関として行動し、各理事のタスクを監督する
- ② 株主会議の採択のために、公社の管理運営計画を決定する
- ③ 公社のバイ・ローで決定されるその他の権限を行使し、職務を遂行する

参考:在ラオス日本大使館公式サイト掲載の Law on Enterprise (2005)

(http://www.la.emb-japan.go.jp/jp/laos/Law_on_Enterprises.pdf 2012年3月21日アクセス)

旧企業法(1994年)には公社理事会及び公社総裁の役割について、改正企業法より詳細に定められている。パイロット水道公社での聞き取りによれば、理事会と総裁の主な役割は、概ね旧企業法の規定に沿っていることから、改正企業法から除外された項目の多くは、同法によって策定が義務付けられたバイ・ローに含まれている可能性がある。参考までに、以下、旧企業法の定める公社の理事会及び総裁の主な職務と権限を示す。

旧企業法(1994)の定める公社理事会及び総裁の主な職務と権限

<公社理事会の主な職務と権限>

- ① 公社の事業戦略を可決する
- ② 公社の事業活動の結果を評価する
- ③ 公社総裁 (Managing Director) の任免を提案する
- ④ 財務省の規定に基づき、公社総裁・副総裁の給与・手当を決定する
- ⑤ 公社の資本構造を決定する
- ⑥ 負債と資本の比率を決定する
- ⑦ 公社が達成すべき目標を決定する
- ⑧ 公社総裁の推薦に基づき、会計責任者の任命を可決する
- ⑨ 監査役の任命を提案する

<公社総裁の主な職務と権限>

- ① 理事会の承認した戦略的ゴール・計画に従った公社の管理・運営について、理事会に説明責任を負う
- ② 理事会によって定められた範囲内で、公社に関する全事項の決裁を行う
- ③ 計画、財務諸表、活動の要約、及び理事会によって要求された特定の報告書を、理事会に定期的に提出する

参考: Business Law (1994)

なお、旧企業法によれば、理事会の任期は3年で再選可能である。理事会の例会は3か月に1 回召集される。臨時会は、必要に応じて、理事長の要求または全理事の半数以上の提案により、 いつでも召集できる。公社の総裁は、理事会の提案に基づき、財務省により、任命または解任さ れる。副総裁は、総裁の提案に基づき、理事会により、任命または解任される。理事会は、公社 総裁の日常業務管理を監督するが、直接には日常業務管理に参与しない(公社総裁を兼任する理 事をのぞく)。

4) 首都ビエンチャン水道公社の役割

上記 4-2-2 (2) 記載のとおり、首都ビエンチャン水道公社は他県への技術サポートについて、 責務を負っており、研修提供、技術者の派遣等を行わなければならない。

4-2-4 日本側の協力実績

(1) 技術協力

ラオスの水道セクターにおいては、1990年代から断続的に個別専門家が派遣されており、2003 ~2006年には公共事業省水道局(当時)及び首都ビエンチャン水道公社を実施機関とする「水道事業体人材育成プロジェクト」が実施された。同プロジェクト終了後は、2006~2008年には、さいたま市水道局を日本側実施機関とする草の根技術協力「上水道配給水管維持管理技術向上」が実施され、2009年度には地方水道人材育成分野の個別専門家が派遣された。

表 4-2 技術協力プロジェクトの実績

	年度	事業名	実施機関	日本側協力機関
1.	2003~	水道事業体人材育成プロ	公共事業省水道局、首都ビ	さいたま市水道局、神
	2006	ジェクト	エンチャン水道公社	奈川県水道局、厚生労
				働省他

表 4-3 草の根技術協力(地域提案型)の実績

	年度	事業名	ラオス側実施機関	日本側実施機関
1.	2006~	上水道配給水管維持管理	公共事業省、首都ビエンチ	さいたま市水道局
	2008	技術向上	ャン及び、チャンパサック、	
			サバナケット、ルアンパバ	
			ン、カムワン県水道公社	

表 4-4 個別専門家の派遣実績

	年度 (期間)	派遣分野名	派遣元
1.	1994(6 カ月)	上水道開発政策	さいたま市水道局
2.	1999~2000(10 カ月)	水道計画策定	さいたま市水道局
3.	2000-2002(2年間)	水道計画	広島市水道局
4.	2008-2009(1 年間)	地方水道人材育成	さいたま市水道局

(2) その他

表 4-5 開発調査の実績

	年度	事業名	実施機関
1.	2002	ビエンチャン市上水道拡張整備計画調査 (F/S)	
2.	2005	ビエンチャン市上水道拡張計画基本設計調査	

表 4-6 無償資金協力の実績

	年度	事業名	実施機関
1.	1997	チエンパサック県・サラワン県地下水開発計画(1/2期)	
2.	2001	サバナケット地区上水道施設改善計画	
3.	2006	ビィエンチャン市上水道施設拡張計画	

4-2-5 他援助機関による協力実施状況

- (1) アジア開発銀行 (ADB) 及びノルウェー開発協力庁 (NORAD) 本件は、DHUP の調整の下、下記の ADB 及び NORAD 関連プロジェクトと継続的に情報共有・意見交換を図り、水道公社の事業管理能力強化に取り組む予定である。
- 1) ADB「スモール・タウン水道衛生分野プロジェクト (SWSSP)」(2009-2014) SWSSP の責任機関は DHUP である。水道セクターの主要活動は以下の通り。
 - ① 水道セクターの計画・管理・規制の強化
 - 「都市水道・衛生セクター戦略(~2020)」策定
 - 「水セクター投資計画」更新
 - 水道分野の人材開発戦略/スカラシップ・プログラム作成
 - スモール・タウン 12 郡を管轄する 10 県の水道公社の能力強化(3 カ年ローリング事業計画策定・実施能力強化を含む)
 - ② スモール・タウン 12 郡 (10 県) における水道施設の新規建設・復旧 (サブ・プロジェクトと呼ばれる)

なお、SWSSPのプロジェクト調整ユニットに確認したところ、上記①②において対象となる県水道公社は、北部4県(ボーケーオ県、フアパン県、ルアンナムタ県、ウドムサイ県)、中部1県(ビエンチャン県)、南部5県(アッタプー県、チャンパサック県、サーラーワン県、サバナケット県、セーコーン県)の水道公社であり、本件(首都ビエンチャン、ルアンプラバン県、カムアン県)とは重複しない。また、①で対象とする事業計画は本件でいうところの短期計画であり、SWSSPでは長期・中期計画は策定されない。

参考までに、SWSSP 支援の3か年ローリング事業計画のアウトライン例(ルアンナムタ県水道公社)を以下に示す。

SWSSP 支援の3か年ローリング事業計画のアウトライン例-ルアンナムタ県水道公社

- ① 序
- ② 組織のビジョン、ミッション、目標20
- ③ 顧客と消費者(一般情報、給水区ごとの情報、顧客関連の課題が含まれる)21
- ④ 管理エリアに影響する外部圧力
- ⑤ 資産及びオペレーション情報(組織、人材、水道システム、各給水区の情報が含まれる)
- ⑥ 事業計画イニシアティブ (活動項目ごとのアクションプランが含まれる) 22
 - 活動1:A給水区の既存水道システムの拡大←自己資金
 - 活動2:B給水区の新水道システムの建設←ADBのサブ・プロジェクト
 - 活動3:水道公社の人材育成
 - 活動4:顧客関係の改善
 - 活動 5:組織改編
 - 活動 6:運転・維持管理
 - 活動7:歳入の最大化
- ⑦ 財政予測(給水区ごとの情報を統合。3年間の年間予測、3年間の四半期予測、初年度の月間予測が含まれる)
- ⑧ キー・インディケーター (業務指標含む)
- ⑨ 外部監査
- ⑩ 主要協議の情報
- ① 民間セクター活動
- ② よき企業市民として(企業の社会的責任: CSR)

参考:ADBの事業計画分野のローカルコンサルタント提供資料及び聞き取り

なお、SWSSP において、事業計画策定/更新は、②のサブ・プロジェクト実施の前提条件の一つでもあり、短期間で策定する必要があることから、実際は、各水道公社からのデータ/インプットをもとに、ADB の事業計画分野及び財務分野のローカルコンサルタントがドラフトを作成し、水道公社のコメントをもとに最終化し、理事会の承認を得ている(脚注 20 参照)。DHUP によれば、SWSSP の枠組下、水道公社が自力で計画を更新できる能力を身につけることは期待できないとのことである。事業計画分野の ADB ローカルコンサルタントも、水道公社が必要な情報をフォーマットに基づき収集・整理・分析できるようにすること、次にデータを管理できるようにすることは指示されているが、その他(事業計画策定/更新能力育成含む)については明確な指示は

²

²⁰ ADB 現地コンサルタント Phiengkham 氏(首都ビエンチャン水道公社の IT・事業計画担当者であり、本件のプロジェクト・スタッフに任命されている)によれば、②「組織のビジョン、ミッション、目標」はキー・インディケーター(PI 含む)とともに、最初に作成する。この際、国や県の方針と整合性をとるようにしている。水道公社と協議をしたうえで、ローカルコンサルタントがドラフトし、県の副知事(副知事が理事長をつとめる理事会)の承認を受ける。理事会からコメントがあれば修正する。

²¹ 上記コンサルタントによれば、③「顧客と消費者」及び⑤資産及びオペレーション情報」の情報収集は ADB 作成のフォーマットに基づき、現地コンサルタントの支援の下、水道公社が行う。ただし、すぐにでてこない情報についてはローカルコンサルタントが自ら情報収集を行う。

²² 上記コンサルタントによれば、⑥の「事業計画イニシアティブ」は、集めた情報をもとに、水道公社と問題及び解決方法を話し合い、その結果をローカルオンサルタントがドラフトする。水道公社によって問題/優先課題や解決方法が違うため、活動項目は水道公社によって異なる。(たとえば、水質が一つの活動項目として入っている事業計画もある)

ないという。ただし、2012年3~4月にSWSSPの中間レビューが行われることから、この点について何らかの提言が行われる可能性はある。

2) NORAD「水道セクター能力育成(CDWS)」(2012-2016)

NORAD は、2011年に調印された「SWSSP/CDWS における協力」の合意に基づき、ADB の SWSSPでカバーされない水道公社に支援を行う予定であり、支援の中には事業計画策定が含まれる。 CDWS のコンサルタントがまだ選定されておらず、詳細は不明である。本件と対象水道公社が重複する可能性があるが、DHUP は、首都ビエンチャン、ルアンプラバン県、カムアン県については本件のパイロットとすることを決定し、その旨を DHUP が NORAD に説明することで合意している。

3) ADB「都市水道規制強化」プロジェクト(2012-2013)

「都市水道規制強化」プロジェクトは、MPWT、特に WASRO を責任機関とし、WASRO 及び DHUP (特に WSD 及び SWSSP プロジェクト調整ユニット) の協力により、実施される。主要活動は以下の通り

- ① 水道事業体のパフォーマンス規制強化:関連法規・ガイドライン(主に草案段階のもの) の承認・適用
- ② 水道公社の説明責任向上:全県水道公社に対する業務監査の実施

(2) フランス開発庁 (AFD)

AFD は、2001 年から 2012 年にかけて、首都ビエンチャン水道公社を支援してきた。概容は以下の通り。

- ① 第 1 期 (2001~2003): 首都ビエンチャンの配水網拡張、技術ロスの削減、水道整備マスタープランの策定(JICA との協働)
- ② 第2期(2003~2006):首都ビエンチャン研修センターの建設、立ち上げ期の技術支援
- ③ 第3期(2007~2012): 首都ビエンチャンのマスタープランの第1フェーズの実施(2012年までの水需要を満たす水生産及び配水網の拡張)、首都ビエンチャン水道公社の組織再編計画の実施(財務状況の改善、オペレーションの収益改善、パフォーマンスのモニタリングの導入等)
- ④ AFD ラオス事務所によれば、第4期以降の支援は予定されていない。

4-3 パイロット水道公社

4-3-1 首都ビエンチャン水道公社

(1) 水道事業概要

総人口は、約800,000人で職員数552人の水道公社で管理されている。給水対象地域は、全体で9郡で、7つの郡で水道施設(パイプ給水)が整備されている。24時間給水もほぼ達成され、一部高台の地域が使用水量の多い時間帯に給水不良となっている。

総人口 788,000 人 (2010 年)

給水人口 419,400 人(普及率 53%)

給水戸数 80,776 戸

供給能力 181.930m³/日※詳細は(4)維持管理に記載

(2) 組織

以下の組織図は2010年のものであり、水道公社総裁はすでに変更しているが、副総裁が三名体制になっており、総務、技術、財務の三つのポストがある。総務の下には、人事、事業計画、IT、トレーニングセンター等の部署が位置づけられている。技術の下には、無収水(主に漏水)、プロジェクト(AFD等)が位置づけられている。財務の下には、会計、資材管理、マーケティング、債務管理がある。全体の参加に、その他の支所や浄水場等が位置づけられている。本調査時総裁であるMr. Khampheuy Vongsakhamphoui については、水道公社の生え抜きで総裁になった人物とのことである。

ໂຄງຮ່າງການຈັດຕັ້ງຂອງ ລັດວິສາຫະກິດ ນຳປະປາ ນະຄອນຫຼວງ ສຶກປີ 2010

Nakhoneluang Water Supply States Interprise Organization Chart Year 2010

Annual Process of Chart Supply States Interprise Organization Chart Supply S

図 4-1 首都ビエンチャン水道公社 組織図

(3) 財務・経営状況

1) 損益計算書

下記表はビエンチャン水道公社の事業計画の担当部署から得た資料における損益計算書部分に該当する記載である。表の下にOperating income(営業収支)と記載されているが、費用の中に営業費用以外も含まれていることから、税引き前収支と想定される。下記 2)記載のとおり、水道料金は他の都市と比較しても安く設定されており、販売価格が生産コストを下回る状況にあり、恒常的な赤字体質となっている。2009年の大きな変化については(特に黄色でハイライトを行った変化について)、首都ビエンチャンにてSEA game(東南アジア競技大会)が行われたため、需

要が増加し消費量が増え水道料金単価が上昇したこと、加えてそれに対応するため Dongbang 浄水場をベトナム公営企業と新設する等、急ピッチで施設整備したことに起因するのではないかと 予想される。

表 4-7 ビエンチャン水道公社における 2008-2010 年損益計算書

Unit: Kip

ltems/Year	2008	2009	2010
Total Revenue	56, 931, 413, 091	105, 612, 483, 535	70, 587, 763, 934
Water Sale	45, 982, 207, 806	74, 939, 440, 411	55, 562, 184, 170
New connection	6, 886, 607, 440	9, 424, 465, 881	8, 759, 957, 129
Other	4, 062, 597, 845	21, 248, 577, 243	6, 265, 622, 635
Total Expenses	58, 142, 618, 495	99, 191, 344, 055	84, 049, 126, 908
Direct Operating Expenses	32, 057, 968, 954	49, 442, 856, 736	48, 852, 560, 794
Depriciation & Amortization	11, 552, 833, 852	19, 698, 836, 679	21, 192, 924, 518
Interest payable & Commitment charge	3, 961, 639, 745	4, 666, 296, 057	2, 074, 747, 637
Non operating Expenses	10, 540, 912, 760	25, 370, 575, 172	11, 909, 865, 951
P/L on foreign exchange rates	29, 263, 184	12, 779, 411	19, 028, 008
Operating income	-1, 211, 205, 404	6, 421, 139, 480	-13, 461, 362, 974

出所:ビエンチャン水道公社 Corporate Planning & IT section から得た資料

2) 水道料金

水道料金は2010年に制定された値であり、従量制で使用量が増加するにつれて単価が上がる逓増料金制である。水道料金における顧客カテゴリーごとの差はない(データとしては、家庭向け、政府向け、産業向け、外国人向けで分けて管理されている)。下記に平均水道料金を記載しているが、販売価格が生産コストを下回っている状況にある。水道料金の値上げについては、首都ビエンチャン水道公社としても必要性を感じており、首都ビエンチャン政府に水道料金を上げるよう働きかけている。

平均水道料金 1,350kip/m³

(0-10m³:500kip, 11-30m³:1,000kip, 31-100m³: 1350kip, over 100m³:2700)

生産コスト 1,728m³/m³

参考: Dongbang 浄水場のバルク売り価格: 1,350kip/m³

3) 貸借対照表

下記表はビエンチャン水道公社の事業計画の担当部署から得た資料における貸借対照表部分に該当する記載である。各項目の内訳を入手し、詳細を分析する必要があるが、自己資本比率、自己資本対固定資産比率、流動比率上も、経営上大きな問題はないと思われる。自己資本比率が約74%あることから、水道料金の引き上げと共に、長期借入による施設整備を行うことで更なる水道サービスの拡張が出来るのではないかと考えられる。

表 4-8 2010 年末貸借対照表(単位: kip)

資産の部	420, 896, 049, 399	負債と資本の部	420, 896, 049, 399
流動資産	80, 706, 553, 568	流動負債	36, 454, 238, 310
固定資産	340, 189, 495, 831	固定負債	74, 129, 139, 156
		資本	310, 312, 671, 933

出所: ビエンチャン水道公社 Corporate Planning & IT section から得た資料

(4) 施設維持管理

1) 浄水容量 181,930m³/日

(内訳: Kaolieo WTP:60,000m³/日, Chinaimo WTP:80,000 m³/日, Thangon WTP: 550 m³/日, Thadeua WTP: 600 m³/日, Dongmarkhay WTP:20,000 m³/日, Dongbang WTP: 20,000 m³/日, Phialard WTP: 240 m³/日, Huaykham WTP: 240 m³/日, Natham WTP: 300 m³/日 場所詳細は下記地図を参照。)

総管路延長 1,154km (φ40~1,000mm)

AutoCad による管路図があり、Excel シートによる各要素別のデータがある。

2012 年 11 月までに AFD 支援による GIS の導入が予定されており、さらなる送配水管管理のためのインフラが整うことになる。

Chinaimo 浄水場(視察実施):

1980年、1996年にそれぞれ 40,000m³/日が建設された合計 80,000m³/日の首都ビエンチャン最大の浄水場である。処理方式は、一般的な急速ろ過方式で、合計 35名の浄水場職員によって運転管理が行われている。維持管理の職員 8名が3班体制で常駐している。

年間の維持管理に関するデータ(配水量、水質、凝集剤、電力等)が紙及びデータで整理されている。主力となる取水ポンプに問題があり、現在はフローティングの取水ポンプを使用している。予算の制約が非常に厳しく、設備の更新はできずメンテナンスのみで対応している。

<浄水場職員の職種内訳>

浄水管理 23 名 (3 班体制で 24 時間管理 (VTE の全 WTP で同様))

電気設備修繕 4名

水質試験室 3名

事務 5名

Dongbang 浄水場:

2008 年からベトナム公営企業 Maidong と首都ビエンチャン水道公社の合弁により、SPC (特別目的会社) 設立し、2010 年から首都ビエンチャン水道公社に 30 年間のバルク給水を行う契約を締結している。2009 年 12 月に首都ビエンチャンにて、SEA game (東南アジア協議大会)が開催されるため、水需要の増加に対応するために整備が進められた。首都ビエンチャン水道公社へのバルク給水の開始については、SEA game 後の 2010 年 5 月から契約を始めている。理事会メンバーは 3 人がベトナム人で、2 人がラオスから出している。なお、出資比率は 8 割Maidong、2 割が首都ビエンチャン水道公社である(利益の還元についても同様の比率)。ラオス側 2 割については土地を出資したとのことである。

SPC スタッフは 26 名おり、多くが首都ビエンチャン水道公社出身である。2 人はベトナムから技術者が来ている。写真のとおり、急速ろ過型の浄水コンパクトユニットをベトナムから持ってきており、 $2000 \mathrm{m}^3$ /日を 10 基設置し、日量 $20,000 \mathrm{m}^3$ /日を生産している。卸価格は $1,350 \mathrm{kip/m}^3$ であり、消費者価格と同じ価格である。低価格であることから、SPC として経営状況は良好ではなく、水道料金の引き上げが必要とのことである。将来の水需要増加に対応するため、追加の $20,000 \mathrm{m}^3$ の増強についても計画があるとのことである。

Dongmakkhai 浄水場:

中国輸銀のローンによる支援にて、現在、日量 $20,000 \,\mathrm{m}^3/\mathrm{H}$ の浄水場を日量 $100,000 \,\mathrm{m}^3$ まで拡張する計画。建設された場合、水需要を大幅にカバーできることになる。

2) 無収水対策

水道メーター設置率が 100%で、すべての配水池 (10 箇所) の出口での流量計測を行っている。 水道メーターは、局内基準で日本と同様の 8 年間更新を採用している。漏水探知は 1 班 5 名の体制で行い、AFD 及び SEDIF (パリ首都圏水道事業体) による支援で配水管の更新もローンプロジェクトにて行っている。DMA (District Metered Area) を 9 区画設定済みである。さらに、コールセンターを設置し、漏水修繕の即応体制も整えている。水道メーターまでが水道局の管轄である。

無収水率 26% メーター設置率 100% 漏水回数 5344 カ所

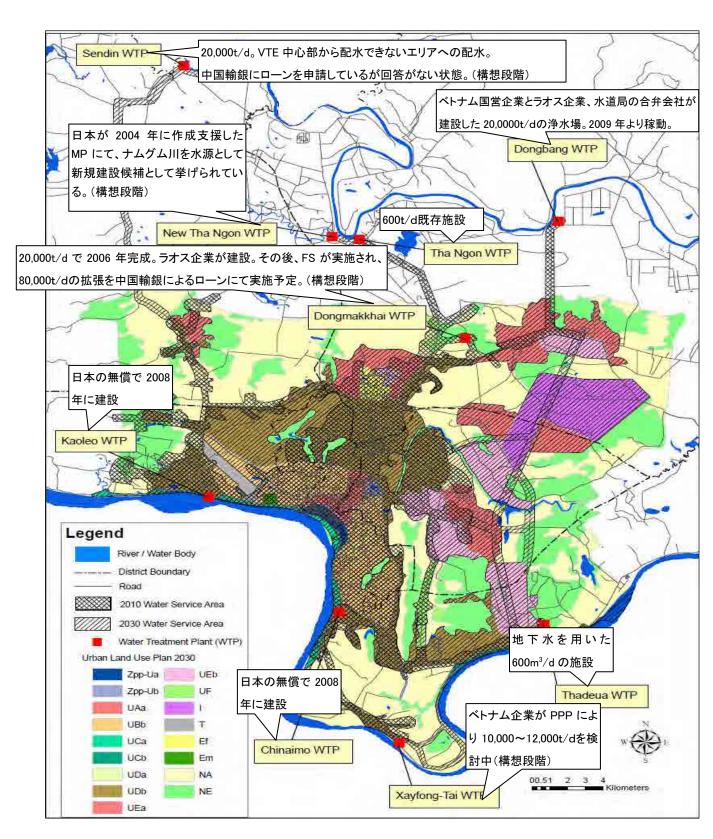


図 4-2 首都ビエンチャン中心部における浄水場位置(構想段階のものを含む)

(5) 水質管理

毎日検査、週間検査、月間検査が適切に行われている。日本の無償資金協力にて支援したチナイモ浄水場にある水質試験室の職員は、JICAの本邦研修で技術移転を受けた職員がおり、重金属等についても対応可能である。水質試験のデータをとり、継続して保存していく習慣が身についている。データはソフトデータ(エクセル)とハードデータ(用紙)のそれぞれにて保管されている。



(6) トレーニングセンター

以下のモジュールに対し、年間 56 の研修コースを実施している。上記 4-2-2(2)、4-2-3(3)4) 記載のとおり、首都ビエンチャン水道公社は各県の水道公社への研修提供を行っている。講師は 主に首都ビエンチャン水道公社の管理職が行っている。トレーニング施設については、2006 年に AFD が支援を行い建設された。その後、AFD が支援を 2007-2009 年まで行い、さらに 2008-2010 年は UN-Habitat が支援を行った。しかしながら、2011 年にはドナー支援がなく、県水道公社職員 の研修参加が財政的に難しい状況になっている。

トレーニングの運営については、年度が始まる前に募集案内を出し受入通知を行っている。しかしながら、通知を行った人数に対して、実際に来る人数は少なく、1トレーニングコース 8~12人の参加者が必要であることから運営上、問題になっている。また、トレーナー不足が顕著であり、スケジュール調整に難航している。

県水道公社は参加者の実費分(宿泊費・旅費)を支給し、トレーニング運営費用は首都ビエンチャン水道公社の経営の中で賄っている。しかしながら、県水道公社は首都ビエンチャンまでの道も遠く、費用もかかることから多くの参加者を出せる状況にない。

トレーニングモジュール

給配水管ネットワーク関連12 モジュールプロジェクト関連5 モジュール浄水計画10 モジュール経営12 モジュールコンピューター5 モジュール

表 4-9 トレーニング参加者数 (年別・派遣元別)

	首都ビエンチャン 水道公社職員	その他 県水道公社	小計
2007	270	127	397
2008	340	208	548
2009	265	154	419
2010	463	242	705
2011	537	180	717
合計	1875	911	2786

出所:首都ビエンチャン水道公社提供資料

表 4-10 2009年 研修参加予定者と実績比較

2009	Plan	Actual
Bokeo	9	6
Luang Namtha	4	3
Oudomxay	38	21
Phongsaly	39	10
Xiengkhaung	56	36
Houaphan	15	11
Luang Prabang	12	12
Xayaboury	11	6
Vientiane	16	5
Vientiane Capital	318	265
Bolikhamxay	8	8
Khammouane	8	6
Savannakhet	43	27
Champasak	42	24
Saravane	3	3
Sekong	5	1
Attapeu	14	12
合計	641	456

出所:首都ビエンチャン水道公社提供資料

4-3-2 ルアンプラバン県水道公社

(1) 水道事業概要

ラオス国北部の中心都市で世界遺産都市であるルアンプラバン郡を県都とするルアンプラバン 県には11の郡があり、そのうち水道システムを有しているのは5つの郡に限られる。

総人口 121,507 人

給水人口 69,958 人 (普及率 58%)

供給能力 28,200m³/日

以下、水道施設を有する5郡の概要である。

• Luangprabang 郡

総人口 82,056 人

給水人口 44,533 人(普及率 54%)

給水戸数 8,819 戸

供給能力 $22,000\text{m}^3$ /日 $(3 箇所の浄水場 12,000\text{m}^3$ /日、 $9,000\text{m}^3$ 、 $1,000\text{m}^3$ /日である)

総管路延長 86km (φ50~350mm) AutoCad による管路図がある。

● Nambark 郡

総人口 65,547 人

給水人口 9,214 人 (普及率 14%)

給水戸数 1,526 戸

供給能力 1500m³/日 (1箇所の浄水場である) 総管路延長 25km 支所に紙図面があるのみである。

• Xieng Ngeug 郡

総人口 28,432 人

給水人口 6,923 人 (普及率 24%)

