Ministry of Public Works and Transport

Integrated Urban Environmental Management in the Tonle Sap Basin Project

QUARTERLY PROGRESS REPORT NO. 5

01 January to 31 March 2018

April 2018

SUBMITTED BY_ Korea Engineering Consultants Corp.

IN JOINT VENTURE WITH_ NIRAS

IN ASSOCIATION WITH_ Key Consultants (Cambodia) Ltd.

Consulting Services for Project Management and Implementation Support (PMIS, Package 1)

Integrated Urban Environmental Management in the Tonle Sap Basin Project (IUEMTSBP)

ADB LoanNo.3311-CAM (SF) / 8295-CAM (SCF) / Grant 0454-CAM--Contract No. PMU/MPWT/IUEMTSP/QCBS/16/001

Our Reference No. : 01 June 2018

To:
H.E. Vong Pisith, Project Director
Ministry of Public Works & Transport
Room 02, Third Floor, Western Building,
CNR Norodom Blvd. & Street #106, Phnom Penh, Cambodia
Tel/Fax: (855) 23 426 110
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Subject: Integrated Urban Environmental Management in the Tonle Sap Basin Project; Submission Quarterly Progress Report No.5 for the period from 01 January to 31 March 2018

Dear Excellency,

Please find attached the Quarterly Progress Report No. 5 for the Integrated Urban Environmental Management in the Tonle Sap Basin Project (IUEMTSP) covering the period between 01 January to 31 March 2018 for your kind perusal and comments.

Sincerely yours,

Mr. Louis Rijk
Team Leader
PMIS Consultants (IUEM-TSBP)
Korea Engineering Consultant Corp.

cc: ADB
KECC,
File: Admin
encl.: QPR No. 5

INTEGRATED URBAN ENVIRONMENTAL MANAGEMENT IN THE TONLE SAP BASIN PROJECT

QUARTERLY PROGRESS REPORT NO.5
01 JANUARY – 31 MARCH, 2018

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ABBREVIATIONS

ADB	Asian Development Bank
AH	Affected household
AM	Aide Memoire
ASEAN	Association of Southeast Asian Nations
CMEI	Community Mobilization and Environmental Improvements
CSEC	Cambodia Socio-Economic Consensus
DMF	Design and monitoring framework
EA	Executing Agency
EMP	Environmental management plan
GMS	Greater Mekong Subregion
ICB	International competitive bidding
IDPoor	Identification of Poor Households Programme
IEC	Information, education and communication
IEE	Initial environmental examination
JICA	Japan International Cooperation Agency
MEF	Ministry of Economy and Finance
MOE	Ministry of Environment
MOWRAM	Ministry of Water Resources and Meteorology
MPWT	Ministry of Public Works and Transport
NCB	national competitive bidding
NGOs	Nongovernment organizations
OJT	On-the-job traning
O&M	Operation and maintenance
PAM	Project administration manual
PDPWT	Provincial departments of public works and transport
PIU	Project implementation unit
PMIS	Project management and implementation support
PMU	Project management unit
PPCR	Pilot program for climate resilience
PPMS	Project Performance Management System
PPTA	Project preparation for technical assistance
PSC	Project Steering Committee
QCBS	Quality- and cost based selection
RP	Resettlement plans
SWM	Solid waste management
TOR	Terms of reference
TSA	Tonle Sap Authority
TSUADF	Tonle Sap Urban Areas Development Framework
USUs	Urban Service Units

1 EXECUTIVE SUMMARY

1.1 Background

1. The project was approved on 10 November 2015 and declared effective on 2 March 2016. The project aims to increase economic activities and environmental protection in the towns of Kampong Chhnang and Pursat in the Tonle Sap Basin. The outcome is expected to be improved urban services and enhanced climate change resilience in Kampong Chhnang and Pursat municipalities. The project has five outputs: (i) Kampong Chhnang Urban Area Improvements; (ii) Pursat Urban Area Improvements; (iii) Community Mobilization and Environmental Improvements, (iv) Strengthened Sector Coordination and Operations and (v) Strengthened Capacity for Project Implementation and operations and maintenance (O&M). The key infrastructure financed under the project includes flood protection infrastructure (embankment), construction of a new landfill facility and improvement of solid waste management and community-driven environmental improvements in Kampong Chhnang; and improvement of the storm water drainage, treatment of waste water, construction of a new landfill facility improvement of solid waste management and community-driven environmental improvements in Pursat. The planned improvements of the river embankment along the Tonle Sap have been cancelled as these improvements will be financed under an EU financed project.

1.2 Overall Project Progress

2. The overall progress of project implementation is estimated to be 9.1% against and elapsed time from the date of project effectiveness of 25.9 %. As per the revised implementation schedule (se annex 1) the actual progress is now about 3 weeks behind the planned progress at the end of this reporting period (31-03-2018).

1.2.1 Kampong Chhnang Flood Protection Embankment

3. Detailed designs and cost estimates have been completed but serious resettlement issues have surfaced in relation to the Royal Cambodian Government Authorization Act for Kampong Chhnang to organize the river festival in March 2019. For the organization of the river festival infrastructure improvements will be required in the Phsar Krom river bank area to provide orderly access and parking space for visitors as well as arrangements to accommodate spectators along the river bank. These infrastructure improvements will require relocation of households and businesses in the Phsar Krom river bank area, but regardless of who finances a particular section of the embankment, these relocations would be subject to ADB's safeguards requirements as it is part of the overall embankment that ADB is financing involuntary resettlement of households along the embankment before affected people are compensated and the resettlement plan is approved and disclosed will result in a safeguards non-compliance. Discussions are ongoing with the parties involved in which form to proceed with the flood protection embankment

1.2.2 Pursat Town Drainage Improvement

4. The detailed design for improving the drainage system is ongoing. In the PPTA it was proposed to build a new system separate from the existing system. Since the PPTA the existing system has been significantly expanded (from about 5.4 to 23.3 km pipeline and it is now impossible to construct the system as proposed in the PPTA without integration and improvement of the existing system. The design for improvement of the existing system is complex and requires the collection of data on the more than 700 existing manholes and junction boxes which turned out to be very time consuming Another design issue is related to the location of the WWTP The PMIS has been informed by the local authorities that close to the original WWTP location a housing development has been planned and that they have therefore selected a new location for the WWTP on the right bank of the defunct irrigation canal about 4.16 km west of the present location The area of this new location is reported to be about 15 to 16 ha. which would allow for the construction of a conventional lagoon based treatment plant. However, based on the SRTM 30 m DEM, the new area is located at about the same level as the original site. This implies that sewage cannot be conveyed from the town area to the new location by gravity and pumping would be required, which would make O&M of the system very costly.

1.2.3 Solid Waste Management, construction of new sanitary landfill sites and closure of existing dump sites

5. . Detailed designs, BOQs and cost estimates for both the Kampong Chhnang and Pursat controlled landfills will be completed by the end of April. A final check of the designs by the international SWM expert is scheduled for the first 2 weeks of May.

1.2.4 River Bank Protection for the Pursat River

6. Local authorities have informed that the proposed improvement of the Pursat river bank will now be undertaken with funding from the European Commission.

1.3 Institutional Development

7. Work on sector policies and institutional development was commenced in late January 2018. The development of a training needs assessment strategy and questionnaire/survey was prepared for the target provincial towns using a “system capacity” approach with the aim to prepare the capacity development plan. Towns was visited in February-March and interviews was conducted and the results from this interviews and the questionnaires was analyzed and preliminary conclusions was made.

8. Preliminary review and discussion have been conducted on urban service units although limited as the procurement and contracting of technical assistance related to USU is still pending.

1.4 Tariff Structure Tariff Setting and Subsidy Methodology

9. Solid Waste Tariff Models are continuing to be developed for Pursat and Kampong Chhnang as statistical and financial information becomes available and the operational structure is developed. The projections in the Models cover the period 2019-2030

1.5 Fund Utilization

10. As result of the delays in project implementation the fund utilization is low with only a total amount of contracts awarded of 2.7% as a percentage of the total loan amount. The total amount allocation is USD 47,133,413, Contracts Awarded USD 4,799,031, Uncontracted Loan Balance USD 42,334,382, Contracts Disbursed USD 1,269,670, and the Undisbursed Contract Balance is USD 3,529,361.

1.6 Safeguards

1.6.1 Resettlement

11. Ministry of Economy and Finance (MEF) General Department of Resettlement (RD-MEF) have set up Provincial Resettlement Sub-Committees Working Groups (PRSC-WG) in October 2017 for Kampong Chhnang and Pursat. RD-MEF has also provided guidance to the Provincial Resettlement Sub-Committees (PRSC) to operationalize Grievance Redress Mechanism (GRM) for the project, and GRM has been initiated for Kampong Chhnang. Pursat GRM has been prepared, and waiting for approval.

12. Public consultations as well as Detailed Measurement Survey (DMS) and Socio-Economic Survey (SES initiated by RD-MEF and organized by PRSC-WG have taken place from November 2017 with affected households (AHs) of Kampong Chhnang flood embankment and Pursat landfill subprojects. DMS/SES has been completed for the 210 AHs (mainly Cham) in the northern section of the embankment, and 51 AHs (stalls and shops) where the embankment connect with the existing road. DMS/SES are currently on-going for the flood embankment, while they have not started yet for both landfill site waste pickers and Pursat drainage subprojects. DMS and SES will cover 100% of the AHs to provide accurate and comprehensive data, which also will be gender disaggregated. RD-MEF has also updated and disseminated the Public Information Booklets (PIB) to part of the AHs of the Kampong Chhnang flood embankment subproject, but the PIB updating has not been completed for the other subprojects as of yet.

13. Kampong Chhnang flood embankment subproject has been prioritized by the Royal Government of Cambodia (RGC) and Provincial Authorities (PA) as part of the PA's waterfront development and upcoming river festival agreed to take place in early part of March 2019. This requires imminent development of the river side, including relocation of the AHs, stalls, shops and storage sheds for construction of a river side boulevard, parking area, walk ways and associated viewing areas. Some of the preparation works have already started with site clearance. The PA has funding available to proceed with the development of the riverside area. However, the relocation of the AHs would require approved DRP and compensation payments, meaning RD-MEF also needs to speed up DMS/SES and public consultations significantly. Also, the number of additional AHs now raise a risk of requirement to update the involuntary resettlement safeguards category of the project to A.

14. RD-MEF has also already started the process in October 2017 for recruitment of the External Monitoring Organization (EMO), but this is not completed yet. RD-MEF internal team has been compiled for the Replacement Cost Survey (RCS), but the figures established by the internal team should be verified by independent consulting firm or organization. For Kampong Chhnang Flood Embankment DRP completion and implementation the speeding up the recruitment of EMO is essential, as well as independent verification of internal RCS. Preparation of the Detailed Resettlement Plan (DRP) will also include Livelihood and Income Restoration Plan (LIRP) for vulnerable and severely AHs.

1.6.2 Environment

15. Updating of the IEE for the project and EMPs for the subprojects has been initiated but can only be completed after the detailed designs for the subprojects have been finalized. It has been agreed that a single consolidated IEE. For the project will be prepared. Because of the various bidding contracts a separate EMP for each sub-project will have to be prepared. It was agreed to make one bidding document for both landfills but the landfills will be entered as separate lots in the bidding document so separate EMPs for each of the 2 lots will have to be prepared. The EMPs will be template based with a common text for all EMPs then the only changes for each EMP will be the project specific sections but each will be a standalone separate EMP.

16. There is confusion/misunderstanding about the scope of work for the preparation of the Government mandated domestic IEIA. In a meeting on 6 December 2017 between the EIA department, Ministry of Environment, PMU the 2nd GMS-CTDP2, TheTS1 project, and the TS2 project it was agreed that the scope of work for a domestic IEIA would be limited to the translation of the updated IEE and EMP reports prepared by the PMIS and incorporate the results of baseline environmental surveys (air and water quality) in these reports. However, it seems that the EIA department is now reversing this agreement and is insisting on the preparation of full-fledged IEIAs duplication a lot of work already done under the project. Moreover, such studies would be costly (<USD 100.000) and would be time consuming (an estimated 6 month). For project implementation it is important that the domestic IEIAs are prepared with the reduced scope as agreed in the meeting of 6 December.

1.7 Loan Covenants

1.7.1 Covenant 5.3: Establishing Urban Service Units:

17. Within 12 months of the Effective Date a road map for the establishment of the USUs. The Consultant has prepared a first working document for the establishment of the Urban Service Units. It should be noted that contrary to earlier information that Ministerial Prakas for this purpose were issued on issued on 29 March 2017, confirming the Ministry's commitment for formally establishing a self-financed “wastewater and solid waste management unit in each of the municipalities, these two Prakas, issued in December 2017 for Kampong Chhnang and Pursat (see attached working paper), are provided the legal basis to establish Wastewater Treatment System and Solid Waste Units (WTSSWUs) under control of the PDPWT, not the municipalities. In this respect it is worth noting that these prakas include solid waste management, for which responsibility has been decentralized to the municipalities.

1.7.2 Covenant 5.4: Environmental Sanitation Fees

18. Review of existing Environmental Sanitation Fees within 18 months of the Effective Date and a feasibility study on levying Environmental Sanitation Fees that recovers operations and maintenance costs and gradual depreciation. Basic Solid Waste Tariff Models have developed for Pursat and Kampong Chhnang based on the present available statistical and financial information. The models will have to be refined as more detailed statistical information on the number of customers in the different fee categories proposed by the municipalities becomes available and the operational structure is agreed upon.

1.7.3 Covenant 5.5: Project Performance Monitoring and Evaluation (PPME).

19. Within 18 months of the Effective Date a PPME system should be established. For PPME the PPR is already being used, For the purpose of PPME it has been agreed to expand the PPR spreadsheet to include the DMF and the GAP.

1.8 Consultant Services

20. Up to the end of this reporting period, 31 March 2018, the total person months used by the International Specialists is 22.7 person-month out of a total provision of 78 person-month (29.1%), leaving a balance of 55.3 person-month., the total person months used by the National Specialists is 77 person month out of a total provision of 446 person month (12.2%), leaving a balance of 391 person month.

21. A second contract variation will be required to formalize and/or include the following changes in the agreed consultant services and inputs under the contract.

1.9 Targets for the next quarter

22. The targets for the next quarter can be summarized as follows:

- Reach an agreement on the way forward for the flood protection embankment and finalize the designs based on the agreed scope for the embankment.
- Finalize the detailed designs for the Pursat and kampong Chhnang landfill sites, with BOQ, technical specifications and bid documents to start the tender process

- Obtain a written agreement on the availability of the original site for the WWTP in Pursat and on the construction of the WWTP at this site.
- Finalize the design based on these agreements
- Complete EMPs for the landfill sites completion of the EMPs for the flood protection embankment and the Pursat drainage will depend on the progress with the detailed designs
- Continue the DMS/SES for the flood protection embankment by DDR with depend on the agreement on a way forward for design and construction of the embankment
- Complete Surveys for the preparation of DMS/SES for the Kampong Chhnang and Pursat
- Preparation of the capacity development plan will continue
- The establishment of a road map for the establishment of USUs can only be continued after approval of VO2 which should provide the additional resources for this new task
- Work on tariff structure, tariff setting and subsidy methodology will continue as well as the consultations and investigations of the most suitable modalities for SWM

No action is planned for the drainage master plan preparation for Kampong Chhnang during the next quarter. This can only be initiated after approval of a contract variation with additional financing for undertaking this task

2 PROJECT BACKGROUND

2.1 Background

23. The project was approved on 10 November 2015 and declared effective on 2 March 2016. The impact of the project will be increased economic activities and environmental protection in the two towns in the Tonle Sap Basin. The outcome will be improved urban services and enhanced climate change resilience in Kampong Chhnang and Pursat municipalities. The project has five outputs:

(i) Kampong Chhnang Urban Area Environmental Improvements which will now comprise the improvement of flood protection for the low lying sectors in the Kampong Chhnang urban area through; (i) the rehabilitation and realignment of a 9.5 km flood protection embankment, and; (ii) the improvement of solid waste management through the proper closure of existing dumpsite and the construction of a new solid water landfill together with the provision of the required equipment, institutional strengthening and community awareness creation.

(ii) Pursat Urban Area Environmental Improvements through; (i) the improvement of the combined storm water drainage/sewerage system in the town area on the west bank of the Pursat River; (ii) the construction of a WWTP, and the construction of a new solid waste landfill site.

(iii) Community Mobilization and Environmental Improvements, to support the Kampong Chnnang, and Pursat urban area developments through community driven environmental improvements

(iv) Strengthened Sector Coordination and Operations and

(v) Strengthened Capacity for Project Implementation and operation and maintenance (O&M) of urban infrastructure in general and the created infrastructure in particular.