給水戸数 2,032 戸

供給能力 2,000m³/日 (1箇所の浄水場である) 総管路延長 25km 支所に紙図面があるのみである。

● Nan 郡

総人口 28,623 人

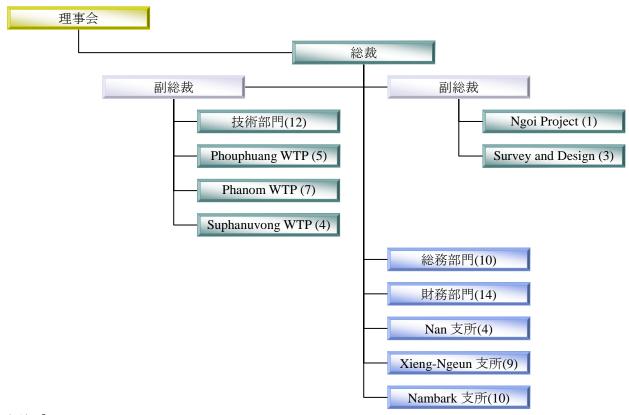
給水人口 10,441 人 (普及率 36%)

給水戸数 2,032 戸

供給能力 1,700m³/日 (1箇所の浄水場である) 総管路延長 4km 支所に紙図面があるのみである。

(2) 組織

ADB が作成支援を行った「3 Year Rolling Corporate Plan 2010-2012 of Luangprabang Provincial Water Supply State Enterprise」に記載の組織図については以下図のとおり。



出所: 「3 Year Rolling Corporate Plan 2010-2012 of Luangprabang Provincial Water Supply State Enterprise」

図 4-3 ルアンプラバン県水道公社組織図

(3) 財務・経営状況

1) 損益計算書

下記表はルアンプラバン県水道公社が ADB の支援を受け作成した 3 year rolling corporate plan における損益計算書部分に該当する記載である。表の下に、債務返済前純利益金額が記載されており、順調な黒字基調として読み取れる。下記 2) のとおり、今後水道料金の引き上げを想定していることから、経営上もさらに健全な方向にあると考えられる。また、下記 3) 貸借対照表を参照すると、2009年の債務返済前純利益金額と 2009年末の固定負債金額に大きな金額差が無く、抱えている債務金額も大きくないことが確認された。

表 4-11 ルアンプラバン県水道公社 損益計算書 2007 - 2009 年(単位: kip)

Items/Year	2007	2008	2009
Total Revenue	5, 919, 948, 438	7, 825, 437, 987	9, 470, 182, 619
Water Sale	4, 550, 059, 640	6, 106, 692, 033	8, 392, 763, 000
Meter rental	122, 615, 500	145, 751, 000	156, 867, 000
Connection Charge	1, 003, 001, 686	1, 325, 367, 849	484, 462, 500
Other	244, 271, 612	247, 627, 105	436, 090, 119
Total Expenses	5, 439, 873, 062	7, 452, 197, 216	6, 659, 785, 272
OM excluding taxes	3, 071, 646, 936	4, 153, 764, 368	4, 565, 924, 556
Cost of Connections	751, 425, 001	1, 193, 952, 654	521, 250, 000
Depreciation	1, 616, 801, 125	2, 104, 480, 194	1, 572, 610, 716
Gross profit before tax	400 075 076	070 040 771	0 010 007 047
and servicing loans	480, 075, 376	373, 240, 771	2, 810, 397, 347
Tax	0	0	0
Interest on debts	194, 518, 910	194, 518, 908	181, 878, 920
Increase in inventory	-52, 408, 680	-425, 517, 946	-865, 163, 975
Net profit after tax and interest on loans, but before repayment	337, 965, 146	604, 239, 809	3, 493, 682, 402

出所: 「3 Year Rolling Corporate Plan 2010-2012 of Luangprabang Provincial Water Supply State Enterprise」

2) 水道料金

調査時の水道料金は2010年に改定を行い、以下のとおり設定されている。

調査時(2012年2月時点)の水道料金レート

平均水道料金:1,950kip/m³(以下のとおり Cross-Subsidy になっている)

世帯用: 0-10m³:1,400kip/m³, 11-30m³:1,600kip/m³, 31-50m³: 1,800kip/m³, over 50m³:1950kip/m³

政府系: 2,100kip/m³ 小規模企業: 2,300kip/m³

観光業、大規模産業、外国人: 2,500kip/m3

ヒアリング結果によると、上記水道料金の整理から、2013年から世帯用、非世帯用の二つの分類に整理し直し、平均水道料金を 2,600kip に引き上げる予定であるとのことである。水道料金引き上げの理由として、下記 7)記載の BOT による民間企業によるバルク給水契約を 2,000kip/ m^3 で行ったことに起因すると思われる。

3) 貸借対照表

複数の浄水場、管路延長 86km 以上の送配水管を有しているにも関わらず、全体資産が 5 億円 足らずであることは確認が必要であるが、自己資本比率、自己資本対固定資産比率、流動比率も、 健全であると判断される。資産額が少ないことについては、施設整備時期が古いことから固定資 産の減価償却されたことが一つの要因であると考えられる。

表 4-12 2009 年末貸借対照表 (単位: kip)

資産の部	49, 654, 457, 078	負債と資本の部	49, 654, 457, 078
流動資産	9, 663, 382, 054	流動負債	456, 979, 329
固定資産	39, 991, 075, 024	固定負債	3, 937, 594, 085
		資本	45, 259, 883, 664

出所:「3 Year Rolling Corporate Plan 2010-2012 of Luangprabang Provincial Water Supply State Enterprise」

(4) 施設維持管理

総人口は、450,000 人で職員数 104 人の水道公社で管理されている。給水対象地域は、全体で 12 郡あり、Luangprabang を含む 5 郡では水道施設 (パイプ給水) が整備されている。一方、7 郡 については水道施設がない。

● Phoupheung 浄水場

ドイツの支援によって 1969 年に建設された 9,000m³/日の浄水場である。水源はさらに上流の湧水 を利用している。浄水場から市内までは、3 本の送水管で自然流下により送水されている。

浄水処理方法は、砂ろ過による急速ろ過方式であるが、沈澱池がない。雨季には湧水の濁度が 500NTU 程度まで上昇する。一方で、この浄水場には沈殿池がないため、濁質を落とすことができないまま、送水することとなる。実際は、湧水の濁度が 500NTU



程度まで上昇したときは、取水を停止しているようである。しかし、取水停止は1から2日程度とのことで、市民への影響を考慮し、10から20NTUの濁度であっても給水しているようである。ここでの判断に明確な基準はなく、ラオスの水質基準は5NTUである。

維持管理の職員は5名である。沈澱池はないものの、凝集剤及び塩素の注入は、職員のマニュ アル制御によって行われている。

● Namkhan 浄水場

ドイツの支援によって、2000 年に建設された 12,000m³/日の浄水場である。水源は河川水で、浄水 処理後は市内の配水池へポンプ加圧で送水される。

浄水処理方法は、一般的な急速ろ過方式である。 しかし、12,000m³/日の設計容量で建設されたものは、 ろ過池以下であり、沈殿池は、6,000m³/日の容量し かない。

維持管理の職員は7名である。この浄水場も職員のマニュアルでの薬品注入であるが、毎日ジャーテストを行って凝集剤の注入量を決定している。



(5) 無収水対策

水道メーター設置率は、約9割程度であり、漏水探知及び老朽管更新への対応も一部分のみである。水道料金収入を確保するために、水道料金を平均1,950kip/m³から2,600kip/m³にあげる予定である。水道メーターまでが水道局の管轄である。以下、各郡の概要である。

● Luangprabang 郡

無収水率 23.49%

メーター設置率 82%

3箇所の配水池の流出側で流量を測定し、配水ブロックは設定していない。 1班2名の漏水探知チームがあるが、年回3回程度の調査しか行っていない。

● Nambark 郡

無収水率 16.75%

メーター設置率 90%

1箇所の配水池

● Xieng Ngeug 郡

無収水率 14.49%

メーター設置率 79%

1箇所の配水池

● Nan 郡

無収水率 31.01% メーター設置率 98%

1 箇所の配水池



(6) 水質管理

Luangprabang 以外の4郡は、水質試験室はない(3月に一度、Luangprabang で検査)。Luangprabang でも1年に1回 Vientiane 特別市 Chinaimo 浄水場で詳細な水質試験を行っている。濁度、pH、残留塩素濃度は、水道施設のあるすべての郡で毎日検査を行っている。

(7) その他・民間企業の参入

ルアンプラバン郡の人口増加へ対応するために、ラオス第三の都市パクセにて BOT を行っているタイ企業による BOT (水道公社へのバルク給水契約)を実施中。現在は取水施設、浄水場等の建設作業を実施している。取水から配水池までの送水をおこない水道局は 2013 年より 2,000kip/m³で全量を購入する。契約期間は 30 年間。フェーズ 1 では 5,000m³/day の浄水場を建設し、将来的には 20,000m³/day まで拡張を想定。現在の水道料金は 1,950kip/m³であるが本 PPP の実施等に伴い値上げの必要。本 PPP プロジェクトで建設される浄水場からは、現在は未給水であるが韓国、中国が住宅地等を開発しているメコン河対岸地域への給水も想定しているとのことである。

現在のルアンプラバン郡の供給能力が22,000m³/日であることから、将来的に約半分の浄水供給は民間企業のバルク給水にて賄われる予定となっている。

4-3-3 カムアン県水道公社

(1) 水道事業概要

総人口は、約80,000人で職員数97人の水道公社で管理されている。給水対象地域は、全体で10districtで、4つのdistrictで水道施設(パイプ給水)が整備されている。

総人口 81,190 人

給水人口 41,382 人(普及率 51%)

施設供給能力 9,700m³/日

(2) 組織

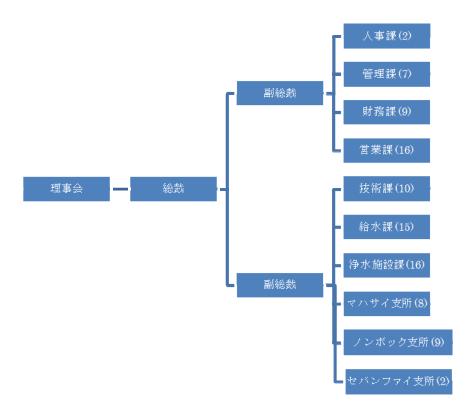


図 4-4 カムアン県水道公社組織図

(3) 財務・経営状況

1) 損益計算書

営業損益を参照すると、2009 年以降赤字基調になっており経営改善が求められる状況にある。詳細は不明であるが、営業外収益により支えられている構造である。さらに、下記 2) のとおり、水道料金の引き上げが毎年行われており、それに伴い水道料金収入が増えているが、人件費引上げ及びメンテナンス、輸送費、Allowance 等コスト増加に伴い、収支状況の改善には至っていない。

しかしながら、内容詳細は不明ではあるが、Operating Cost の金額が年々減少していることから、 運転の効率化が進んでいるように読めることは改善が進んでいると考えられる。

なお、キャッシュフロー上は減価償却費を計上していることから、大きく問題があるものとは

想定されない。

表 4-13 カムアン県水道公社損益計算書

(Unit: million Kip)

		Year		
		rear		
No.	Description	2008	2009	2010
1	Total operating income	5,768.13	6,170.26	7,226.56
1.1	Water tariff revenue	5,090.87	5,763.31	6,965.20
1.2	Initial connection revenue	449.49	324.85	144.71
1.3	Meter rent revenue	25.50	28.10	26.51
1.4	Other revenues	202.27	54.00	90.14
2	Total operating expenditure	5,646.30	6,693.62	7,495.80
2.1	Operational cost	2,350.81	2,092.57	1,765.32
2.2	Maintenance, transport, allowances, etc.	509.96	582.08	1,250.20
2.3	Staff salary	990.43	1,613.59	2,152.22
2.4	Depreciation cost	1,644.40	2,214.44	1,833.58
2.5	Loan repayment, etc.	104.25	124.29	163.58
2.6	Other expenditures	46.45	66.65	330.90
3	Gross Profit	121.83	-523.36	-269.24
4	Non operating income	683.25	584.21	343.47
5	Non operating costs	752.98	0	0
6	Profit before tax	52.10	60.85	74.23

出所: NPKMN

2) 水道料金

2008年3月以降、以下のとおり毎年のように水道料金の引き上げを行っている。カムアン県では大規模な都市を有する上記二都県と異なり、水道サービス利用者が少ない上に、水道料金単価の高い産業需要も少ない。さらに、人口密度が少ない上に、複数郡に対して小規模な水道事業を行っていることから規模の経済効果が働かず、生産コストが高くなる傾向があると考えられる。そのため、上記二都市よりも世帯向け水道料金が高く、一般消費者への負担が高い傾向がある。これらの傾向はラオス国内で一定規模の都市を有していない県では同様の問題が起こる可能性があり、所得が低い県の住民が、所得の高い地域の住民に対して、高い水道料金を求められる可能性があることを示している。

表 4-14 カムアン県水道料金

(単位:Kip/m3)

	2008年3月-2009年3月	2009年4月-2010年4月	2010年5月以降
家庭用	2, 300	2, 500	2, 800
政府用	3, 050	3, 350	3, 700
商業用	3, 250	3, 550	3, 900
工業用	3, 750	4, 150	4, 550

出所: JICA「ラオス国タケク上水道拡張計画準備調査」入手資料

表 4-15 カテゴリー別顧客数、平均請求額一覧

	顧客数	月額平均請求額	小計	割合
家庭用	6, 390	57, 039	364, 479, 210	63.0%
政府用	190	367, 631	69, 849, 890	12. 1%
商業用	701	177, 282	124, 274, 682	21.5%
工業用	34	591, 756	20, 119, 704	3. 5%
合計	7, 315		578, 723, 486	100%

出所: JICA「ラオス国タケク上水道拡張計画準備調査」入手資料

(4) 施設維持管理

- 施設更新計画はない。
- タケク郡内の送配水管については、AUTO CAD にて材質と口径の情報は有している。布設 時期については、有していないが、古い配水管でも 1995 年ごろの EU 支援時期であるため、 それほど古いものではない。
- 無収水率は26%程度(取水量に対し、販売量。)
- 漏水対策はあまり行われていない模様。
- 井戸からの水の濁度が高いとのこと。

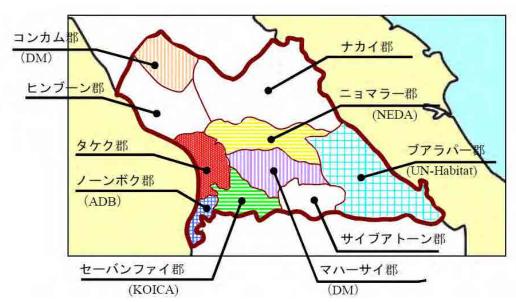


図 4-5 カムアン県水道公社他ドナー動向

表 4-16 カムアン県水道公社他ドナー動向

Thakhek	メコン川水源の浄水場 2,500m³/day、井戸 2,000-4,000(季節次第)m³/day		
	JICA にて無償資金協力実施予定。15,000m³/day の浄水場建設・送配水管網布設を		
	行う。		
Mahaxay	500m³/day コンクリート製の急速濾過方式浄水場。支局には9人配置。		
Nongbok	1,500m ³ /day コンクリート製急速濾過方式浄水場。2004 年に ADB によるローンプ		
	ロジェクト。プロジェクト費約 1.56 百万 USD、うち 15%をカムアン県水道公社負		
	担。利率 6.4%。		
Xebangfay	900m³/day の浄水場を KOICA 支援。2012年6月頃から稼働開始し2012年12月に		
	引き渡し式が行われた。カムアン県水道公社内で10人を支局へ異動させる予定。		
Bualapha	2007年に UN-Habitat が調査を行い、止まっていたが現在協議が開始し、900m³/day		
	の無償プロジェクトを検討中。プロジェクト概算 873 千 USD。		
Nhommalath	NEDA が FS 調査を 3 月に実施予定。956m³/day の浄水場建設予定。プロジェクト		
	費の内訳は30%無償、70%有償。		
Khounkhan	ラオスの建設会社 DM company が BOT 方式にて、建設を行い 5-10 年間運転し、水		
	道局に移譲する。事業規模は80千万円程度。既にMPWTから承認を得たとのこと。		
Hinboon	水道施設なし		
Nakai	水道施設なし		
Xaybouathong	水道施設なし		

出所:JICA「ラオス国タケク上水道拡張計画準備調査」作成資料

(5) 無収水対策

タケク郡内の送配水管については、AUTO CAD にて材質と口径の情報は有している。布設時期については有していないが、古い配水管でも 1995 年ごろの EU 支援時期であるため、それほど古いものではない。メーター検針は月に一度水道公社職員によって行われている。なお、メーターはタイ製品が主で一部中国製品が使われている。

- 無収水率は26%程度(取水量に対し、販売量。)
- 漏水対策はあまり行われていない模様。

(6) 水質管理

ジャーテストの機材はあるものの、凝集剤の添加量を細かく管理しているような印象はない。 PH、濁度、残留塩素濃度のみ毎日検査を行っている。

RECORD OF DISCUSSIONS

ON

THE CAPACITY DEVELOPMENT PROJECT FOR IMPROVEMENT OF MANAGEMENT ABILITY OF WATER SUPPLY AUTHORITIES

IN

LAO PEOPLE'S DEMOCRATIC REPUBLIC

AGREED UPON BETWEEN

MINISTRY OF PUBLIC WORKS AND TRANSPORT

AND

JAPAN INTERNATIONAL COOPERATION AGENCY

Vientiane Capital, 27th June 2012

Masato TOGAWA

Chief Representative

Laos Office,

Japan International Cooperation Agency,

Japan

Khamthavy THAIPHACHANH

Director General

Department of Housing and Urban Planning Ministry of Public Works and Transport

Lao People's Democratic Republic

Based on the minutes of meetings on the Detailed Planning Survey for "The Capacity Development Project for Improvement of Management Ability of Water Supply Authorities" (hereinafter referred to as "the Project") signed on March 2, 2012 between Department of Housing and Urban Planning (hereinafter referred to as "DHUP"), Ministry of Public Works and Transport (hereinafter referred to as "MPWT") and the Japan International Cooperation Agency (hereinafter referred to as "JICA"), JICA held a series of discussions with DHUP and relevant organizations to develop a detailed plan of the Project.

Both parties agreed the details of the Project as described in the Appendix 1.

Both parties also agreed that DHUP, the counterpart to JICA, will be responsible for the implementation of the Project in cooperation with JICA, coordinate with other relevant organizations and ensure that the self-reliant operation of the Project is sustained during and after the implementation period in order to contribute toward social and economic development of Lao PDR.

The Project will be implemented within the framework of the Agreement on Technical Cooperation signed on December 12, 2003 (hereinafter referred to as "the Agreement") and between the Government of Japan (hereinafter referred to as "GOJ") and the Government of Lao PDR (hereinafter referred to as "GOL").

Appendix1: Project Description

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Appendix 1

PROJECT DESCRIPTION

I. BACKGROUND

According to the Government of Lao PDR 1999 Prime Minister Decision No.37/PM on Management and Development of Water Supply and Wastewater Sector, the sector target is to provide 24-hour access to safe water for the 80% of urban population by 2020.

To achieve the target, development partners have supported MPWT and Water Supply State Enterprises (WSSEs) to supply sufficient, reliable and safe water to urban people with financing the construction of water supply facilities and strengthening the capacity of the related personnel. JICA also conducted grant aid projects in Vientiane Capital and Savannakhet, and a technical cooperation project with MPWT from 2003-2006 to improve basic skills of increasing engineers with increasing number of water supply bodies. The technical cooperation project established a base for training system which can be applied for all engineers. Following up the project, a JICA Partnership Program was carried out from 2006-2008 and a long-term expert was dispatched to Lao PDR in 2009. As a result of these cooperation, Lao PDR continues to organize training programs to provide the fundamental skills to the engineers by themselves.

As an issue to be solved, it is a serious situation for the sustainable water supply that most of WSSEs hardly realize the full cost recovery management. To improve the above situation, GOL requested the technical cooperation that aims to strengthen the planning and management ability of nationwide water supply authorities to the Government of Japan.

This project is to contribute to improve the management of nationwide water supply authorities through strengthening planning, implementation and monitoring ability of WSSEs.

II. OUTLINE OF THE PROJECT

Details of the Project are described in the Logical Framework (Project Design Matrix: PDM) (ANNEX I) and the tentative Plan of Operation (PO) (ANNEX 2).

1. Title of the Project

The title of the Project will be "The Capacity Development Project for Improvement of Management Ability of Water Supply Authorities".

2. Overall Goal

The Overall Goal will be "The system for sustainable and stable development of the water supply sector in Lao PDR is strengthened".

3. Project Purpose

The Project Purpose will be "The System of strengthening the capacity for management of the water supply state enterprises (WSSEs) with mid-term and long-term views is established in Lao PDR".

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4. Outputs

The Outputs of the Project and the Lao organization(s) in charge of each Output will be as follows:

	Outputs	Organization(s) in charge
1.	Data necessary for long-term, mid-term and short-term corporate planning at each pilot WSSE is available on an ongoing basis	Overall: DHUP Pilot WSSEs: NPNL, PNP-LP, and PNP-KM
2.	The pilot WSSEs are managed based on long-term, mid-term, and short-term Corporate Plans(CPs) ^(*1) through Plan-Do-Check-Action(PDCA) cycles	Overall: DHUP Pilot WSSEs: NPNL, PNP-LP, and PNP-KM
3.	Monitoring of the Corporate Plan, including Performance Indicators (PIs), is strengthened	Overall: WASRO Pilot WSSEs: NPNL, PNP-LP, and PNP-KM
4.	Technical guidelines on corporate planning is developed, utilizing the results of Output 1 to 3	DHUP
5.	A mechanism to disseminate techniques and knowledge relevant to the new technical guidelines to other WSSEs and private enterprises is developed, utilizing the results of Output 1 to 4	Overall: DHUP Pilot WSSEs: NPNL, PNP-LP, and PNP-KM
0.	The Project is managed and coordinated properly	Overall: DHUP Pilot WSSEs: NPNL, PNP-LP, and PNP-KM

Note

5. Activities

<For Output 1>

- 1-1 Review the availability and current management of data necessary for corporate planning at each pilot WSSE
- 1-2 Develop an improvement plan for data management with a check list, including the way to adapt "Asset Management" approach of Japanese water supply sector to local situation at each pilot WSSE
- 1-3 Implement the improvement plan at each pilot WSSE
- 1-4 Develop a data management manual for corporate planning in Lao and English for approval by DG/DHUP

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^{* (1):} Long-term Corporate Plan (CP) is defined as "10-year strategic plan with PI targets, which corresponds with the cycle of National/Provincial 5-year Plan (i.e. 2011-2020, 2021-2030 · · ·). Mid-term CP is defined as "5-year plan with action plan, which is consistent with national/provincial 5-year Plan and corresponds with its cycle (2011-15, 2016-2020, · · ·). Short-term CP is defined as "3-year rolling plan delineated by the Prime Minister's Decision 37, with the detailed annual action plan for the first year. Management areas covered by CP would include finance, facility management, operation and maintenance, human resource development, non-revenue water management, risk management, customer services, public relations, etc. depending on the needs/priorities of WSSEs

<For Output 2 >

- 2-1 Review the existing management plans, planning process and the current management status at each pilot WSSE
- 2-2 Develop an improvement plan for business management, including outlines of 10-year, 5-year, and 3-year CPs at each pilot WSSE.
- 2-3 Forecast long-term demand for water supply and replacement/renovation of water supply facilities^(*2), as well as long-term financial balance (i.e. revenue and expenditure), utilizing the data obtained through Output 1, at each pilot WSSE
- 2-4 Develop a 10-year CP (up to 2020) at each pilot WSSE for approval by its Board of Directors
- 2-5 Develop a 5-year CP (up to 2015 and/or 2016-2020) at each pilot WSSE for approval by its Board of Directors
- 2-6 Develop a 3-year rolling CP, and then revise it annually at each pilot WSSE for approval by its Board of Directors
- 2-7 Implement the annual action plan of the 3-year rolling CP at each pilot WSSE
- 2-8 Review and revise the 10-year CP as appropriate at each pilot WSSE for approval by its Board of Directors
- 2-9 Develop a corporate planning manual, with individual manuals for some specific areas, in Lao and English for approval by DG/DHUP

<For Output 3>

Provincial level

- 3-1 Review the internal monitoring system^(*3) of the existing management plans and PIs at each pilot WSSE
- 3-2 Develop an internal monitoring system for CP, including PIs, based on the review at each pilot WSSE
- Conduct monitoring of CP, including PIs, based on the system developed above at each pilot WSSE, the results of which would be fed back to data management under Output 1 and corporate planning under Output 2
- 3-4 Improve the internal monitoring system for CP, including PIs, at each pilot WSSE as appropriate

National level

- 3-5 Review the monitoring system of PIs at WASRO in the context of CP
- 3-6 Develop a monitoring system for CP, including PIs
- 3-7 Conduct monitoring of CPs, including PIs, of the pilot WSSEs
- 3-8 Improve the monitoring system for CP, including PIs, based on the results of Activity 3-7 for application to all WSSEs
- 3-9 Review the Guidelines on Service Performance Targets for Water Supply and Regulatory Monitoring of Service Level (2010)
- 3-10 Develop a draft of revised Guidelines for review and approval by the Water Supply Regulation Committee

<For Output 4>

- 4-1 Establish a Guidelines Committee (*4)
- 4-2 Develop a draft outline of the Guidelines for finalization by the Committee
- 4-3 Develop a draft Guidelines, reflecting the results of Output 1 to 3, for the comments by the Committee
- 4-4 Modify the draft Guidelines based on the above comments for approval by the Committee
- 4-5 Submit the approved draft to the Minister of Public Works and Transport for endorsement
- 4-6 Publish the Guidelines in Lao and English

<For Output 5>

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- 5-1 Identify the core resource persons at each pilot WSSE for future dissemination of the transferred knowledge/techniques within their respective WSSEs.
- 5-2 Provide on-the-job training to the core resource persons through Output 1 to 3
- 5-3 Provide Trainer's Training to the core resource persons
- 5-4 Organize three regional introductory seminars on long-term, mid-term, and short-term corporate planning, one each at a pilot WSSE
- 5-5 Review the existing training program at the Training Center of NPNL in light of the new Technical Guidelines
- 5-6 Modify the existing course(s) and/or develop new course(s) based on the review at the Training Center
- 5-7 Implement the modified and/or new training course(s) at each pilot WSSE
- 5-8 Improve the above training course(s) based on the feedbacks from the participants
- 5-9 Develop a dissemination plan for corporate planning for DHUP based on the results of the Project for approval by DG/DHUP

<For Output 0 >

- 0-1 Organize Joint Coordination Committee (JCC) meeting at least once a year
- 0-2 Organize three provincial project orientation seminars, one each at a pilot WSSE, participated by the staff and the Board members of the respective pilot WSSE, and other relevant stakeholders
- 0-3 Finalize the Indicators of the PDM and the Plan of Operations (PO) for approval of the first JCC meeting
- 0-4 Prepare a draft Annual Plan of Operations (APO) based on the PO for approval of the JCC
- 0-5 Monitor the progress and achievement of the Project based on PO/APO and the Indicators of the PDM through JCC and internal regular meetings, including Project Management Team *(5) meetings, Pilot Project Management Team meetings at each pilot WSSE *(6), and inter-pilot WSSE coordination meetings (*7)

Note

- *(2): Water supply facilities are defined as "the facilities from intake to customer water meter".
- *(3) Monitoring system would consist of (i) monitoring item, (ii) methods, timing frequency, and responsible person(s) of data collection, compilation & analysis, reporting, decision making, and feedback for each item). Internal monitoring at a pilot WSSE includes monitoring by the respective Board of Directors.
- *(4): Guidelines Committee consists of the Deputy Director General of DHUP (chair), representatives of DHUP, including those in charge of the projects assisting corporate planning, WASRO, and JICA Expert Team
- *(5) Project Management Team consists of Project Director, Deputy Project Directors, Project Managers, Pilot Project Managers, and long-term Japanese Experts
- *(6) Pilot Project Management Team at each pilot WSSE consists of Pilot Project Manager, Deputy Pilot Project Managers, staff in charge (SIC), and long-term Japanese Experts. A representative of the respective DPWT as well as Short-term Experts in Laos is invited for information sharing and exchange of views.
- *(7) Participants of Inter-pilot WSSE coordination meetings from each pilot WSSE would be decided by the respective Pilot Project Manager, depending on the agenda of the meetings, in consultation with long-term Japanese Experts. Each pilot WSSE takes turns in providing a meeting place: a meeting is combined with a study tour within the hosting WSSE.

6. Input

- (1) Input by JICA
 - (a) Dispatch of Experts
 - I) Long-term experts
 - Chief advisor
 - Project Coordinator / Monitoring Management / Training Management
 - 2) Short-term experts
 - Finance
 - Facility Management
 - Human Resource Development

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- Others (if necessary)

(b) Training

- Water supply utility management in Japan
- Subjects related to water supply utility management

(c) Equipment

Equipment necessary for the effective implementation of the Project will be provided within the budget allocated.

(2) Input by DHUP

DHUP will take necessary measures to provide at its own expense:

- (a) Services of MPWT and Pilot WSSEs' counterpart personnel and administrative personnel as referred to in II-7;
- (b) Suitable office space with necessary equipment;
- (c) Supply or replacement of machinery, equipment, instruments, vehicles, tools, spare parts and any other materials necessary for the implementation of the Project other than the equipment provided by JICA;
- (d) Information as well as support in obtaining medical service;
- (e) Credentials or identification cards;
- (f) Available data (including maps and photographs) and information related to the Project;
- (g) Running expenses necessary for the implementation of the Project;
- (h) Expenses necessary for transportation within Lao PDR of the equipment referred to in II-6 (1) as well as for the installation, operation and maintenance thereof; and
- (i) Necessary facilities to the JICA experts for the remittance as well as utilization of the funds introduced into Lao PDR from Japan in connection with the implementation of the Project

7. Implementation Structure

The Project organization chart is given in the ANNEX III. The roles and assignments of relevant organizations are as follows:

- (1) MPWT (DHUP, and Water Supply Regulatory Office (hereinafter referred to as "WASRO"))
 - (a) Project Director

Project Director will be responsible for overall administration and implementation of the Project.

(b) Deputy Project Directors

The Deputy Project Directors will be responsible for supervision of the administration and implementation of the Project in their respective Output(s).

(c)Project Managers

The Project Managers will be responsible for the managerial and technical matters as well as day-to-day implementation of the Project.

(2) Pilot Water Supply State Enterprises

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(a) Pilot Project Managers

Pilot Project Managers will be responsible for the implementation of the project activities in their respective WSSEs. The Pilot WSSEs are as follows;

- -Vientiane Capital Water Supply State Enterprise (hereinafter referred to as "NPNL")
- -Luang Prabang Provincial Water Supply State Enterprise (hereinafter referred to as "PNP-LP")
- -Khammouane Provincial Water Supply State Enterprise (hereinafter referred to as "PNP-KM")

(b) Deputy Pilot Project Managers

Deputy Pilot Project Managers will be responsible for the supervising for implementation of the pilot project activities.

(3) JICA Experts

The JICA experts will give necessary technical guidance, advice and recommendations to DHUP on any matters pertaining to the implementation of the Project.

(4) Joint Coordinating Committee

Joint Coordinating Committee (hereinafter referred to as "JCC") will be established in order to facilitate inter-organizational coordination. JCC will be held at least once a year and whenever deems it necessary. JCC will approve an annual work plan, review overall progress, conduct monitoring and evaluation of the Project, and exchange opinions on major issues that arise during the implementation of the Project. A list of proposed members of JCC is shown in the ANNEX IV.

(5) Project Management Team meeting

The Project Management Team (hereinafter referred to as "PMT") will be established in order to implement the Project effectively and smoothly. The PMT will manage and coordinate the Project through monitoring the semi-annual progress of APO/PO and achievement of Indicators of PDM, sharing views. The PMT meets at least twice a year and whenever deems it necessary. The PMT consists of Project Director, Deputy Project Directors, Project Managers, Pilot Project Managers, and long-term Japanese Experts.

(6) Pilot Project Coordination

The Pilot Project Coordination Team, consisting of the Pilot Project Manager, Deputy Pilot Project Managers, staffs in charge and long-term Japanese Experts, will be established at each pilot WSSE for effective and smooth implementation of the project activities at the level of pilot WSSE. The team will meet monthly to share the information and exchange views about plan, progress, issues, solutions, etc. related to their activities.

8. Project Site(s) and Beneficiaries

(1)Project Area

The Project area would be Vientiane Capital, Luang Prabang province, and Khammouane province.

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(2) Direct Beneficiaries

The Direct Beneficiaries will be staff of NPNL, PNP-LP, PNP-KM, DHUP, and WASRO.

(3) Indirect Beneficiaries

The Indirect Beneficiaries will be People living in the water supply areas of the pilot water supply state enterprises (WSSE) as well as the other 14 WSSEs.

9. Duration

August 2012 - August 2017

10. Reports

Semiannual progress report will be submitted to PCT meeting.

Annual progress report will be submitted to the JCC.

11. Environmental and Social Considerations

DHUP agreed to abide by 'JICA Guidelines for Environmental and Social Considerations' in order to ensure that appropriate considerations will be made for the environmental and social impacts of the Project.

III. UNDERTAKINGS OF GOL

1. GOL will take necessary measures to:

- (1) ensure that the technologies and knowledge acquired by the Lao PDR nationals as a result of Japanese technical cooperation contributes to the economic and social development of Lao PDR, and that the knowledge and experience acquired by the personnel of Lao PDR from technical training as well as the equipment provided by JICA will be utilized effectively in the implementation of the Project; and
- (2) grant privileges, exemptions and benefits to the JICA experts and their families, which are no less favorable than those granted to experts and members of the missions and their families of third countries or international organizations performing similar missions in Lao PDR.

IV. EVALUATION

JICA and the DHUP will jointly conduct the following evaluations and reviews.

- 1. Mid-term review at the middle of the cooperation term
- 2. Terminal evaluation during the last six (6) months of the cooperation term

V. PROMOTION OF PUBLIC SUPPORT

For the purpose of promoting support for the Project, DHUP will take appropriate measures to make the Project widely known to the people of GOL

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VI. MUTUAL CONSULTATION

JICA and DHUP will consult each other whenever any major issues arise in the course of Project implementation.

VII. AMENDMENTS

The record of discussions may be amended by the minutes of meetings between JICA and DHUP.

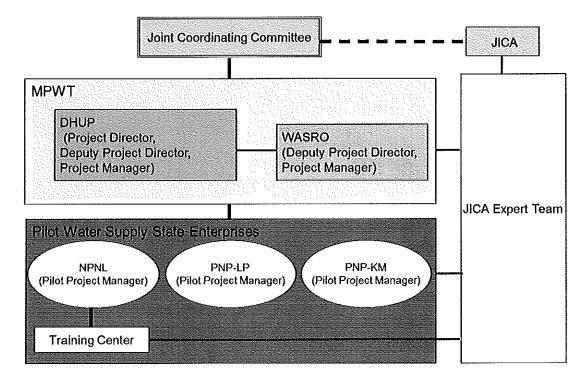
The minutes of meetings will be signed by authorized persons of each side who may be different from the signers of the record of discussions.

ANNEX I	Logical Framework (Project Design Matrix:PDM)
ANNEX II	Tentative Plan of Operation
ANNEX III	Structure of the Project
ANNEX IV	A List of Proposed Members of Joint Coordinating Committee/ Steering
	Committee

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ANNEX III STURUCTURE OF THE PROJECT



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ANNEX IV JOINT COORDINATING COMMITTEE

1. Functions

The Joint Coordinating Committee (hereinafter referred to as "JCC") will be held <u>at</u> least once a year and whenever necessity arises. Its functions are as follows:

- (1) To authorize an annual plan of operation (APO) of the Project based on the PO
- (2) To monitor and review the overall progress (based on PO) and achievements of the Project (based on the PDM)
- (3) To discuss and advise on major issues those arise during the implementation period of the Project.

2. Compositions

The JCC shall be composed of;

- (1) Chairperson: Director General of DHUP, MPWT (Project Director)
- (2) Members: (to be considered)
 Lao members;
 - Deputy Director General of DHUP, MPWT (Deputy Project Director)
 - Director of WASRO, MPWT (Deputy Project Director)
 - Director of Water Supply Division, DHUP, MPWT (Project Manager)
 - Deputy Director of WASRO, MPWT (Project Manager)
 - Director General of Department of Public Works and Transport (hereinafter referred to as "DPWT")), Vientiane Capital government
 - Director General of DPWT, Luang Prabang provincial government
 - Director General of DPWT, Khammouane provincial government
 - General Manager of Vientiane Capital Water Supply State Enterprise (Pilot Project Manager)
 - General Manager of Luang Prabang Provincial Water Supply State Enterprise (Pilot Project Manager)
 - General Manager of Khammouane Provincial Water Supply State Enterprise (Pilot Project Manager)
 - Representative, Department of International Cooperation, Ministry of Planning and Investment
 - Others appointed by the Chairperson Japanese members;
 - Japanese experts of the Project
 - JICA missions dispatched by JICA
 - JICA Laos Office
 - Others appointed by the Chairperson
- (3) Observers: Official(s) of Embassy of Japan and/or consulate of Japan

3. The Secretariat of the Committee

DHUP will act as the Secretariat of the Committee. The Secretariat will coordinate matters pertaining to the administration of the Committee.

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ANNEX I DRAFT PROJECT DESIGN MATRIX (PDM)

"The Capacity Development Project for Improvement of Management Ability of Water Supply Authorities".

Duration of the Project: Five years from August 2012 PDM ver.1 (day/month/year) Vientiane Capital, Provinces of Luang Prabang and Khammouane

Department of Housing and Urban Planning (DHUP)/Ministry of Public Works and Transport (MPWT) of Lao PDR
Water Supply Regulation Office (WASRO)/MPWT; Water Supply Division (WSD)/DHUP; Vientiane Capital Water Supply State Enterprise (NPN-LP) and Khammouane Provincial Water Supply State Enterprise (PNP-LM) as the pilot water supply state enterprises.
Staff of NPNL, PNP-LP, PNP-KM, DHUP, and WASRO
People living in the water supply areas of the pilot water supply state enterprises (WSSE) as well as the other 14 WSSEs mplementing Organization:

Direct Beneficiaries: Indirect Beneficiaries:

People living in the water supply areas of the pilot water supply state enterprises (WSSE) as well as the other 14 WSSEs	ve Summary Objectively Verifiable Indicators (*2) Means of Verification Assumptions	a. By the end of 2020, at all WSSEs, a 10-year CP (2021-2025), and a three-year rolling CP (2021-2023), and a three-year rolling CP (2021-2023) are developed/approved, using the Technical Guidelines and the manuals developed through the Project by the end of 2020, at NPNL, PNP-LP, and PNP-KM, X%* ² of the targets by 2020 identified in their 10-year concerned WSSEs to WASRO. CPs (2014-2020) are achieved	a. By the Project end, all pilot WSSEs are assessed as capable of developing/revising their 10-year CPs, and 3-year CPs, and 3-year CPs, and 3-year CPs, and 3-year rolling CPs, using the Technical Guidelines and the manuals developed through the Project according to the criteria set by the Project Management Team in 6 months after according to the criteria set by the Project according to the criteria set by the Project according to the criteria set by the Project Management Team in 6 months after according to the criteria set by the Project according to t	1a: All data identified in the necessary data checklist of the respective data management plan are collected according to data management manual or its draft, by December 2013 at NPNL and approves the safe planning at each pilot it. The above data collection is maintained and the data is compiled every year at each pilot it. By March 2016, final version of data management manual is approved by DG/DHUP	2a: At each pilot WSSE, a 10-year CP (2014-2020) is developed/approved by December 2015 2b: At each pilot WSSE, a 5-year CP (2016-2020) is developed/approved by December 2015 2c: At each pilot WSSE, a 3-year rolling CP is developed/approved by December annually from 2013. 2c: At each pilot WSSE, a 3-year rolling CP is developed/approved by December annually from 2013. 2c: At each pilot WSSE, a 3-year rolling CP is developed/approved by December 2015 2c: Record on date of approval at DHUP 2e: By March 2016, final version of corporate planning manual is approved by DG/DHUP.		es on corporate planning is 4a The Draft of Technical Guidelines on corporate planning is developed in Lao and English. Guidelines Committee Guidelines Committee	isseminate techniques and sasessed as capable of providing technical according to the corter resource persons at pilot WSSEs, identified through the Project, are assessed as capable of providing technical advice on corporate planning to other WSSEs when needed, assessment at each pilot Project Manager. WSSEs when needed, wssessment at each pilot Project Manager. WSSEs when needed, wssessment at each pilot Project Manager. WSSEs when needed, the Dipty Project Manager. WSSEs when needed, wssessment at each pilot Project Manager. WSSEs when needed, wssessment at each pilot Project Manager. WSSEs when pilot Project Manager. WSSEs when pilot Project Manager. WSSE by the Pilot Project Manager. WSSE by
Indirect Beneficiaries: People living in the w	Narrative Summary	Coverall Goals The system for sustainable and stable development of the water supply sector in Lao PDR is strengthened	System of strengthening the capacity for The System of strengthening the capacity for management of the water supply state enterprises (WSSEs) with mid-term and long-term view is established in Lao PDR	<outputs> 1. Data necessary for long-term, mid-term and short-term corporate planning at each pilot WSSE is available on an ongoing basis.</outputs>	2. The pilot WSSEs are managed based on long-term, mid-term, and short-term Corporate Plans(CPs)(*1) through Plan-Do-Check-Action (PDCA) cycle	3. Monitoring of the CPs, including Performance Indicators (PIs), is strengthened	 4 Technical guidelines on corporate planning is developed, utilizing the results of Output 1 to 3 	5. A mechanism to disseminate techniques and knowledge relevant to the new technical guidelines to other WSSEs and private enterprises is-developed, utilizing the results of Output 1 to 4

Executing Organization:

Title of the Project: Project Area:

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Staff of pilot WSSEs do

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ANNEX I DRAFT PROJECT DESIGN MATRIX (PDM)

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1. Data management for corporate planning

- 1-1 Review the availability and current management of data necessary for corporate planning at each pilot WSSE Develop an improvement data management plan with a check list, including the way to adapt "Asset
 - Management" approach of Japanese water supply sector to local situation at each pilot WSSE Implement the improvement plan at each pilot WSSE <u>ო</u>
 - 4
- Develop a data management manual for corporate planning in Lao and English for approval by DG/DHUP

Management based on CP

2-2

- 2-1 Review the existing management plans, planning process and the current management status at each pilot
- Develop an improvement business management plan, including outlines of 10-year, 5-year, and 3-year CPs at
 - Forecast long-term demand for water supply and replacement/renovation of water supply facilities("3), as well as long-term financial balance (i.e. revenue and expenditure), utilizing the data obtained through Output 1, at each pilot WSSE each pilot WSSE
 - Develop a 10-year CP (up to 2020) at each pilot WSSE for approval by its Board of Directors
- Develop a 5-year CP(up to 2015 and/or 2016-2020) at each pilot WSSE for approval by its Board of Directors
 - Develop a 3-year rolling CP, and then revise it annually at each pilot WSSE for approval by its Board of
- 2-7 Implement the annual action plan of the 3-year rolling CP at each pilot WSSE.
- 2-8 Review and revise the 10-year CP as appropriate at each pilot WSSE for approval by its Board of Directors 2-9 Develop a corporate planning manual, with individual manuals for some specific areas, in Lao and English for
 - approval by DG/DHUP

Monitoring of CP with PI

<Pre><Pre>cProvincial level>

- 3-1 Review the internal monitoring system(*4) of the existing management plans and PIs at each pilot WSSE
- Develop an internal monitoring system for CP, including PIs, based on the review at each pilot WSSE
- Conduct monitoring of CP, including Pls, based on the system developed above at each pilot WSSE, the results of which would be fed back to data management under Output 1 and corporate planning under Output 2.
 - Improve the internal monitoring system for CP, including PIs, at each pilot WSSE as appropriate
 - <National level>
- 3-5 Review the monitoring system of PIs at WASRO in the context of CP
 - Develop a monitoring system for CP, including Pls
- Conduct monitoring of CPs, including Pls, of the pilot WSSEs
- Improve the monitoring system for CP, including PIs, based on the results of Activity 3-7 for application to all
- 3-9 Review the Guidelines on Service Performance Targets for Water Supply and Regulatory Monitoring of Service Level (2010)
 - 3-10 Develop a draft of revised Guidelines for review and approval by the Water Supply Regulation Committee.

4. Technical Guidelines for corporate planning

- Establish a Guidelines Committee(*5)
- Develop a draft Guidelines, reflecting the results of Output 1 to 3, for the comments by the Committee Develop a draft outline of the Guidelines for finalization by the Committee
 - Modify the draft Guidelines based on the above comments for approval by the Committee
 - Submit the approved draft to the Minister of Public Works and Transport for endorsement

(a)Management personnel Project personnel

<MPWT level>

-Director General (DG) of DHUP/MPWT 1)Project Director

-Deputy DG of DHUP/MPWT (for Output 2)Deputy Project Directors

Preconditions.

-Director of WASRO/MPWT (for Output 3) 1,2,4,5,0)

Division/DHUP/PMWT (for Output -Director of Water Supply 3)Project Managers 1,2,4,5,0)

-Deputy Director (Technical Regulation) of WASKO/MPWT (for Output 3)

<WSSE level>

-General Manager of NPNL, PNP-LP, 1)Pilot Project Manager

2)Deputy Pilot Project Manager PNP-KM

 to be assigned at each pilot WSSE (Administration)

3) Deputy Pilot Project Manager (Technical)

to be assigned at each pilot WSSE

1) DHUP: Staff in charge (SIC) of Corporate (b) Technical personnel

Planning, Financial Management, Facility Development (HRD), Water Treatment Planning
2) WASRO: SIC of Monitoring of CP
3)Each Pilot WSSE:SIC of Corporate Management, Human Resource

4) Training Center (TC) of NPNL: Head of TC (also as SIC in Training Management), SIC of Training Planning and Coordination Plant, Distribution Network

spaces for Japanese Expert team and a meeting implementation of the Project, including office Land, buildings, facilities necessary for the room at the pilot WSSEs and MPWT

Running expenses

Japanese Side

Japanese Expert

Long-term Experts in the following fields: Chief Advisor, Project Coordinator/ Monitoring Management/Training

ANNEX I DRAFT PROJECT DESIGN MATRIX (PDM)

	AININE / DESIGN MAI RIS (PDM))NI)	
	4-6 Publish the Guidelines in Lao and English	Management	
and the	5. Dissemination mechanism	(2)Short-term Experts in the following fields:	
and.	5-1 Identify the core resource person for at each pilot WSSE for future dissemination of the transferred	and others (if necessary)	
	knowledge/techniques within their respective WSSEs.	2. Equipment	
	5-2 Provide on-the-job training to the core resource persons through Output 1 to 3 at each pilot WSSE	•	
	5-3 Provide Trainer's Training to the core resource persons	with the Project in Japan in the field of	
	5-4 Organize three regional introductory seminars on long-term, mid-term and short-term corporate planning, one	Water Supply Utility Management in Japan	
	each at a pilot WSSE	and other fields related to water supply	
	5-5 Review the existing training program at the Training Center of NPNL in light of the new Technical Guidelines	utility management	
	5-6 Modify the existing course(s) and/or develop new course(s) based on the review at the Training Center		
	5-7 Implement the modified and/or new training course(s) at each pilot WSSE		
	5-8 Improve the above training course(s) based on the feedbacks from the participants		
	5-9 Develop a dissemination plan for corporate planning for DHUP based on the results of the Project for approval		
	by DG/DHUP		
	0. Project Management and Coordination		
	0-1 Organize Joint Coordination Committee (JCC) meeting at least once a year		
	0-2 Organize three provincial project orientation seminars, one each at a pilot WSSE, participated by the staff and		
	the Board members of the respective pilot WSSE, and other relevant stakeholders		
	0-3 Finalize the Indicators of the PDM and the Plan of Operations (PO) for approval of the first JCC meeting		
	Company of the Art of		

is defined as "5-year plan with action plan, which is consistent with national/provincial 5-year Plan and corresponds with its cycle (2011-15, 2016-2020,····). Short-term CP is defined as "3-year rolling plan delineated by the Prime Minister's Decision 37, with the detailed annual action plan for the first year. Management areas covered by CP would include finance, facility management, operation Long-term Corporate Plan (CP) is defined as "10-year strategic plan with PI targets, which corresponds with the cycle of National/Provincial 5-year Plan (i.e. 2011-2020, 2021-2030---) Management Team meetings at each pilot WSSE *(7), and inter-pilot WSSE coordination meetings (*8) £

Monitor the progress and achievement of the Project based on PO/APO and the Indicators of the PDM through

Prepare a draft Annual Plan of Operations (APO) based on the PO for approval of the JCC

JCC and internal regular meetings, including Project Management Team *(6) meetings, Pilot Project

and maintenance, human resource development, non-revenue water management, risk management, customer services, public relations, etc. depending on the needs/priorities of WSSEs Indicators will be reviewed and finalized in 6 months after commencement of the Project for approval of JCC, "(2) Indicators will be reviewed and finalized in 6 months after commencement of the Project "(3): <u>Water supply facilities</u> are defined as "the facilities from intake to customer water meter". "(4) <u>Monitoring system</u> would consist of (i) monitoring item, (ii) methods, timing frequency, ar

Monitoring system would consist of (i) monitoring item, (ii) methods, timing frequency, and responsible person(s) of data collection, compilation & analysis, reporting, decision making, and feedback for Internal monitoring at a pilot WSSE includes monitoring by the respective Board of Directors.

*(5): <u>Guidelines Committee</u> consists of the Deputy Director General of DHUP (chair), representatives of DHUP, including those in charge of the projects assisting corporate planning, WASRO, and JICA Expert Team

9

Project Management Team consists of Project Director, Deputy Project Directors, Project Managers, Project Managers, and long-term Japanese Experts

Pilot Project Management Team at each pilot WSSE consists of Pilot Project Manager, Deputy Pilot Project Managers, staff in charge (SIC), and long-term Japanese Experts. A representative of the respective DPWT as well as Short-term Experts in Laos is invited for information sharing and exchange of views.

Participants of Inter-pilot WSSE coordination meetings from each pilot WSSE would be decided by the respective Pilot Project Manager, depending on the agenda of the meetings, in consultation with long-term Japanese Experts. Each pilot WSSE takes turns in providing a meeting place: a meeting is combined with a study tour within the hosting WSSE.