2.2 Project Basic Data

Project Title	**Integrated Urban Environmental Management in the Tonle Sap Basin Project**			
Project Acronym	**IUEMTBP**			
Project Financing	**Asian Development Bank ADF Loan**		**SDR 26,4M (USD 37M equivalent)**	**3311-CAM (SF)**
	ADB Strategic Climate Fund loan		**USD 5M**	**8295-CAM (SCF)**
	ADB Strategic Climate Fund grant		**USD 5M**	**0454-CAM (SCF)**
Borrower	**Kingdom of Cambodia**			
Project Approval	**10 November 2015**	**Signing of Loan**		**22 December 2015**
Date of Effectiveness	**02 March 2016**	**Closing Date**		**30 April 2023**
Project Completion Date	**October 2022**	**Overall project implementation progress**		**11%**
Elapsed Period	**25.9%**	**Revised Loan Closing Date**		**N/A**
Progress on Contract Award and Disbursement	**Contract Award**	**10.2%**	**Disbursement**	**2.7%**
Project Executive Agency	**Ministry of Public Works and Transport (MPWT)**			
Project Director	**H.E. Vong Pisith, Deputy Director General MPWT**			
Consultant ISPMC	**KECC in JV with NIRAS and associated with KCC**			
Team Leader **Dep .Team Leader**	**Mr. Louis Rijk,** **Mr. Srey Socheat**			
ADB Task Manager	**Mr Sameer A. Kamal**			

2.3 Document

Document Title	**Quarterly Progress Report No. 05**
Reporting Period	**01 January to 31 March 2017**
Author(s) & project role	**Louis Rijk Team Leader/Municipal Engineer PIMS, Mr. Kerry Blance, Mr. Teemu Jantunen, Resettlement Specialists, Mr. Claes Clifford, Institutional Specialist**

2.4 ADB Review Missions

24. Altogether ADB has fielded 4 Missions; Loan Inception Mission, Review Mission, Follow up meeting, Implementation Review Mission. During this reporting period there no official missions for the project were fielded by ADB. Details of the ADB Missions are given in the following table. 2-1

Table 2-1 : Details of ADB Missions

S. No.	Nature of Mission	Duration	Name and Designation of Participants from ADB	Total Nos. of Participants from ADB
2016				
1	Loan Inception Mission	7 to 14 December 2017	Sameer A. Kamal, Urban Development Specialist, SEUW/SERD (Mission Leader); Januar Hakim, Senior Portfolio Management Specialist, CARM; Genevieve O'Farrell, Environment Specialist, CARM; Melody F. Ovenden, Social Development (Resettlement) Specialist, SEUW/SERD; Tadeo R. Culla, Associate Social Development Officer, SEUW; Ludovina R. Balicanot, Associate Project Officer, SEUW and Sophy Ea, National Social Safeguards Specialist, Consultant.	**7**
2017				
1	Review Mission	15 to 27 March 2017	Sameer A. Kamal, Urban Development Specialist, SEUW/SERD (Mission Leader). Jan Hansen, Senior Country Economist, CARM (wrap-up meeting)	**2**
2	Follow up meeting	15 June 2017	Sameer A. Kamal, Urban Development Specialist, SEUW/SERD (Mission Leader).	**1**
3	Implementation Review Mission	August 25-29, 2017	Sameer A. Kamal, Urban Development Specialist / Mission Leader, Urban Development and Water Division (SEUW); Melody Ovenden, Social Development Specialist (Resettlement), Lao PDR Resident Mission (LRM); Genevieve O'Farrell, Environment Specialist (Safeguards), Cambodia Resident Mission (CARM); Chansouk Insouvanh, Social Safeguards Consultant, Lao PDR Resident Mission (LRM); and Sophy Ea, Social Safeguards Consultant, Urban Development and Water Division (SEUW). Januar Hakim, Senior Portfolio Management Specialist, CARM joined selected discussions. Linda Adams, Senior Social Development Specialist, SEUW and Ludovina Balicanot, Associate Project Officer, SEUW provided remote support	**8**

2.4 Compliance with actions agreed during the Special Project Administration Mission

25. The recent Implementation Review Mission of ADB (25 to 29 August) and the EA have agreed to comply with the following key follow-up actions. The current status of the follow-up actions as agreed and included in the Missions' Aide-Memoire is given in the table below.

Table 2-2 : Follow-up Actions and the Status of their Compliance

#	Actions	Lead	Agreed Due Date	Status
A. Overall actions and net steps				
1	Submission of contract variation request for PIMS	PMU, PIMS	October 15, 2017	A limited constract variation proposal will be submitted during the next quarter. It will not include a provision for the masterplan preparation as this would require an increase in the contract cost.
2	Commence detailed measurement survey (DMS)	GDR	October 1, 2017.	DMS/SES completed for 210 AHs in northern section of embankment and 51 AHs (stalls and shop) along the road to tourist port near completion. Data not verified yet. DMS for remaining AHs along flood embankment not started yet. RCS is currently being done by RD-MEF internal team, which figures need to be verified by independent consulting firm.
3	Submission of Q3 quarterly report including appendices on (i) summary of loan covenants, (ii) summary safeguards updates, (iii) Gender Action Plan Progress, (iv) environmental monitoring report and (v) resettlement monitoring report	PMU with PIMS	30 October 2017	Was submitted with delay since it was necessary to include major issues that have come up in the preparation of detailed designs for the Kampong Chhnang Flood Embankment and the Pursat Drainage system
5	Social impact assessment and consultations commence	GDR with PIMS, PMU	As soon as possible	Affected waste picker households have been identified, but meaningful consultations and SES has not been completed. Preparation of DRPs for landfills to be initiated
6	Operationalize the Grievance Redress Mechanism	GDR and PMU	As soon as possible	GDR has informed that the GRM mechanism at Provincial level for Kampong Chhnang is operational. Pursat GRM composition has been prepared, but waiting for Governor approval.
7	Submission of revised IEE/EMP for ADB review - Pursat landfill - Kampong Chhnang landfill - Pursat River Embankment Protection - Pursat drainage - Kampong Chhnang embankment	PMU with PIMS	October 15, 2017 October 22, 2017 December 15, 2017 January 15, 2018 February 14, 2018	Updating the IEE for the project and EPMs for the controlled landfills has been started The EMPs for the Kampong Chhnang flood embankment and the Pursat Drainage will be started during the next quarter. The Pursat River Embankment Protection has been cancelled because this has been taken up under EU financing

FINANCING AND FUND UTILIZATION

2.5 Financing

The project was approved on 10 November 2015 and declared effective on 2 March 2016. Financing for the $52.6 million project includes a SDR 26,4M (USD 37M equivalent) loan from ADB (Asian Development Fund) and $10 million ($5 million loan and $5 million grant) from the Strategic Climate Fund

The following table 2-1 summarizes project financing by financier

Table 2-3: Financing by financier

Financing	
Modality and Sources	**Amount ($ million)**
ADB	37
Sovereign Project loan: Asian Development Fund	37
Cofinancing	10
Strategic Climate Fund - PPCR	5
Strategic Climate Fund	5
Counterpart	5.6
Government	5.4
Others	0.2
Total	52.6

Table 2-2 presents the project investment plan for the 4 components of the project.

Table 2-4 : Project Investment Plan ($ million)

Item		Amount
A. Base Cost a		
1.Output 1: Kampong Chhnang Urban Area Improvements		22.9
2.Output 2: Pursat Urban Area Improvements		11.2
3.Output 3: Community Mobilization and Environmental Improvements		4.3
4.Output 4: Strengthened Sector Coordination and Operations		0.4
5.Output 5: Strengthened Capacity for Project Implementation, O&M		5.5
	Subtotal (A)	**44.3**
B. Contingencies		**6.9**
C. Financing Charges During Implementation		**1.4**
Total (A+B+C)		**52.6**

ADB = Asian Development Bank, SCF = Strategic Climate Fund
Includes taxes and duties of $4.55 million to be financed by the government through exemptions, ADB and ADB SCF grant.
In September 2015 prices.

Physical contingencies computed at 10% for civil works, equipment and consulting services. Price contingencies computed at 1.8% to 2.2% on foreign exchange costs and 3.5% on local currency costs; includes provision for potential exchange rate fluctuations under the assumption of a purchasing power parity exchange rate.

Includes interest estimated at $1.40 million during implementation for the ADB loan and $0.02 million in service charge for the ADB Strategic Climate Fund loan, which will both be capitalized as part of the loans.

Source: Asian Development Bank estimates

2.6 Fund utilization

26. There are no changes in the fund utilization during this quarter. The following table 2.5 presents the consolidated status of loan and grant proceeds. The details of the fund utilization are presented in annex 2. The total amount of contracts awarded as a percentage of the total loan amount is 2.7%. The total disbursement as percentage of the total amount of contracts awarded is 26.5%.

Table 2-5: Consolidated Status of Loan and Grant Proceeds

As of 31 Dec 2017

Loan/Grant No.	US Dollars					
	Allocation	**Contracts Awarded**	**Uncontracted Loan Balance**	**Contracts Disbursed**	**Undisbursed Loan Balance**	**Undisbursed Contract Balance**
	A	B	C = A - B	D	E = A - D	F = B - D
Loan 3311	37,133,413	4,423,235	32,710,178	1,075,670	36,057,743	3,347,565
Loan 8295	5,000,000	-	5,000,000	-	5,000,000	-
Grant 0454	5,000,000	375,796	4,624,204	194,000	4,806,000	181,796
Total	**47,133,413**	**4,799,031**	**42,334,382**	**1,269,670**	**45,863,743**	**3,529,361**

The overall status of physical and finical progress of the project can be summarized as follows

Elapsed	25.58%
Physical	7.89%
CA - Lag	12.36%
Disbursement. - Lag	22.64%
Project - Lag	18.50%

Details of fund utilization and the Contract Award and Disbursement Projections are presented in Annex 3 and 4.

Table 2-6: Consolidated Loan Utilization

As of 31 Dec 2017

Cat. Ref.	Category Name	US Dollars					
		Allocation	Contracts Awarded	Uncontracted Loan Balance	Contracts Disbursed	Undisbursed Loan Balance	Undisbursed Contract Balance
		A	B	C = A - B	D	E = A - D	F = B - D
01A	CW - KC Flood Treatment	19,200,837	-	19,200,837	-	19,200,837	-
01B	CW - KC Solid Waste Mgt.	434,163	-	434,163	-	434,163	-
01C	CW - PS Drainage	604,727	-	604,727	-	604,727	-
01D	CW - PS Flood Protection	4,898,430	-	4,898,430	-	4,898,430	-
01E	CW - PS Solid Waste Mgt.	1,029,023	-	1,029,023	-	1,029,023	-
01F	CW - KC Small-scale Inf. Dev.	740,051	-	740,051	-	740,051	-
01G	CW - PS Small-scale Inf. Dev.	740,051	-	740,051	-	740,051	-
01A	CW - PS Drainage	2,460,000		2,460,000		2,460,000	-
01B	CW - KC Sanitation Improvement	510,000		510,000		510,000	-
01C	CW - PS Sanitation Improvement	510,000		510,000		510,000	-
02A	GD - KC Solid Waste Mgt.	737,231		737,231		737,231	-
02B	GD - PS Solid Waste Mgt	821,808		821,808		821,808	-
02C	GD - KC Embank. Manual Equipment	36,650		36,650		36,650	-
02D	GD - PS Flood Manual Equipment	36,650		36,650		36,650	-
02E	GD - PS Drainage Manual Equipment	36,650		36,650		36,650	-
03A	WS - Project Mgt & Implement Supp.	580,757	534,000	46,757	82,035	498,722	451,965
03B	WS - SSCD	9,867		9,867		9,867	-
02A	WS - NGO SCEI	200,000		200,000		200,000	-
02B	WS - CCAUD	10,000	10,000	-		10,000	10,000
04A	CS - SSCD	97,264	-	97,264	-	97,264	-
04B	CS - PMIS	3,407,553	3,577,913	(170,360)	536,381	2,871,172	3,041,532
04C	Survey and Investigation	67,010	85,000	(17,990)	12,621	54,389	72,379
03A	CS - CCAUD	200,000	200,000	-		200,000	200,000
03B	CS - NGO SCEI	810,000	-	810,000	-	810,000	-
03C	CS - Survey and Investigation	100,000	165,796	(65,796)	-	100,000	165,796
	Salary Supplement	-	-	-	-	-	-
05A	IA - Office and Travel Expense	401,742	40,369	361,373	48,337	353,405	(7,968)
05B	IA - Vehicles	152,239	134,500	17,739	134,500	17,739	-
05C	IA - Equipment	15,506	51,453	(35,947)	41,453	(25,947)	10,000
	Interest During Implementation	1,402,476	-	1,402,476	8,633	1,393,843	(8,633)
	Service During Implementation	18,000		18,000		18,000	-
	Unallocatd	6,887,237	-	6,887,237	-	6,887,237	-
99	Imprest Account	(22,509)	-	(22,509)	358,551	(381,060)	(358,551)
				-		-	-
	Total	**47,133,413**	**4,799,031**	**42,334,382**	**1,222,511**	**45,910,902**	**3,576,520**

Table 2-7: Grant Utilization

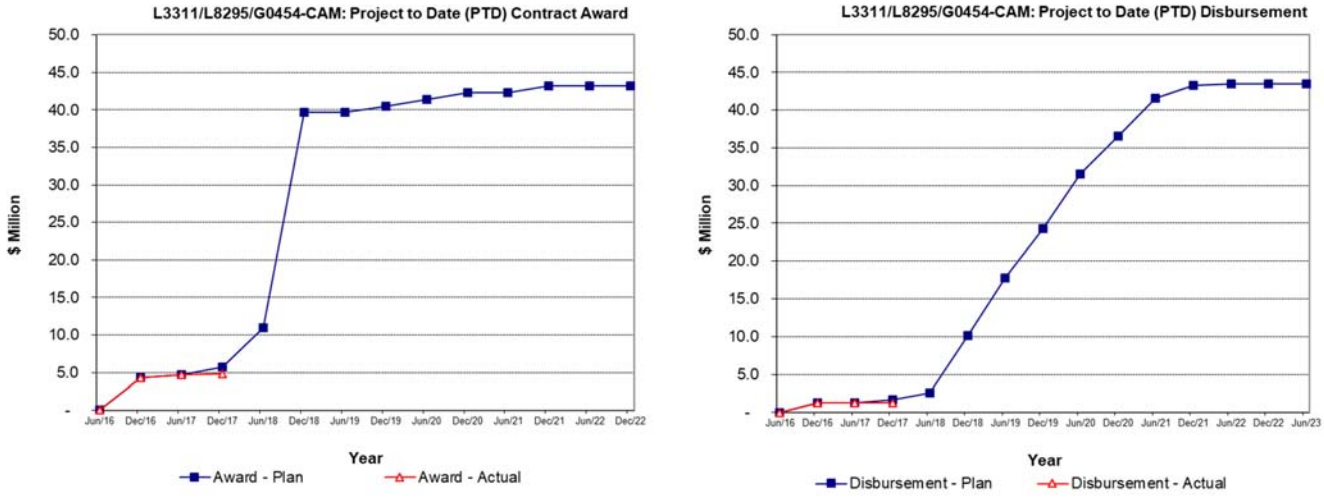
As of 31 Dec 2017

Cat. Ref.	Category Name	US Dollars					
		Allocation	Contracts Awarded	Uncontracted Loan Balance	Contracts Disbursed	Undisbursed Loan Balance	Undisbursed Contract Balance
		A	B	C = A - B	D	E = A - D	F = B - D
01A	CW - PS Drainage	2,460,000	-	2,460,000	-	2,460,000	-
01B	CW - KC Sanitation Improvement	510,000	-	510,000	-	510,000	-
01C	CW - PS Sanitation Improvement	510,000	-	510,000	-	510,000	-
02A	WS - NGO SCEI	200,000	-	200,000	-	200,000	-
02B	WS - CCAUD	10,000	10,000	-	-	10,000	10,000
03A	CS - CCAUD	200,000	200,000	-	47,159	152,841	152,841
03B	CS - NGO SCEI	810,000	-	810,000	-	810,000	-
03C	CS - Survey and Investigation	100,000	165,796	(65,796)	-	100,000	165,796
04	Unallocated	200,000		200,000	-	200,000	-
	Imprest Account	-	-	-	146,841	-	-
	Total	**5,000,000**	**375,796**	**4,624,204**	**194,000**	**4,952,841**	**328,637**

2.7 S curves for contract awards and disbursements

Based on the revised contract awards and disbursement schedule based on the updated work plan, the resulting s curves are presented in the following figures

Figure 2-1: L3311/L8295/G0454-CAM: Project to Date (PTD) Contract Award and (PTD) Disbursement based on revised contract award and disbursement plans



2.8 Procurement Plan

27. The following table presents the procurement plan as updated 31 March 2018. The table reflects the planning as presented in the revised implementation schedule presented in chapter 4 and Annex 1. The figures in red colour represent historic data of completed procurement

Table 2-8: Procurement Plan

#	Contract Packages	Proc. Method	Advert. Date	Award Date*
Civil Works				
G07	Supply of KC and Pursat Solid Waste Management Equipment batch 1	NCB	Q4 2019	Q1 2020
G08	Supply of Pursat Solid Waste Management Equipment Batch 2	NCB	Q3 2021	Q4 2021
CW04	Construction of KC Embankment	ICB	Q3 2018	Q4 2018
CW05	Construction of Pursat Drainage and WWTP	ICB	Q3 2018	Q4 2018
CW06	Construction of Pursat Landfill Site	NCB	Q4 2017	Q2 2018
CW07	Construction of Pursat River Embankment Protection	Cancelled		
CW08	Construction of KC Landfill Site	NCB	Q3 2018	Q4 2018
CW09	KC and Pursat Community-driven Env. Improvements	NCB		
Consulting Services				
CS01	Project Management and Implementation Support	QCBS	Q4 2015	Q4 2016
CS02	Climate Change Adaptation in Urban Development	CQS		Q3 2017
CS03	Strengthening Sector Development	CQS	Merged with PMIS	
CS04	NGO Support for Output 3 (CMEI)	QBS	Q3 2017	Q1 2018
Goods and Works Under $100K				
G01	Supply of 5 units 4WD double cabin pick-up trucks	NCB	Q1 2017	Q2 2017
G02	Supply of 8 motorcycles	Shopping		Q2 2017
G03	Office furniture for PMU and PIUs (KC and Pursat)	Shopping		Q3 2017
G04	Office equipment for PMU and PIUs (KC and Pursat)	Shopping		Q3 2017
G05	Equipment for Pursat Drainage and Flood Protection	Shopping		Q1 2019
G06	Manual Equipment for KC Embankment	Shopping		Q1 2019
CW01	Office Repairs (PMU)	Shopping		Q2 2017
CW02	Office Repairs (PIU KC)	Shopping		Q2 2017
CW03	Office Repairs (PIU Pursat)	Shopping		Q2 2017

3 IMPLEMENTATION PROGRESS

3.1 Status of Project Implementation and Revised Project Implementation Schedule

28. The overall progress of project implementation is estimated to be 7.9 % against and elapsed time from the date of project effectiveness of 25.9 %. A revised implementation schedule has been prepared that will ensure the completion of all planned infrastructure and related support activities before the scheduled project completion date. At the end of the reporting period project implementation was approximately 3 weeks behind this revised schedule.