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Activities	Expected results			90 AS 1860		(0)	Implementors	Other major innuts	Remarks
	<u> </u>		1 EM	LET 2015	LEYZO16 LEYZ017	17 Charge			
		2013	2014 2014	7015	2018 2018	2017		Japanese	
	148	Jen Apr Jul- Mar Jun Sep	Oct- Jan- Apr- Jul- Oct- Dec Mar Jun Sep Dec	Jan- Apr. Jul. Oct. Jan- Mar Jun Sep Dec Mar	Apr- July Oct-	Jen- Apr- Mer Aug		epis oer Pepis	
Output 1: Data neccesary for long-term, mid-term and short- term corporate planning at each pilot WSSE is available on an ongoing basis						Overall, PM (DHUP) WSSE: Pllot PM		Long-tem Expert (LE) : Chief Advisor: CA	
1.1 Review the availability and current management of data necessary for corporate planning at each pilot WSSE	Proparation of 3 improvement plans with checklists	and d		Difference of the second of th		Dy PPM (Adm) Dy PPM (Tec),	Staff in Charge (SiC): CP, Finance, Distribution Network (DN), Water Treatment Plant (WTP)	Short-term Expert (SE) : Finance, Facility Mgt, LE (CA),	
1.2 Develop an improvement plan for data management with a check list, including the way to adapt "Asset Management"approach of Japanese water supply sector to local situation at each pilot WSSE	ditto	d T-HNG.		Follow up activities		1	SIC (CP, Finance, DN, WTP)	SE (Finance, Facility Mgt), LE (CA),	
1.3 Implement the improvement plan for data management at each pilot WSSE	Improvement plans	2 d d = 2 d d				Dy PPM (Adm) Dy PPM (Tec),	SIC (CP, Finance, DN, WTP)	SE (Financo, Facility Mgt), LE (CA),	Tinitial assistance is provided nanih by SEz: follow-up is provided manih by LE. "Major sub-activities will be identified in finalizing the PO based on the improvement plans
1.4 Develop a data management manual for corporate planning in Lao and English for approval by DG/DHUP						Dy PPM (Adm) Dy PPM (Tec),		SE (Finance, Facility Mgt), LE (CA),	
1.4.1 Develop the first draft	Development of 1st draft	1				ditto	SIC (CP, Finance, DN, WTP)	SE (Finance, Facility Mgt)	
1.4.2 Modify the draft	The draft modified twice		1			ditto	ditto	LE (CA)	
1.4.3 Finalize the draft	The draft finalized					ditto	ditto	LE (CA)	
1.4.4 Submit the manual for approval By DG/DHUP	Manual approved					РМ (DHUP)	SIC (CP) of DHUP		
Output 2: The pilot WSSEs are managed based on long-term, mid-term, and short-term Corporate Plans (CPs) through Plan-Do-Check-Action (PDCA) cycle	d on long-term, s) through					Overall, PM (DHUP) WSSE: Pllot PM		(ck)	
2.1 Review the existing management plans, planning processes and the current management status at each pilot WSSE	3 improvement plans	WY dNd				Dy PPM (Adm) Dy PPM (Tec).	SIC (CP, Finance, HRD, DN, WTP, CP, Monitoring)	SE (Finance, Facility Mgt)	
Develop an improvement plan for business management, including outlines of 10-year, 5-year and 3-year CPs	ditto	INAN INAN INAN INAN INAN INAN INAN INAN		PVP-KW(2)			SIC (CP, Finance, HRD, DN, WTP, CP, Monitoring)	SE (Finance, Facility Mgt)	
2.3 Foercast long-term demand for water supply and replacement/renovation of water supply facilities, as well as financial balance, utilizing the data obtained through Output 1, at each pilot WSSE	(a)Forcasts available	N d		XY-d Nd		Dy PPM (Tes) Dy PPM(Adm)	SIC (CP, Finance, DN, WTP)	SE (Finance, Facility Mgt)	

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S Remarks													Major sub-activities will be identified in finelizing the PO based on the improvement plans				
Other major inputs Japanese Lao side side	SE (Finance, Facility Mgt), LE (CA),	SE (Finance, Facility mgt, HRD), LE (CA)	SE (Finance), LE (CA)	SE (Facility Mgt), LE(CA),	SE (Facility Mgt), LE(CA),) LE (CA)	SE (HRD), LE(CA)	LÉ (CA)	LE (CA)	LE (CA)	LE(CA)		SE (Finance, Facility Mgt HRD), LE (CA),	SE (Finance, Facility Mgt, HRD), LE (CA),	SE (Finance), LE (CA)	SE (Facility Mgt), LE(CA),	SE (Facility Mgt), LE(CA),
Implementors	SIC (CP., Finance, HRD, DN, WTP, CP, Monitoring)		SIC (Finance)	SIC (DN, WTP)	ditto	SIC (CP, WTP, DN)	SIC (HRD)	SIC (Finance)	Relevant SIC	Relevant SIC	SIC (CP)	Dy PPM (Adm) Dy PPM (Tec)	SIC (Finance, DN, WTP, CP, HRD, Monitoring)		SIC (Finance)	SIC (DN, WTP)	ditto
Person in Charge	Oy PPM (Adm) Dy PPM (Tec),	Dy PPM. (Adm) Dy PPM (Tec).	DyPPM (Adm)	Dy PPM(Tec)	Dy PPM(Tec)	Dy PPM (Adm) Dy PPM (Tec).	DyPPM (Adm)	Dy PPM (Adm)	Dy PPM (Adm/Tec)	Dy PPM (Adm/Tec)	DyPPM(Ad m)	Wdd.	Dy PPM. (Adm) Dy PPM (Tec).	Dy PPM (Adm) Dy PPM (Tec).	Dy PPM (Adm)	ОуРРМ (Тес)	DyPPM(Tec.)
Checked Chec	WY-divided in the control of the con	<5-year CP (2014-2015)>											CP (2014- < CP (2015-17)> < CP (2016-18)> < CP (2017-19)>	TINGN N			
Expected results	(a)NPNL&LP. CPs approved (b)KM: CP approved		5-year plan with action plan developed/improved	ditto	ditto	ditto	ditto	ditto	ditto	Other components developed	All the components collated before the Board meeting	(a) 2CPs(~2015) approved (b) 3CPs (~2020) approved	(a) 1st CPs (3CPs) approved (b) Subsequent CPs approved annualy		Annual action plan implemented	ditto	ditto
Activities	2.4 Develop a 10-year CP (up to 2020) at each pilot WSSE for approval by its respective Board of Directors	2.5 Develop a 5-year CP (up to 2015, 2016- 2020) at each pilot WSSE for approval by its respective Board of Directors	2.5.1 Develop/improve a financial management plan		water		opment		2.5.7 Develop other specific plans identified in the improvement plan	ponents identified in	draft	2.5.10 Submit the draft CP for approval by the Board of Directors		2.7 Implement the annual action plan of the 3-year rolling CP at each pilot WSSE	2.7.1 Implement the annual financial management plan		2.7.3 Implement the annual O&M plan of water supply facilities

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Activities	Expected results		Sch	Schedule		Person in	in Implementors	Character 120		Remarks
	(EY	FY LFY 2013	LFY2014	LFY 2015	LFY2016	7201		Street Halo	200	
	1	2013	2014	2	2016	2017		Japanese		
	Aug- Cot- Sep Dec	Oct. Jan. Apr. Jul. Oct.	Mar.	Mar.	Jar- Ap	Jan- Apr-			Lao side	
2.7.4 Implement the annual risk management plan	ditto					DV PPM (Adm) Dy PPM (Tec)	SIC (CP, WTP, DN)	LE (CA)		
2.7.5 Implement the annual human resourve development (HRD) plan	ditto					Dy PPM (Adm)	SIC (HRD)	SE (HRD). LE(CA)		
2.7.6 implement the annual customer service plan	ditto					Dy PPM (Adm)	SIC (Finance)	LE (CA)		
2.7.7 Implement the annual action plans for other specific plans identified	ditto					Dy Adm or Dy Tec		LE (CA)		
2.8 Review and revise the 10-year CP as approapriate at each pilot WSSE for approval by its Board of Directors	Revised 10-year CPs (3 CPs) approved				MX-dNd dT;dNd iNdN	Dy PPM (Adm) Dy PPM (Tec).	SIC (CP, Finance, DN, WTP, Monitoring)	LE (CA)		
vanning manual, with some specific areas, approval by			***************************************			Dy PPM (Adm) Dy PPM (Tec).		SE (Finance, Facility Mgt, HRD), LE (CA),		
t draft	1st draft develped					ditto	SIC (CP, Finance, DN, WTP, HRD, Monitoring)	SE (Finance, Facility Mgt, HRD)		
2.9.2 Modify the draft	The draft modified					ditto	ditto	ditto		
	The draft finalized					ditto	ditto	LE(CA)		
2.9.4 Submit the manual for approval By DG/DHUP	Manual approved					(АПНО) МА	P) SIC (CP) of DHUP			
Output 3: Monitoring of the Corporate Plan, including Performance Indicators (Pis), is strengthehed.	cluding					Overall: Dy PD (WASRO) WSSE: Plot PM	lot o	(FICA)		
2	S TOS SOCIETA STATE OF THE STAT					material programmes in the second				
Review the internal monitoring system of the existing management plans and PIs at each pilot WSSE			MA-GNA G1-dNd JNGN			Dv PPM (Adm) Dy PPM (Tec).	SIC (Monitoring, CP, HRD, Finance, DN, WTP)		"Intermon	Internal monitoring includes monitoring by Board of Directors
Develop an internal monioring system for CP, including PIs, based on the review at each pilot WSSE	Discription of the system is propared at each WSSE		MY-IND BNP-LP			Dy.PPM. (Adm) Dy PPM (Tec).	ditto	LE (PC/MM/TM), LE(CA)	inclu WAX	Internal monitoring items will include those requested by WASRO (Activity 3.7.1) among others
Conduct monitoring of CP, including PIs, based on the system developed above at each pilot WSSE, the results of which would be fed back to data management (Output 1) and corporate planning (Output	(a) Monitoning conducted conducted (b) Results fed back to the subsequent planning	NPNL PNPLP PNPLP					ditto	LE(CA)		
ntemal monitoring system for PIs, at pilot WSSEs as	Internal monitoring system improved		NPNE FUPLEP FUPLEP			Dy PPM (Adm) (Dy PPM (Tec).	ditto	LE (PC/MM/TM), LE(CA)		
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			The format will be referred to n developing internal monitoring system of WSSE (Activity 3.2)				Application to other WSSEs s expected to start in 2017							
LE (PC/MM/TM), LE(CA)	LE(CA)	LE (PC/MM/TM), LE(CA)	منئده	ditto	ditto	ditto	LE(CA)	LE(CA)	LE (PC/MM/TM), LE(CA)	ditto	ditto		(CS)	LE (CA)
RO)	RO)	dltto	ditto	dito	ditto	ditto	RO) ditto	RO) dito	ditto	ditto	ditto	PM (WASRO)		PD (DHUP) Dy PD, PM, Staff (DHUP)
STANCE WALLS	PM (WAS)	PM (WAS)	ditto	ditto	ditto	olitto	PM (WASi	PM	Md (wasi	ditto	ottle	(WAS)	4 60 4 70 4 70 4 70 4 70 4 70 7 70 7 70 7 7	면 대한 대한 대한 대한 대한 대한 대한 대한 대한 대한 대한 대한 대한
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		luding PIs,	to each pilot		lion			Description Supply and points of revel	les for				corporate planning Output 1-3	e Guideline Committee s of the nominated JP (chair), ding those in corporate
Review the monitoring system o WASRO in the context of CP	Develop a monitoring system for including Pis	Conduct monitoring of CPs, inclion of the pilot WSSEs based on the system	.1 Distribute a monitoriing format t WSSE	2 Collect information from each pi WSSE based on the format	.3 Compile & analyze the informat	.4 Provide feedback to each pilot V based on the analyses	improve the monitoring system including Pls, based on the resu Activity 3-7 for application to all	Review the guidelines on Servic Performance Targets for Water Regulatory Monitoring of Service (2010)	Develop a draft of revised guide review for approval by WSRC	1 Develop an outline of the revise guidelines	2 Develop a draft based on the o	3 Submit the draft for approval by	ut 4: Technical guidelines on loped, utilizing the results of C	Establish a Guidlines Committee ('guidelines Committee consists of the Depury Director General of DHUP (chair), representatives of DHUP, including those in charge of the projects assisting corporate planning, WASRO, and JICA Expert Team)
	n of PIs at Review report PM	Review report Sep Lord Mary Jun Sep Lord Mary Ju	the monitoring system of PIs at prepared prepare	the monitoring system of PIs at Prepared prepare	Review report	Review report prepared by the system is propared by place with the system is prescribed format by place with the system is prescribed for a system in the system is prescribed for a system in the system in the system is prescribed for a system in the system is prescribed for a system in the system is prescribed for a system in the system in the system is prescribed for a system in the system in the system is prescribed for a system in the syst	Review report prepared by State (WASRO) LE (PCMMATM). Discription of the system is prepared by PM. Calculation of the prescribed format prescribed format to a paint WSSEs in prescribed format to a paint WSSEs.	Review report prepared the system is prepared to the submitted by places from the prepared format is prescribed format in the places provided format in the places places provided format in the places places provided format in the places places places places provided format in the places pl	Foreign report Presented by Phase State (WASRO) State (WASRO) LE (CA) WASRO) LE (CA) WASRO (WASRO) LE (CA) WAS	Routour report Presented to the submitted by prescribed formet system is propertied from the policies of revision Prescribed to the policies of revision Processed to the processed to the policies of revision Processed to the policies of revision Processed to the proc	19 st Province report 19 st Province	The property of the property The	Note of the control	Particular of the control of the c

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ANNEX II TENTATIVE PLAN OF OPERATION (PO)

Person in Implementors Other major inputs Remarks	Avg PM (DHUP) Staff of DHUP LE (CA)	PM(DHUP) Staff of DHUP LE (CA)	Oltto Staff of DHUP LE (CA)	PD Dy PD LE (CA)	Dy PD Staff of DHUP (CA) (DHUP)	Dy PD (DHUP)	Dy PPM(Tec) LE (CA), SE (Finance, Facility Mgt)	Dy LE (CA), SE(all) ■ PM(Adm)	Dy SIC (HRD) 'LE (PCMM/TM) TOT needs to be completed PPM(Adm) prior to Activity 5.7 teacher's training	Dy SIC (HRD) LE (CA), LE PPM(Adm) (PC/MM/TM)	Haed of TC SIC (Training LE (CA. of NPNL Planning & PC/MM/TM) Coordination)/NPNL	Haed of TC SIC (Training LE (CA, Guidelines, manuals of NPNL Planning & PCAMMTM) developed through the Coordination)/NPNL Coordination/NPNL
CEY 2013	Mari yang i saapi jurasi saasi yang i yang saasi s						Wyrdad Jindy		THE WAY	DY-dNd T-DNd-T-DNd-T-DNd-T-DNd-T-DN-T-DN-T-DN-T		
Activities Expected results LFY JFN JFN JFN Z00	4.2 Develop a draft outline of the guidelines for Outline finalized by finalization by the Committee	4.3 Develop a draft guidelines, reflecting the Draft reviewed by results of Output 1-3 forcomments by the Committee Committee	4.4 Modify the draft guidelines based on the Modified draft above comments for approval by the committee committee	4.5 Submit the approved draft to the Minister of Draft endorsed Public Works and Transport for endorsement	4.5 Publish the guidelines in Lao and English Guideline published	Output 5: A mechanism to disseminate techniques and knowledge relevant to the new technical guidelin to other WSSEs and private enterprises is developed, utilizing the results of Output 1-4	5.1 Identify the core resource persons at each pilot WSSE for future dissemination of the transferred knowledge/techniques within their respective WSSEs	5.2 Provide OJT to the core resource persons through Output 1-3	5.3 Provide Teacher's Training to the core All core resource resource presons receive TOT	5.4 Organize three regional introductory Three seminars semminar on long-term, mid-term, and organized short-term corporate planning, one each at a pilot WSSE	5.5 Review the existing training program at Training plan for CP. Training Centre(TC) of NPNL in light of the Including course new Technical Guidlines developed under ment Output 4	5.6 Modify the existing course(s) and/or Courses develop new course(s) based on the review modified/developed at the Training Center

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Japanese Lao side	1-LE (PCMM/TM, Training courses offered at CA) Phys-LP & Phy-R/M will be selected based on their charasteristics and capacity	LE (PC/AMMTM, CA)	LE (PCMM/TM, CA)	LE (PCANINITIA). CA)	LE (CA)	LE (CA), LE (PCMM/TM)		LE (CA), LE (PC/MM/TN)	LE (CA), LE (PCMM/TM)	LE (CA), LE 'Baseline data for the (PCMM/TM) indicators is also collected	LE (CA), LE (PCMM/TM)	LE (CA), LE (PCMM/TM)	LE (CA), LE (PCAMATW)	LE (CA), LE Rach pliot WSSE takes turns (PC/MM/TM) in providing a meeting place: a meeting is combined with a study tour within the hosting
		SIC (Training Planning & Coordination)/NPNL	SIC (HRD)/PNP-LP	SIC (HRD)/PNP-KM	SIC (Training Planning & Coordination)/NPNL	Staff (DHUP)		Dy PD (WASRO), PM (DHUP, WASRO), Pilot PPMs, Dy PPMs	Pliot PM, Dy PPM (Tch) SiC (all)	Dy PPM (Adm, Tech)	Dy PD (WASRO). PM (DHUP, WASRO), Pliot PPM		Dy PPM (Adm, Tch) SIC (all)	
	Haed of TC of NPNL	Haed of TC of NPNL	DyPPM(Ad m)/PNP-LP	DyPPM(Ad m)/PNP-KM	Haed of TC of NPNL	РМ (DHUP)	Oy PD (DHUP)	Dy PD (OHUP)	Dy PPM(Adm)	Overall; Dy PD WSSE: Pilot PM	ру Ро (ОНОР)	Dy PD (WASRO)	Dy PPM (ADM)	Dy PPM (ADM)
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		All the modified/developed courses implemented	All the selected courses implemented	ditto	(a) Results of questionnairos to trainees compiled (b) The coursus modified based on the feedback	Dissemination plan approved	ated properly	JCC organized at least once a year	3 provincial seminars held	Indicators & PO flualized in 6 months after the start of the Project	APO prepared before JCC		Monthly meeting conducted at each WSSE	Meeting conducted three times a year
	Implement the modified new training course(s) at each pilot WSSE	odified/new training	ted courses at PNP-LP	ted courses at PNP-KM	Improve the above training course(s) based on the feedbacks from the participants at the NPNL	Develop a dissemination plan for corporate loplanning for DHUP based on the results of the Project for approval by DG/DHUP	Output 0: The Project is managed and coordinated properly	Organize JCC at least once a year	Organize three provincial project orientation 3 provincial seminars held seminars, one each at a pilot WSSE, participated by the staff and the Board members of the respective pilot WSSE, and other relevant stakeholders	ators of the PDM and the s (PO) for approval by the	Prepare a draft Annual Plan of Operations (APO) based on the PO for approval of the DICC	Monitor the achievement of the Indicators of PDM and progress of APO/PO through JCC and internal regular meetings	Organize a Pilot Project Management Team Meeting at each pilot WSSE monthly	0.5.2 Organize an Inter-Pliot Project Coordination Meeting three times a year
	Implement ti course(s) at	courses at NPNL	Implement the selector VVSSEs in North	Implement the select for WSSEs in South	improve the on the feedb NPNL	Develop a di planning for the Project fo	ıt 0: The Pro	Organize JC	Organize thr seminars, or participated members of other relevar	Finalize the Indice Plan of Operation first JCC meeting	Prepare a dr. (APO) based JCC	Monitor the a PDM and pro and internal	0.5.1 Organize a P meeting at ea	2 Organize an meeting thre

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Artivities	Expected results		Schedille	el I	WELLY, HELEN HOLD DECKNOOL	Doroco	Immiamantore		SEALU SERGINASSELLINOS
		LFY LFY2013	LFY2014 L	LFY 2015 LFY 2016	LFY 2017	Charge	2	Other major inputs	Saliding.
		8	JEY 201	JFY2015	ĪŌ	•			
		2013	7	2015	2			Japanese	4
		Aug- Oct- Jen- Apr- Jul- Oct- Sep Dec Mar Jun Sep Dec	Jan- Apr- July Oct- Jan- Mar Jun Sep Dec Mar	r- Apr- Jul- Oct- Jan- Apr- Jul-	Oct- Jan- Apr- Dec Mar Aug			side side	
0.5.3 Organize Project Management Team meeting semi-annually ("Project Management Team consists of PD, Dy PD (DHUP, WASRO), PM (DH	Meeting conducted twice a year					Dy PO (DHUP)	Рм (DHUP)	(PCMM/TM)	
annual progress report for MT meeting	A semi-annual report prepared before PMT meeting					Dy PD (CHUP)	Dy PD (WASRÖ). PM (DHUP. WASRO).Pilot PMs, Dy PPMs	LE (CA), LE (PCMMATM)	Progress of APO/Indicators, issues&actions, plan for the next term, progress made on the recommendation of the Mid-term Review, etc.
0.5.5 Prepare an annual progress report for review by JCC	Annual report prepared before JCC					Dy PD (DHUP)	Dy PD (WASRO), PM (DHUP. WASRO),Pilot PMs, Dy PPMs	LE (CA), LE (PC/MM/TM)	*ditto *For the year 2012 &2017, semi-annual report will be submitted to JCC
0.5.6 Conduct assessment of the capacity of pilot WSSEs and core resource persons (i.e. Indicator a of the Project Purpose and Indicator 4a of Output 4)									
a Set the criteria for pilot WSSEs	Criteria approved by the PMT meeting					Dy PD (WASRO)	PM (WASRO), SIC (Monitoring) of WASRO	LE (CA), SE (Finance, Facility Mgt)	The state of the s
	Assessment results compiled					ditto	ditto	ditto	
c Set the criteria for core resource persons	Criteria approved by the PMT meeting					Dy PD (WASRO)	PM (WASRO), SIC (Monitoring) of WASRO	LE (CA), SE (Finance, Facility Mgt), LE (PC/MM/TM)	
d Conduct assessment of core resource persons' capacity for corporate planning	Assessment results compiled					Pilot PM	Dy PPMs	ditto	
0.6 Prepare for mid-term and terminal evaluation	Requested Information provided In time					Dy PD (DHUP)	ditto	LE (CA), LE (PC/MM/TM)	

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MINUTES OF MEETINGS BETWEEN

JAPAN INTERNATIONAL COOPERATION AGENCY

AND

AUTHORITIES CONCERNED OF THE GOVERNMENT OF LAO PEOPLE'S DEMOCRATIC REPUBLIC

ON

JAPANESE TECHNICAL COOPERATION FOR

THE CAPACITY DEVELOPMENT PROJECT FOR IMPROVEMENT OF MANAGEMENT ABILITY OF WATER SUPPLY AUTHORITIES IN LAO PDR

Japan International Cooperation Agency (hereinafter referred to as "JICA") has dispatched the Detailed Planning Survey Team (hereinafter referred to as "the Team") headed by Mr. Fumihiko OKIURA, to the Lao People's Democratic Republic from February 14 to March 3, 2012 for the purpose of the preparatory study of the technical cooperation project concerning "The Capacity Development Project for improvement of management ability of water supply authorities in Lao PDR" (hereinafter referred to as "the Project").

During its stay in Lao PDR, the Team exchanged their views and had a series of discussions for the purpose of working out the details of the Project with the Ministry of Public Works and Transport (hereinafter referred to as "MPWT"), and other concerned organizations.

As a result of discussions, both sides came to understanding concerning the matters referred to in the document attached hereto.

Mr. Fumihiko OKIURA

Leader

Detailed Planning Survey Team,

Japan International Cooperation Agency,

Japan

Khamthavy THAIPHACHANH

Director General

Department of Housing and Urban Planning, Ministry of Public Works and Transport,

Vientiane Capital, March 2, 2012

Lao People's Democratic Republic

THE ATTACHED DOCUMENT

I. Background of the Project

According to the Government of Lao PDR 1999 Prime Minister Decision No.37/PM on Management and Development of Water Supply and Wastewater Sector, the sector target is to provide 24-hour access to safe water for the 80% of urban population by 2020.

To achieve the target, development partners have supported MPWT and Water Supply State Enterprises (WSSEs) to supply sufficient, reliable and safe water to urban people with financing the construction of water supply facilities and strengthening the capacity of the related personnel. JICA also conducted grant aid projects for Vientiane Capital and Savannakhet, and a technical cooperation project with MPWT from 2003-2006 to cope with the need of increasing WSSEs' staff. The technical cooperation project established a base for training system which can be applied for all engineers. Following up this project, a grass-roots technical cooperation project 2006-2008 and a JICA cooperation program of dispatching long-term experts to Lao PDR in 2009 were carried out. As a result, Lao PDR itself continues to organize the training program and the training program is providing the fundamental skills to the engineers.

As an issue to be solved, it is a serious situation for the sustainable water supply that most of WSSEs hardly realize the full cost recovery management. To improve the above situation, the Government of Lao PDR requested to the Government of Japan for the technical cooperation that aims to strengthen the planning and management abilities of nationwide water supply authorities.

II. Framework of the Project

The Project aims for the capacity development of nationwide water supply authorities including MPWT and provincial WSSEs and Vientiane Capital Water Supply State Enterprise (hereinafter referred to as "NPNL") by the following 5 approaches: 1) strengthening the data management for corporate planning at the pilot WSSEs i.e. NPNL, Luang Prabang Provincial Water Supply State Enterprise (hereinafter referred to as "PNP-LP"), and Khammouane Provincial Water Supply State Enterprise (hereinafter referred to as "PNP-KM"); 2) establishing the management based on the long-term, mid-term, and short-term corporate planning at the pilot WSSEs; 3) strengthening the monitoring of the performance of the pilot WSSEs; 4) developing the technical guidelines on corporate planning; and 5)developing the dissemination mechanism relevant to the new technical guidelines. The Project will be managed and implemented appropriately by the coordination among all stakeholders.

1. Title of the Project

The title of the Project will be "The Capacity Development Project for Improvement of Management Ability of Water Supply Authorities in Lao PDR".

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2. Executing and Implementing Organizations

Department of Housing and Urban Planning (hereinafter referred to as "DHUP") of MPWT will be the Executing Organization, which is responsible for overall execution of the Project. Water Supply Regulatory Office (hereinafter referred to as "WASRO") of MPWT, Water Supply Division (hereinafter referred to as "WSD") of DHUP, NPNL, PNP-LP and PNP-KM will be the Implementing Organizations, which are responsible for day-to-day implementation of the Project (Structure of the Project is shown in ANNEX I).

3. Project Area

The Project Area would be Vientiane Capital, Luang Prabang Province, and Khammouane Province.

4. Direct Beneficiaries

The Direct Beneficiaries will be staff of NPNL, PNP-LP, PNP-KM, DHUP, and WASRO.

5. Indirect Beneficiaries

The Indirect Beneficiaries will be people living in the water supply areas of NPNL, PNP-LP, and PNP-KM as well as staff of other provincial WSSEs who participate in the training course(s) organized by the Project.

6. Duration of the Project

The duration of the Project would be five (5) years (sixty [60] months) from the date when Japanese Experts of the Project arrive in Lao PDR.

7. Master Plan of the Project

(1) Overall Goal

The Overall Goal will be "The system for sustainable and stable development in the water supply sector of Lao PDR is strengthened".

(2) Project Purpose

The Project Purpose will be "The capacity for management of the water supply state enterprises (WSSEs) with mid-term and long-term view is strengthened in Lao PDR".

(3) Outputs

The Outputs of the Project and the Lao organization(s) in charge of each Output will be as follows:

	Outputs	Organization(s) in charge
1.	Data necessary for long-term, mid-term and short-term corporate planning at each pilot WSSE is available on an ongoing basis	Overall: DHUP Pilot WSSEs: NPNL, PNP-LP, and

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		PNP-KM
	THE THE WOOD	Overall: DHUP
2.	The pilot WSSEs are managed based on long-term, mid-term, and short-term Corporate Plans(CPs) ^(*1) through	Pilot WSSEs: NPNL,
	•	PNP-LP, and
	Plan-Do-Check-Act (PDCA) cycles	PNP-KM
		Overall: WASRO
3.	Monitoring of the Corporate Plan, including Performance	Pilot WSSEs: NPNL,
	Indicators (PIs), is strengthened	PNP-LP, and
		PNP-KM
4.	Technical guidelines on corporate planning is developed, utilizing the results of Output 1 to 3	DHUP
5.	A mechanism to disseminate techniques and knowledge relevant to the new technical guidelines to other WSSEs and private enterprises is developed, utilizing the results of Output 1 to 4	Overall: DHUP Pilot WSSEs: NPNL, PNP-LP, and PNP-KM
0.	The Project is managed and coordinated properly	Overall: DHUP Pilot WSSEs: NPNL, PNP-LP, and PNP-KM

Note

(4) Activities

<For Output 1>

- 1-1 Review the availability and current management of data necessary for corporate planning at each pilot WSSE
- 1-2 Develop an improvement plan with a check list, including the way to adapt "Asset Management" approach of Japanese water supply sector to local situation at each pilot WSSE
- 1-3 Implement the improvement plan at each pilot WSSE
- 1-4 Develop a data management manual for corporate planning

<For Output 2 >

- 2-1 Review the existing management plans, planning process and the current management status at each pilot WSSE
- 2-2 Develop an improvement plan, including outlines of 10-year, 5-year, and 3-year CPs.