29. The summary of the revised implementation schedule is given in figure 4.1 and the detailed implementation schedule is presented in Annex 1.

Figure 3-1: Revised Implementation Schedule

PROJECT IMPLEMENTATION PROGRESS -- Loan and/or Grant Number(s): L3311 / L8295 / G0454 - CAM

No.	Activities	2017				2018				2019				2020				2021				2022				Prog (%)	Wt	Total
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
1	**Project Readiness/Preparation**																										**2.5**	**2.5**
	- Loan Effectiveness																									100	1.0	1.0
	- Recruitment of PMIS Consultants																									100	0.5	0.5
	- Recruitment of PMU Staff																									100	0.5	0.5
	- Recruitment of PIU Staff																									100	0.5	0.5
2	**Output 1: Kampong Chhnang Urban Environmental Improvements**																										**26.7**	**1.5**
	a. Flood Protection Embankment																										**20.0**	**1.4**
	- Preparation/Approval Design, EMP, IEIA, RP																									90	1.5	1.4
	- Bidding Process/Contract Award																									-	1.0	-
	- Construction Embankment/Anciliary Works																									-	16.5	-
	- Liability Period																									-	0.5	-
	- O&M support																									-	0.5	-
	b. Improved Solid Waste Management																										**6.7**	**0.2**
	b1. Construction Sanitary Landfill																										**3.2**	**0.2**
	- Preparation/Approval Design, EMP, IEIA, RP																									90	0.1	0.1
	- Bidding Process/Contract Award																									20	0.3	0.1
	- Construction Landfill & Anciliary Works																									-	2.6	-
	- Liability period																									-	0.1	-
	- O&M support for SWM																									-	0.1	-
	b2. Remediation/Closure existing dump sites																									-	**0.2**	-
	b3. SWM Equipment Procurement																										**3.3**	**-**
	- Procurement 1st Batch Equipment																									-	1.7	-
	- Procurement 2nd Batch Equipment																									-	1.6	-
3	**Output 2: Pursat Urban Environmental Improvements**																										**35.1**	**2.1**
	a. Improvement Solid Waste Management																										**9.5**	**0.5**
	a1. Construction Sanitary Landfill facility																										**5.6**	**0.5**
	- Preparation/Approval Design, EMP, IEIA, RP																									90	0.5	0.5
	- Bidding Process/Contract Award																									20	0.3	0.1
	- Construction Landfill/Anciliary Works																									-	3.6	-
	- Liability Period																									-	0.5	-
	a2. Remediation/Closure existing dump sites																									-	**0.2**	**-**
	- O&M support for SWM																									-	0.5	-
	a3. SWM Equipment Procurement																									-	**3.7**	**-**
	- Procurement 1st Batch Equipment																									-	**2.0**	**-**
	- Procurement 2nd Batch Equipment																									-	**1.7**	**-**
	b. Improvement Drainage in Pursat Town and Waste Water Treatment																									-	**25.6**	**1.6**
	- Preparation/Approval Design, EMP, IEIA, RP																									80	**2.0**	**1.6**
	- Bidding Process/Contract Award																									-	**1.5**	**-**
	- Construction Drainage & Anciliary Works																									-	**21.1**	**-**
	- Liability Period																									-	**0.5**	**-**
	-O&M Support																										**0.5**	**-**
4	**Output 3: Community Mobilization and Environmental Improvements (CMEI)**																										**11.2**	**0.4**
	- Recruit International NGO																									100	0.4	0.4
	- Train village development committee units for project briefing and output training																									-	0.4	-
	- Community awareness programs																									-	0.4	-
	- Needs assessments for small-scale infrastructure works on CCA, sanitation																									-	0.4	-
	- Planning, implementing, and supervising community improvements																									-	9.4	-
	- Prepare report on community environmental improvements and lessons																									-	0.1	-
	- Internal and external monitoring of safeguard documents																									-	0.1	-
5	**Output 4: Strengthened sector coordination and operations**																										**3.4**	**1.2**
	- Recruit and mobilize climate change resilience consultants																									100	0.5	0.5
	- Prepare, approve, establish, and strengthen USU institutions																									10	1.5	0.2
	- Review climate change and urban development documents, and sanitation standards in building codes																									60	0.8	0.5
	- Implement TSUADF, revising building codes, developing the plan for CCA																									20	0.5	0.1
	- Plan for climate change adaptation in urban areas is endorsed																									-	0.1	-
6	**Output 5: Strengthened Capacity for Project Implementation, and Operations and Maintenance**																										**21.1**	**3.1**
	- Overall project management and implementation support																									15	16.0	2.4
	- NGO Support																									10	2.9	0.3
	- Procurement transporation, equipment, Office Repairs PMU &PIUs																									30	1.4	0.4
	- Recruit external resettlement monitor																									-	0.3	-
	- Develop PPMS and capacity development plan																									-	0.5	-
	Total																										**100.0**	**10.9**

3.2 Kampong Chhnang Urban Environmental Improvements

3.2.1 Flood Protection Embankment

30. In March 2015 the Provincial Government adopted a 5-year plan for development and beatification of the river front area. This plan had an estimated cost of USD18.5 and included; Disclosure of the proposed initiatives under the plan to the population, Moving the floating houses from their present moorings along the river bank north and south of the tourist port to new moorings 3to 5 km to the north of the tourist port, development a new resettlement site for relocation of HH along the river bank and the tourist port area access, develop a new market and commercial area close to the new resettlement site, develop the river front infrastructure, environmental and public health management, develop river front related tourist services to increase tourism and O&M cost.

31. In March 2018 The Royal Government of Cambodia has approved the Kampong Chhnang Authorization Act to host the 5th Anniversary of the River Festival in 2019. For the organization of the river festival infrastructure improvements will be required in the Phsar Krom river bank area to provide orderly access and parking space for visitors as well as arrangements to accommodate spectators along the river bank.

32. For the organization of the 2019 river festival the Provincial Government plans to undertake the following infrastructure improvements: (i) The extension of the tourist port boulevard by 187 m. this will be the prime location for viewing the river festival and a terraced seating arrangement will be erected at that site; (ii) widening of the tourist port access road, creation of a parking/recreational area, joining the parking area with the access road and create suitable pedestrian access to the tourist port. The parking area will be created by land filling of a section of the flood plain area along the access road and; (iii) raising the level of the road between the tourist port and the new port to 11 m and widen the road to 10 m, to provide access to the river front for visitors of the festival. These infrastructure improvements will require relocation of households and businesses in the Phsar Krom river bank area, but regardless of who finances a particular section of the embankment, it would be subject to ADB's safeguards requirements as it is part of the overall embankment that ADB is financing involuntary resettlement of households along the embankment before affected people are compensated and the resettlement plan is approved and disclosed will result in a safeguards non-compliance.

Proposed Infrastructure works, resettlement impacts and timeline

Proposed Infrastructure improvements	Resettlement Impacts	Timeline
The extension of the tourist port boulevard by 187 m. This is a priority requirement as this will be the prime location for viewing the river festival and a terraced seating arrangement will be erected at that site for the dignitaries.	The nearby ferry landing, the boat unloading facilities (conveyor belts), and related stalls and other businesses, including a petrol station for fueling boats will have to be relocated to the new port area. These facilities would have to be relocated to the new port, but the new port is not yet ready to receive/accommodate these facilities	The works will require land filling of about 100 m of the extension area and the construction of a new concrete revetment. This will have to be completed before the river water level starts rising. Priority should be given to extend concrete revetment and operation area of the new port to accommodate the unloading facilities
Widening of the tourist port access road, creation of a parking/recreational area, joining the parking area with the access road and create suitable pedestrian access to the tourist port. The parking area will be created by land filling of a section of the flood plain area along the access road	To allow the widening of the access road and joining the parking area with the existing access road embankment, 126 stalls and shops along the road embankment will have to be relocated. 51 stalls/shops are included in the present DMS and for the other 75 stalls a DMS would have to be conducted.	Land filling for the parking area can be started without the immediate need for relocation of stalls and shops. However, for widening the road and joining the parking area with the road embankment the shops/stall will have to be relocated. This could be done after most of the land filling has been completed and is not very sensitive to the rainy season
The proposed extension of the tourist port boulevard will not be able to accommodate all the expected visitors/spectators and an additional section of the river bank will have to be made	To provide a viewing area for all the expected visitors 210 HH along the river bank will have to be relocated before the festival	Improving and widening of the road surface without raising the road embankment and relocating the AH along the river bank could be done after the rainy

accessible for spectators It is proposed to raise the level of the road between the tourist port and the new port to 11 m and widen the road to 10 m.	in March 2019. These AH are included in the DMS.	season in the period from December to February If the work would include raising the road embankment, this would have to be done before the start of the rainy season and relocation of AH would have to start almost immediately.
Beautification of the Tourist Port and improving the view of the river from the tourist port boulevard. This would improve the general environment of the tourist port area but is not essential for the organization of the river festival	Would require relocation of 58 HH with shops and other businesses. For the present embankment improvement this relocation is not required. Initial consultations have indicated that the cost for relocation could ascend to USD 3M, under ADB safeguard requirements	Relocation of the well-established shops in the tourist port with some of them having hard titles and most of them eligible for hard titles and none of them interested in relocation because of the commercial potential of the tourist port location would require a long process which cannot be completed before the river festival under the ADB safeguard requirements

Potential safeguard non-compliance

In the case of the embankment all resettlement can be qualified as involuntary. According the ADB guidelines voluntary resettlement refers to any resettlement not attributable to eminent domain or other forms of land acquisition backed by powers of the state. The important principles in voluntary resettlement are informed consent and power of choice. Informed consent means that the person involved is fully knowledgeable about the project and its implications and consequences and freely agree to participate. Power of choice means that the person involved has the option to agree or disagree with the land acquisition, without adverse consequences being imposed formally or informally by the state. Power of choice is only possible if project location is not fixed and in case of the embankment and the proposed river festival infrastructure improvements the location of these interventions is fixed

Therefore, if for the implementation of the infrastructure improvements for the organization of the river festival involuntary resettlement of HH or commercial operations are required and if this is concluded before the approval of the resettlement and compensation plans and the disclosure of these plans, this would result in non-compliance with ADB resettlement safeguards.

Options to avoid safeguard no compliance.

Given the immutable facts faced by the project, the infrastructure requirements for organizing the river festival, and the time line for implementation of these works the following options could be considered to avoid safeguard non-compliance.

a) Postpone the river festival till march 2020.or move the venue of the main festival activities (official functions, fairs, markets) to another location in Kampong Chhnang that would not impact the planning of the flood embankment and the ongoing preparation of the resettlement plan.

b) If GDR could complete the resettlement plan by the end on June and approval of the inter-ministerial committee can be obtained before the elections in the beginning of July, ADB approval could be expected by the end of August (this assumes that there will be comments that have to be addressed). Payment of compensation could start in September and after receiving the compensation the AH will have to be given at least one-month notice to start organizing their relocation. Relocation could start with shop/stalls along the parking area and the commercial activities on the extension area of the tourist boulevard. After this the relocation of the HH along the riverbank could be started in December when flood water recedes. Under this scenario the landfilling for the parking area and surfacing could be completed for 90% before relocation of shops and after completion of the relocation the parking area could be finished by filling the gap between the access road and the land filling and the access road could be widened. After relocation of HH from the riverbank the area could be cleaned up and made ready for receiving visitors, the road could be improved and widened but there will not be enough time to raise the road embankment. This would leave a particular problem with regard to the extension of the tourist port boulevard. The above scenario would not leave sufficient time for the construction of this extension and the present occupants would have to be relocated before the resettlement plan is approved.

c) Consider the southern section of the present embankment as a self-standing subproject. This could be justified as follows; for the design of the new river port, the extension of the river embankment to the north of the port, road embankment around the resettlement and northern expansion area a design level of 11 m has been adopted. According to the Modelling of Future Land-Use, Infrastructure & Flood Behaviour across the Cambodian Floodplain, Tonle Sap and The Mekong Delta of Cambodia and Vietnam prepared by the MRC, a design level of 11 m would withstand 24 year return period flood but would be overtopped by 100 year return period floods under 2 of the 6 evaluated development scenarios. If the Provincial Government constructs all flood protection works for the northern expansion area up to a design height of 11 m. it would make no sense to construct the embankment under ADB financing up to a level of 12 m. If now the Provincial Government also constructs the extension of the tourist port boulevard and the road embankment between the tourist port and the new port at a level of 11 m, linking up with existing road and river embankments at the same level, the northern part of the town would be fully protected from 24 year return period floods. This would only leave the improvement of flood protection of the southern section of the town. This would involve strengthening of 3 km of existing road embankment and rehabilitation of 2.5km existing embankment. These section have no major resettlement issues and have no relation with the Provincial Government river front beautification plan or the river front improvements for organizing the river festival. It should be noted that there is no formal confirmation from the Provincial Authorities that all the above to referred road embankments will be raised to a relatively safe level of 11 m.

33. In order to finalize the detailed design of the flood protection embankment a decision is needed on how to proceed with planning of the embankment based on the options outlined above.

3.2.2 Kampong Chhnang Drainage and Drainage Master Plan

3.2.3 Construction of a new sanitary landfill site

40. Drone imagery, detailed topographic surveys and geotechnical investigation for the new sanitary landfill sites in Kampong Chhnang and Pursat have been completed during the previous quarter. The site selected for the Kampong Chhnang sanitary landfill did not pose significant engineering constraints apart from the encroachment into the area reserved for the landfill of spoil banks from a nearby quarry. The detailed design for the landfill site has been substantially completed. An input from the International SWM specialist is planned during the month of January/February next year to finalize the detailed design. The detailed design report detailed designs, construction drawings, BOQ and technical specifications will be completed during the next quarter.

3.3 Pursat Urban Environmental Improvements

3.3.1 Pursat Town Drainage Improvement

34. Drone imagery and detailed topographical survey of the Pursat drainage area had been completed during the 3rd quarter of 2017. During this reporting period a detailed inventory of the existing drainage system was completed which included the collection of inverted pipe levels, details of the existing man holes and junction boxes, the condition of the pipelines and the maintenance of the system. This was a time consuming operation as for inspection, the concrete covers of each manhole and junction box had to be lifted with a small crane and after inspection replaced. The inspection revealed no major problems in the system but many minor problems regarding the levels of pipe lines and especially the level of deferred maintenance. At crucial locations, junction boxes and pipelines are blocked with sand, other debris and garbage. This seems to be one of the major causes of flooding in the town area during rain storms.

35. A major issue that is affecting the completion of the detailed designs and cost estimates is type and location of the WWTP. Although the PAM mentions a WWTP as a component of the Pursat urban area environmental improvements, no specific resources for the construction of such a WWTP have been provided in the project budget.

36. The available area of 2.8 ha. for the construction of a WWTP close to the town area is not sufficient for a conventional lagoon system, but would allow the construction of an anaerobic treatment (settler, anaerobic baffled reactor, anaerobic filter, planted/root gravel filter). The permanent disposal of storm water and WWTP effluent is only possible through the existing but now defunct irrigation left bank canal of the Kbal Hong barrage. However, from consultation with the MOWRAM it transpired that there is the intention to restore at least half the capacity of this canal by converting the present gravity system in to a lift irrigation system.

37. Now the PMIS has been informed by the local authorities that close to the original WWTP location a housing development has been planned and that they have therefore selected a new location for the WWTP on the right bank of the defunct irrigation canal about 4.16 km west of the present location The area of this new location is reported to be about 15 to 16 ha. which would allow for the construction of a conventional lagoon based treatment plant. However, based on the SRTM 30 m DEM, the new area is located at about the same level as the original

site. This implies that sewage cannot be conveyed from the town area to the new location by gravity and pumping would be required.

38. The additional works for conveying waste water to the new site would include the construction of a pre-treatment facility and pumping station at the original site for the WWTP, a 4.2 km pipeline along the embankment of the irrigation canal, a 4.2 km service/access road and a larger lagoon based treatment plant.

39. In case the excess storm water cannot be discharged in the irrigation canal, this storm water would have to be pumped back to the Pursat River. The cost implications can be summarized as follows.

- Improving the drainage system with a small WWTP at the original site: cost USD 8,554,500
- Improving the drainage system with a lagoon based WWTP at the new site; cost USD 13,411,800

3.3.2 Construction of a new sanitary landfill site

40. Drone imagery, detailed topographic surveys and geotechnical investigation for the new sanitary landfill site was completed during the last quarter. The area selected for the Pursat sanitary landfill and its access is flooded during the rainy season and will require costly filling to raise the ground level of the site above the level of flooding. An alternative site suggested by the local authorities is also partly flooded during the rainy season and would require considerable investment for creating year-round access. The detailed design for the originally selected site in Pursat has been substantially completed and will be finalized during the next quarter with the support of the international SWM specialist. The main complication in finalizing the detailed design is the requirement for 1 m high land filling to raise the ground level of the site above the rainy season flood level of the surrounding area. A borrow area for this land filling has still to be identified. The detailed design report detailed designs, construction drawings, BOQ and technical specifications will be completed during the next quarter.

3.3.3 River Bank Protection for the Pursat River

41. Local authorities have informed that the proposed improvement of the Pursat river bank will now be undertaken with funding from the European Commission.

3.4 Institutional Development

41. This work related to sector policies and institutional development was commenced in late January 2018 with a review of existing institutional setup and development of a training needs assessment strategy and questionnaire for the target provincial towns using a “system capacity” approach as capacity weaknesses are seldom limited to single technical, organizational, institutional or infrastructural shortcomings, and in most cases a combination of different elements leads to capacity limitation. A draft capacity development plan have been initiated.

42. The Capacity Development Plan will integrate new concepts and initiatives linked directly to the IUEMTB, including (i) development of implementation capacities for urban infrastructures; (ii) education and training on management, operation and maintenance of urban infrastructures such as wastewater, drainage and river embankment – as well solid waste management; (iii) disaster risk management (planning, response, and recovery) to better prepare for and react to such climate change impacts; and (iv) mainstreaming of climate change directly into urban development initiatives.

43. Both towns were visited in February 2018 and interviews was conducted and follow visit in March 2018. The results from this questionnaire /survey was analyzed and preliminary conclusions was made.

44. Also preliminary consideration was made in February/March on the concept of Urban Service Units – but as the procurement and contracting of technical assistance related to USU was still unclear - limited attention has been given on USUs during this reporting period under the PMIS TA.

45. The long-term vision for urban service delivery in Cambodia is that such service should be provided by semi-autonomous and self-financing entities/authorities. In fact such entities are already in place in Phnom Penh and Siem Reap[1] successfully providing water supply, being financial viable (reported full cost recovery) and having very commendable collection ratio – close to 100%. Nonetheless, as in many other places globally, the management of wastewater and solid waste (the “dirty” part of urban services or urban environmental sanitation) has proven to be much more complicated and is lagging far behind compared with the provision of water supply.

46. One of the core problems relates to the overlapping and unclear responsibilities for urban services between provincial and municipal administrations. Presently water supply is provided by the Provincial Departments of Industry and Handicraft (PDIH), wastewater management is predominantly provided by Provincial Departments of

[1] On 10 January 2007, SRWSA was transferred as a public enterprise with full administrative & financial autonomy by Sub-Decree of Royal Government of Cambodia.

Public Works and Transport (PDPWT) and solid waste management is provided by municipalities (nearly always by contracting a private solid waste operator)

3.5 Tariff Structure Tariff Setting and Subsidy Methodology

47. Solid Waste Tariff Models are continuing to be developed for Pursat and Kampong Chhnang as statistical and financial information becomes available and the operational structure is developed. The projections in the Models cover the period 2019-2030 and provides for the following:

- Expenditure costings and income projections in Riel and US Dollar;
- Construction, operation and management of Landfills;
- Purchase of plant and equipment for landfill operation and solid waste collection services;
- Projected population increases and household numbers;
- Customer numbers in various categories (information still being provided)
- Staffing requirements - operational and management;
- Street sweeping expenses;
- Revenue collection efficiency;
- Waste collection efficiency
- Depreciation of assets
- Projected solid waste tariffs for the various categories (to be calculated when categories numbers are finalized);
- Estimated Profit and Loss Account.

It is important for the Municipalities to provide estimated customer numbers for the various tariff categories that they propose. Until this information is available the Tariff Models cannot be finalized.

48. The present model shows that the SWM operations will be very sensitive to economies of scale because of the high level of fixed cost for the landfill and basic equipment O&M. For Kampong Chhang the monthly fee per household could be as low as USD 1.40, depending on how subsidies from the central government are used, but in Pursat the monthly fee would be minimum USD 4 because of a much smaller customer base (Pursat is a large municipality but the urbanized area is small with a maximum population of 30.000)

3.5.1 Solid Waste Collection and Transportation Contract – Pursat

49. An examination has been made of the Solid Waste Collection and Transportation Contract for Pursat. On 1 January 2008 the Sampeou Meas District, Pursat Province, signed a Contract with a Solid Waste Contractor to operate the service from 1 January 2008 until 31 December 2022.

50. On 26 December 2014 this Contact was transferred, with the Provincial Governor's approval, to another Contractor to operate the service from 1 January 2015 to 31 December 2022. The second Contractor was obligated under the Contract to provide the following:

- Two collection trucks;
- A garbage disposal area of 10,000 m^2 to dispose solid waste for 8 years until contract termination;
- Maintain access to the Landfill site at all times;
- Street and drainage cleaning services to designated roads and public parks;
- Suitable staff numbers to carry out the services and provide them with suitable clothing and safety equipment;
- Collect and retain solid waste fees, as determined (an existing fee schedule is detailed in the Contract).

51. However, the second Contractor has gone bankrupt and the existing service is now being carried out informally on a week to week basis by the Contractor who has an existing agreement to collect waste from the market. At a meeting with a Deputy Governor from the Municipality he was advised that if it is being considered to enter a new contract to collect, transport and treat solid waste in the Municipality it should only be on a short term basis until any new arrangements under the Project are finalized.

3.5.2 Solid Waste Collection and Transportation License Agreement - Kampong Chhnang.

52. Up to the end of 2017 the Department of Environment (DOE) had an annual agreement with a Solid Waste Contractor for the collection and transportation of solid waste in Kampong Chhnang. The DOE has recently issued Sub-Decree No. 113 authorizing the Municipality to enter into a contract for the provision of future solid waste collection services. Contractual negotiations for 2018 are proceeding at present. Details of the Licence Agreement for 2017 and proposed new agreement for 2018 is to be provided by the Municipality. The annual Licence Agreement for 2016 provided that the Contractor shall:

- Pay a security deposit of 25% of Contract price;

- Collects and retains solid waste fees from customers;
- Exclusive rights for solid waste collection in the area;
- Clean designated public places;
- Collect and transport waste to a site designated by the Provincial Authority;
- Provide safe working conditions for staff.

3.5.3 Future Solid Waste Management Arrangements.

53. With the construction of new landfills and the implementation of improved arrangements for the collection, transportation and treatment of solid waste in the Project towns existing contracts will need to be reviewed. This will be separately reported on under the Project whereby different management options for provision of the service will be examined.

Table 3-1: Status of planned activities with milestones as presented in the PAM

As Planned in the PBME	Present status
1. Kampong Chhnang urban area environmental improvements	
a) Conduct topographical and soil surveys (Q1, 2017)	Topographical surveys and geotechnical investigations completed for the new landfill site. The topographical survey work for the flood embankment has been completed
b) Update feasibility study and appraisal report for ADB and government approval (Q1–Q3, 2017).	Uncertainty has been created for finalizing the detailed designs for the flood embankment because of the proposed river festival in march 2018 which may result in possible safeguard non compliance
c) Issue bids, evaluate bids, and submit to ADB for no objection (Q4, 2017–Q3, 2018).	The design for the landfill has been completed but a final review by the international SWM specialist is pending
d) Transfer O&M and tariff collection for SWM to USU (Q4, 2017–Q2, 2018)	Delayed, USUs have not yet been established.
e) Award landfill civil works contract, procure landfill equipment and construct landfill (Q2, 2018–Q3, 2019)	Formation of USU was to be provided under a separate consultant package. Under this package no consultants could be engaged and a proposal to merge the TOR of this package with the PMIS TOR is under considerations
f) Transfer O&M responsibilities for drainage and flood control systems to USU (Q3, 2018)	On track
g) Remediate old open dumpsites and construct controlled landfill (Q4, 2018–Q2, 2019)	On track
h) Award civil works contract and construct embankment (Q2, 2018–Q4, 2019)	On track
i) Dry season 1, Construct embankment segments A to C (Q1–Q3, 2019)	On track
j) Procure solid waste collection equipment (Q4, 2019)	On track
k) Hand over works of landfill site and defects liability period (Q4, 2019–Q4, 2020)	On track
l) Dry season 2, Construct embankment segments D to I (Q1–Q3, 2019 and Q1–Q3, 2020)	On track
m) Construct embankment segments I to M during higher lake levels (Q1, 2019–Q4, 2020)	Detailed planning of construction works is yet to be prepared but overall target can be achieved
n) Road surfacing and supervision intermittent (Q1-Q2, 2020 and Q1–Q2, 2021)	See above
o) Handover embankment works and defects liability period (Q3,2021–Q3, 2022)	Will depend on the progress in construction of the flood embankment
p) Internal and external monitoring of safeguard documents (2017–2022, quarterly)	Target can be achieved In QPRs and specials reports if required
2. Pursat urban area environmental improvements	
a) Conduct topographical and soil surveys (Q1, 2017)	Topographical Surveys and geotechnical investigations have been completed

As Planned in the PBME	Present status
b) Update feasibility study and appraisal report for ADB and government approval (Q1–Q3, 2017)	Detailed designs will be completed during the next quarter. To effectively merge the 24 km existing pipelines with new trunk lines has proven to be very complicated
c) Transfer O&M and tariff collection for SWM to USU (Q4, 2017–Q2, 2018)	On track Formation of USU was to be provided under a separate consultant package. Under this package no consultants could be engaged and a proposal to
d) Issue bids, evaluate bids, and submit to ADB for no objection (Q4, 2017–Q2, 2018)	merge the TOR of this package with the PMIS TOR is under consideration
e) Award contract for drainage and embankment works (Q3, 2018)	Slippage, designs/cost estimates and tender documents will be completed by the end of May
f) Procure landfill equipment (Q2–Q3, 2018)	On track It is proposed to procure the equipment in two batches, 1st batch before completion of the landfill site and 2nd batch after one year of operation. Type and
g) Award contract for landfill construction (Q4, 2018)	number of equipment will depend on operation modalities (force account of contract)
h) Remediate old open dumpsites and construct controlled landfill (Q4, 2018–Q3, 2019)	On track
i) Construction of riverbank protection (Q3, 2018–Q2, 2019)	Closure of existing landfill sites can only be done if ownership of these sites is transferred to the
j) Transfer O&M responsibilities for drainage and flood control systems to USU (Q3, 2018)	government Cancelled, as this will be done under EU financing
k) Procure solid waste collection equipment (Q4, 2019)	Slippage likely as USUs have not yet be established
l) Hand over works for landfill and defects liability period (Q4, 2019–Q4, 2020)	See above at landfill equipment
m) Construct drainage system starting at foot of system, construct pumping stations and WWTP with road rehabilitation as required (Q4, 2018–Q2, 2020) Update feasibility study b and appraisal report for ADB and government approval (Q1–Q3, 2017)	On track On track
n) Supervise start-up and commissioning of WWTP (Q3–Q4, 2020)	
o) Handover of drainage and embankment works and defects liability period (Q3, 2019–Q1, 2022)	On track
p) Internal and external monitoring of safeguard documents (2017–2022, quarterly)	Improvement river embankment has been cancelled
q) Internal and external monitoring of safeguard documents (2017–2022, quarterly)	On track
3. Community mobilization and environmental improvements	
a) Recruit International NGO (Q2–Q4, 2016)	NGO has mobilized, Inception report will be presented during the next quarter
b) Train village development committee units for project briefing and output training (Q2–Q3, 2017)	
c) Climate change adaptation and sanitation needs assessments (Q1–Q2, 2017)	Is expected to start after the inception period, initial surveys on onsite sanitation are being conducted
d) Undertake community awareness programs (Q3, 2017–Q3, 2018 and intermittent)	See above
e) Needs assessments for small-scale infrastructure works on climate change adaptation and sanitation (Q1–Q3, 2017)	See above See above

As Planned in the PBME	Present status
f) Assist in planning, implementing, and supervising community environmental improvements (Q3, 2017–Q4, 2021)	See above
g) Prepare report on community environmental improvements and lessons (Q4, 2021)	NGO will contribute to the safeguard monitoring, coordination between the NGO and the PIMS for safeguard monitoring will have to be developed.
h) Internal and external monitoring of safeguard documents (2017–2022, quarterly)	
4. Strengthened sector coordination and operations	
a) Recruit and mobilize climate change resilience consultants (Q3–Q4, 2016)	Have been mobilized
b) Recruit and mobilize institutional development consultants (Q1–Q2, 2016)	Could not be engaged, transfer of these responsibilities to PMIS is problematic
c) Prepare, approve, establish, and strengthen USU institutions (Q2, 2016–Q3, 2022)	Will depend on the resolution of the institutional development consultancy
d) Review climate change and urban development documents, and sanitation standards in building codes (Q1, 2017)	Ongoing
e) Implement TSUADF, including revising building codes and developing the plan for climate change adaptation in urban areas (Q2, 2017–Q1, 2019)	Ongoing
f) Plan for climate change adaptation in urban areas is endorsed, including revised building codes in Tonle Sap provinces (Q4, 2018–Q1, 2019)	Ongoing
g) National task force for urban development meetings (Q1, 2017–Q1, 2022)	No information
5. Strengthened capacity for project implementation, and O&M	
a) Appoint and update PMU and PIU members, including grievance focal points (Q1, 2016 and Q4, 2016)	Ongoing
b) Recruit and mobilize project management and implementation support consultants (Q4, 2015–Q4, 2016)	Completed
c) Recruit external resettlement monitor (Q3–Q4, 2016)	Not done
d) Develop project performance management system and capacity development plan (sex-disaggregated) (Q2, 2017)	To be initiated
e) Undertake training programs in project and financial management, procurement, safeguards, gender mainstreaming, and others (Q1, 2017–Q1, 2022)	To be initiated
f) Submit quarterly project progress reports (1 month after each quarter, starting in Q1, 2017)	Ongoing
g) Prepare annual PPME reports (31 January, 1 month after close of calendar year)	Included in this quarterly report as only preparatory activities are ongoing, has been agreed to merge
h) Submit Government completion and post-evaluation reports on resettlement activities (Q2, 2019 and Q1, 2020)	PPR and DFM data sheets for the PPME No yet Due
i) Submit government project completion report and resettlement report (Q3, 2022)	Not yet due

54. Based on an updated implementation schedule presented in the inception report with the estimated duration of each of the major activities for project Implementation the following break downs of activities have been proposed.in the inception report. This breakdown is based on the continuity of services of the PIMS and the availability of international and national specialists as offered in the consultant's proposal.

4 PROJECT MANAGEMENT ARRANGEMENTS

55. MPWT is the executing agency (EA). The implementing agencies (IAs) are the Provincial Department of Public Works and Transport (PDPWT) and Municipal Governments in Kampong Chhnang and Pursat. A Project Steering Committee (PSC) has been established by MPWT although there is no report available on any meeting of the PSC. The PSC is responsible for: (i) overseeing implementation in conformity with the Project's development objectives and scope; (ii) assisting in coordination among government agencies involved in Project implementation and policy reforms (in consultation with the PCU in Phnom Penh); (iii) ensuring coordinated and efficient implementation of Project activities; (iv) monitoring the progress of achieving all outputs, in particular, measuring the development impact and outcome envisaged under the Project; and (v) provide guidance and direction towards the accomplishment of the Project's impact and outputs. The PSC is chaired by MPWT and members include representatives from Ministry of Economy and Finance (MEF), Tonle Sap Authority (TSA), MPWT, and Ministry of Land Management Urban Planning and Construction (MLMUPC).

56. A Provincial Coordinating Committee (PCC) has been established in each town to oversee the work of the PIUs. The PCC includes Provincial Governor (chair), deputy governors or municipality governors (deputy chair), select members of the provincial technical coordinating committee, and PMU project director (members), PIU manager (secretariat). There will be at least one woman in each committee. The PCC has met in several opportunities

57. A project management unit (PMU) has been established with full time staff from MPWT. The PMU includes a Project Director, Project Manager, two Supervisory Engineers, Social and Resettlement Officer, Environment Officer, Office Manager, Procurement Officer, Accounting Officer, Assistant Accountant and Secretary/Office Assistant. It is aimed that at least 30% of the PMU staff are women. This target has not yet been achieved.

58. The project management and implementation support (PMIS) consultants is based in Phnom Penh and works directly with the PMU. The consultant team leader and PMU Procurement Officer are verifying all procurement and consulting service documents.

59. The PMU is responsible for coordinating detailed preparation and implementation of project activities. More specifically it is (i) promoting the Project to the targeted beneficiaries;(ii) assisting in subproject development and implementation; (iii) evaluating the technical, financial and economic, social, and environmental viability of proposed subprojects; (iv) undertaking Project supervision and monitoring; (v) establishing and implementing the Project Performance Management System (PPMS); (vi) preparing community action plans, bidding arrangements, and bid documents; (vii) evaluating bids; (viii) awarding and supervising construction contracts; (ix) exercising quality control; and (xi) recruiting, managing and supervising project consultants. The PMU reports directly to the General Department of Public Works (GDPW) regarding project-related matters.

60. Project Implementation Units (PIUs) are set up in Kampong Chhnang and Pursat and are operational. The PIU's are staffed jointly by the Provincial Department of Public Works and Transport and the Municipal government.

4.1 Project Implementation and Management Support (PMIS) Consultant

61. The contract with the PMIS consultants, Korea Engineering Consultants Corp. (KECC) in joint venture with NIRAS A/S and in association with Key Consultants (Cambodia) Ltd., was signed on 20 October 2016 and the consultant services were started on 17 November 2017

4.1.1 Utilization Consultants' Inputs

62. Up to the end of this reporting period, 31 March 2018, the total person months used by the International Specialists is 22.7 person-month out of a total provision of 78 person-month (29.1%), leaving a balance of 55.3 person-month., the total person months used by the National Specialists is 77 person-month out of a total provision of 446 person-month (12.2%), leaving a balance of 391 person-month. (for details see Annex 4.).