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^{* (1):} Long-term Corporate Plan (CP) is defined as "10-year strategic plan with PI targets, which corresponds with the cycle of National/Provincial 5-year Plan (i.e. 2011-2020, 2021-2030 · · ·). Mid-term CP is defined as "5-year plan with action plan, which is consistent with national/provincial 5-year Plan and corresponds with its cycle (2011-15, 2016-2020, · · ·). Short-term CP is defined as "3-year rolling plan delineated by the Prime Minister's Decision 37, with the detailed annual action plan for the first year. Management areas covered by CP would include finance, facility management, operation and maintenance, human resource development, non-revenue water management, risk management, customer services, public relations, etc. depending on the needs/priorities of WSSEs

- 2-3 Forecast long-term demand for water supply and replacement/renovation of water supply facilities^(*2), as well as long-term financial balance (i.e. revenue and expenditure), utilizing the data obtained through Output 1
- 2-4 Develop a 10-year CP (up to 2020) at each pilot WSSE for approval by its Board of Directors
- 2-5 Develop a 5-year CP (up to 2015 and/or 2016-2020) at each pilot WSSE for approval by its Board of Directors
- 2-6 Develop a 3-year rolling CP, and then revise it annually at each pilot WSSE for approval by its Board of Directors
- 2-7 Implement the annual action plan of the 3-year rolling CP at each pilot WSSE
- 2-8 Review and revise the 10-year CP as appropriate at each pilot WSSE for approval by its Board of Directors
- 2-9 Develop a corporate planning manual

<For Output 3>

Provincial level

- 3-1 Review the internal monitoring system^(*3) of the existing management plans and PIs at each pilot WSSE
- 3-2 Develop an internal monitoring system for CP, including PIs, based on the review at each pilot WSSE
- 3-3 Conduct monitoring of CP, including PIs, based on the system at each pilot WSSE, the results of which would be fed back to data management under Output 1 and corporate planning under Output 2
- 3-4 Improve the internal monitoring system for CP, including PIs, at each pilot WSSE as appropriate

National level

- 3-5 Review the monitoring system of PIs at WASRO in the context of CP
- 3-6 Develop a monitoring system for CP, including PIs
- 3-7 Conduct monitoring of CPs, including PIs, of the pilot WSSEs
- 3-8 Improve the monitoring system for CP, including PIs, based on the results of Activity 3-7 for application to all WSSEs
- 3-9 Review the Guidelines on Service Performance Targets for Water Supply and Regulatory Monitoring of Service Level (2010)
- 3-10 Develop a draft of revised Guidelines for review and approval by the Water Supply Regulation Committee

<For Output 4>

- 4-1 Establish a Guidelines Committee (*4)
- 4-2 Develop a draft outline of the Guidelines for finalization by the Committee
- 4-3 Develop a draft Guidelines, reflecting the results of Output 1 to 3, for the comments by the Committee
- 4-4 Modify the draft Guidelines based on the above comments for approval by the

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Committee

- 4-5 Submit the approved draft to the Minister of Public Works and Transport for endorsement
- 4-6 Publish the Guidelines in Lao and English

<For Output 5>

- 5-1 Identify the core resource persons at each pilot WSSE for future dissemination of the transferred knowledge/techniques within and/or outside their respective WSSEs.
- 5-2 Provide on-the-job training to the core resource persons through Output 1 to 3
- 5-3 Provide Trainer's Training to the core resource persons
- 5-4 Organize three regional seminars on long-term, mid-term, and short-term corporate planning, one each at a pilot WSSE
- 5-5 Review the existing training program at the Training Center of NPNL in light of the new Guidelines
- 5-6 Modify the existing course(s) and/or develop new course(s) based on the review
- 5-7 Implement the modified and/or new training course(s) at NPNL, PNP-LP, and PNP-KM
- 5-8 Improve the above training course(s) based on the feedbacks from the participants
- 5-9 Develop a dissemination plan for corporate planning for DHUP based on the results of the Project

<For Output 0 >

- 0-1 Organize Joint Coordination Committee (JCC) meeting at least once a year
- 0-2 Organize three provincial project orientation seminars, one each at a pilot WSSE, participated by the staff and the Board members of the respective pilot WSSE, and other relevant stakeholders
- 0-3 Finalize the Indicators of the PDM and the Plan of Operations (PO) for approval of the first JCC meeting
- 0-4 Prepare a draft Annual Plan of Operations (APO) based on the PO for approval of the JCC
- 0-5 Monitor the progress and achievement of the Project based on PO/APO and the Indicators of the PDM through internal regular meetings, including meetings of Project Management Team *(5), Pilot Project Management Team at each pilot WSSE *(6), and inter-pilot WSSEs

Note

- *(2): Water supply facilities are defined as "the facilities from intake to customer water meter".
- *(3): Monitoring system would consist of (i) monitoring item, (ii) methods, timing frequency, and responsible person(s) of data collection, compilation & analysis, reporting, decision making, and feedback for each item)
- *(4): Guidelines Committee consists of the Deputy Director General of DHUP (chair), representatives of DHUP, including those in charge of the projects assisting corporate planning, WASRO, and JICA Expert Team
- *(5): Project Management Team consists of Project Director, Deputy Project Directors, Project Managers, Pilot Project Managers, and long-term Japanese Experts
- *(6): Pilot Project Management Team at each pilot WSSE consists of Pilot Project Manager, Deputy Pilot Project Managers, staff in charge (SIC), and long-term Japanese Experts

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8. Draft of Project Design Matrix (PDM)

A preliminary draft of Project Design Matrix (PDM), a summary table of the project design, which is used as a management tool in implementation, monitoring, and evaluation of a project of JICA, is shown in ANNEX II. The PDM will be modified as needed during the Project implementation stage through mutual consultations between JICA and the Lao sides.

9. Tentative Plan of Operations (PO)

The Project will be carried out in accordance with the Plan of Operation (PO). Its working draft is shown in ANNEX III. Detail Input for the Project will be decided in the course of the first several months through analysis in the Project. The schedule is tentative and subject to modification if such necessity should arise and mutually agreed by JICA and the Lao sides.

10. Joint Coordinating Committee

The Joint Coordinating Committee (the JCC) will be formulated at the beginning of the Project and the meeting will be held at least once a year and whenever necessity arises for the smooth implementation of the Project.

- (1) To authorize an annual plan of operation (APO) of the Project based on the PO
- (2) To monitor and review the overall progress (based on APO/PO) and achievements of the Project (based on the Indicators of the PDM)
- (3) To discuss and advise on major issues those arise during the implementation period of the Project

List of members of the JCC is shown in ANNEX IV of the Record of Discussions (R/D). Draft of the R/D is attached as ANNEX V.

III. Measures to be Taken by Both Sides

For the implementation of the Project, both sides will take the following necessary measures. Details will be discussed and examined by both sides and decided.

1. The Lao Side

(1) Assignment of Project Personnel

The Lao side will assign suitable number of capable project personnel in order to ensure the effective implementation of the Project. The list of project personnel is attached as ANNEX IV.

- 1) Management personnel
- a. Project Director (1 person)
 - -Director General of DHUP, MPWT
- b. Deputy Project Director (2 persons in total)
 - -For Output 1, 2, 4, 5, and 0: Deputy Director General of DHUP, MPWT
 - -For Output 3: Director of WASRO, MPWT
- c. Project Manager (2 persons in total)
 - -For Output 1, 2, 4, 5, and 0: Director of WSD, DHUP, MPWT
 - -For Output 3: Deputy Director (Technical Regulation) of WASRO, MPWT

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- d. Pilot Project Managers (3 persons in total)
 - -For NPNL: General Manager of NPNL
 - -For PNP-LP: General Manager of PNP-LP
 - -For PNP-KM: General Manager of PNP-KM
- e. Deputy Pilot Project Managers (Administration) (3 persons in total)
 - -For NPNL: Manager of IT and Corporate Planning Section, NPNL
 - -For PNP-LP: Deputy General Manager (Administration) of PNP-LP
 - For PNP-KM: Chief of Personnel Section, PNP-KM
- f. Deputy Pilot Project Managers (Technical) (3 persons in total)
 - -For NPNL: Manager of Technical and Non Revenue Water Section, NPNL
 - -For PNP-LP: Deputy General Manager (Technical) of PNP-LP
 - For PNP-KM: Chief of Technical Section, PNP-KM

*Note: <u>The Project Director</u> will bear overall responsibility for administration and implementation of the Project. <u>The Deputy Project Directors</u> will be responsible for supervision of the administration and implementation of the Project in their respective Output(s). <u>The Project Managers</u> will be responsible for the managerial and technical matters as well as day-to-day implementation of the Project. <u>The Pilot Project Managers</u> will be responsible for the implementation of the project activities in their respective WSSEs.

2) Technical Personnel

The list of Technical personnel in MPWT and in Pilot WSSEs is attached as ANNEX IV.

(2) Provision of Office Space and Facilities

Both sides confirmed the principal facilities for the implementation of the Project would be prepared by the Lao side. The Lao side will provide furnished and air-conditioned office space for Japanese Expert team in the MPWT, NPNL, PNP-LP, and PNP-KM with telephone lines, necessary facilities, a meeting room, and others necessary for the implementation of the Project.

(3) Provision of Necessary Information

Both sides confirmed that the Lao side would provide necessary information on implementing the Project such as documentary records, standards, etc.

(4) Allocation of Running Expenses

The following will be required to ensure effective implementation of the Project.

- 1) Salaries for the Lao project personnel.
- 2) Operational expenses for customs clearance, storage and domestic transportation for the equipment provided by the Japanese side
- 3) Expenses for maintenance of equipment
- 4) Other contingency expenses related to the Project

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2. The Japanese Side

(1) Dispatch of Experts

- 1) Long-term experts
- Chief Advisor
- Project Coordinator/ Monitoring Management/ Training Management
- 2) Short-term experts
- Finance
- Facility Management
- Human Resource Development
- Others (if necessary)

(2) Provision of Equipment

Equipment necessary for the effective implementation of the Project will be provided within the budget allocated.

(3) Training of Lao Personnel in Japan

JICA will provide training in Japan for Lao personnel concerned with the Project as listed below:

- Water supply utility management in Japan
- Subjects related to water supply utility management

(4) Accommodation and Travel Cost

JICA will provide accommodation and travel cost for the implementation of the Projects in the following cases:

- For Project Personnel to disseminate the transferred techniques and knowledge
- For Project Personnel to participate in the meetings, seminars/workshop organized by the Project.
- For the staff of provincial WSSEs and the relevant stakeholders to participate in the training courses, seminars, or workshops organized by the Project regarding the techniques and knowledge relevant to the new technical guidelines

IV. Discussions

1. Project Management Team

The Project Management Team (hereinafter referred to as "PMT") will be established in order to implement the Project effectively and smoothly. The PMT will manage and coordinate the Project through monitoring the semi-annual progress of APO/PO and achievement of Indicators of PDM, sharing views. The PMT meets at least twice a year and whenever deems it necessary. The PMT consists of Project Director, Deputy Project Directors, Project Managers, Pilot Project Managers, and long-term Japanese Experts.

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2. Pilot Project Coordination Team

The Pilot Project Coordination Team, consisting of the Pilot Project Manager, Deputy Pilot Project Managers, staffs in charge and long-term Japanese Experts, will be established at each pilot WSSE for effective and smooth implementation of the project activities at the level of pilot WSSE. The team will meet monthly to share the information and exchange views about plan, progress, issues, solutions, etc. related to their activities.

3. Pilot Water Supply State Enterprises

Both sides agreed that the pilot WSSEs for the Project would be the three WSSEs selected by MPWT (i.e. NPNL, PNP-LP, and PNP-KM); and confirmed that DHUP of MPWT bear responsibility for explanation to NORAD to avoid overlaps with the Capacity Development of Water Sector Project.

4. Cooperation with JICA, ADB, NORAD and Other Development Partners

DHUP will hold the meeting at least once a year with JICA, ADB, NORAD and other related development partners for sharing the information regarding the activities to formulate the corporate planning of water supply utilities in Lao PDR.

V. The Following Steps

After the approval of JICA headquarters and Government of Lao PDR, MPWT and JICA Laos office will sign R/D before the commencement of the Project. The expected commencement will be in July 2012.

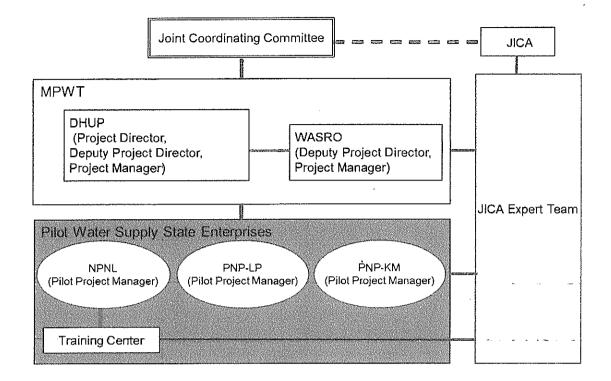
LIST OF ANNEX

ANNEX I	STRUCTURE OF THE PROJECT
ANNEX II	DRAFT PROJECT DESIGN MATRIX (PDM)
ANNEX III	TENTATIVE PLAN OF OPERATION (PO)
ANNEX IV	DRAFT LIST OF TENTATIVE PROJECT PERSONNEL
ANNEX V	DRAFT OF RECORD OF DISCUSSIONS (R/D)



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ANNEX I STURUCTURE OF THE PROJECT





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ANNEX II DRAFT PROJECT DESIGN MATRIX (PDM)

PDM ver. X (day/month/year)

Title of the Project: "Capacity Development Project for Improvement of Management Ability of Water Supply Authorities".

<u>Project Area: Vientiane Capital, Provinces of Luang Prabang and Khammouane Duration of the Project: Five years from July 2012</u>

Implementing Organization: Water Supply Regulation Office (WASRO)/MPWT, Water Supply Division (WSD)/DHUP; Vientiane Capital Water Supply State Enterprise (NPNL), Luang Prabang Provincial Water Supply State Enterprise (PNP-LP) and Khammouane Provincial Water Supply State Enterprise (PNP-KM) as the pilot water supply state enterprises. Executing Organization: Department of Housing and Urban Planning (DHUP)/Ministry of Public Works and Transport (MPWT) of Lao PDR

Direct Beneficiaries: Staff of NPNL, PNP-LP, PNP-KM, DHUP, and WASRO indirect Beneficiaries. People living in the water supply areas of the pilot water supply state enterprises as well as staff of other water supply state enterprises who participate in the training course(s) organized by the Project

Narrative Summary	Objectively Verifiable Indicators (*2)	Means of Verification	Important Assumptions
<overall goal=""> The system for sustainable and stable development in the water supply sector of Lao PDR is strengthened</overall>			
<project purpose=""> The capacity for management of the water supply state enterprises (WSSEs) with mid-term and long-term view is strengthened in Lao PDR</project>			
1. Data necessary for long-term, mid-term and short-term corporate planning at each pilot WSSE is available on an ongoing basis		`	
2. The pilot WSSEs are managed based on long-term, mid-term, and short-term Corporate Plans(CPs)(*1) through Plan-Do-Check-Act (PDCA) cycles			
3. Monitoring of the Corporate Plan, including Performance Indicators (PIs), is strengthened			
4 Technical guidelines on corporate planning is developed, utilizing the results of Output 1 to 3			
5. A mechanism to disseminate techniques and knowledge relevant to the new technical guidelines to other WSSEs and private enterprises is-developed, utilizing the results of Output 1 to 4	·		
0. The Project is managed and coordinated properly			

Short-term CP is defined as "3-year rolling plan delineated by the Prime Minister's Decision 37, with the detailed annual action plan for the first year. Management areas covered by CP would include finance, facility management, operation and maintenance, human resource development, non-revenue water management, risk management, (1) Long-term Corporate Plan (CP) is defined as "10-year strategic plan with PI targets, which corresponds with the cycle of National/Provincial 5-year Plan (i.e. 2011-2020, Mid-term CP is defined as "5-year plan with action plan, which is consistent with national/provincial 5-year Plan and corresponds with its cycle (2011-15, customer services, public relations, etc. depending on the needs/priorities of WSSEs 2021-2030····). 2016-2020, ...).

(2) Indicators will be reviewed and finalized in 3 months after commencement of the Project for approval of JCC.

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ANNEX II DRAFT PROJECT DESIGN MATRIX (PDM)

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 | 1,2,4,5,0) -Director of WASRO/MPWT (| 3)Project Managers | Division/DHUP/PMW/T (for (| -Deputy Director (Technical R | WASKO/MPWT (for Output 3
 | 1)Pilot Project Manager | 2)Deputy Pilot Project Manager | - to be assigned at each pilot V | beputy Filot Floject Manage to be assigned at each pilot \(\) | (b) Technical personnel
 | 1) DHUP: Staff in charge (SIC) | 2) WASRO: SIC of Monitoring | 3) Each Pilot WSSE: SIC of Co | Financial Management, Facil | Treatment Plant Distribution
 | 4) Training Center (TC) of NPN | (also as SIC in Training Mana | Training Planning and Coord 2. Land, buildings, facilities necess | | spaces for Japanese Expert teal room at the pilot WSSEs and MF
 | 3. Running expenses | Japanese Side | | 1. Japanese Expert | 1. Japanese Expert (1) Long-term Experts in the Chief Advisor Project Co.
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Monitoring Management/ | 1. Japanese Expert (1) Long-term Experts in the Chief Advisor, Project Co Monitoring Management/Management (2) Short-term Experts in the Finance Facility Management | 1. Japanese Expert (1) Long-term Experts in the Chief Advisor, Project Con Monitoring Management/Management (2) Short-term Experts in the Finance, Facility Manage |
| <activities></activities> | agement for corporate planning | | | 2. Management based on CP
 | 2-1 Review the existing management plans, planning process and the current management status at each pilot WSSE | | | |
 | Directors 3.7 Implement the control potion at the 3 control of the 3 control of the control of t | 2-7 IIII) PELICENT IN EACH PLANT OF THE 3-Year POLITY OF STEACH PROTIES. 2-8 Review and revise the 10-year CP as appropriate at each pilot WSSE for approval by its Board of Directors | 2-9 Develop a corporate planning manual | 3. Monitoring of CP with Pi | <provincial level=""></provincial> | 3-1 Review the internal monitoring system(*4) of the existing management plans and PIs at each pilot WSSE
 | | | 3-4 Improve the internal monitoring system for CP, including PIs, at each pilot WSSE as appropriate | ANATIONAL LEVELY |
 | | | 3-9 Review the Guidelines on Service Performance Targets for Water Supply and Regulatory Monitoring of | Service Level (2010) | 3-10 Develop a draft of revised Guidelines for review and approval by the Water Supply Regulation Committee.
 | 4. Technical Guidelines for corporate planning | 4.1 Haringal Li Baningal Li Ba | | | |
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| | | Develop art improvement plan with a check list, including the way to adapt. Asset Management, approach of Japanese water supply sector to local situation at each pilot WSSE. | Develop at hip overlief the parameter with a check list, including the way to adapt. Asset Management approach of AMPWT level> Implement the improvement plan at each pilot WSSE (a)Management at level> (b)Project Director | Develop an improvement part with a check list, including the way to adapt. Asset Management approach of supporting the management personnel struction at each pilot WSSE implement the improvement plan at each pilot WSSE implement the improvement plan at each pilot WSSE implement the improvement plan at each pilot WSSE implement the improvement manual for corporate planning included the provided planting including | sector to local situation at each pilot WSSE nent plan at each pilot WSSE nent manual for corporate planning | AMPWT level> Including the way to adapt. 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It is internal monitoring system for CP, including Pls, at each pilot WSSE as appropriate The monitoring system of Pls at WASRO in the context of CP The monitoring system of Pls at WASRO in the context of CP The monitoring system of Pls at WASRO in the context of CP The monitoring system of Pls at WASRO in the context of CP The monitoring system of Pls at WASRO in the context of CP The monitoring system of Pls at WASRO in the context of CP The monitoring system of Pls at WASRO in the context of CP The monitoring system of Pls at WASRO in the context of Activity 3-7 for application to all The monitoring system of Pls at WASRO in the monitoring of the monitoring of CP The monitoring system of Planning and The Committee The monitoring system of Planning The committee of the Guidelines for finalization by the Committee The monitoring system of Planning of CP The monitoring system of Planning The monitoring system of Planning System of Plan | te internal monitoring system for CP, including PIs, at each pilot WSSE as appropriate a monitoring system of PIs at WASRO in the context of CP monitoring system for CP, including PIs nonitoring system for CP, including PIs, of the pilot WSSEs to monitoring system for CP, including PIs, based on the results of Activity 3-7 for application to all e Guidelines on Service Performance Targets for Water Supply and Regulatory Monitoring of wel (2010) and approval by the Water Supply Regulation Committee. The Guidelines for review and approval by the Water Supply Regulation Committee. The Guidelines for finalization by the Committee draft outline of the Guidelines for finalization by the Committee draft Guidelines reflecting the results of Output 1 to 3, for the comments by the Committee draft Guidelines based on the above comments for approval by the Committee as approved draft to the Minister of Public Works and Transport for endorsement as Guidelines in Lao and English
 | e monitoring system of PIs at WASRO in the context of CP monitoring system for CP, including PIs nonitoring system for CP, including PIs nonitoring system for CP, including PIs, of the pilot WSSEs te monitoring of CPs, including PIs, of the pilot WSSEs te monitoring system for CP, including PIs, based on the results of Activity 3-7 for application to all cuidelines on Service Performance Targets for Water Supply and Regulatory Monitoring of sel (2010) a Guidelines on Service Performance Targets for Water Supply and Regulation Committee. defines for corporate planning a Guidelines for corporate planning a Guidelines for manitee draft Guidelines committee draft Guidelines based on the above comments for approval by the Committee draft Guidelines based on the above comments for approval by the Committee a gapproved draft to the Minister of Public Works and Transport for endorsement e Guidelines in Lao and English | s, of the pilot WSSEs cluding PIs. S, of the pilot WSSEs cluding PIs, based on the results of Activity 3-7 for application to all Treview and approval by the Water Supply Regulation Committee. For finalization by the Committee Tesults of Output 1 to 3, for the comments by the Committee The above comments for approval by the Committee Tof Public Works and Transport for endorsement The above comments for approval by the Committee Tof Public Works and Transport for endorsement | s, of the pilot WSSEs reluted on the results of Activity 3-7 for application to all mance Targets for Water Supply and Regulatory Monitoring of review and approval by the Water Supply Regulation Committee. For finalization by the Committee are sults of Output 1 to 3, for the comments by the Committee above comments for approval by the Committee rof Public Works and Transport for endorsement | review and approval by the Committee. for finalization by the Committee above comments for approval by the Committee above comments for approval by the Committee above above and Transport for endorsement sh | rmance Targets for Water Supply and Regulatory Monitoring of review and approval by the Water Supply Regulation Committee. 1. For finalization by the Committee aresults of Output 1 to 3, for the comments by the Committee above comments for approval by the Committee r of Public Works and Transport for endorsement
 | for finalization by the Water Supply Regulation Committee. For finalization by the Committee above comments for the Committee above comments for approval by the Committee or of Public Works and Transport for endorsement | Treview and approval by the Water Supply Regulation Committee. 3. Fulfail for finalization by the Committee are sults of Output 1 to 3, for the comments by the Committee above comments for approval by the Committee r of Public Works and Transport for endorsement | for finalization by the Committee results of Output 1 to 3, for the comments by the Committee above comments for approval by the Committee r of Public Works and Transport for endorsement | Establish a Guidelines Committee (*5) Develop a draft outline of the Guidelines for finalization by the Committee Develop a draft Quidelines, reflecting the results of Output 1 to 3, for the comments by the Committee Modify the draft Guidelines based on the above comments for approval by the Committee Submit the approved draft to the Minister of Public Works and Transport for endorsement Publish the Guidelines in Lao and English | Develop a draft outline of the Guidelines for finalization by the Committee Develop a draft Guidelines, reflecting the results of Output 1 to 3, for the comments by the Committee Modify the draft Guidelines based on the above comments for approval by the Committee Submit the approved draft to the Minister of Public Works and Transport for endorsement Publish the Guidelines in Lao and English
 | Modify the draft Guidelines based on the above comments for approval by the Committee Submit the approved draft to the Minister of Public Works and Transport for endorsement Publish the Guidelines in Lao and English | Submit the approved draft to the Minister of Public Works and Transport for endorsement Publish the Guidelines in Lao and English | Publish the Guidelines in Lao and English | | Fillance, Facility Management, HKU, and
 |

ANNEX II DRAFT PROJECT DESIGN MATRIX (PDM)

5. Dissemination	国 (if necessary)	属:
5-1 Identify the core resource persons at each pilot WSSE for future dissemination of the transferred	2. Equipment state of the Lot account of the Lot a	資料
knowledge/rechingles within ana/or outside their respective woods. 5-2 Provide on-the-job training to the core resource persons through Output 1 to 3	with the Project in Japan in the field of Water	<u> </u>
5-3 Provide Trainer's Training to the core resource persons	Supply Utility Management in Japan and	
5-4 Organize three regional seminars on long-term, mid-term and short-term corporate planning, one each at a	other fields related to water supply utility	
5-5 Review the existing training program at the Training Center of NPNL in light of the new Guidelines 5-6 Modify the existing course(s) and/or develop new course(s) based on the review		
5-7 Implement the modified and/or new training course(s) at NPNL, PNP-LP, and PNP-KM		
5-8 Improve the above training course(s) based on the feedbacks from the participants.		
5-9 Develop a dissemination plan for corporate planning for DHUP based on the results of the Project		
0. Project Management and Coordination		
0-1 Organize Joint Coordination Committee (JCC) meeting at least once a year		
0-2 Organize three provincial project orientation seminars, one each at a pilot WSSE, participated by the staff and		
the Board members of the respective pilot WSSE, and other relevant stakeholders		
0-3 Finalize the Indicators of the PDM and the Plan of Operations (PO) for approval of the first JCC meeting	-	
0-4 Prepare a draff Annual Plan of Operations (APO) based on the PO for approval of the JCC		
0-5 Monitor the progress and achievement of the Project based on PO/APO and the Indicators of the PDM		
through internal regular meetings, including meetings of Project Management Team *(6), Pilot Project		

Management Team at each pilot WSSE *(7), and inter-pilot WSSEs.