4.1.2 Required Contract Variation

63. A second contract variation is required to (i) formalize already approved staff replacements and other staff input related issues, and; (ii) to include services that are additional to the original; scope of the consultant contract. (adding the TOR of the package 3 consultant services, the preparation of the domestic IEIA, preparation of the Kampong Chhang drainage masterplan). The total cost of the additional services will exceed the contract amount and would require additional financing. Therefore, it is proposed to arrange for the masterplan preparation under a separate contract variation. VO2 would be a no-cost variation but the preparation of a drainage masterplan would require additional financing.

64. The additional cost for the preparation of the domestic IEIA cannot be finalized until the confusion/misunderstanding on the scope of this work has been clarified.

5 SAFEGUARDS

5.1 Environment

5.1.1 Updating IEE and EMPs

65. Updating of the IEE for the project and EMPs for the subprojects has been initiated but can only be completed after the detailed designs for the subprojects have been finalized. It has been agreed that a single consolidated IEE. For the project will be prepared. Because of the various bidding contracts, a separate EMP for each sub-project will have to be prepared. It was agreed to make one bidding document for both landfills but the landfills will be entered as separate lots in the bidding document so separate EMPs for each of the 2 lots will have to be prepared. The EMPs will be template based with a common text for all EMPs then the only changes for each EMP will be the project specific sections but each will be a standalone separate EMP.

66. The review of gaps within the IEE and EMP will completed towards the end of the detailed design of the proposed infrastructure. This will then allow the EMPs to be finalized. It is proposed that instead of updating both the IEE and EMP documents as submitted during the PPTA, the team will concentrate on the EMP for each sub-project, and ensure that it includes:

- An outline of the sub-project based on detailed design and final site choice
- Updates to legislation since the PPTA if appropriate
- Environmental Receptors
- Updated table of mitigation measures and costs
- Implementation arrangements as per PPTA unless updates are required.

67. By focusing on the EMP, which is the most critical document to guide the construction process and to be included in the procurement process, the team will ensure effective use of time. However, IEE document completed at the PPTA stage, with exception for the new landfill construction, will require significant updates because of the proposed significant design changes i.

68. Climate change risks will be integrated into the design. The environmental team, in collaboration with the climate change specialist, will ensure that the risks are included in mitigation measures where appropriate, or into the design.

5.1.2 Preparation of the Domestic IEIA

69. There is confusion/misunderstanding about the scope of work for the preparation of the Government mandated domestic IEIA. In a meeting on 6 December 2017 between the EIA department, Ministry of Environment, PMU the 2nd GMS-CTDP2, TheTS1 project, and the TS2 project it was agreed that the scope of work for a domestic IEIA would be limited to the translation of the updated IEE and EMP reports prepared by the PMIS and incorporate the results of baseline environmental surveys (air and water quality) in these reports. However, it seems that the EIA department is now reversing this agreement and is insisting on the preparation of full-fledged IEIAs duplication a lot of work already done under the project. Moreover, such studies would be costly (<USD 100.000) and would be time consuming (an estimated 6 month). For project implementation it is important that the domestic IEIAs are prepared with the reduced scope as agreed in the meeting of 6 December.

5.2 Resettlement

5.2.1 Progress in resettlement

70. Ministry of Economy and Finance (MEF) General Department of Resettlement (RD-MEF) has instructed the public consultation, data collection and Detailed Measurement Surveys (DMS)/Socio-Economic Survey (SES) works done by Provincial Resettlement Sub-Committees Working Groups (PRSC-WG). The activities started in November 2017, and are currently on-going. DMS and SES will cover 100% of the affected households (AHs) to provide accurate and comprehensive data, which also will be gender disaggregated. Grievance Redress Mechanism (GRM) is now in place in Kampong Chhnang and being finalised in Pursat. Cooperation and communication between RD-MEF, PMU, PRSC-WG and PMIS has improved, and demonstrated by several joint meetings on key issues, especially in regards to Kampong Chhnang Flood Embankment Subproject.

71. In the Quarter 1 / 2018 the PMIS resettlement team supported RD-MEF and PRSC in resettlement activities for the subprojects, and completed review of resettlement impact compliance with ADB SPS on indigenous peoples in Kampong Chhnang Flood Embankment Project, including the Vietnamese floating commune. The team met with key stakeholders (PMU, GDR/MEF, ADB and MOE) and undertook several field visits to sites in Kampong Chhnang and Pursat, and provided recommendations for resettlement process. The team has also supported both RD-MEF and PRSC-WG in all the activities, including providing options for DMS verification by use of satellite and drone

imagery, and google mapping tools. The team also initially met with the NGO heading Component 4 for coordination of activities and Component 4 outputs.

72. In order to facilitate delays in DEDs and implementation of the construction projects with approved designs the PMIS recommends to separate sub-projects into several separate DRP's as: (i) Kampong Chhnang flood embankment; (ii) Pursat drainage; and (iii) Kampong Chhnang and Pursat landfill site sub-projects.

73. RD-MEF need to speed up the consultations and DMS/SES for Kampong Chhnang Flood Embankment Subproject and both of the landfill subprojects. It will also still need to update and disseminate the Public Information Booklets (PIB) to all the affected households (AH) as well as complete recruitment of the External Monitoring Organisation (EMO). RD-MEF also need to hire a consultant for the Replacement Cost Survey (RCS) to verify the findings of the RD-MEF internal team establishing the RCS in the field.

74. It is expected that the resettlement budget will considerably increase from the ones estimated in the PPTA resettlement reports (for Kampong Chhnang PPTA figure is 203,618.84 USD and for Pursat 53,774.69 USD). This is mainly due to the PPTA underestimating the extent of land acquisition and resettlement (LAR), especially with Kampong Chhnang flood embankment, due to the alignment and design features. Secondly, PPTA was done prior to the new MOE guidelines (2016) on landfill site selection, which set a 350m zone around landfill sites where housing should not be allowed. Depending on how many AHs prefer relocation over local mitigation measures the resettlement budget will significantly increase also for both of the landfills sub-projects.

5.2.2 Resettlement in Pursat

Drainage

75. One of the key concerns for resettlement and social development in Pursat drainage project design has been in the northwest corner of the sub-project, in Sangkat Phteah Prey, where drainage is to link to the existing irrigation canal. There are households located on both sides of the irrigation canal (Kbal Hong Canal), which is planned in the PPTA to be used for drainage and waste water outflow. The houses are built on the canal embankment, wholly or partially overhanging on top of the canal. In the PPTA plan a parallel drainage line to the irrigation canal is to be built, which can directly impact 42 AHs. LAR impact would also affect trees, structures, businesses and livelihoods. ROW for the irrigation canal according to the Provincial Authorities is 30m. None of these potential AHs have been consulted regarding the project. The new plan is to establish a WWTP over 4km away from the northwest corner along an existing irrigation canal. With the wastewater being pumped away from the site of the potential AHs the main resettlement and social problems can be averted.

76. The Wastewater treatment plant (WWTP) site will be located on private agricultural land, which the PA's are in process of acquiring through negotiated land acquisition. There is not expected to be any other resettlement issues at the WWTP site.

77. In Pursat town area key locations with need for improved drainage are around the market, while one traversing drainage line which has collapsed. These areas experience heavy flooding during rainfall events. The market area has several dozen affected street sellers, but the Provincial Authorities have agreed to organize a location for market vendors to continue selling during the construction period, if affected. However, the alternative site should be equipped with running water for washing facilities, separate toilets for women and men, and effective solid waste collection.

78. Other businesses, land use and secondary structures will also experience potential impact due to the project. However, this impact on e.g. shop eaves and shop operations along the drainage lines is not clear yet, but can be minimized by ensuring the construction company will notify the AHs well in advance and ensure access to houses and businesses during construction.

79. Public consultations have started already with Sangkat office organizing events for the general public once or twice a month discussing all development projects in Pursat town. Drainage project has been highlighted in these meetings, but appropriate consultation with PMU / PIU detailing entitlements, GRM and other important aspects has not been done yet.

Landfill

80. The landfill site is situated on public land, but there are several permanent households close-by. Depending on the size and shape of the planned landfill these households fall within 350 m of the landfill borders set at MOE guidelines for landfill site selection. This trigger the need for LAR or mitigation measures for any affected households. The access road is currently 4m wide, planned to be widened to 8m. This will have immediate LAR impact on both sides of the road on actively farmed land plots, some fruit and other trees, electricity line, and private property like fences. Screening of living conditions of AHs around the landfill site in Pursat within 350 m from the boundary of the landfill site as per Ministry of Environment recommendations has started while the identification of AHs along the access roads requiring widening has been completed. Public consultations with the AHs along the access road took place on 19th March 2018 with all AHs with productive agricultural land impacted. Land acquisition is needed for the access road.

81. There are 13 AHs involved in waste picking, however, the number of waste pickers is depending on the day and time of the day, in what appears to be part-time employment for some of the waste pickers. A list of all AHs involved has been compiled by the Provincial Authorities, but the identification of vulnerable AHs is still on-going, and consultation and SES has not been done yet. Some of the waste pickers are entirely dependent on the waste picking as primary income source, and due to their family situation do not have alternatives or options for change of livelihoods via vocational training. These AHs live in village of Sres Srang, right next to the existing landfill site. Consultations with the waste picker AHs, especially vulnerable ones, is essential to develop a suitable compensation plan and LIRP.

82. Waste collection is done by private company, but the current contract has not been finalized with the new company. The new contract could be as long as 15 years. The current rates for MSW collection is 5000-7000 riel / HH / m and 20-30 USD/m for hotels, restaurants and businesses. Price increase with the new waste collecting company and a more distant landfill site is possible. Landfill management arrangement has not been decided yet.

5.2.3 Resettlement in Kampong Chhnang

Flood embankment

83. Kampong Chhnang flood embankment project is currently in non-compliance with ADB SPS (2009) due to resettlement activities started by the Provincial Authorities prior to the approval of the updated Resettlement Plan (RP). Corrective action report has been submitted to ADB on 28th of February 2018. The embankment alignment and detailed engineering design (DED) has been nearly completed, but waiting for final approval due to Provincial waterfront development initiative.

84. According to the Provincial Authorities the right-of-way (ROW) for the current embankment is 50m, meaning land acquisition will be limited along this line, but structures and livelihoods are required to be compensated for. All the low-lying areas surrounding the river system are situated below the height level of the National Road 5 (NR5), causing them to fall under category of Zone 2 of Tonle Sap Biosphere Reserve (TSBR) jurisdiction. Within TSBR only agricultural activities are allowed, but change of land use is allowed by permission from the Royal Government of Cambodia (RGC).

5.2.4 A. Northern section (Chong Koh Village)

85. The Provincial Authorities have already started in March 2017 the relocation process of the affected households (AHs) located in Chong Koh Village on the northern/eastern side of the dry-season road along the Tonle Sap natural river embankment. Relocation and self-relocation has been halted to wait for conclusions from the project compliance review based on ADB SPS (2009).

86. 209 AHs out of 210 AHs have agreed to move to the resettlement site, out of which 45 AHs have already relocated. Each AH will receive a 5m x 20m plot of land as part of the contract between AHs and the company developing the resettlement site, but need to pay within two years 1,000 USD for the cost of backfilling the land. After completion of the payment, they will receive land titles. There are at least 11 vulnerable (poor) AHs who have all agreed to relocate, but cannot pay for the 1,000 USD cost of backfilling, making them highly vulnerable. 47 out of 210 AHs have agreed and already received funds from the Provincial Authorities for self-relocation. Each AH received between 400 and 1,000 USD / AH as lump sum. 4 AHs have not been paid yet though. All 47 AHs have been identified and contacted for verification and contact details by PRSC/RD-MEF.

87. Majority of the households in this section of the embankment are Cham Muslim, with their main livelihoods in fishing.

Table 5-1: Identified 210 Affected households for relocation (to be updated by GDR/MEF)

Relocation option	AH	AP	Re-contacted by Province	Relocated
Relocate to resettlement site	162	TBC	157	45
Self-relocate	47	TBC	47	47
Not-agreed	1	TBC	1	0
Total	**210**	**TBC**	**210**	**82**

88. The houses in Chong Koh Village on the southwest side of the dry season access road are currently not to be relocated by the Provincial Authorities, and as such not recognized as AHs of the project. However, these HH are likely going to be severely affected by the flood embankment to be constructed between their houses and the river. First of all, this is likely to cause considerable flooding from rainfall from the sub-catchment draining through the area. The flooding is most likely exacerbated by the current JICA funded drainage project which will direct the storm water to the same area, as well as sewage. Drainage storm water will also have considerable amount of plastics and other solid wastes. It is expected that the lower lying areas where the households are

located will be semi-permanently water logged, with no realistic options pumping or draining the water out during flooding season to the Tonle Sap River. Secondly, the embankment can permanently cut-off these HHs access to the river and key livelihood for many of them.

89. Based on remote sensing imagery calculation of rooftops there are anything between 100-160 AHs in the south-western side of the dry-season access road. It appears majority of the HHs are Cham Muslim. However, they have not been consulted about the project as of yet. Given the distance from the dry-season river bank these HHs are eligible for land titles (more than 50m from the dry season river edge), and have subsequently constructed higher quality and category of housing. The area also has large CPP party office and two mosques. The extent on the impact on the HHs will be depending on the detailed engineering design solutions, e.g. re-directing the natural stream and drainage storm water out of the area to be protected from river flooding by the embankment.

5.2.5 Tourist port section

90. The tourist port area both northwest and south will be re-developed as part of the PA's waterfront development and upcoming river festival agreed to take place in early part of March 2019. This requires imminent development of the river side, including relocation of the AHs, stalls, shops and storage sheds for construction of a river side boulevard, parking area, walk ways and associated viewing areas. Some of the preparation works have already started with site clearance. However, the relocation of the AHs would require approved DRP and compensation payments, meaning RD-MEF also needs to speed up DMS/SES and public consultations significantly. Also, the number of additional AHs now raise a risk of requirement to update the involuntary resettlement safeguards category of the project to A.

91. As part of the riverside development the HHs immediately at the tourist port location (58 AHs) will be required to relocate, in addition to all shops and stalls south of the tourist port along the access road (51 AHs + 75 AHs) and all loading/unloading facilities, sheds and temporary/seasonal shops northwest of the tourist before all the way to the ferry landing site (AHs to be identified).

92. West of the tourist port there is an access road and causeway leading to the island/peninsula with Kandal Village. It is important that this is not interrupted with the embankment construction, and ideal design is to provide all-season access road to the village while maintaining adequate water flow capacity through the channel

5.2.6 Samraong Village riverside settlement section

93. In Samraong Village the embankment will be constructed on the wetland in front of all the houses on the existing embankment to avoid LAR. However, all of the houses have been constructed overhanging the embankment with supporting stilts. During construction, and subsequent backfilling of the gap between the embankments with sand to avoid creation of area of standing waste water, there is a high risk of collapse of these houses, especially the ones with wooden stilts. Therefore, if the embankment is constructed with the planned alignment there is a need to mitigate the impact of construction and reinforce the support structures of the houses with concrete pillars, as well as backfill the gap between the embankments. It is also important for maintaining access for the AHs to their fishing boats along the river with construction of walkways along the embankment.

94. Majority of the AHs are Khmer. They have not been consulted by the Provincial Authorities regarding the project as of yet. During the dry season the wetland is used for small scale agriculture, such as vegetables and home gardens, and during rainy season for fishing using traditional arrow-head fish traps. Both will be affected by the construction of embankment, and the loss of livelihoods is required to be compensated.

5.2.7 Resettlement site (Village # 6, Sangkat Khsam)

95. Resettlement site is located northwest of the location of the 210 AHs (Cham) aside a public-private investment for a market place and residential area mainly intended for resettled AHs. The development is part of a much larger investment and development of the floodplain into a new residential and business area of kampong Chhnang Town The total immediate resettlement area is 17.5 ha, out of which 5 ha is reserved for the market area and public infrastructure. The area has plots to house 525 AHs. The sub-decree for establishment of the site was signed on March 27, 2016. However, no EIA or IEE was completed. The site has been given as a concession to a private company (Ly Leang Kim LKL Construction) to develop. The plots on the land are also for sale, in addition to the use as a resettlement site.

96. The site construction started in 2016 and has now been completed, except for areas where the backfilling was not done high enough and are water logged during the rainy season. The plan for the development of this area was made prior to the ADB embankment project implementation started in 2017. Borrow area for the backfilling is located less than two km west of the resettlement site, and is also located on Zone 2 of TSBR. Government permission was granted to turn the agricultural area into commercial fish ponds. There are no resettlement issues at borrow sites as they are all located on private land.

97. The resettlement site is going to be equipped with roads, electricity, water supply, drainage, health station and school. However, completion of the installation of the basic infrastructure has been very slow, and both paved roads and drainage are still completely missing. Also, health centre and school are not operational yet with staff,

as they are waiting for main relocation of the AHs to take place first. Hence, at the moment the closest school is 0.5km away and health station 2km from the site.

98. The resettlement site is lacking waste water treatment for sewerage and sanitation services and facilities. Drainage is planned to be kept separate from wastewater treatment and sewerage. Sanitation is at least at first planned to be soak-away system, which could later be linked to wastewater system once the treatment plant is built.