Monitoring system would consist of (i) monitoring item, (ii) methods, timing frequency, and responsible person(s) of data collection, compilation & analysis, reporting, decision *(3): <u>Water supply facilities</u> is defined as "the facilities from intake to customer water meter" *(4) <u>Monitoring system</u> would consist of (i) monitoring item, (ii) methods, timing frequency making, and feedback for each item)

Guidelines Committee consists of the Deputy Director General of DHUP (chair), representatives of DHUP, including those in charge of the projects assisting corporate planning, WASRO, and JICA Expert Team (2)

*(6) <u>Project Management Team</u> consists of Project Director, Deputy Project Directors, Project Managers, Project Managers, and long-term Japanese Experts
*(7) <u>Pilot Project Management Team</u> at each pilot WSSE consists of Pilot Project Manager, Deputy Pilot Project Managers, staff in charge (SIC), and long-term Japanese Experts

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	Remarks													
or Inputs	Section Sectio	Lao side		3 1.5 1.5 1.6 1.6 1.6 1.6 1.6 1.6 1.6 1.6 1.6 1.6)								
Other major inputs		Japanese	Long-tem Expert (LE) : Chief Advisor.CA	Short-term Expert (SE) :Finance, Facility Mgt, LE (CA),	SE (Finance, Facility Mgt), LE (CA),	SE (Finance, Facility Mgt), LE (CA),	SE (Finance, Facility Mgt), LE (CA),	SE (Finance, Facility Mgt)	LE (CA)	re(cv)		SE (Finance, Facility Mgt)	SE (Finance, Facility Mgt)	SE (Finance, Facility Mgl)
Implementors				Staff in Charge (StC): CP. Finance, Distribution Network (DN), Water Treatment Plant (WTP)	SIC (CP, Finance, DN, WTP)	SIC (CP, Finance, DN, WTP)		SIC (CP, Finance, DN, WTP)	dito			SIC (CP, Finance,HRD,DN, WTP, CP, Monitoring)	SIC (CP, Finance, HRD, DN, WTP, CP, Monitoring)	SIC (CP. Finance, DN, WTP)
Person in	5		Overall: PM (DHUP) WSSE: Pilot PM	Dy PPM (Adm) Dy PPM (Tec).	Dy PPM (Adm) Dy PPM (Tec).	Dv PPM (Adm) Dv PPM (Tec),	Dy PPM (Adm) Dy PPM (Tec),		ditto	Overall: PM (DHUP) WSSE: Pilot	Ē	Dy PPM (S (Adm) P Dy PPM V (Tec).	<u>Dy PPM</u> (Adm) Dy PPM V (Tec).	D <u>y PPM</u> S (Tec) D Dy PPM(Adm)
PY LFY. 2013 LFY. 2014 LFY 2015 LFY 2017 LFY 2017	Y 2012 - JFY2013 - JFY 2014 - JFY2015 - JFY2	Jul- Oct- Jan- Apr- Jul- Oct- Jul- Jul- Oct- Jul- Oct- Jul- Oct- Jul- Oct- Jul- Oct- Jul- Oct- Jul- Jul- Oct- Jul- Jul- Oct- Jul- Oct- Jul- Oct- Jul- Oct- Jul- Oct- Jul- Oct- Jul- Jul- Oct- Jul- Jul- Oct- Jul- Oct- Jul- Oct- Jul- Oct- Jul- Oct- Jul- Oct- Jul- Jul- Oct- Jul- O		My-dNA When the state of the st	My-dnd d'h-dnd	WY-dNd						NPN-L PNP-LP	NPN	MANIA - INGNIA - INGN
Activities as per PDM Expected results II			Output 1: Data neccesary for long-term, mid-term and short-term corporate planning at each pilot WSSE is available on an ongoing basis	,		Implement the imrprovement planfor data management at each pilot WSSE	corporate planning	Y/. 1 Develop the first draft Y7.2 Modify the draft	1.7.3 Finalize the draft	Output 2: The pilot WSSEs are managed based onlong- term, mid-term, and short-term Corporate Plans (CPs) through Plan-Do-Check-Act (PDCA) cycle	2.1 Review the evicting management place	j		the data obtained through Output 1

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ERATION (PO)
TENTATIVE PLAN OF OPI
ANNEX III.

Activities as per PDM Expe		in Implementors		
	1 1		Other major inputs	
	Apr. Jul. Oct. Jan. Jul. Sci. Jan. Jul. Sci. Jul. Jul. Jul. Jul. Jul. Jul. Jul. Jul		Japanese Lao side Remarks	larks
 2.4 Develop a 10-year CP (up to 2020) at each pilot WSSE for approval by its respective Board of Directors 	WY-dNd d'I-dNd	<u> </u>	Ш	
2.5 Develop a 5-year CP (up to 2015, 2016-2020) at each pilot WSSE for approval by its respective Board of Directors		18 E E	SE (Finance, Facility mgt, HRD), LE (CA)	
2.5.1 Develop/improve a financial management plan	MODEL MANAGEM (1) DypPpM (Adm)	SIC (Finance) SE (F	SE (Finance), LE (CA)	
rentation from the following fro	Dy PPM(Tec)	SIC (DN, WTP)	SE (Facility Mgt). LE(CA).	
2.5.4 Develop a risk management plan	PPM(Tec) DV.PPM (Adm)	SIC (CP, WTP, DN)	LE(CA),	
2.5.5 Develop a human resourve development (HRD)	Dy PPM (Teo).	Sic (HRD) SE	SE (HRD), LE(CA)	
2.5.6 Develop a customer service plan	(Adm) (Adm)	SIC (Finance) LE	LE (CA)	
improvement plan into the limprovement plan 2.5.8 Collate the ahove commonants into the death.	Dy PPM (Adm/Tec)	Relevant SIC LE	LE (GA)	
Develop 2 Supersollist Of 14	DyPPM(Ad m)	SIC (CP)	LE(CA)	
	NPNL BERT THE STATE OF THE STAT	SIC (Finance, DN, SE WTP, CP, HRD, Far Monitoring) HR	SE (Finance, Facility Mgt, HRD), LE (CA),	
2.7 Implement the annual action plan of the 3-year rolling CP at each pilot WSSE	NP-IVAL AND	SE Fac	SE (Finance, Facility Mgt, HRD), LE (CA),	
2.7.1 Implement the annual financial management plan	Dy PPM (Adm)	SIC (Finance) SE	SE (Finance), LE (CA)	
r.r.z implement the annual facility rennovation/replacement plan 2.7.3 Implement the annual O&M man of water summer	БуРРМ (Tec)	SIC (DN, WTP)	SE (Facility Mgl), LE(CA),	
taclities 2.7.4 Implement the annual risk management plan	DyPPM(Tec)	dilto	SE (Facility Mgt), LE(CA),	
	Dy PPM (Adm) Dy PPM (Dy PPM (Tec).	SIC (CP, WTP, DN) L.E (CA)	(A)	

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	Remarks																		
Other major inputs	Japanese Lao sida	SE (HRD), LE(CA)					nce, igt, i (CA),	SE (Finance, Facility Mgt, HRD)						ct on Roring Trainng LE(CA)	M/TM),		M/TM),	WITM),	ATTM),
11.2 11.2 11.2	Japa	SE (HRD	Į.	LE (CA)	LE (CA)		SE (Finance, Facility Mgt, HRD), LE (CA),	SE (Finar Facility M		ditto	(E(CA)	LE(CA)		LE (Project Cordination (PC)/Monitoring Mgt(MM)/Trainng Mgt(TM)), LE(CA)	LE (PC/MM/TM),	7	LE (PC/MM/TM), LE(CA)	LE (PC/MM/TM), LE(CA)	LE (PC/MM/TM), LE(CA)
n Implementors		SIC (HRD)	Cipanal Cip	SIC (Finalice)	SIC (CP, Finance, DN, WTP, Monitoring)			SIC (CP, Finance, DN, WTP, HRD, Monitorino)	(B	ditto	dilto			SIC (Monitoring, CP, HRD, Finance, DN, WTP)	ditto		ditto	ditto	Staff (WASRO)
Person in Charge	4pr-		(Aum)	(Adm) Dy Adm or	Dy PPM (Adm) Dy PPM	(Tec),	Dy PPM Dy PPM	ditto		ditto	ditto	Overall: Dy PD (WASRO) WSSE: Pilot	PM	Dy PPM (Adm) Dy PPM (Tec).	Dy PPM (Adm)	Dy PPM (Tec).	Dv.PPM (Adm) Dv.PPM (Tec).	Dy PPM (Adm) Dy PPM	(Tec). PM (WASRO)
5 LFY 2017	2016 Oct Jan-	Jed Hiar				>												2 2 2 2	
LFY201	Jan- Apr-	i i			NPN! PNP-LP	PNP-KM			-										
LFY 201	Jan- Apr. Jul-										domination of the second								
FY2014	Apr- Jul- Oct-													MN-and AT-dNd		KW.			
V2043	Jul- Oct- Jan- Apr-													Adv And Na	NAN	MA'-dNd	2	AD-NA NPNL PNP-LP	PNP-KM
LFY 20	§ §																NPNI , PNP-KM		
Expected LFY LFY	42.8	-	1.00									ņ							
		lan resourve	omer service plan	on plans for other	rear CP as WSSE for approval by	ng manual					Output 3: Monitoring of the Corporate Plan, including	s strengthehed.	ing system of the	and PIs at each	ng system for CP, review at each pilot	luding Ple hasad	WSSE, the results to data management anning (Output 2)	ing system for CP, s as appropriate	m of PIs at WASRO
Activities as per PUM		2.7.5 Implement the annual human resourve development (HRD) plan	2.7.6 Implement the annual customer service plan	2.7.7 Implement the annual action plans for other specific plans identified	Review and revise the 10-year CP as approval by approapriate at each pilot WSSE for approval by its Board of Directors	Develop a corporate planning manual	9 0 4 Davidon the first deef	ાલા માલા તાલા	y the draft	ze the draft	onitoring of the Co	Performance Indicators (Pis), is strengthehed.	Review the internal monitoring system of the	existing management plans and PIs at each pilot WSSE	Develop an internal monioring system for CP, including PIs, based on the review at each pilot	Wase Conduct onitoring of GP including Ple based	on the system at each pilot WSSE, the results of which would be fed back to data management (Output 1) and corporate planning (Output 2)	Improve the internal monitoring system for CP, including PIs, at pilot WSSEs as appropriate	Review the monitoring system of PIs at WASRO in the context of CP
		2.7.5 Impl deve	2.7.6 Impl	2.7.7 Impli	2.8 Revie appro	2.9 Deve	201		2.9.2 Modify the draft	2.9.3 Finalize the draft	Output 3: M	Performance V-7V	3.4 Revie		3.2 Develor includin	3.3 Condu	on the of whi (Outp	3.4 Improv includi	3.5 Reviev

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Activities as per PDM	Person in	Implementors	
	/ 2017	Other major inputs	
00	Juf Oct Jan Agr Jul Oct Jan Agr Jul Oct Jan Agr Jul Oct Agr Jun Agr Agr Jun Agr Agr	Japanese Lao side side	Kemarks
		LE (PC/AMM/TM), LE(CA)	
3.7 Conduct monitoring of CPs, including PIs, of the pilot WSSEs based on the above system	NPNI MENERAL DE LA COLO COMPANIO DE LA COLO COMPANIO DE LA COLO COMPANIO DE LA COLO COLO COLO COLO COLO COLO COLO C	LE (PCAMMTM), LE(CA)	
3.8 Improve the monitoring system for CP, including PIs, based on the results of Activity 3-7 for application to all WSSEs		LE (PCAMMTM), LE(CA)	
3.9 Review the guidelines on Service Performance Targets for Water Supply and Regulatory Monitoring of Service Level (2010)	PW dito	LE (PCMM/TM), LE(CA)	
3.10 Develop a draft of revised guidelines for review and approval by WSRC	V ditto	LE (PC/MM/TM), LE(CA)	
Output 4: Technical guidelines on corporate planning is developed, utilizing the results of Output 1-3	anning is Dy PD (OHUP)	LE (CA)	
Establish a Guidlines Committee (*guidelines Committee consists of the Depuiy Director General of DHUP (chair), representatives of DHUP, including those in charge of the projects assisting corporate planning, WASRO, and JICA Expert Team)	PD (DHUP) (OHUP)	PM, Staff LE (CA)	
4.2 Develop a draft outline of the guidelines for finalization by the Committee	Staff of DHUP) Staff of DHUP	DHUP LE (CA)	
4.3 Develop a draft guidelines, reflecting the results of Output 1-3 forcomments by the Committee	S PM(DHUP) Staff of DHUP	OHUP (LE (CA)	
4.4 Modify the draft guidelines based on the above comments for approval by the Committee	Clitto Staff of DHUP	JHUP LE (CA)	
4.6 Submit the approved draft to the Minister of Public Works and Transport for endorsement	Qd kQ	LE (CA)	
4.7 Publish the guidelines in Lao and English	Staff of DHUP)	OHUP LE (CA)	

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Implementors Other major Inputs	Japanese Lao side Kemarks side	I.E. (CA.)	Dy PPM(Tec) LE (CA), SE (Finance, Facility Mgt)	LE (CA), SE(ali)	SIC (HRD) *LE (PC/MM/TM) -Local cost for teacher's training	SIC (HRD) LE (CA), LE (PC/MM/TM)	SIC (Treining LE (CA, Planning & PC/MM/TM) Coordination)/NPNL	SIC (Training LE (CA. Planning & PC/MM/TM) Coordination)/NPNL	LE(CA)	SIC (Training LE (PC/MM/TM), Planning & LE(CA) Coordination)/NPNL	SIC (HRD)/PNP-LP LE (PC/MM/TM), LE(CA)	SIC (HRD)/PNP-KM LE (PC/MM/TM), LE(CA)	SIC (Training Planning & Coordination)/NPNL
LFY 2015 LFY 2016 LFY 201	CG- Jan- Apr- Jul- Oct- Jan- Apr- Jul- Oct- Jan- Apr- Ecg Mar Jun Sep Dec Mar Jun Sep Dec Mar Jun		WPN; Dy PPM(Adm) D		NPML HAM.	NPNL, PNP-LP PNP-KM PNP-KM	Of NPNL Co	Haed of TC Sig	Haed of TC of NPNL	NPNL Haed of TC SIC	DyPPM(Ad SIC	DyPPM(Ad SIG	OCO
Activities as per PDM Expected results		tput owle SSEs sults	5.1 Identify the core resource persons at each pilot WSSE for future dissemination of the transferred knowledge/techniques within and/or outside their respective WSSEs				0		5.7 Implement the modified/new training course(s) at NPNL, PNP-LP, and PNP-KM	5.7.1 Implement the modified/new training courses at NPNL	5.7.2 Implemented the selected courses at PNP-LP for WSSEs in North	5.7.3 Implemeeted the selected courses at PNP-KM for WSSEs in South	5.8 Improve the above training course(s) based on the feedbacks from the participants at NPNL.

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	Activities as per PDM	Expected results L	LFY I	LFY 2013	_	FY2014	F	LFY 2015	FY	LFY2016	L FY 2017	Person in Charge	n Implementors	<u>د</u>	Other major inputs	r inputs	and the state of t	> 7
		<u>.</u>	7 20	L	Y2013	JFY	JFY 2014	JFY2015		l≿.	116			<u>L</u> .	lananese		Remarks	
	The state of the s	-J 103	Jul- Ock- J Sep Dec	Jan- Apr- J	Jul- Oct- Jan- Sep Dec Mar	Apr- Jus- Jun Sep	Oct- Jan- Dec Mar	Apt- Jus- Oct- Jun Sep Dec	Jan- Mar	Apr- Jut- C	Oct- Jan- Apr- Dec Mar Jun	-16			side	Lao side		-
5.9	Develop a dissemination plan for corporate planning for DHUP based on the results of the Project											РМ (ОНИР)) Staff (DHUP)	(PC	LE (CA), LE (PC/MM/TM)			
Output 0 properly	Output 0: The Project is managed and coordinated properly											Dy PD (DHUP)						
0.1	Organize JCC at least once a year		J									Dy PD (DHUP)	Dy PD (WASRO), PM (DHUP, WASRO),Pilot PPMs, Dy PPMs	∑ '\$'	LE (CA), LE (PC/MM/TM), LE(CA)			
0.2	Organize three provincial project orientation seminars, one each at a pilot WSSE, participated by the staff and the Board members of the respective pilot WSSE, and other relevant stakeholders	<u> </u>										Dy PPM(Adm)			LE (CA), LE ' (PC/MM/TM),			
0.3	Finalize the Indicators of the PDM and the Plan of Operations (PO) for approval by the first JCC meeting											Overall: Dy PD WSSE: Pilot PM		Tech) LE (PC	LE (CA), LE (PC/MM/TM)			
₹ A2-2	Prepare a draft Annual Plan of Operations (APO) based on the PO for approval of the JCC			B		- Advantage	R					Dy PD (DHUP)	Dy PD (WASRO), PM (DHUP, WASRO),Pilot PPM), PM LE (PC 'PM	LE (CA), LE (PC/MM/TM)			
ල. ලි.	Monitor the achievement of the Indicators of PDM and progress of APO/PO through regular meetings											Dy PD (WASRO)		7	LE (CA), LE (PC/MM/TM)			1
0.5.1	.1 Organize a Pilot Project Management Team meeting at each pilot WSSE monthly	10	12 12	8 8	2 2 2	0 0 0	- 12 - 12	0 0 8	6 6 2 6	6 6 6 6	0 0 2	Dy PPM (ADM)	Dy PPM (Adm, Tch) SIC (all)		LE (CA), LE (PC/MM/TM)			
0.5	0.5.2 Organize an Inter-Pilot Project Coordination meeting three times a year		# E	E E	6 6 6	13 13 14	2 2 3	15 25 26	10 10 0	75 75 70 70		Dy PPM (ADM)		크 (P)	LE (CA), LE (PC/MM/TM)			
0.5	0.5.3 Organize Project Management Team meeting semt-annually ("Project Management Team consists of PD, Dy PD (DHUP, WASRO), PM (DHUP, WASRO), Pilot PMs, Jes)									The state of the s		Dy PD (DHUP)	РМ (DHUP)	H (F)	LE (CA), LE (PC/MM/TM)			
0.5	0.5.4 Prepare a semi-annual progress report for discussion by PMT meeting											Dy PD (DHUP)	Dy PD (WASRO), PM (DHUP, WASRO), Pilot PPMs, Dy PPMs)), PM LE (P(LE (CA), LE (PC/MM/TM)			
0.5	0.5.5 Prepare an annual progress report for review by JCC	And the same of th										Dy PD (DHUP)	Dy PD (WASRO), PM LE (CA), LE (CHUP. (PC/MM/TM) WASRO), Pilot PPMs. Dy PPMs	O), PM LE (P(PMs,	(CA), LE C/MM/TM)			
9.0	Prepare for mid-term and terminal evaluation											Dy PD (DHUP)	ditto	교()	LE (CA), LE (PC/MM/TM)			
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ANNEX IV DRAFT LIST OF TENTATIVE PROJECT PERSONNEL

(1) List of Management personnel

(1)	Position of the Project	Position of their Organization	Name
1			***************************************
1	Project Director	Director General of Department of Housing and Urban Planning (DHUP), Ministry of Public Works and Transport (MPWT)	Mr. Khamthavy Thaiphachanh
2	Deputy Project Director for Output 1, 2, 4, 5 and 0	Deputy Director General of DHUP, MPWT	Mr. Noupheuak Virabouth
3	Deputy Project Director for Output 3	Director, Water Supply Regulatory Office (WASRO), MPWT	Mr. Somvan Mongphachan
4	Project Manager for Output 1, 2, 4, 5 and 0	Director of Water Supply Division, DHUP, MPWT	Mr. Khanthone Vorachith
5	Project Manager for Output 3	Deputy Director (Technical Regulation), WASRO, MPWT	Mr. Sompong Sithivong
6	Pilot Project Manager for NPNL	General Manager, Vientiane Capital Water Supply State Enterprise (NPNL)	Mr. Khampheuy Vongsakhamphoui
7	Pilot Project Manager for PNP-LP	General Manager, Luang Prabang Provincial Water Supply State Enterprise (PNP-LP)	Mr. Soulith Chindamany
8	Pilot Project Manager for PNP-KM	General Manager, Khammouane Provincial Water Supply State Enterprise (PNP-KM)	Mr. Khanngeun Sengiem
· 9	Deputy Pilot Project Manager (Administration) for NPNL	Manager of 1T and Corporate Planning Section, NPNL	Mr. Phiengkham Srisouraj
10	Deputy Pilot Project Manager (Administration) for PNP-LP	Deputy General Manager, PNP-LP	Mr. Somsanith Thipphasouda
11	Deputy Pilot Project Manager (Administration) for PNP-KM	Chief of Personnel Section, PNP-KM	Mrs. Phaivanh Chanthavong
12	Deputy Pilot Project Manager (Technical) for NPNL	Manager of Technical and Non Revenue Water Section, NPNL	Mr. Viengthouay Vannarath
13	Deputy Pilot Project Manager (Technical) for PNP-LP	Deputy General Manager, PNP-LP	Mr. Chanthone Sanaphay
14	Deputy Pilot Project Manager (Technical) for PNP-KM	Chief of Technical Section. PNP-KM	Mr. Khamprasit Sinthepphavang

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(2) List of Technical personnel

(a)MPWT

	Field	Organization/ Position	Name (Expected number)
1.	Corporate Planning	DHUP	Ms. Malichanh Xananikhom Mr. Xaipasa Liengsone
2.	Monitoring of Corporate Plan	WASRO (To be assigned prior to the start of the Project)	1 (at least)

(b) In each pilot WSSE

	Field	Organization/ Position	Name (Expected number)
1.	Corporate Planning	The person in charge of Corporate plan	1 (at least)
2.	Financial Management	The person in charge of finance	1 (at least)
3.	Water Treatment Plant (WTP)	The person in charge of operation and maintenance for WTP	1 (at least)
4.	Distribution Network	The person in charge of Water Distribution Network	1 (at least)
5.	Human resource development	The person in charge of personnel	1 (at least)
6.	Monitoring	The person in charge of monitoring	1 (at least)

(c) Training Center of NPNL

	Field	Organization/ Position	Name (Expected number)
1.	Training Management	Head of TC	1
2.	Training Planning and Coordination	The person to be assigned from Section for Planning and	1 (at least)
		Implementation	

(3) Others

Administrative and supporting staff

- Mr. Sengsavath Sidlakone, DHUP, MPWT
- Mr. Soutchay Buaphayvanh, DHUP, MPWT

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ANNEX V DRAFT OF RECORD OF DISCUSSIONS (R/D)

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RECORD OF DISCUSSIONS

ON

THE CAPACITY DEVELOPMENT PROJECT FOR IMPROVEMENT OF MANAGEMENT ABILITY OF WATER SUPPLY AUTHORITIES

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LAO PEOPLE'S DEMOCRATIC REPUBLIC

AGREED UPON BETWEEN

MINISTRY OF PUBLIC WORKS AND TRANSPORT

AND

JAPAN INTERNATIONAL COOPERATION AGENCY

[Vientiane Capital], [2012]

Mr. Masato TOGAWA Chief Representative Laos Office, Japan International Cooperation Agency, Japan Mr./ Ms. *****

Ministry of Public Works and Transport Lao People's Democratic Republic



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Based on the minutes of meetings on the Detailed Planning Survey for the Capacity Development Project for Improvement of Management Ability of Water Supply Authorities Lao PDR (hereinafter referred to as "the Project") signed on March 2, 2012 between Department of Housing and Urban Planning (hereinafter referred to as "DHUP"), Ministry of Public Works and Transport (hereinafter referred to as "MPWT") and the Japan International Cooperation Agency (hereinafter referred to as "JICA"), JICA held a series of discussions with DHUP and relevant organizations to develop a detailed plan of the Project.

Both parties agreed the details of the Project as described in the Appendix 1.

Both parties also agreed that DHUP, the counterpart to JICA, will be responsible for the implementation of the Project in cooperation with JICA, coordinate with other relevant organizations and ensure that the self-reliant operation of the Project is sustained during and after the implementation period in order to contribute toward social and economic development of Lao PDR.

The Project will be implemented within the framework of the Agreement on Technical Cooperation signed on December 12, 2003 (hereinafter referred to as "the Agreement") and between the Government of Japan (hereinafter referred to as "GOJ") and the Government of Lao PDR (hereinafter referred to as "GOL").

Appendix1: Project Description



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Appendix 1

PROJECT DESCRIPTION

Both parties confirmed that there is no change in the Project Description agreed on in the minutes of meetings on the concerning Detailed Planning Survey on the Project signed on March 2, 2012.

I. BACKGROUND

According to the Government of Lao PDR 1999 Prime Minister Decision No.37/PM on Management and Development of Water Supply and Wastewater Sector, the sector target is to provide 24-hour access to safe water for the 80% of urban population by 2020.

To achieve the target, development partners have supported MPWT and Water Supply State Enterprises (WSSEs) to supply sufficient, reliable and safe water to urban people with financing the construction of water supply facilities and strengthening the capacity of the related personnel. JICA also conducted grant aid projects for Vientiane Capital and Savannakhet, and a technical cooperation project with MPWT from 2003-2006 to cope with the need of increasing WSSEs' staff. The technical cooperation project established a base for training system which can be applied for all engineers. Following up this project, a grass-roots technical cooperation project 2006-2008 and a JICA cooperation program of dispatching long-term experts to Lao PDR in 2009 were carried out. As a result, Lao PDR itself continues to organize the training program and the training program is providing the fundamental skills to the engineers.

As an issue to be solved, it is a serious situation for the sustainable water supply that most of WSSEs hardly realize the full cost recovery management. To improve the above situation, the Government of Lao PDR requested the technical cooperation that aims to strengthen the planning and management ability of nationwide water supply authorities to the Government of Japan.

This project is to contribute to improve the management of nationwide water supply authorities through strengthening planning, implementation and monitoring ability of WSSEs.

II. OUTLINE OF THE PROJECT

Details of the Project are described in the Logical Framework (Project Design Matrix: PDM) (ANNEX I) and the tentative Plan of Operation (PO) (ANNEX 2).

1. Title of the Project

The title of the Project will be "The Capacity Development Project for Improvement of Management Ability of Water Supply Authorities in Lao PDR".

2. Overall Goal

The Overall Goal will be "The system for sustainable and stable development in the

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water supply sector of Lao PDR is strengthened".

3. Project Purpose

The Project Purpose will be "The capacity for management of the water supply state enterprises (WSSEs) with mid-term and long-term view is strengthened in Lao PDR".