99. The resettlement site is connected by a road to the new public fishing port (approximately 500m distance from the resettlement site), but it is unclear if all the boats of the relocated AHs can fit into it. Theoretically, the port will allow fisherman families to continue with their livelihoods fairly uninterrupted if they have cost-free access to it. However, the current fishing port facilities are inadequate to house all the fishing boats of the AHs, as well as the loading/unloading facilities. Also, the distance from the resettlement site will probably mean that the AHs need to find a solution for security, especially at night time. The new fishing port is of concrete construction and can withstand 11m high floods.

100. The land plots are available for free for relocated AHs, but with 1,000 USD cost for backfilling with two-year repayment period. The Provincial Authorities have no plan set for situation where AHs default on the 1,000 USD payment after the two years, or sell before the two-years is full. Already, 11 AHs have been identified who cannot afford to pay the 1,000 USD even in the two years. All of the AHs will receive official land title once the loan for backfilling has been paid.

5.2.8 Landfill

101. The selected new landfill site is situated partially on public and partially on private land. Private land has been acquired through negotiated land acquisition between the owners and MEF/GDR. The negotiated land acquisition has been completed, but 3rd party validation has not been done yet. RD-MEF has prepared and submitted on 28th of February 2018 a report on the negotiated resettlement for ADB.

102. Existing waste pickers in Kampong Chhnang current landfill sites have been identified and recorded. There are 14 AHs involved in waste picking, however, the number of waste pickers is depending on the day and time of the day, in what appears to be part-time employment for some of the waste pickers.

103. Screening of living conditions of AHs around the landfill sites in Kampong Chhnang within 350 m from the boundary of the landfill sites as per Ministry of Environment recommendations has started.

5.3 The indigenous peoples

104. The indigenous peoples safeguard category for the project has been set as C. Kampong Chhnang flood embankment has direct impact on ethnic Cham (e.g. 210 AHs) and they have been identified and meaningfully consulted by the Provincial Authorities at the PPTA phase, as the relocation to the resettlement site started and as part of the due diligence for the corrective action report. It is not clearly established whether the ethnic Vietnamese, largely located in the floating villages, have been impacted by the project. In any case, they will be consulted in their relation to the resettlement site in Kampong Chhnang. Both ethnic minorities live alongside the Khmer majority and are well integrated the larger community.

105. Design features are included to ensure the ethnic Cham are beneficiaries and are meaningfully consulted during the detailed design of the subprojects especially with regard to the required relocation of houses for the construction of the Kampong Chhnang flood protection embankment. Output 3 pre-identifies villages where ethnic Cham and Vietnamese are a majority of beneficiaries.

5.4 Grievance Redress Mechanism (GRM).

106. Ministry of Economy and Finance (MEF) General Department of Resettlement (RD-MEF) have set up Provincial Resettlement Sub-Committees Working Groups (PRSC-WG) in October 2017 for Kampong Chhnang and prepared the set up for Pursat, awaiting approval of the Provincial Governor. RD-MEF has also provided guidance to the Provincial Resettlement Sub-Committees (PRSC) to operationalize Grievance Redress Mechanism (GRM) for the project in mid-October 2017.

5.5 Gender Action Plan

107. The Project is classified as 'Effective Gender Mainstreaming' (EGM) under the Asian Development Bank's (ADB) guidelines (March 2010). The Project impact is increased economic activities and environmental protection in towns in the Tonle Sap Basin and the outcome of the project will be improved urban services and enhanced climate change resilience in Kampong Chhnang and Pursat municipalities. A Gender Action Plan (GAP) has been prepared in accordance with ADB's Policy on Gender and Development (1998), ADB Operations Manual Section C2/BP (2010) Gender and Development in ADB Operations, and the Government's goal to strengthen the role and

social status of women through capacity building for women in all sectors, changing discriminatory social attitudes, and safeguarding women's rights to actively and equally participate in nation building.

108. The Gender Action Plan includes specific gender actions to help ensure men and women actively participate in project activities, receive project information, and have access to opportunities during project implementation. In this report the performance indicators/targets of the plan as presented in the PAM have been reformulated based on the SMART criteria to be able to more accurately measure the level of achievement.

Table 5-2: Gender Action Plan

GENDER ACTIVITIES/ ACTIONS	PERFORMANCE INDICATORS/ TARGETS	RESPONSIBLE AGENCIES	STATUS
Output 1: Kampong Chhnang Urban Environmental Improvements			
1.1 Ensure social and gender inclusion in community participation, including women directly consulted during the project implementation. *- Record women participation in terms of numbers, percentage, and how their suggestions and concerns have been addressed.*	1.1.1 Number of local people who participate in consultations on project design and implementation disaggregated by sex. Target: at least 40% women for each sub-project. 1.1.2 Relevant clauses on core labor standards (including gender-specific ones such as equal pay for equal work, equal opportunities for employment) are included in all bidding and contract documents	PMU, PIU, PMIS consultants, PDOWA, contractors, IRC/MEF and WCCC	Consultations with local people on project design have been started. Public consultation minutes and SES conducted for Kampong Chhnang Flood Embankment Subproject has produced disaggregated data, but are not available for analyses yet. Labor standards will be included in the specific conditions and technical specifications of the bidding documents
1.2 Ensure improved access to and affordable cost for women to public services, health and safety, and cultural / religious facilities.	1.2.1 Improved and better all-year-round access to health and school services, and cultural / religious facilities for relocated AHs. 1.2.2 Cost of public services not increasing for relocated AHs. 1.2.3 Improved access, not impeded by flooding, to urban citizens.	PMU, PIU, PMIS consultants, contractors, IRC/MEF and WCCC	Not yet started
1.3 Incorporate health and safety (including menstrual hygiene) management features in communities for improved solid waste management.	1.3.1 Provide separate toilet and washing facilities for women and men waste pickers (if allowed) at the new landfill site. 1.3.2 Health and safety training and equipment provided as part of Livelihood and Income Restoration Program (LIRP). Target: all women and men continuing to work on landfill site (if allowed).	PMU, PIU, PMIS consultants, PDOWA, contractors, IRC/MEF and WCCC	Separate toilet and washing facilities for women and men waste pickers have been included in the designs for the new landfill sites. Health and safety included in draft LIRP structure.
1.4 Generate unskilled jobs in embankment construction /maintenance for women.	1.4.1 Contractors' cumulative unskilled labor days will be for at least 20% women, for embankment sub-project, by 2020.	Contractors, with oversight from PMU	Not yet started

1.5 Equal pay for men and women for work of equal type. *- Keep accurate records of number or percent of men and women labor days and salary for skilled and unskilled labor for embankment sub-project.* *- Monitor core labor standards (CLS) enforcement on a monthly basis.*	1.5.1 Average daily wage paid for unskilled labor to women and to men per major types of work. Target: no gender difference.	Contractors, with oversight from PMU	Not yet started
1.6 Facilitate safe and conducive environment for women's employment in embankment works.	1.6.1 Safe and conductive women's employment environment ensured through creation of women's groups if appropriate; skills enhancement; on-site clean toilet facilities separately to men and women. Target: at least 1 women's group created, 100% of women workers participate in skills enhancement provided by contractor, and separate toilet facilities for workers.	Contractors, with oversight from PMU	Will be included in the specific conditions and technical specifications of the bidding documents
1.7 Households irrespective of income, ethnicity or sex of household head receives equal compensation and payment for any land acquisition or resettlement losses.	1.7.1 Equal compensation for similar losses. Target: no gender difference.	PMU, PIU, PMIS consultants, PDOWA, IRC/MEF and WCCC	DMS is ongoing, the consultant will ensure that irrespective of income, ethnicity or sex of household head receives equal compensation and payment for any land acquisition or resettlement losses will be provided
1.8 Mitigate HIV/AIDS and human trafficking risks during embankment works	1.8.1 Ensure contractors and labor force participate in training on HIV/AIDS. Target: 100% of contractors' labor force participate in HIV/AIDS training by 2020.	Contractors, with oversight from PMU	Not yet started
Output 2: Pursat Urban Environmental Improvements			
2.1 Ensure social and gender inclusion in community participation, including women directly consulted during the project implementation. *- Record women participation in terms of numbers, percentage, and how their suggestions and concerns have been addressed.*	2.1.1 Number of local people who participate in consultations on project design and implementation disaggregated by sex. Target: at least 40% women for each sub-project. 2.1.2 Relevant clauses on core labor standards (including gender-specific ones such as equal pay for equal work, equal opportunities for employment) are included in all bidding and contract documents	PMU, PIU, PMIS consultants, PDOWA, contractors, IRC/MEF and WCCC	Consultations with local people on project design have been started, no disaggregated data are yet available. Labor standards will be included in the specific conditions and technical specifications of the bidding documents
2.2 Ensure improved access for women to public services, health and safety, market stalls and cultural / religious facilities.	2.2.1 Improved access, not impeded by flooding, to public services and facilities.	PMU, PIU, PMIS consultants, contractors,	Not yet started

	2.2.2 Reduced hardship for women street sellers from street flooding near the market.	IRC/MEF and WCCC	
2.3 Incorporate health and safety (including menstrual hygiene) management features in communities for improved solid waste management.	2.3.1 Provide separate toilet and washing facilities for women and men waste pickers (if allowed) at the new landfill site. 2.3.2 Health and safety training and equipment provided as part of Livelihood and Income Restoration Program (LIRP). Target: all women and men continuing to work on landfill site (if allowed).	PMU, PIU, PMIS consultants, PDOWA, contractors, IRC/MEF and WCCC	Separate toilet and washing facilities for women and men waste pickers have been included in the designs for the new landfill sites. Health and safety included in draft LIRP structure.
2.4 Generate unskilled jobs in drainage construction /maintenance for women.	2.4.1 Contractors' cumulative unskilled labor days will be for at least 20% women, for drainage sub-project, by 2020.	Contractors, with oversight from PMU	Not yet started
2.5 Equal pay for men and women for work of equal type. *- Keep accurate records of number or percent of men and women labor days and salary for skilled and unskilled labor for drainage sub-project.* *- Monitor core labor standards (CLS) enforcement on a monthly basis.*	2.5.1 Average daily wage paid for unskilled labor to women and to men per major types of work. Target: no gender difference.	Contractors, with oversight from PMU	Not yet started
2.6 Facilitate safe and conducive environment for women's employment in drainage works.	2.6.1 Safe and conductive women's employment environment ensured through creation of women's groups if appropriate; skills enhancement; on-site clean toilet facilities separately to men and women. Target: at least 1 women's group created, 100% of women workers participate in skills enhancement provided by contractor, and separate toilet facilities for workers.	Contractors, with oversight from PMU	Will be included in the specific conditions and technical specifications of the bidding documents
2.7 Households irrespective of income, ethnicity or sex of household head receives equal compensation and payment for any land acquisition or resettlement losses.	2.7.1 Equal compensation for similar losses. Target: no gender difference.	PMU, PIU, PMIS consultants, PDOWA, IRC/MEF and WCCC	Not yet started
2.8 Mitigate HIV/AIDS and human trafficking risks during drainage works	2.8.1 Ensure contractors and labor force participate in training on HIV/AIDS. Target: 100% of contractors' labor force participate in HIV/AIDS training by 2020.	Contractors, with oversight from PMU	Not yet started
Output 3: Community Mobilization and Environmental Improvements (CMEI)			

3.1 Sanitation grants to IDPoor 1 and 2, including female-headed households, if categorized as IDPoor 1 or IDPoor 2.	3.1.1 Household sanitation grants benefit at least 40% women-headed households.	PMU, PIU, PMIS consultants, PDOWA, NGO, and WCCC	Not yet started
3.2 Meaningfully consultations with women in Kampong Chhnang and Pursat on priority small scale infrastructure improvements and design (e.g., gender-specific requirements for public infrastructure, such as separate latrines for women with trash bins, if appropriate).	3.2.1 Consultations with women groups on identification of infrastructure needs and their location. Target: 40% of participants in consultations are women. 100% of women groups in selected localities consulted.	PMU, PIU, PMIS consultants, PDOWA, NGO, and WCCC	Not yet started
3.3 Capacity development and IEC materials will be gender-sensitive.	3.3.1 At least 40% of participants in CMEI activities and training are women. 3.3.2 IEC materials are checked by MPWT gender working group and PDOWA. 3.3.3 Hygiene IEC campaigns cover topics that are important for women (e.g., at least 30% of hygiene campaigns focus on menstrual hygiene and solid waste management).	PMU, PIU, PMIS consultants, PDOWA, NGO, and WCCC	Not yet started
Output 4: Strengthened sector coordination and operations			
4.1 Women's sanitation issues are incorporated in updated building code applications for six provincial towns around Tonle Sap (e.g., space in public bathrooms and separate toilets).	4.1.1 Updated building code applications have been designed with women's sanitation issues incorporated.	PMU, PIU, PMIS consultants, PDOWA and WCCC	No data available
4.2 Tonle Sap Urban Areas Development Framework and individual urban development strategies for Kampong Chhnang and Pursat are explained to women's groups.	4.2.1 100% of women's groups consulted are explained on Tonle Sap Urban Areas Development Framework. 4.2.2 At least 1 sector coordination meeting, chaired by MPWT, will include a discussion related to women's needs in integrated urban environmental management over project implementation.	PMU, PIU, PMIS consultants, PDOWA and WCCC	Not yet started
4.3 Semi-autonomous urban service units in Kampong Chhnang and Pursat municipality are established, become operational and have women represented.	4.3.1 At least 20% of staff in each unit are women.	PMU, PIU, PMIS consultants, PDOWA and WCCC	Not yet started
Output 5: Strengthened Capacity for Project Implementation, and Operations and Maintenance			
5.1 At least 1 member of the Project Steering Committee is a woman.		PMU	Complied
5.2 At least 30% of PMU and 30% of staff in both PIUs are women (2014 Baseline: PMU=1 woman; PIUs have not been established).		PMU, PIUs	Not complied. PMU, 13 members, 2 women (15%)

		PIU Kampong Chhnang, 11 members, 1 women (9%) PIU Pursat 11 members, 2 women (18%)
5.3 Project management and implementation consultants include an international social development /resettlement specialist (6 person-months) and national gender specialist (6-person months).	PMU, PMIS	Inputs of the international social development specialist has been started. The national gender specialist has not yet been mobilized
5.4 A resettlement/social development officer is appointed in the PMU	PMU	No yet done
5.5 The NGO appoints at least 30% women as part of their team for each town in Kampong Chhnang and Pursat.	PMU, NGO	NGO recruitment has been completed, but recruitment is on-going
5.6 A government community coordinator is appointed in Pursat PIU and two government community coordinators are in Kampong Chhnang PIU.	PMU, PIUs	Not yet appointed
5.7 A representative from the PDOWA is appointed to the provincial coordination committee in Pursat and Kampong Chhnang.	PMU, PIUs, PDOWA	No data available
5.8 Project performance monitoring system includes sex-disaggregated data.	PMU, PMIS	PPMS to be set up
5.9 The annual project performance monitoring and evaluation reports will include progress against sex-disaggregated indicators. Routine monitoring will be done, and indicators and risks added to logical framework.	PMU, PMIS	To be started
5.10 Progress reports (e.g., quarterly, safeguards, annual project performance monitoring and evaluation, and PPCR reports) include information on gender activities. The GAP monitoring table is updated and attached to the project progress report (twice a year).	PMU, PMIS	Ongoing
5.11 GAP performance included in mid-term and final project reviews.	PMU, PMIS	No due
5.12 At least 20% of technical training participants are professional staff women of PMU and PIUs.	PMU, PIUs	Not yet started

6 PROJECT PERFORMANCE

109. The following provides a summary assessment of the likelihood of reaching the targets set out in the DMF, and areas where the DMF needs to be changed.

Design Summary	Performance Targets and Indicators with Baselines	Assessment of the Project Implementation
Outcome Improved urban services and enhanced climate change resilience in Kampong Chhnang and Pursat municipalities.	By 2023: a. At least 100,000 residents benefit from the project in Kampong Chhnang and Pursat municipalities (2013: 42,500 residents in Kampong Chhnang and 51,400 residents in Pursat). b. Households affected by floods in Kampong Chhnang reduced by 80% (2013: 5,400 households).	Too early to assess
Outputs **Outputs 1** Kampong Chhnang urban area environmental improvements	By 2022: (Baseline: not applicable, if not otherwise stated) 1a. At least 15.1 km of embankment and road improved and constructed to a once in 50 years frequency flood level or 1:50 year flood levels (2013: range 1:1–1:20) 1b. 365 ha of urban land in 14 villages, and 950 ha of agricultural land in 14 villages are free from flooding from Tonle Sap. 1c. About 10 ha is converted into a controlled landfill. 1d. Two open dumpsites are closed and capped. 1e. Household collection increases to at least 60% in the municipality of Kampong Chhnang (2013: 4% or 400 households)	Scope of the Kampong Chhnang flood protection embankment is under review to select the best option that will not clash with the proposed river festival organization. Cumulative waste collection after 10 years is estimated to be between 60.000 to 80.000 tonnes, which can be accommodated in one or two landfill cells with a total area of 1 ha. The open dumpsites are located on private land. The legal implications for closing these dumpsites which would require public investment on private property, will have to be assessed SWM operation modalities would focus on achieving this target
Output 2 Pursat urban area environmental improvements	By 2022: (Baseline: not applicable, if not otherwise stated) 2a. At least 9.89 km of drains are improved and extended (2013: 5.64 km of drains) controlled landfill.	During the validation of the PPTA it was found that there are 24 km of existing drains. Deferred maintenance which has resulted a partial blockage of pipes and outfalls seems to be the main problem. The proposed new drains in the PPTA do not match the existing system.