4. Outputs

The Outputs of the Project and the Lao organization(s) in charge of each Output will be as follows:

	Outputs	Organization(s) in charge
1.	Data necessary for long-term, mid-term and short-term corporate planning at each pilot WSSE is available on an ongoing basis	Overall: DHUP Pilot WSSEs: NPNL, PNP-LP, and PNP-KM
2.	The pilot WSSEs are managed based on long-term, mid-term, and short-term Corporate Plans(CPs) ^(*1) through Plan-Do-Check-Act (PDCA) cycles	Overall: DHUP Pilot WSSEs: NPNL, PNP-LP, and PNP-KM
3.	Monitoring of the Corporate Plan, including Performance Indicators (PIs), is strengthened	Overall: WASRO Pilot WSSEs: NPNL, PNP-LP, and PNP-KM
4.	Technical guidelines on corporate planning is developed, utilizing the results of Output 1 to 3	DHUP
5.	A mechanism to disseminate techniques and knowledge relevant to the new technical guidelines to other WSSEs and private enterprises is developed, utilizing the results of Output 1 to 4	Overall: DHUP Pilot WSSEs: NPNL, PNP-LP, and PNP-KM
0.	The Project is managed and coordinated properly	Overall: DHUP Pilot WSSEs: NPNL, PNP-LP, and PNP-KM

Note

5. Activities

<For Output 1>

- 1-1 Review the availability and current management of data necessary for corporate planning at each pilot WSSE
- 1-2 Develop an improvement plan with a check list, including the way to adapt "Asset

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^{* (1):} Long-term Corporate Plan (CP) is defined as "10-year strategic plan with PI targets, which corresponds with the cycle of National/Provincial 5-year Plan (i.e. 2011-2020, 2021-2030 · · ·). Mid-term CP is defined as "5-year plan with action plan, which is consistent with national/provincial 5-year Plan and corresponds with its cycle (2011-15, 2016-2020, · · ·). Short-term CP is defined as "3-year rolling plan delineated by the Prime Minister's Decision 37, with the detailed annual action plan for the first year. Management areas covered by CP would include finance, facility management, operation and maintenance, human resource development, non-revenue water management, risk management, customer services, public relations, etc. depending on the needs/priorities of WSSEs

Management" approach of Japanese water supply sector to local situation at each pilot WSSE

- 1-3 Implement the improvement plan at each pilot WSSE
- 1-4 Develop a data management manual for corporate planning

<For Output 2 >

- 2-1 Review the existing management plans, planning process and the current management status at each pilot WSSE
- 2-2 Develop an improvement plan, including outlines of 10-year, 5-year, and 3-year CPs.
- 2-3 Forecast long-term demand for water supply and replacement/renovation of water supply facilities^(*2), as well as long-term financial balance (i.e. revenue and expenditure), utilizing the data obtained through Output 1
- 2-4 Develop a 10-year CP (up to 2020) at each pilot WSSE for approval by its Board of Directors
- 2-5 Develop a 5-year CP (up to 2015 and/or 2016-2020) at each pilot WSSE for approval by its Board of Directors
- 2-6 Develop a 3-year rolling CP, and then revise it annually at each pilot WSSE for approval by its Board of Directors
- 2-7 Implement the annual action plan of the 3-year rolling CP at each pilot WSSE
- 2-8 Review and revise the 10-year CP as appropriate at each pilot WSSE for approval by its Board of Directors
- 2-9 Develop a corporate planning manual

<For Output 3>

Provincial level

- Review the internal monitoring system^(*3) of the existing management plans and PIs at each pilot WSSE
- 3-2 Develop an internal monitoring system for CP, including PIs, based on the review at each pilot WSSE
- 3-3 Conduct monitoring of CP, including PIs, based on the system at each pilot WSSE, the results of which would be fed back to data management under Output 1 and corporate planning under Output 2
- 3-4 Improve the internal monitoring system for CP, including PIs, at each pilot WSSE as appropriate

National level

- 3-5 Review the monitoring system of PIs at WASRO in the context of CP
- 3-6 Develop a monitoring system for CP, including PIs
- 3-7 Conduct monitoring of CPs, including PIs, of the pilot WSSEs
- 3-8 Improve the monitoring system for CP, including PIs, based on the results of Activity 3-7 for application to all WSSEs
- 3-9 Review the Guidelines on Service Performance Targets for Water Supply and Regulatory Monitoring of Service Level (2010)
- 3-10 Develop a draft of revised Guidelines for review and approval by the Water Supply Regulation Committee

<For Output 4>

- 4-1 Establish a Guidelines Committee (*4)
- 4-2 Develop a draft outline of the Guidelines for finalization by the Committee
- 4-3 Develop a draft Guidelines, reflecting the results of Output 1 to 3, for the comments by the Committee
- 4-4 Modify the draft Guidelines based on the above comments for approval by the Committee
- 4-5 Submit the approved draft to the Minister of Public Works and Transport for

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endorsement

4-6 Publish the Guidelines in Lao and English

<For Output 5>

- 5-1 Identify the core resource persons at each pilot WSSE for future dissemination of the transferred knowledge/techniques within and/or outside their respective WSSEs.
- 5-2 Provide on-the-job training to the core resource persons through Output 1 to 3
- 5-3 Provide Trainer's Training to the core resource persons
- 5-4 Organize three regional seminars on long-term, mid-term, and short-term corporate planning, one each at a pilot WSSE
- 5-5 Review the existing training program at the Training Center of NPNL in light of the new Guidelines
- 5-6 Modify the existing course(s) and/or develop new course(s) based on the review
- 5-7 Implement the modified and/or new training course(s) at NPNL, PNP-LP, and PNP-KM
- 5-8 Improve the above training course(s) based on the feedbacks from the participants
- 5-9 Develop a dissemination plan for corporate planning for DHUP based on the results of the Project

<For Output 0 >

- 0-1 Organize Joint Coordination Committee (JCC) meeting at least once a year
- 0-2 Organize three provincial project orientation seminars, one each at a pilot WSSE, participated by the staff and the Board members of the respective pilot WSSE, and other relevant stakeholders
- 0-3 Finalize the Indicators of the PDM and the Plan of Operations (PO) for approval of the first JCC meeting
- 0-4 Prepare a draft Annual Plan of Operations (APO) based on the PO for approval of the JCC
- 0-5 Monitor the progress and achievement of the Project based on PO/APO and the Indicators of the PDM through internal regular meetings, including meetings of Project Management Team *(5), Pilot Project Management Team at each pilot WSSE *(6), and inter-pilot WSSEs

Note

- *(2): Water supply facilities are defined as "the facilities from intake to customer water meter".
- *(3): Monitoring system would consist of (i) monitoring item, (ii) methods, timing frequency, and responsible person(s) of data collection, compilation & analysis, reporting, decision making, and feedback for each item)
- *(4): Guidelines Committee consists of the Deputy Director General of DHUP (chair), representatives of DHUP, including those in charge of the projects assisting corporate planning, WASRO, and JICA Expert Team
- *(5): Project Management Team consists of Project Director, Deputy Project Directors, Project Managers, Pilot Project Managers, and long-term Japanese Experts
- *(6): Pilot Project Management Team at each pilot WSSE consists of Pilot Project Manager, Deputy Pilot Project Managers, staff in charge (SIC), and long-term Japanese Experts

6. Input

- (1) Input by JICA
 - (a) Dispatch of Experts
 - 1) Long-term experts
 - Chief advisor
 - Project Coordinator / Monitoring Management / Training Management
- 2) Short-term experts
 - Finance
 - Facility Management
 - Human Resource Development

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- Others (if necessary)

(b) Training

- Water supply utility management in Japan
- Subjects related to water supply utility management

(c) Equipment

Equipment necessary for the effective implementation of the Project will be provided within the budget allocated.

(2) Input by DHUP

DHUP will take necessary measures to provide at its own expense:

- (a) Services of MPWT and Pilot WSSEs' counterpart personnel and administrative personnel as referred to in II-7;
- (b) Suitable office space with necessary equipment;
- (c) Supply or replacement of machinery, equipment, instruments, vehicles, tools, spare parts and any other materials necessary for the implementation of the Project other than the equipment provided by JICA;
- (d) Information as well as support in obtaining medical service;
- (e) Credentials or identification cards;
- (f) Available data (including maps and photographs) and information related to the Project;
- (g) Running expenses necessary for the implementation of the Project;
- (h) Expenses necessary for transportation within Lao PDR of the equipment referred to in II-6 (1) as well as for the installation, operation and maintenance thereof; and
- (i) Necessary facilities to the JICA experts for the remittance as well as utilization of the funds introduced into Lao PDR from Japan in connection with the implementation of the Project

7. Implementation Structure

The Project organization chart is given in the ANNEX III. The roles and assignments of relevant organizations are as follows:

- (1) MPWT (DHUP, and Water Supply Regulatory Office (hereinafter referred to as "WASRO"))
 - (a) Project Director

Project Director will be responsible for overall administration and implementation of the Project.

(b) Deputy Project Directors

The Deputy Project Directors will be responsible for supervision of the administration and implementation of the Project in their respective Output(s).

(c)Project Managers

The Project Managers will be responsible for the managerial and technical matters as well as day-to-day implementation of the Project.

(2) Pilot Water Supply State Enterprises

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(a) Pilot Project Managers

Pilot Project Managers will be responsible for the implementation of the project activities in their respective WSSEs. The Pilot WSSEs are as follows;

- -Vientiane Capital Water Supply State Enterprise (hereinafter referred to as "NPNL")
- -Luang Prabang Provincial Water Supply State Enterprise (hereinafter referred to as "PNP-LP")
- -Khammouane Provincial Water Supply State Enterprise (hereinafter referred to as "PNP-KM")

(b) Deputy Pilot Project Managers

Deputy Pilot Project Managers will be responsible for the supervising for implementation of the pilot project activities.

(3) JICA Experts

The JICA experts will give necessary technical guidance, advice and recommendations to DHUP on any matters pertaining to the implementation of the Project.

(4) Joint Coordinating Committee

Joint Coordinating Committee (hereinafter referred to as "JCC") will be established in order to facilitate inter-organizational coordination. JCC will be held at least once a year and whenever deems it necessary. JCC will approve an annual work plan, review overall progress, conduct monitoring and evaluation of the Project, and exchange opinions on major issues that arise during the implementation of the Project. A list of proposed members of JCC is shown in the ANNEX IV.

(5) Project Management Team meeting

The Project Management Team (hereinafter referred to as "PMT") will be established in order to implement the Project effectively and smoothly. The PMT will manage and coordinate the Project through monitoring the semi-annual progress of APO/PO and achievement of Indicators of PDM, sharing views. The PMT meets at least twice a year and whenever deems it necessary. The PMT consists of Project Director, Deputy Project Directors, Project Managers, Pilot Project Managers, and long-term Japanese Experts.

(6) Pilot Project Coordination

The Pilot Project Coordination Team, consisting of the Pilot Project Manager, Deputy Pilot Project Managers, staffs in charge and long-term Japanese Experts, will be established at each pilot WSSE for effective and smooth implementation of the project activities at the level of pilot WSSE. The team will meet monthly to share the information and exchange views about plan, progress, issues, solutions, etc. related to their activities.

8. Project Site(s) and Beneficiaries

(1)Project Area

The Project area would be Vientiane Capital, Luang Prabang province, and Khammouane province.

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(2) Direct Beneficiaries

The Direct Beneficiaries will be staff of NPNL, PNP-LP, PNP-KM, DHUP, and WASRO.

(3) Indirect Beneficiaries

The Indirect Beneficiaries will be people living in the water supply areas of NPNL, PNP-LP, and PNP-KM as well as staff of other provincial WSSEs who participate in the training course(s) organized by the Project.

9. Duration

July 2012 – July 2017

10. Reports

Semiannual progress report will be submitted to PCT meeting.

Annual progress report will be submitted to the JCC.

11. Environmental and Social Considerations

DHUP agreed to abide by 'JICA Guidelines for Environmental and Social Considerations' in order to ensure that appropriate considerations will be made for the environmental and social impacts of the Project.

III. UNDERTAKINGS OF GOL

- 1. GOL will take necessary measures to:
 - (1) ensure that the technologies and knowledge acquired by the Lao PDR nationals as a result of Japanese technical cooperation contributes to the economic and social development of Lao PDR, and that the knowledge and experience acquired by the personnel of Lao PDR from technical training as well as the equipment provided by JICA will be utilized effectively in the implementation of the Project; and
 - (2) grant privileges, exemptions and benefits to the JICA experts and their families, which are no less favorable than those granted to experts and members of the missions and their families of third countries or international organizations performing similar missions in Lao PDR.

IV. EVALUATION

JICA and the DHUP will jointly conduct the following evaluations and reviews.

- 1. Mid-term review at the middle of the cooperation term
- 2. Terminal evaluation during the last six (6) months of the cooperation term

V. PROMOTION OF PUBLIC SUPPORT

For the purpose of promoting support for the Project, DHUP will take appropriate measures to make the Project widely known to the people of GOL

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VI. MUTUAL CONSULTATION

JICA and DHUP will consult each other whenever any major issues arise in the course of Project implementation.

VII. AMENDMENTS

The record of discussions may be amended by the minutes of meetings between JICA and DHUP.

The minutes of meetings will be signed by authorized persons of each side who may be different from the signers of the record of discussions.

ANNEX I	Logical Framework (Project Design Matrix:PDM) (*1)
ANNEX II	Tentative Plan of Operation (*2)
ANNEX III	Structure of the Project (*3)
ANNEX IV	A List of Proposed Members of Joint Coordinating Committee/ Steering
	Committee

Note

^{*1:} For the Minutes of Meetings (M/M) on March 2, 2012, Logical Framework is attached as ANNEX II of M/M

^{*2:} For the M/M on March 2, 2012, Tentative Plan of Operation is attached as ANNEX III of M/M *3: For the M/M on March 2, 2012, Structure of the Project is attached as ANNEX I of M/M

ANNEX IV JOINT COORDINATING COMMITTEE

1. Functions

The Joint Coordinating Committee (hereinafter referred to as "JCC") will be held <u>at least once a year and whenever necessity</u> arises. Its functions are as follows:

- (1) To authorize an annual plan of operation (APO) of the Project based on the PO
- (2) To monitor and review the overall progress (based on PO) and achievements of the Project (based on the PDM)
- (3) To discuss and advise on major issues those arise during the implementation period of the Project.

2. Compositions

The JCC shall be composed of;

- (1) Chairperson: Director General of DHUP, MPWT (Project Director)
- (2) Members: (to be considered)
 Lao members;
 - Deputy Director General of DHUP, MPWT (Deputy Project Director)
 - Director of WASRO, MPWT (Deputy Project Director)
 - Director of Water Supply Division, DHUP, MPWT (Project Manager)
 - Deputy Director of WASRO, MPWT (Project Manager)
 - Director General of Department of Public Works and Transport (hereinafter referred to as "DPWT")), Vientiane Capital government
 - Director General of DPWT, Luang Prabang provincial government
 - Director General of DPWT, Khammouane provincial government
 - General Manager of Vientiane Capital Water Supply State Enterprise (Pilot Project Manager)
 - General Manager of Luang Prabang Provincial Water Supply State Enterprise (Pilot Project Manager)
 - General Manager of Khammouane Provincial Water Supply State Enterprise (Pilot Project Manager)
 - Representative, Department of International Cooperation, Ministry of Planning and Investment
 - Others appointed by the Chairperson Japanese members;
 - Japanese experts of the Project
 - JICA missions dispatched by JICA
 - JICA Laos Office
 - Others appointed by the Chairperson
- (3) Observers: Official(s) of Embassy of Japan and/or consulate of Japan

3. The Secretariat of the Committee

DHUP will act as the Secretariat of the Committee. The Secretariat will coordinate

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matters pertaining to the administration of the Committee.



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事業事前評価表

国際協力機構地球環境部水資源第一課

1. 案件名

国 名: ラオス人民民主共和国

案件名: 和名「水道公社事業管理能力向上プロジェクト」

英名"The Capacity Development Project for Improvement of Management

Ability of Water Supply Authorities"

2. 事業の背景と必要性

(1) 当該国における都市水道セクターの現状と課題

ラオス国では、1999年に出された首相令により、2020年までに都市人口の8割に対して24時間の安全で安定的な都市給水を行うことを目標としている。また、2015年までに67%の都市人口への24時間給水を目指している。JICAは、上記首相令を受けた水道施設の拡充に対応できる技術人材を育成するため、2003年から2006年まで技術協力プロジェクトを通じた研修強化支援を行い、その結果主要水道施設においては一定レベルでの運転が可能な状況となっている。しかしながら、目標水道普及率の達成には未だ遠い状況であり、2010年の都市における水道普及率は55%にとどまっている。

今後、国が掲げる目標値を達成するためには、水道施設のさらなる拡張・更新、そのための事業運営の効率化を通じた投資資金の確保が必要となっている。事業運営の効率化に向けて、1999年の首相令は水道公社に対し、施設の維持管理等に係るコストを賄いつつ、短期計画(3カ年のローリング事業計画)に基づき効率的かつ独立採算での経営を行うよう義務付けているほか、2010年には公共事業運輸省(MPWT)内の水道規制室(WASRO)が、水道公社のサービス状況を数値化した業務指標」について、毎年の目標設定とモニタリング及び報告を各水道公社に課し、水道普及率等の所与の国家目標を目指した事業実施を促進している。

このように短期的な計画策定とモニタリングの枠組みは整備されたものの、①自力では短期計画を策定できない、②ドナーの支援により短期計画を策定したもののそれを自ら更新できない、③短期計画はおろか年間予算計画すら作成していない、といった水道公社がまだまだ多く、さらに短期計画は策定したものの、業務指標とそれに基づくモニタリングが計画と関連づけられていないというケースもあり、実効性に乏しい枠組みとなっ

¹ WASRO は 2010 年「水道のサービス・パフォーマンス・ターゲット及びサービス・レベルの規制モニタリングに係るガイドライン(以下「規制ガイドライン」)」にて、9 項目指標(水道普及率、水質、給水時間、水圧、断水、料金支払いと使用水量の測定、キャッシュフロー、顧客対応、漏水)のターゲットを決め、毎年県水道公社から目標値と結果、改善するためのアクション・プランを WASRO と県政府公共事業運輸局(DPWT)へレポートするよう指示している。当事業の中で、当ガイドラインの改訂を予定しており、単年の業務指標数値やアクション・プランだけでなく、財源に基づいた中長期の水道事業計画に基づきモニタリングする仕組みを導入することで、長期的な国家政策との整合性を国政府や県政府がモニタリング・承認・管理することが可能となる。

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さらには、水道施設の拡張・更新に必要な、中長期的な水需要予測や財務収支見通しに基づく事業計画の策定とモニタリングは、MPWTによる制度化すらされておらず、現にほとんどの水道公社は中長期事業計画を有していない。

こうした状況では、中長期的な水需要の増とそれに対応したサービス拡充方針が不明確であるため、水道施設の拡張・更新も場当たり的にならざるを得ず、ある程度精緻な計画が求められるドナーの支援が得にくい上、短絡的な PPP 事業の導入が長期的に公社の財政に悪影響を与えることが懸念されている。事業運営の効率化もほとんど進んでおらず、2009 年には 17 都県の水道公社のうち黒字経営はわずか 4 社のみである。

今後、ラオス国において、水道施設の拡充と事業運営効率化を真に適正な形で進めていくためには、水道公社による中長期的な水需要及び財務収支見通しに基づく事業計画の導入が不可欠であり、それらを MPWT や DPWT がモニタリングし、事業運営状況を的確に把握した上で、水道公社に対して経営面・技術面での支援を行っていく体制を構築する必要がある。

(2) 当該国における都市水道セクターの開発政策と本事業の位置づけ

ラオス国では、1996年の第6回人民革命党大会において、開発目標として「2020年までにLDC(後発発展途上国)を脱却する」ことが決議された。これを受け、都市水道セクターでは、公共事業運輸省が1997年に策定した「通信・運輸・郵便・建設開発計画1996~2020」及び1999年の上水道整備に関する首相令において、2020年までに都市部の水道普及率を80%とする開発目標が掲げられた。これらの開発目標を受けて、第7次国家社会経済開発計画(2011~2015)においては、2015年までに都市人口の67%が安全な水にアクセスできることを、経済分野の目標の一つとして挙げている。

本プロジェクトは、ラオス国の主要な水道事業体である県水道公社の中長期的視野に基づく事業運営能力の向上を図ることにより、都市部における給水率の増加及び安全な水供給に寄与するものであり、ラオス国の開発政策に合致している。

(3)当該国における都市水道セクターに対する我が国及び JICA の援助方針と実績

我が国の『対ラオス人民民主共和国 国別援助方針』において、「経済・社会インフラ整備」は援助重点分野と位置づけられており、上水道分野については、バランスの取れた経済発展を実現するため、環境と調和した快適な社会構築に資することを目的として支援を行っていく方針を掲げている。過去の支援実績としては、以下のとおり。

- 2001 年「サバナケット地区上水道施設改善計画」(無償資金協力)
- 2003~2006 年「水道事業体人材育成プロジェクト」(技術協力プロジェクト)。 実施機関は公共事業省水道局及び首都ビエンチャン水道公社
- 2006 年「ビエンチャン市上水道施設拡張計画」(無償資金協力)
- 2006~2008 年「上水道配給水管維持管理技術向上」(草の根技術協力(地域提案型))。ラオス側実施機関はMPWT、首都ビエンチャン、チャンパサック県、サバナケ

ット県、ルアンプラバン県、カムアン県、カムアン県水道公社。日本側実施機関はさいたま市水道局)

- 2009 年「地方水道人材育成」(個別専門家派遣)
- 2011 年~2012 年「タケク上水道拡張計画」協力準備調査

(4)他の援助機関の対応

3.(9)に詳述。

3. 事業概要

(1)事業目的

本事業は、ラオス国において、①パイロット水道公社における事業計画策定に必要なデータ管理²強化、②パイロット水道公社における短期・中期・長期事業計画³策定/実施能力強化、③パイロット水道公社内部及び国レベルでの事業計画モニタリング強化、④以上を踏まえた水道事業計画技術ガイドライン(以下「技術ガイドライン」)⁴整備、⑤パイロット以外の水道公社における事業計画策定を促進するためのメカニズム構築を行うことにより、水道公社の中長期的視野に基づいた事業管理能力強化の仕組み整備を図るものである。本事業を通じて、将来、ラオス国の全水道公社が中長期の事業計画に基づいて、施設の拡張・更新及び給水の安定化を図れるようになり、持続可能な水道体制を実現することに寄与する。

(2)プロジェクトサイト/対象地域名

首都ビエンチャン、ルアンプラバン県、カムアン県(パイロット水道公社管轄地域)5

(3)本事業の受益者(ターゲットグループ)

公共事業運輸省住宅都市計画局(DHUP)、同省水道規制室(WASRO)、首都ビエンチャン水道公社(附属研修センターを含む)、ルアンプラバン県水道公社、カムアン県水道

² 対象となるデータは、送配水管や浄水場等の施設情報、取水量、配水量、水質検査、新規給水管接続、財務情報等を 想定。詳細はプロジェクト内で確認していく。

³ 長期事業計画 は「PI のターゲットを含む 10 カ年戦略計画であり、そのサイクルは国家/県の5カ年計画のサイクルと一致する(例:2011-2020 年、2021-2030 年・・・)」と定義される。中期事業計画は「アクション・プランを含んだ5カ年計画であり、国家/県の5カ年計画と整合性があり、そのサイクル(例:2011-15 年、2016-2020 年・・・)と一致する」と定義される。短期事業計画は「1999 年首相令 37 号に規定される3カ年ローリング事業計画であり、初年度の詳細アクション・プランを含む」と定義される。毎年更新される事業計画であり、詳細な単年事業計画に加え、二年間分の将来予想値等が添付される。事業計画対象の管理分野には、各水道公社のニーズ/優先度によって、財務、施設管理、運転維持管理、人材開発、無収水管理、危機管理、顧客サービス、広報等が含まれる。

⁴ 現在、ラオス国では水道公社に対して、3カ年ローリング事業計画(短期事業計画)を策定し、それに基づいて事業経営を実施するよう定めているが、記載内容については特に規定されていない。本事業では、水道事業計画技術ガイドラインを作成支援し、当ガイドラインでは短期事業計画に加え、長期・中期事業計画の策定を推進し、さらに各事業計画の記載内容を規定する。

⁵ パイロットサイトの選定については、中部:首都ビエンチャン水道公社、北部:ルアンプラバン県水道公社、南部:カムアン県水道公社と各地域から一つずつ選出し、周囲の県へ技術移転を行うことを想定。カムアン県については、無償資金協力との連携を見据え選出。その他の地域については過去のプロジェクトで対象となった水道公社と同じ水道公社を選定。

公社の職員

- (4)事業スケジュール(協力期間) 2012年8月~2017年7月を予定(計60ヶ月)
- (5)総事業費(日本側) 3.8 億円
- (6)相手国側実施機関
 - 1) 責任機関: DHUP/MPWT
 - 2) 実施機関: 水道課(WSD)/DHUP/MPWT、WASRO/MPWT、首都ビエンチャン水道公社、ルアンプラバン県水道公社、カムアン県水道公社⁶

(7)投入(インプット)

- 1)日本側
- (a) 専門家
- 長期専門家:チーフ・アドバイザー、業務調整/モニタリング管理/研修管理
- 短期専門家:財務分野、施設管理分野、人材開発分野、その他の分野(必要に応じて)
- (b) 機材
- 研修用プロジェクター、スクリーン等
- (c) ラオス側プロジェクト関係者の研修員受け入れ: 水道事業管理、その他の水道事業 管理関連分野
- (d) 在外事業強化費
- 2)ラオス国側
- (a) 人員配置
- (b) 本事業実施に必要な土地・建物・施設(MPWT 及び各パイロット水道公社における専門家チームの執務スペース及び会議室を含む)
- (c) 経常費
- (8)環境社会配慮・貧困削減・社会開発

WSD/DHUP/MPWT: 上水道セクター開発政策策定、技術ガイドライン策定、水道公社人材育成の調整・計画、開発援助機関窓□

WASRO: 規制ガイドラインの策定、毎年の業務指標のモニタリングおよび水道公社へのフィードバックおよび承認、水道公社への監査等の実施、(本事業後からは毎年の事業計画のモニタリング及び承認)

県水道公社:独立採算制に基づき、水道事業を実施、県政府メンバーを中心とした理事会が事業計画の承認やモニタリングを行う。パイロット水道公社は本事業実施中及び本事業後に、事業計画策定方法について他県への研修を行う。

⁶ それぞれの機関の主な役割は以下のとおり。

- 1)環境に対する影響/用地取得・住民移転
- カテゴリ分類(A,B,C を記載):C
- ②カテゴリ分類の根拠

本事業は、「国際協力機構 環境社会配慮ガイドライン(2010 年 4 月公布)」に記載されている「一般に影響を及ぼしやすいセクター・特性、影響を受けやすい地域」に該当せず、環境や社会への望ましくない影響が最小限かあるいはほとんどないと考えられるため。

- 2)ジェンダー・平等推進/平和構築・貧困削減 特になし。
- 3)その他特になし。
- (9)関連する援助活動
 - 1)我が国の援助活動特になし。

2)他ドナー等の援助活動

本プロジェクトは、DHUP の調整の下、下記のアジア開発銀行(ADB)及びノルウェー開発協力局(NORAD)関連プロジェクトと継続的に情報共有・意見交換を図り、ラオス国の水道公社の事業運営管理能力強化に取り組む予定である。また、本プロジェクトの「水道事業計画技術ガイドライン」策定活動に際しては、ADB・NORAD プロジェクト支援による水道公社短期事業計画(下記(a)及び(b)参照)との整合性を担保するために、当該プロジェクト関係者を本プロジェクト内で設立するガイドライン委員会のメンバーとして含むことを想定している。この技術ガイドライン委員会にて、ADBやNORADの活動内容も踏まえ、ラオス国の短期・中期・長期水道事業計画策定/更新に係る技術ガイドラインを作成する。

- (a) ADB「スモール・タウン水道衛生分野プロジェクト(SWSSP)」(2009-2014) SWSSP の責任機関は DHUP である。関連活動は以下の通り。
 - ① 水道セクターの計画・管理・規制の強化:「都市水道・衛生セクター戦略(~2020)」 策定、「水セクター投資計画」更新、水道分野の人材開発戦略/スカラシップ・プログラム作成、対象スモール・タウン 12 郡を管轄する 10 県の水道公社の能力強化(3 カ年ローリング事業計画策定・実施能力を含む)