Design Summary	Performance Targets and Indicators with Baselines	Assessment of the Project Implementation
		Moreover, installing new pipelines next to existing blocked lines is no solution for deferred maintenance problems. The detailed design is focusing on the improvement of the existing system and introduction of better O&M practices.
	2f. Two open dumpsites are closed and capped (2013: 1 of 2 landfill sites is closed)	The open dumpsites are located on private land. The legal implications for closing these dumpsites which would require public investment on private property, will have to be assessed
	2g. Household collection increases to at least 60% in Pursat municipality (2013: 11%)	SWM operation modalities would focus on achieving this target
Output 3 Community mobilization and environmental improvements	By 2022: (Baseline: 0) 3a. At least 40% of participants in output activities and training are women.	NGO under package IV has been mobilized in February 2018. Inception Report due in May 2018.
Output 4 Strengthened sector coordination and operations	By 2022: (Baseline: not applicable) 4a. A plan for climate change adaptation in urban areas around the Tonle Sap is adopted by Tonle Sap provinces	Ongoing, no progress data available
	4b. Building codes with refined latrine standards are adopted by Tonle Sap provinces.	Ongoing, no progress data available
	4c. MPWT chairs at least two coordination meetings per year	Ongoing, no progress data available
	4d. Semi-autonomous USUs in Kampong Chhnang and Pursat municipalities are established and become operational (20% of staff are women).	Delayed, package IV consultant could not be engaged and sifting this responsibility to the PMIS will need a contract variation and internal agreement within the JV
Output 4 5. Strengthened capacity for project implementation, and operations and maintenance	By 2022: 5a. At least 20% of training participants are qualified women (2013: 5%-10%) 5b. A capacity development program is adopted by each municipality (baseline: not applicable).	A training needs assessment will be initiated during the next quarter

7 LOAN COVENANTS

7.1 Covenant 5.3: Establishing Urban Service Units:

110. Within 12 months of the Effective Date a road map for the establishment of the USUs The Consultant has prepared a first working document for the establishment of the Urban Service Units. It should be noted that contrary to earlier information that Ministerial Prakas for this purpose were issued on issued on 29 March 2017, confirming the Ministry's commitment for formally establishing a self-financed “wastewater and solid waste management unit in each of the municipalities, these two Prakas, issued in December 2017 for Kampong Chhnang and Pursat (see attached working paper), are provided the legal basis to establish Wastewater Treatment System and Solid Waste Units (WTSSWUs) under control of the PDPWT, not the municipalities. In this respect it is worth noting that these prakas include solid waste management, for which responsibility has been decentralized to the municipalities.

7.2 Covenant 5.4: Environmental Sanitation Fees

111. Review of existing Environmental Sanitation Fees within 18 months of the Effective Date and a feasibility study on levying Environmental Sanitation Fees that recovers operations and maintenance costs and gradual depreciation

112. Basic Solid Waste Tariff Models have developed for Pursat and Kampong Chhnang based on the present available statistical and financial information. The models will have to be refined as more detailed statistical information on the number of customers in the different fee categories proposed by the municipalities becomes available and the operational structure is agreed upon.

113. Due to the lack of statistical information on the number of customers in the various categories that the Project Towns have indicated their wish to charge solid waste fees, preliminary monthly fees can only be calculated for households and a cost per ton calculated for a nonresidential category.

114. It is important for the Municipalities to provide estimated customer numbers for the various tariff categories that they propose if they wish the model to provide fees and charges on a detailed category basis.

115. The present model shows that the SWM operations will be very sensitive to economies of scale because of the high level of fixed cost for the landfill and basic equipment O&M. For Kampong Chhang the monthly fee per household could be as low as USD 1.40, depending on how subsidies from the central government are used, but in Pursat the monthly fee would be minimum USD 4 because of a much smaller customer base (Pursat is a large municipality but the urbanized area is small with a maximum population of 30.000).

7.3 Covenant 5.5: Project Performance Monitoring and Evaluation.

116. Within 18 months of the Effective Date, the Borrower shall ensure, and cause the Project Executing Agency to ensure, that a project performance monitoring and evaluation is established, acceptable to ADB, to monitor and evaluate the Project performance during implementation. It has been agreed that the ADB PPR reporting format will be used as platform for the PPME and will be expanded incorporating a data set that supports the DMF.

117. The compliance with loan covenants is presented in Annex 6.

8 ASSESSMENT OF VALIDITY OF KEY ASSUMPTIONS AND RISKS

118. In the Project Design and Monitoring Framework the following risks that could adversely affect effective implementation and sustainable benefits had been identified. The present validity of those risks can be summarized as follows:

Assumptions and Risks	Validity
Outcome Improved urban services and enhanced climate change resilience in Kampong Chhnang and Pursat municipalities.	
Economic activities are adversely affected by natural disasters and lack of climate change impact mitigation. Municipalities are not prepared to collect revenues for O&M of urban infrastructure.	Detailed flood hazard modelling by MRC has shown that a 12 m level for the Kampong Chhnang flood protection embankment provides security for 50 years return period floods. The capacity for resource mobilization by Municipalities will have to be studied in more detail. Detailed designs will take into account the initial investment cost versus O&M cost of the infrastructures.
Output 1. Kampong Chhnang urban area environmental improvements	
Project start-up delays increase the number of affected people along the embankment alignment CSOs and/or NGOs raise concerns during project implementation.	Comparing Google Earth imagery from 2013/14 with imagery from 3/2/207 does not show a notable increase in the number of houses along the embankment.
Output 2. Pursat urban area environmental improvements	
NGOs raise concerns during project implementation	The INGO under package 4 will close cooperate with local NGOs and timely address the concerns of affected people. Beneficiary population and the general population. The implementation of the stakeholder communication plan should timely address and mitigate these concerns.
Output 3. Community mobilization and environmental improvements	
CSOs and/or NGOs raise concerns during project implementation.	See above
Output 4. Strengthened sector coordination and operations	
A plan for climate change adaption will be difficult to formulate as short and midterm environmental impacts will mainly result from the flow alterations in the Mekong River, due to development activities in the upstream countries. These will cause negative effects for ecosystem productivity, and thus also for livelihoods of the inhabitants of Tonle Sap floodplain, who directly depend on the lake's natural resources. The projected changes in the dry-season water levels, estimated to increase the water level in Tonle Sap Lake by 0.15– 0.60 m, would, in particular, be harmful to the present ecosystem of the lake.	The Mekong River Commission has commissioned a study on Modelling of Future Land-Use, Infrastructure & Flood Behaviour across the Cambodian Floodplain, Tonle Sap and The Mekong Delta of Cambodia under different lans use, development and climate change scenarios. A draft report with the results of the study is available
Output 5. Strengthened capacity for project implementation, and operations and maintenance	
Participants might not be fully receptive to the training and capacity building	A detailed training needs assessment has been initiated.with detailed consultations with all the potential recipients of training activities
Financial Management Arrangements	
Municipalities are not prepared to collect revenues for O&M of urban infrastructure.	Problems in revenue collection is being identified by the municipal financing specialists It is proposed to establish a special municipal office for collection of user fees from private and institutional users. The municipal financing specialists will support these units to introduce business plans to recover O&M costs for the services provided.
The project implementation units (PIUs) in Kampong Chhnang and Pursat are new entities and may have difficulty in managing project sub-	The PIUs will draw management staff from PDPWTs and municipalities. A PMU in the MPWT will support the PIUs in project implementation. The PMU will use a project financial management system developed under previous ADB

accounts and adhering to accounting policies and procedures.	projects, and will be responsible for all procurement. It will support the PIUs, with assistance from the PMIS consultants. A provincial coordination committee will guide the project in each town. Each PIU sub-account will have a ceiling of $5,000. To ensure strict financial controls, each PIU will be required to liquidate every month. A late submission of liquidation (more than 10 days from the end of the month) will be grounds for suspension of the sub-account—
Fund mismanagement	The implementation arrangements are outlined in the project administration manual. All procurement will be done from within the PMU; a representative from each PIU will be invited to participate on the procurement committee. An imprest account will be established in the PMU. A sub-account will be established in each PIU, with a ceiling of $5,000 and requirement for monthly liquidations. The proposed fund allocation also helps minimize fund mismanagement—reducing the risk to low.
Inadequate internal audit	Each government ministry has a Department of Inspectorate, whose role is to carry out the functions of an internal auditor within the ministry, and ensure that government rules and regulations are observed at all times. The MPWT has extensive experience in undertaking audits for externally financed projects. The Standard Operating Procedures for all Externally Financed Projects/Programs in Cambodia (May 2012) outline the requirements for internal audit
Inadequate external audit	The MEF will recruit an independent auditor to carry out external audits of all externally financed projects, including ADB-supported projects. The Standard Operating Procedures for all Externally Financed Projects/Programs in Cambodia (May 2012) outline the requirements for external audit

9 TARGETS FOR THE NEXT QUARTER

119. The targets for the next quarter can be summarized as follows:

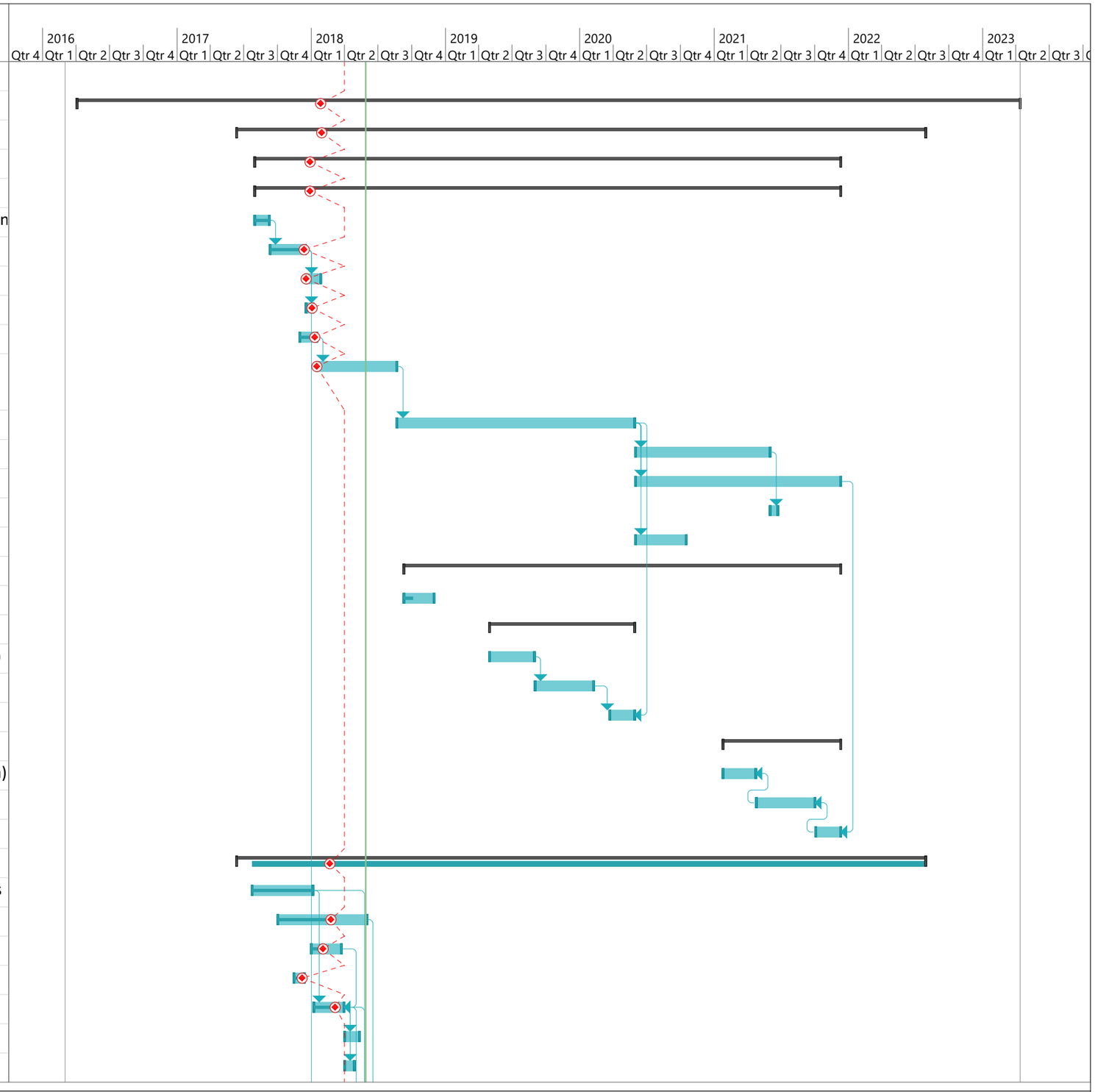
Targets this quarter	Compliance	Targets next quarter
Finalize the detailed designs and cost estimates for the Kampong Chhnang and Pursat sanitary landfill facilities, the improvement of the Pursat town drainage system and the Kampong Chhnang flood protection embankment, including the bidding documents for submission to ADB for approval.	Detailded designs for the landfills in Kampong Chhnang and Pursat have been completed. Final review by the international specialist is pending. The design of the flood protection embankment in Kampong Chhnang could not be finalized because of complications related to the proposed organization of a river festival in March 2018. The design of the drainage system could not be completed as errors were found in the inverted pipe levels of the existing system. All levels had to be re-surveyed.	Reach an agreement on the way forward for the flood protection embankment and finalize the designs based on the agreed scope for the embankment. Finalize the detailed designs for the Pursat and kampong Chhnang landfill sites, with BOQ, technical specifications and bid documents to start the tender process
Start the detailed design of the WWTP for Pursat, and if the facility would be constructed at its new location, the detailed design of a main sewer line between the town area and the new WWTP location, including the required pumping stations.	The local authorities have not yet confirmed in writing that the original site for the WWTP will remain available. Design has been started for an anaerobic treatment plant (settler, anaerobic baffled reactor, anaerobic filter, planted/root gravel filter).	Obtain a written agreement on the availability of the original site for the WWTP in Pursat and on the construction of the WWTP at this site. Finalize the design based on these agreements
Initiate preliminary works for the preparation of a drainage master plan for Kampong Chhnang. The preparation of such a plan will be subject to the approval of a contract variation for the PMIS consultant services contract.	Since these services are additional to the scope of the consulting contract, additional finance needs to be added to the contract sum to finance such services. Therefore the masterplan preparation was is not included in the VO2	No action planned for the master plan preparation during the next quarter. This can only be initiated after approval of a contract variation with additional financing for undertaking this task
Initiate updating the IEEs for the several subprojects prepared under the PPTA including the preparation of EMPs and arrange for the preparation of the government mandated IEIAs by an external consultant.	Has been started PMU has proposed to finance the preparation of a domestic IEIA under the consultant's contract. Since this was not included in the scope of the services, this activity and its cost has to be included VO2	EMPs for the landfill sites will be completed/ Completion of the EMPs for the flood protection embankment and the Pursat drainage will depend on the progress with the detailed designs
Consider design options and changes for Kampong Chhnang flood embankment taking into account the PA riverside development. Complete DMS/SES as well as RCS for all AHs along the Kampong Chhnang flood embankment subproject, and prepare Detailed Resettlement Plan	Because of the proposed organization of a river festival which could result in safeguard non-compliance design options could not be finalized DMS/SES for the flood embankment was suspended after the Khmer New year	Continuation of the DMS/SES for the flood protection embankment by DDR with depend on the agreement on a way forward for design and construction of the embankment Surveys for the preparation of DMS/SES for the Kampong Chhnang and Pursat landfills will be completed

for the Inter-Ministerial Resettlement Committee (IRC) and ADB approval. Undertake corrective action plan for the 210 AHs in Kampong Chhnang. Complete public consultations, DMS/SES and distribution of PIB to all AHs in Pursat and Kampong Chhnang landfill sites, including waste pickers. Prepare Detailed Resettlement Plans for both landfills. Identify AHs, and undertake public consultations and DMS/SES with affected households for Pursat drainage sub-project followed by DRP development.	Surveys for the preparation of DMS/SES for the Kampong Chhnang and Pursat landfills have not yet started	
Initiate the institutional development support with; (i) a training needs assessment that would be the basis for the formulation of a training plan; (ii) support the preparation of a road map for the establishment of USUs and; (iii) investigate possible modalities for SWM, this would also include refining the model for the establishment of sustainable environmental service fees.	Initial Notes on Training Need Assessment, Capacity Development Plan and Urban Service Unit Road Map have been prepared	Preparation of the capacity development plan will continue The establishment of a road map for the establishment of USUs can only be continued after approval of VO2 which should provide the additional resources for this new task Work on tariff structure, tariff setting and subsidy methodology will continue as well as the consultations and investigations of the most suitable modalities for SWM