② スモール・タウン 12 郡(10 県)における水道施設の新規建設・復旧ただし、上記①②において対象となる県水道公社は、本事業のパイロットプロジェクトとは重複しない。また、①の対象事業計画は本事業でいうところの短期計画であり、長期・中期計画は策定されない。さらに、事業計画策定/更新は、②の投資プロジェクト実施の前提条件でもあり、短期間で策定する必要があることから、ADB のコンサルタントの支援により作成されている。水道公社が自力で計画を更新できる能力を育成することは、SWSSP のスコープに含まれていない。

(b) NORAD「水道セクター能力育成(CDWS)」(2012-2016)

NORAD は、2011 年に調印された「SWSSP/CDWS における協力」の合意に基づき、ADB の SWSSP でカバーされない水道公社に支援を行う予定であり、支援の中には短期事業計画策定が含まれている。CDWS のコンサルタントがまだ選定されておらず、詳細は不明である。本事業のパイロットプロジェクトと対象水道公社が重複する可能性があったが、DHUP は、首都ビエンチャン、ルアンプラバン県、カムアン県については本プロジェクトのパイロットとすることを決定し、その旨を DHUP が NORAD に説明することで合意している。

(c) ADB「都市水道規制強化」プロジェクト(2012-2013)

「都市水道規制強化」プロジェクトは、公共事業運輸省、特に水道規制室(WASRO)を責任機関とし、WASRO 及び DHUP(特に WSD 及び SWSSP プロジェクト調整ユニット)の協力により、実施される。本事業の関連活動は以下の通りであり、事業計画策定の基になるデータ整備について、WASRO が管理する規制や監査内容と整合性を合わせる必要がある。

- ① 水道事業体のパフォーマンス規制強化:関連法規・ガイドライン(主に草案段階のもの)の承認・適用
- ② 水道公社の説明責任向上:全県水道公社に対する業務監査の実施

4. 協力の枠組み

(1)協力概要

1) 上位目標:ラオス国上水道セクターにおける持続可能かつ安定的な開発に向けた管理体制が強化される

【指標】

a.2020 年末までに、全ての水道公社にて長期・中期・短期の事業計画が、プロジェクトで作成した技術ガイドラインやデータ管理マニュアル⁷・事業計画策定マニュアルを基に更新され承認される。

⁷ <u>データ管理マニュアル:</u>事業計画策定に必要なデータを正確に取得し、管理するためのマニュアル。本事業実施中に作成し、全国の技術レベルの異なる水道公社にて使用できる汎用性のあるマニュアルを想定している。

- b.2020 年末までに、パイロット水道公社にて長期事業計画にて定めた業務指標目標の うち X%の項目が達成される。
- 2) プロジェクト目標: ラオス国において、水道公社の中長期的視野に基づく事業管理能力を強化する体制が整備される。

【指標】

- a.プロジェクト終了までに、パイロット水道公社がプロジェクトで作成した技術ガイドライン やデータ管理マニュアル・事業計画策定マニュアル⁸を基に長期・中期・短期の事業計 画を策定・更新する能力を習得する。(第二回のプロジェクト運営チーム会議にて評価 基準を設定する)
- b.2016年末時点で、パイロット水道公社にて長期事業計画にて定めた2016年の業務指標目標のうちX%の項目が達成される。
- c.水道事業計画技術ガイドラインが公共事業運輸大臣に承認される。
- d.プロジェクト終了時までに、事業計画策定普及計画(以下「普及計画」) に沿って各パイロット水道公社にてプロジェクト終了以降も継続的に事業計画作成のための研修コースを実施していくための実施計画(予算措置を含む)が策定される。

3)アウトプット及び活動

◆アウトプット 1:パイロット水道公社において、長期・中期・短期の事業計画策定に必要なデータが継続的に利用可能になる

【指標】

- 1a.首都ビエンチャン水道公社及びルアンプラバン県水道公社では 2013 年 12 月までに、カムアン県水道公社では 2014 年 12 月までに、パイロット水道公社において、データ管理改善計画¹⁰に含まれている必要情報リスト記載の情報が、データ管理マニュアルまたはその案に基づき取得される。
- 1b. パイロット水道公社において、データ管理マニュアルまたはその案に基づき必要情報リスト記載の情報が毎年取得、蓄積される。
- 1c. 2016 年 3 月までに、データ管理マニュアルが公共事業運輸省住宅都市計画局長によって承認される。

⁸ 事業計画策定マニュアルは長期・中期・短期事業計画を策定するために、アウトプット1にて整備した情報を基に水需要 予測や財務収支分析、施設拡張/更新需要等の把握の方法をはじめ、事業計画策定の各項目の作成方法について説明 を行う全国の水道公社で利用可能である汎用性のあるマニュアルを想定。

⁹ 普及計画:全国の水道公社における長期・中期・短期各事業計画策定を普及するための計画。パイロット水道公社が本事業を通じて得た知見を、本事業後に他の県水道公社へ普及するためのシナリオと実施計画を想定。

^{10 &}lt;u>データ管理改善計画:</u>パイロット水道公社毎に、現在有しているデータやその入手・管理状況を確認し、事業計画策定に必要な正確なデータを整備するために、どのように業務改善する必要があるかを示す改善計画を想定している。この改善計画には、事業計画策定のために入手する必要がある情報リストを添付する予定。

【活動】

- 1-1 各パイロット水道公社にて、事業計画策定に必要なデータの有無及び現行のデータ管理をレビューする
- 1-2 各パイロット水道公社にて、日本の水道セクターの「アセット・マネジメント」アプローチ¹¹を現地に適用する方法を含む、必要情報リストつきのデータ管理改善計画を策定する
- 1-3 各パイロット水道公社にて、データ管理改善計画を実施する
- 1-4 事業計画策定のためのデータ管理マニュアル(ラオス語・英語)を作成し、DHUP 局長の承認を受ける
- ◆アウトプット2: パイロット水道公社において、長期・中期・短期事業計画に基づいた 事業実施管理が、Plan-Do-Check-Action (PDCA)サイクルを用いて行われる

【指標】

- 2a. パイロット水道公社において、2015 年までに長期事業計画(2020 年まで)が作成され承認される。
- 2b. パイロット水道公社において、2015 年までに中期事業計画(2016 年-2020 年)が作成され承認される。
- 2c. パイロット水道公社において、2013 年以降、短期事業計画が毎年作成され承認される。
- 2d. 2014年以降、パイロット水道公社において、毎年の業務指標目標のうち年平均 X% の項目が達成される。
- 2e. 2016 年 3 月までに、事業計画策定マニュアルが策定され、公共事業運輸省住宅都市計画局長によって承認される。

【活動】

- 2-1 各パイロット水道公社にて、既存の事業計画、計画プロセス、事業運営・管理の 実態をレビューする
- 2-2 各パイロット水道公社にて、10カ年、5カ年、3カ年事業計画のアウトラインを含む 改善のための改善提案事項が取りまとめられる
- 2-3 各パイロット水道公社にて、アウトプット1で得られるデータを活用して、長期的な水需要、水道施設¹²の更新需要、及び財務バランス(歳入と支出)を予測する
- 2-4 各パイロット水道公社にて、10カ年事業計画(~2020年)を策定し、理事会の承認を得るために提出する
- 2-5 各パイロット水道公社にて、5 カ年事業計画(~2015 年,2016-2020 年) を策定し、

^{11 &}lt;u>日本の水道セクターの「アセット・マネジメント」</u>については、「水道事業におけるアセットマネジメント(資産管理)に関する手引き」を参照。http://www.mhlw.go.jp/za/0723/c02/c02-01.html

¹² 水道施設 は「取水口から顧客水道メーター間の施設」と定義される。

- 理事会の承認を得るために提出する
- 2-6 各パイロット水道公社にて、3 カ年ローリング事業計画を策定/毎年更新し、理事会の承認を得るために提出する
- 2-7 各パイロット水道公社にて、3 カ年ローリング事業計画の年間アクション・プランを 実施する
- 2-8 各パイロット水道公社にて、10 カ年計画をレビュー及び適宜更新し、理事会の承認を得るために提出する
- 2-9 水道事業計画策定マニュアル(特定分野の個別マニュアル含む)を作成し、 DHUP 局長の承認を受ける
- ◆アウトプット3:業務指標(PI)を含む事業計画のモニタリングが強化される

【指標】

- 3a. パイロット水道公社において、内部モニタリングの結果が次年度以降の事業計画の 作成に反映される。
- 3b. パイロット水道公社において、WASRO のモニタリング結果が次年度以降の事業計画の作成に反映される。
- 3c.プロジェクト終了までに、規制ガイドラインの見直し(目標値の修正と事業計画と業務 指標の関連を公式化する)を行い、水道規制委員会(WSRC)によって承認される。

【活動】

〈県レベル〉

- 3-1 各パイロット水道公社にて、既存の事業計画及び業務指標の内部モニタリング・ システム¹³をレビューする
- 3-2 各パイロット水道公社にて、レビューに基づき、業務指標を含む事業計画の内部 モニタリング・システムを設計する
- 3-3 各パイロット水道公社にて、上記システムに基づき、業務指標を含む事業計画の モニタリングを行う(モニタリングの結果はアウトプット1のデータ管理、アウトプット2の事業計画策定に反映される)
- 3-4 各パイロット水道公社にて、業務指標を含む事業計画の内部モニタリング・システムを適宜改良する

〈国レベル〉

- 3-5 WASRO における各水道公社の業務指標のモニタリング・システムを事業計画との関連でレビューする
- 3-6 業務指標を含む各水道公社の事業計画のモニタリング・システムを設計する
- 3-7 上記システムに基づき、パイロット水道公社の業務指標を含む事業計画のモニタ

^{13 &}lt;u>モニタリング・システム</u>は(i) モニタリング項目及び(ii)各項目のデータ収集・集計・分析・報告・意思決定・フィードバックに係る方法・時期・頻度・担当者を含む。<u>水道公社の内部モニタリング</u>には公社理事会によるモニタリングも含まれる。

リングを実施する

- 3-8 業務指標を含む事業計画のモニタリング・システムを、全水道公社に適用するために、活動 3-7 の結果に基づき、改良する
- 3-9 「水道のサービス・パフォーマンス・ターゲット及びサービス・レベルの規制モニタリングに係るガイドライン(規制ガイドライン)」(2010年)をレビューする
- 3-10 改訂ガイドラインのドラフトを作成し、WSRC に検討・承認を受けるために提出する
- ◆アウトプット4:アウトプット 1~3 の成果を踏まえ、水道事業計画技術ガイドライン(技術 ガイドライン)が策定される

【指標】

4a.水道事業計画技術ガイドライン案が作成される。

【活動】

- 4-1 技術ガイドライン委員会¹⁴を設立する
- 4-2 技術ガイドラインのアウトライン案を作成し、最終化のために委員会に提出する
- 4-3 アウトプット1~アウトプット3の成果を踏まえて技術ガイドラインのドラフトを作成し、委員会のコメントを得る
- 4-4 上記コメントを基にドラフトを修正し、委員会に承認を得るために提出する
- 4-5 委員会に承認されたドラフトを、公共事業大臣の承認(endorsement)を得るために提出する
- 4-6 技術ガイドラインまたはその案をラオス語・英語で発行し各水道公社へ配布する
- ◆アウトプット5:アウトプット1~4の成果を活用し、全国の水道公社及び民間企業における事業計画策定及びモニタリング体制の構築を促進するための仕組みが構築される

【指標】

- 5a. プロジェクト終了時までに、パイロット水道公社内の移転知識/技術の公社内外への将来的な普及の中核となるリソース・パーソン(コア・リソース・パーソン)が事業計画作成について、他県水道公社に対して技術指導出来る能力を有す(第二回のプロジェクト運営チーム会議にて基準を設定する)。
- 5b. パイロット水道公社で実施する事業計画策定に係る研修に係る参加者の X%が理解度、適用度が三段階評価にて二段以上の評価を行う。
- 5c. 普及計画が公共事業運輸省住宅都市計画局にて承認される。

^{14 &}lt;u>技術ガイドライン委員会</u> は、委員長(DHUP の副局長)及び委員(事業計画策定を支援する他本事業の担当者を含む DHUP の代表、WASRO の代表、専門家チームの代表)から構成される。

【活動】

- 5-1 各パイロット水道公社にて、コア・リソース・パーソンを特定する
- 5-2 各パイロット水道公社にて、アウトプット1~3を通じ、コア・リソース・パーソンに 実地研修(OJT)を行う
- 5-3 コア・リソース・パーソンに教授法の研修を行う
- 5-4 各パイロット水道公社にて、周辺県水道公社を対象とした長期・中期・短期事業計画に係るリージョナル入門セミナーを1回開催する
- 5-5 首都ビエンチャン水道公社研修センターの既存研修プログラムを、新水道事業計画策定/更新に係る技術ガイドラインに照らし、レビューする
- 5-6 上記研修センターにて、レビューに基づき、既存コースの改訂及び/または新規コースの開発を行う
- 5-7 各パイロット水道公社にて、改訂及び/または新規研修コースを実施する
- 5-8 受講生のフィードバックを基に、上記研修コースを改良する
- 5-9 プロジェクトの成果を踏まえ、普及計画を策定し、DHUP 局長の承認を受ける

4)プロジェクト実施上の留意点

- ① ラオス国水道公社への中長期事業計画の導入:本事業ではデータ管理強化、そのデータに基づく事業計画策定能力強化、事業計画のモニタリングについてパイロット水道公社に対し技術移転を行い、本事業期間内でパイロット水道公社の事業運営効率化を実証しつつ、本事業後の他県水道公社への事業管理能力強化のための研修実施機関として能力強化を図っていく。また、公共事業運輸省住宅都市計画局(DHUP)を対象に技術ガイドラインや事業計画策定マニュアル作成支援を行うと共に、同省水道規制室(WASRO)に対して規制ガイドライン見直し支援を行い、中長期的な視野に立った事業計画の策定を国として制度化するとともに、各公社の事業計画の国レベルにおけるモニタリング、承認体制の構築を行う。以上のとおり、本事業では、全国の水道公社における事業計画策定を見据え、制度構築及び実施能力強化の双方の支援を行い、新しい水道公社事業管理の在り方をラオス国に導入する。そして、導入された新たな事業運営を通じて、将来的にラオス国の持続可能で安定的な水道事業の実施体制強化に寄与することを目指すものである。
- ② <u>指標の計画値</u>: 今回計画値が設定されていない指標に関しては、本事業開始から6 か月以内に、現況調査を踏まえて設定し、関連実施機関と協議の上、第1回合同調整員会(JCC)で決定する。
- ③ ADB 及び NORAD との調整:「3(9)関連する援助活動」で記したように、本プロジェクトと並行し、ADB 及び NORAD が水道公社の3カ年事業管理計画策定を支援中/支援予定である。主たる調整は各プロジェクトの責任機関である DHUP が担うことでDHUPと合意しているが、技術ガイドラインや事業管理モニタリング・システムの全国

適用において、ADB 及び NORAD の支援を受けた水道公社の混乱を招くことにならぬよう、通常から、ADB 及び NORAD 関係者(コンサルタントを含む)と積極的な情報共有・意見交換を行うことが重要である。

④ プロジェクト管理・調整:本プロジェクトの5つの実施機関及び専門家チームの連携・調整の促進のために、異なるレベルの内部定期会合が活動として組み込まれているが、これらを有効に活用し、効率的なプロジェクト管理を行うことが望まれる。プロジェクトの運営会合、実施体制は以下のとおり。

【プロジェクト運営会合】

- ●JCC¹⁵
- ●プロジェクト管理チーム16 会合
- ●パイロット水道公社ごとのパイロットプロジェクト管理チーム17 会合
- ●パイロット水道公社調整会合18

【ラオス側実施体制】

●マネージメント・スタッフ

<MPWT レベル>

- ① プロジェクト・ディレクター
 - DHUP 局長
- ② 副プロジェクト・ディレクター
 - DHUP 副局長:アウトプット 1.2.4.5.0 担当
 - WASRO 室長: アウトプット 3 担当
- ③ プロジェクト・マネージャー
 - WSD 部長/DHUP: アウトプット 1.2.4.5.0 担当
 - WASRO 副室長(技術規制担当):アウトプット 3 担当

<水道公社レベル>

① パイロット・プロジェクト・マネージャー

¹⁵ 合同調整委員会(JCC)はDHUP局長を議長とし、ラオス側関係者(各実施機関、パイロット水道公社を管轄する県公共事業運輸局)及び日本側関係者(JICA 専門家、JICA ラオス事務所等)をメンバーとする。

^{16 &}lt;u>プロジェクト管理チーム</u>は、プロジェクト・ディレクター、副プロジェクト・ディレクター(2 名)、プロジェクト・マネージャー(2 名)、パイロット・プロジェクト・マネージャー(3名)、長期専門家から構成される。

¹⁷ パイロット・プロジェクト・マネージメント・チーム は、各水道公社のパイロット・プロジェクト・マネージャー、副パイロット・プロジェクト・マネージャー(2名)、テクニカルスタッフ、及び長期専門家から構成される。現地派遣中の短期専門家及び水道公社を管轄する県公共事業運輸局代表も、情報共有と意見交換のため、招かれる。

^{18 &}lt;u>パイロット水道公社間調整会合</u>の各公社からの参加者は、その時々の議題に応じ、各パイロット・プロジェクト・マネージャーが長期専門家と相談の上、決定する。会合は各水道公社持ち回りで開催され、主催公社管内の現場視察を併せて行う。

- 首都ビエンチャン、ルアンプラバン県、カムアン県の水道公社総裁
- ② 副パイロット・プロジェクト・マネージャー(管理部門)
 - 各パイロット水道公社において配置される
- ③ 副パイロット・プロジェクト・マネージャー(技術部門)
 - 各パイロット水道公社において配置される

●技術スタッフ

- ① DHUP: 事業計画策定分野の担当スタッフ (SIC)
- ② WASRO: 事業計画モニタリング分野の SIC
- ③ 各パイロット水道公社:事業計画策定、財務管理、人材開発、浄水場管理、及び配水網管理分野の SIC
- ④ 首都ビエンチャン水道公社研修センター: センター所長(研修管理分野 SIC を 兼任)、研修計画・調整分野の SIC

(2)その他インパクト

本事業は、事業計画というツールを活用し、水道公社事業運営の効率化を目指すものである。それは、開発ニーズの把握、それに対応するための資金確保への備えを可能とし、将来的に水道公社の給水区のより多くの住民に対して安全で安定した水供給が可能になることが期待される。

5. 前提条件・外部条件(リスク・コントロール)

(1)事業実施のための前提特になし。

- (2)アウトプット達成のための外部条件
 - パイロット水道公社において、多数のスタッフが職場を離れない(現状、可能性は低いが、プロジェクトの中でモニタリングを行っていく)。
- (3)プロジェクト目標達成のための外部条件
- (4)上位目標達成のための外部条件 特になし。

6. 評価結果

本事業は、ラオス国の開発政策、開発ニーズ、日本の援助政策と十分に合致しており、また計画の適切性が認められることから、実施の意義は高い。

7. 過去の類似案件の教訓と本事業への活用

本事業は実質のところ、2003 年に始まった技術協力プロジェクト「水道事業体人材育成プロジェクト」の終了時評価での「提言と教訓」では、1)継続的な研修の実施、2)人材・組織、3)人材育成のアプローチ、4)研修教材の活用、5)ドナー間の協調の5つが挙げられている。特に、1)では、地域拠点として北部、中部、南部の研修拠点を中心とした研修の実施について触れており、本事業においても提言どおりそれぞれの地域毎にパイロット水道公社を選出し、その地域の中心となって普及していくことを期待している。さらに、1)、2)、3)にて、大規模水道公社と中小水道公社の技術格差とそれぞれのレベルに適した研修の実施について課題として挙げており、本事業では中小水道公社であるカムアン県をパイロット水道公社として対象とすることで、将来的に中小水道公社への普及が実現性の高いものになることが期待されている。本事業においても、4)記載のとおり、研修教材やマニュアルの作成を行い、全国へ普及することや技術指針とすることを本事業後に想定したアプローチをとっている。さらに、5)に関連し、本事業で扱う事業計画策定支援は一部 ADB や NORAD 等の他ドナーも支援を行う予定または実施中であることから、これら他ドナーで実施しているプロジェクト関係者を集めて、協議を行う活動を組み入れており、それぞれのドナー間の協調もスムーズに行えるよう努めている。

8. 今後の評価計画

- (1)今後の評価に用いる主な指標
 - 4. (1)のとおり。
- (2)今後の評価計画

事業中間時点中間レビュー事業終了6ヶ月前終了時評価事業終了3年後事後評価

以上

Schedule for Detailed Planning Survey for Technical Cooperation Project on Capacity Development for the Improvement of Management Ability of Water Supply Authorities in Lao PDR

		Mr.OKIURA (Leader)	Mr.SHIMOMURA (Water policy)	Mr.HAMANO (Survey Planning/ Capacity Assessment)	Ms.HIROUCHI (Evaluation Analysis)	Mr.ITAYA (Facility Management)	
14-Feb-12	Tue			NRT→Hanoi(VN311)→VTE(VN2897)	Osaka→Hanoi(VN331)→ VTE(VN2897)		
15-Feb-12	Wed	NRT→BKK(TG641)→ Yangon(TG305)		Meeting in JICA Office、Moving to Tha PM Khammouane provincial Water Supp	NRT→BKK(TG641)→ Yangon(TG305)		
16-Feb-12	Thu	Survey in Myanmar		9:00 Meeting with Mr. Chan, Director province 10:00 Meeting with Mr. KhanNgeun, Di WSSE	Survey in Myanmar		
17-Feb-12	Fri	Survey in Myanmar		9:00 meeting with Mr. Somvanh, Director 10:30 meeting with Mr. Vorasith, Projec 13:30 meeting with Mr. Mai BOSRAM, at PTI	Survey in Myanmar		
18-Feb-12	Sat	Survey in Myanmar		Report Writing		Survey in Myanmar	
19-Feb-12	Sun	Survey in Myanmar		Report Writing		Survey in Myanmar	
20-Feb-12	Mon	Survey in Myanmar		9:00 meeting with Mr. Khampheuy, DG 10:30 meeting with Mr. Noupheuk, DDG	Survey in Myanmar		
				13:30 meeting with Mr. Khonesavanh, I of AFD	Director of Water Supply Sector		
	1	e Survey in Myanmar Yangon→BKK(TG306)		0:30 meeting with Mr. Khampheuy, DG of VTE Cap. WSSE 3: 30 meeting with Mr. Nuntharath, Director of Kaorio Water Treatment		Survey in Myanmar Yangon1650→ BKK1845(Bangkok Airways)	
21-Feb-12	Tue			Palnt (WTP) and site observation until 1: PM VTE1630—LPO1725			
22-Feb-12	Wed	ed Survey in Thailand	NRT→Hanoi (VN311)	9:00 meeting with Mr. Soulith CHINDAMANY, Director of LPB provincial WSSE		BKK0915→ LPQ1115(Bangkok Airways) PM:Site observation in Luang Prabang	
				13:30 meeting with Mr. Atsavin, Deputy Director of DPWT of LuangPrabang province			
				14:30 site observation of WTP in LuangPrabang province			
23-Feb-12	Thu	Survey in Thailand	Survey in Vietnam	Meeting with Luang Prabang WSSE regarding facility management Site observation in branch LPQ1940→VTE2040			
		ri Survey in Thailand	Survey in Vietnam	09:00 meeting with Mr. Vern SEANGDARA, Deputy Director of Chinaimo WTP			
24-Feb-12	Fri			10:30 meeting with DHUP, MPWT			
				13:30 meeting with VTE Cap. WSSE			
				15:30 meeting with Teaining Center			
25-Feb-12	Sat	BKK→VTE(TG574)	Hanoi→VTE(VN921)	9:00-12:00 Site observation in Dongbang WTP Mission team meeting			
26-Feb-12	Sun	Mission team meeting					
27-Feb-12	Mon	9:00 Meeting with Vientiane capital WSSE 11:00 Meeting with WASRO 15:00-16:00 Meeting with MPWT 17:00-18:30 Meeting with ADB					
28-Feb-12	Tue	8:00- 17:00 PCM workshop 8:30-9:30 Mr.Okiura & Mr. Itaya TV meeting					
29-Feb-12	Wed	9:00-12:00 Meeting with Pilot WSSEs 13:30-16:00 Meeting for M/D with DHUP					
1-Mar-12	Thu	11:00-12:00 Meeting with Pilot WSSEs 13:30-16:00 Meeting for M/M with DHUP					
	Fri	21:55-22:50 VTE→BKK (TG575) for Mr.ITAYA 8:30-9:30 Signing for M/M, 10:30 Report to JICA office 13:50-14:50 VTE→BKK(TG) for Mr. OKIURA 19:35- 20:35VTE→Hanoi (VN920) for Mr.SHIMOMURA, Ms.HIROUCHI, Mr. HAMANO					
2-Mar-12							

A:ラオス国関連機関資料(英語あるいは英訳資料)

	タイトル	年	機関	備考
1.	Prime Ministerial Decree No.191/PM on Registration of Urban Water	2005	Prime Minister's	WASRO 提供
	Supply Operation		Office	
2.	Prime Ministerial Decision No.37 on Management and Development	1999	Prime Minister's	非公式版(**
	of Water Supply Sector		Office	*)
3.	Decision No.13266/MPWT on the Organization and Activities of the	2005	MPWT	WASRO 提供
	Water Supply Regulation Office			
4.	Decision No.13265/MPWT on the Organization and Activities of the	2005	MPWT	WASRO 提供
	Water Supply Regulation Committee			
5.	なし (MPWT の組織図)	n/a	n/a	WASRO 提供
6.	Organization Chart (WSRC 及び WASRO 組織図)	n/a	n/a	WASRO 提供
7.	WSRC Chairman Decision No.007/WSRC on Guidelines on Service	2010	WASRO	WASRO 提供
	Performance Targets for Water Suppliers and Regulatory Monitoring			
	of Service Level			
8.	なし(WASRO の業務指標モニタリング・フォーマット)	2011	WASRO	

B:他ドナー資料

	タイトル	年	機関	備考
1.	Project Implementation Manual for SMALL TOWNS WATER	2008	ADB	
	SUPPLY AND SANITATION SECTOR PROJECT			
2.	Technical Assistance Report for Strengthening Urban Water Supply	2011	ADB	
	Regulation			
3.	Inception Report for SMALL TOWNS WATER SUPPLY AND	2011	ADB	
	SANITATION SECTOR PROJECT			
4.	Annual Progress Report for SMALL TOWNS WATER SUPPLY AND	2011	ADB	
	SANITATION SECTOR PROJECT			
5.	なし(AFD の首都ビエンチャン水道公社支援プロジェクトのプロジ		AFD	仏語
	ェクトノート)			