Annexes

Annex 1 : Revised Implementation Schedule

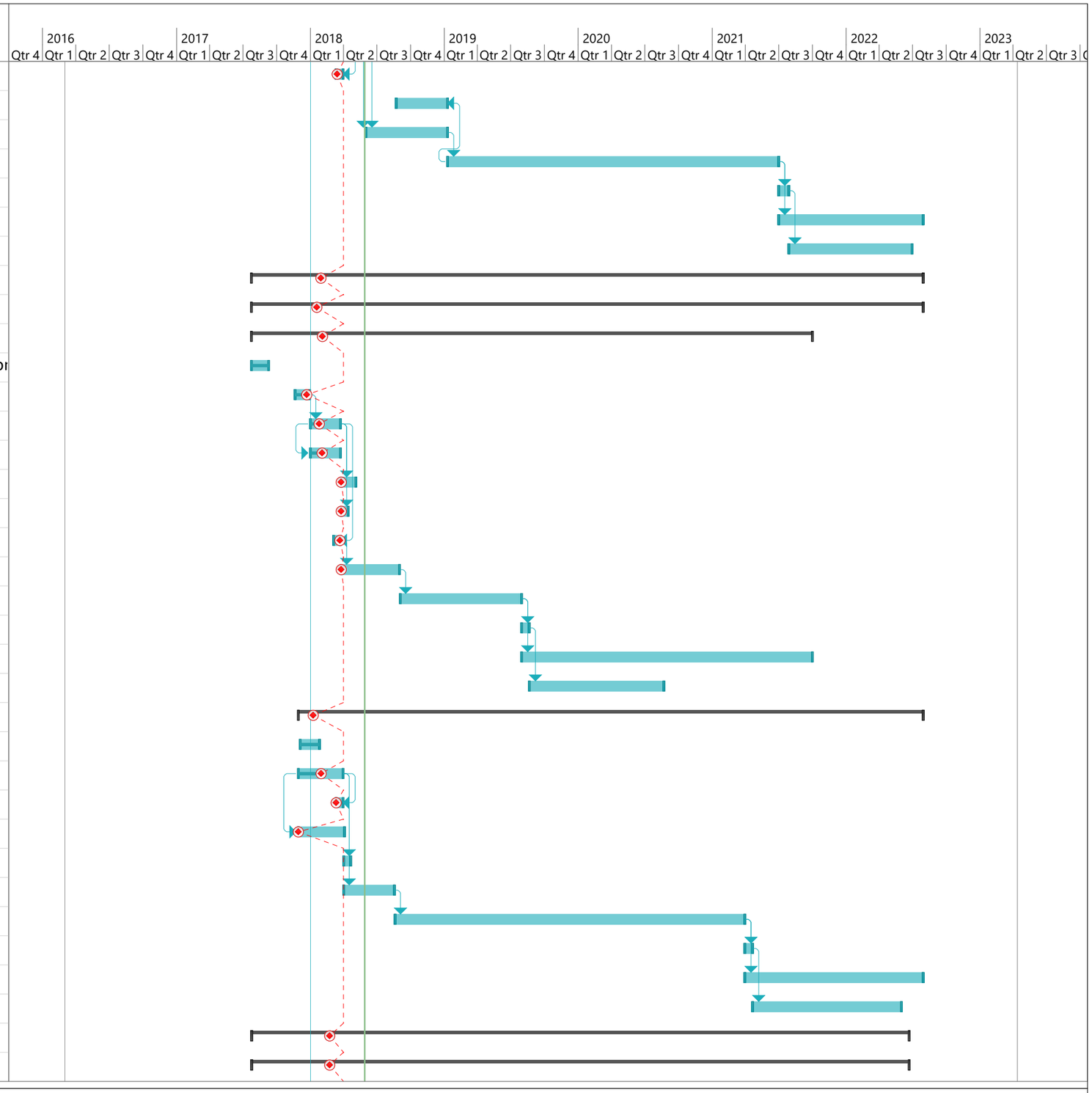
ID		Task Name
1		
2		**Overall Project Implementation**
3		**Kampong Chhnang urban area environmental improvements**
4		**Improved Solid Waste Management**
5		**Design and Construction of New Sanitary Landfill**
6	✓	Drone mapping and topographical survey works Geotechnical Investigation
7		Detailed Design, BOQ, Cost Estimates and Technical Specifications
8		Preparation IEIA by a registered Cambodian firm & Approval MoE
9		Preparation of EMP
10		Preparation of Bidding Documents
11		Tender Process (Bid Documents, IFB, TBER, FBER with ADB Approval) Contract Award
12		Contractor Mobilization and Construction
13		Provisional Acceptance of Works and Liability Period
14		Support for Landfill Operation
15		Final Acceptance of Works
16		**Remediation/Closure existing Dumpsites (if legally viable)**
17		**Procurement Solid Waste management Equipment**
18		Analysis of PPP Arrangements for SWM
19		**Procurement first batch equipment**
20		Finalizing Type/Nos Equipment and Technical Specifications (1st Batch)
21		Tender process and Contract Award
22		Equipment Delivery
23		**Procurement second batch equipment**
24		Finalizing Type/Nos Equipment and Technical Specifications (2nd Batch)
25		Tender process and Contract Award
26		Equipment Delivery
27		**Improved, Reinforced and Raised Flood Protection Embankment**
28	✓	Drone mapping topographical survey works and Geotechnical Investigations
29		Preparing Resettlement plan with DMS, ISA and Approval
30		Additional/Complementary Survey Work
31		Preparation of runoff model to assess inflow in retention areas
32		Detailed Design, BOQ, Cost Estimates and Technical Specifications
33		Preparation IEIA by a registered Cambodian firm & Approval MoE
34		Preparation of EMP



Project: Implementation schedu
Date: Tue 5/29/18

Task	Project Summary	Manual Task	Start-only	Deadline
Split	Inactive Task	Duration-only	Finish-only	Progress
Milestone	Inactive Milestone	Manual Summary Rollup	External Tasks	Manual Progress
Summary	Inactive Summary	Manual Summary	External Milestone

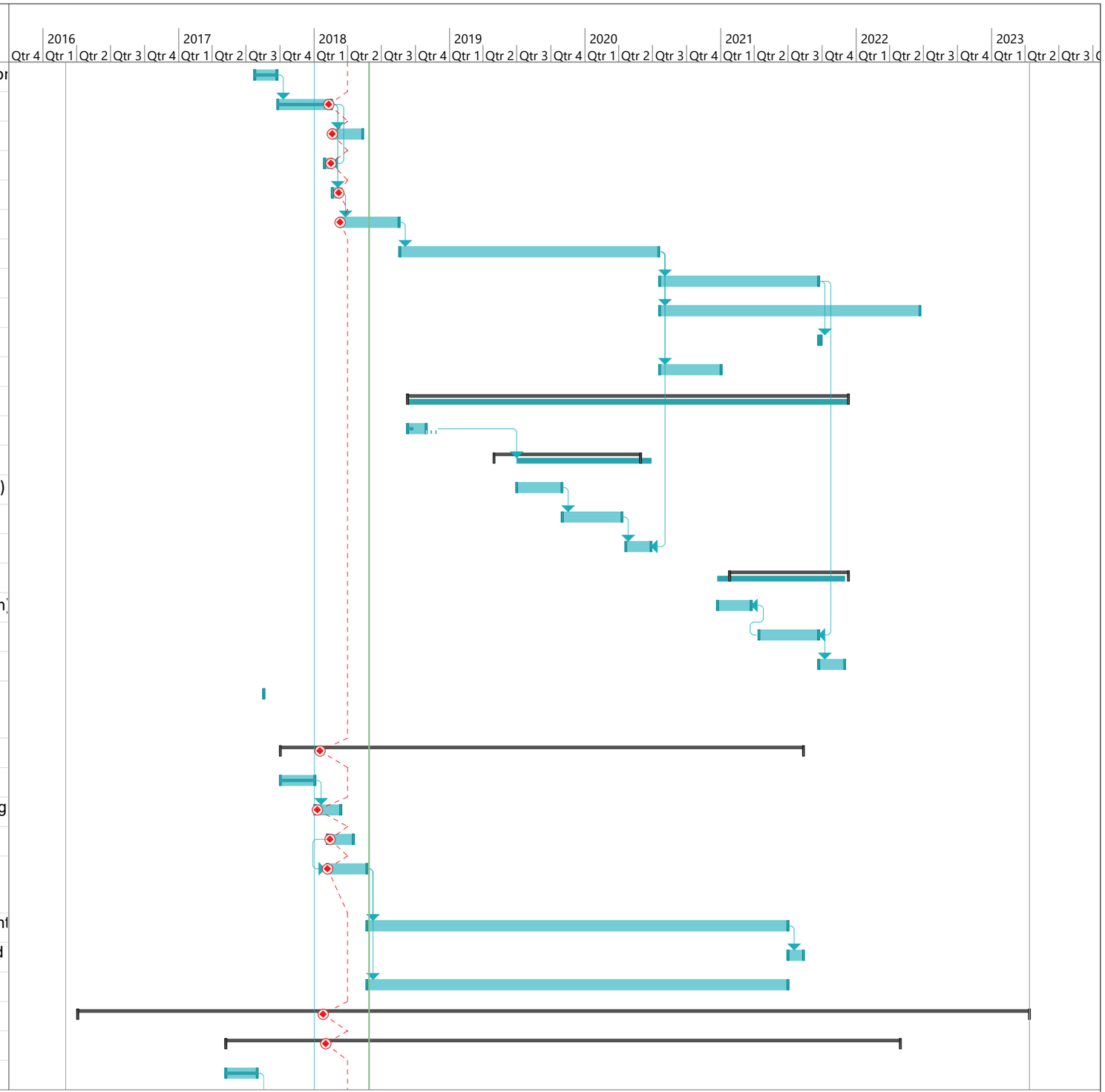
ID		Task Name
35		Preparation Bidding Documents
36		Implementation Resettlement Plan
37		Tender Process (IFB, TBER, FBER with ADB Approval) Contract Award
38		Contractor Mobilization and Construction
39		Provisional Acceptance of Works
40		Support for O&M
41		Defects Liability Period and Final Acceptance of Works
42		**Pursat Urban Area Environmental Improvements**
43		**Improved Town Centre Drainage and Waste Water Treatment**
44		**Improved Town Centre Drainage**
45	✓	Drone mapping topographical survey works and Geotechnical Investigatior
46		Preparation of Drainage Simulation Model
47		Detailed Design, BOQ, Cost Estimates and Technical Specifications
48		Resettlement Due Diligence
49		Preparation IEIA by a registered Cambodian firm & Approval MoE
50		Preparation of EMP
51		Preparation Bidding Documents
52		Tender Process (IFB, TBER, FBER with ADB Approval) Contract Award
53		Contractor Mobilization and Construction
54		Provisional Acceptance of Works
55		Support for O&M
56		Defects Liability Period and Final Acceptance of Works
57		**Waste Water Treatment & Effluent/Storm Water Disposal**
58	✓	Additional Drone Mapping and Survey Works
59		Detailed Design, BOQ, Cost Estimates and Technical Specifications
60		Preparation of EMP
61		Preparation IEIA by a registered Cambodian firm & Approval MoE
62		Preparation/Approval Bidding Documents
63		Tender Process (IFB, TBER, FBER with ADB Approval) Contract Award
64		Contractor Mobilization and Construction
65		Provisional Acceptance of Works
66		Support for O&M
67		Defects Liability Period and Final Acceptance of Works
68		**Improved Solid Waste management**
69		**Design and Construction of New Sanitary Landfill**



Project: Implementation schedu
Date: Tue 5/29/18

Task	Project Summary	Manual Task	Start-only	Deadline	
Split	Inactive Task	Duration-only	Finish-only	Progress	
Milestone	Inactive Milestone	Manual Summary Rollup	External Tasks	Manual Progress	
Summary	Inactive Summary	Manual Summary	External Milestone		

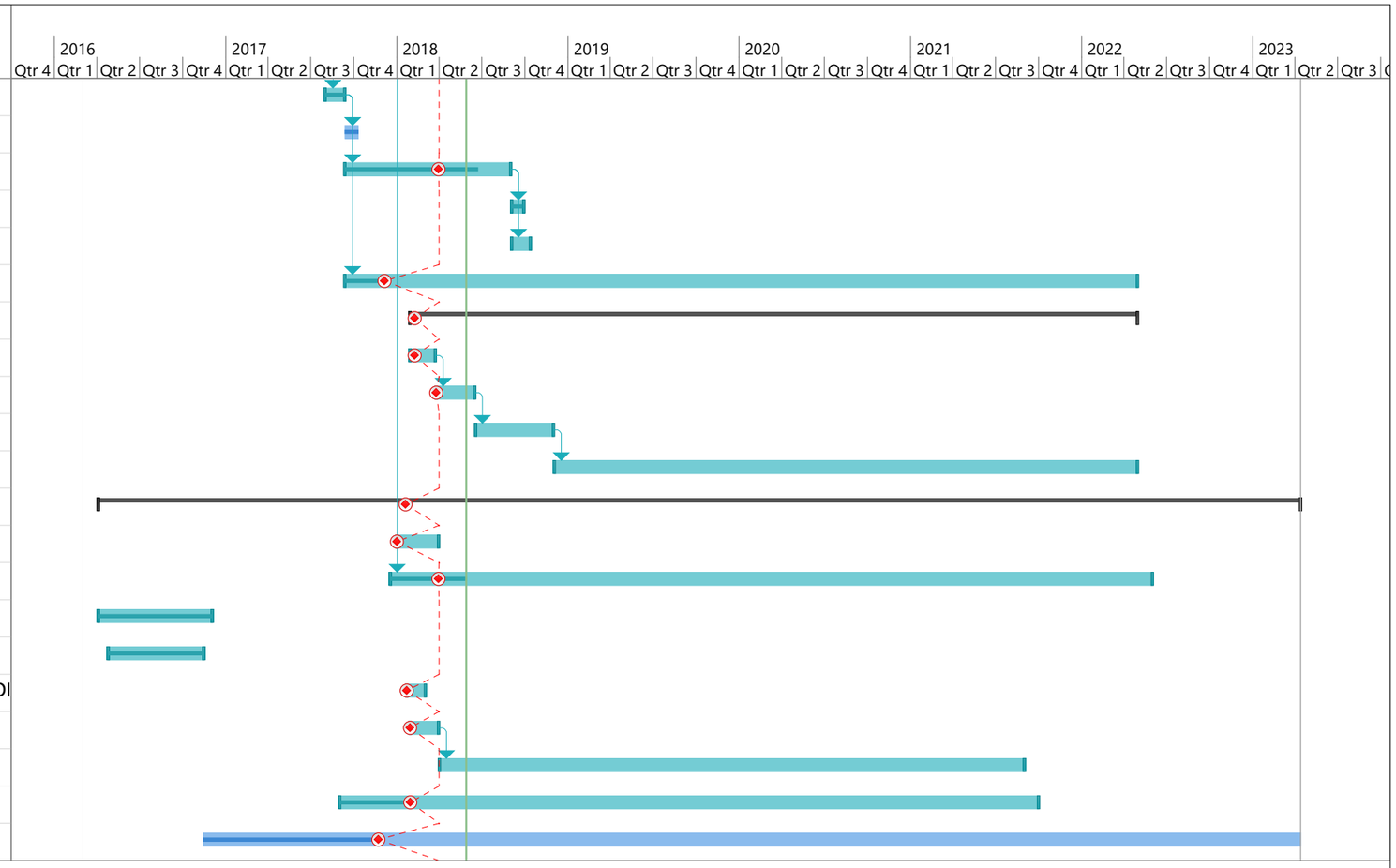
ID		Task Name
70	✓	Drone mapping and topographical survey works Geotechnical Investigation
71		Detailed Design, BOQ, Cost Estimates and Technical Specifications
72		Preparation EIA by a registered Cambodian firm & Approval MoE
73		Preparation of EMP
74		Preparation of Bidding Documents with ADB Review
75		Tender Process (IFB, TBER, FBER with ADB Approval) Contract Award
76		Contractor Mobilization and Construction
77		Provisional Acceptance of Works and Liability Period
78		Support for Landfill Operation
79		Final Acceptance of Works
80		**Remediation/Closure existing Dumpsites (if legally viable)**
81		**Procurement Solid Waste management Equipment**
82		Analysis of PPP Arrangements for SWM
83		**Procurement first batch equipment**
84		Finalizing Type/Nos Equipment and Technical Specifications (1st Batch)
85		Tender process and Contract Award
86		Equipment Delivery
87		**Procurement second batch equipment**
88		Finalizing Type/Nos Equipment and Technical Specifications (2nd Batch)
89		Tender process and Contract Award
90		Equipment Delivery
91	✓	**Riverbank Erosion Control (Cancelled, proposed flood embankment to be financed by the EU)**
92		**Community Mobilization & Environmental Improvements**
93	✓	Recruit International NGO
94		Train village development committee units for project briefing and output training
95		Community awareness programs
96		Needs assessments for small-scale infrastructure works on climate change adaptation and sanitation
97		Planning, implementing, and supervising community environmental improvement
98		Prepare report on community environmental improvements and lessons learned
99		Internal and external safeguard monitoring
100		**Strengthening Sector Coordination and Operations**
101		**Climate change adaptation**
102	✓	Recruit and mobilize climate change resilience consultant



Project: Implementation schedu
Date: Tue 5/29/18

Task	Project Summary	Manual Task	Start-only	Deadline
Split	Inactive Task	Duration-only	Finish-only	Progress
Milestone	Inactive Milestone	Manual Summary Rollup	External Tasks	Manual Progress
Summary	Inactive Summary	Manual Summary	External Milestone

ID		Task Name
103	✓	Review existing climate change documents
104	✓	Review & assessment sanitation standards
105		Program consultation & Implementation of TSUADF
106		Preparation of Plan for climate change adaptation
107		Issuance revised building codes
108		National task force for urban development coordination meetings
109		**Formation of Urban Service Units**
110		Preparation of roadmap for establishment USUs
111		Government Approval
112		Establishment and start-up of USUs
113		Institutional strengthening and operational support for USUs
114		**Strengthening Capacity for Project Implementation and O&M**
115		Recruit external resettlement monitoring
116		Internal and external safeguard monitoring
117	✓	Appoint and update staffing of PMU and PIUs
118	✓	Recruit and Mobilize PMIS consultant
119		Develop Project Performance Management System (PPMS) and submit to ADI
120		Review and update capacity development plan
121		Training for project management, safeguards, gender equality
122		Establishment and monitoring of grievance redress mechanisms
123		Reporting (Inception, Quarterly, Annual, PCR)



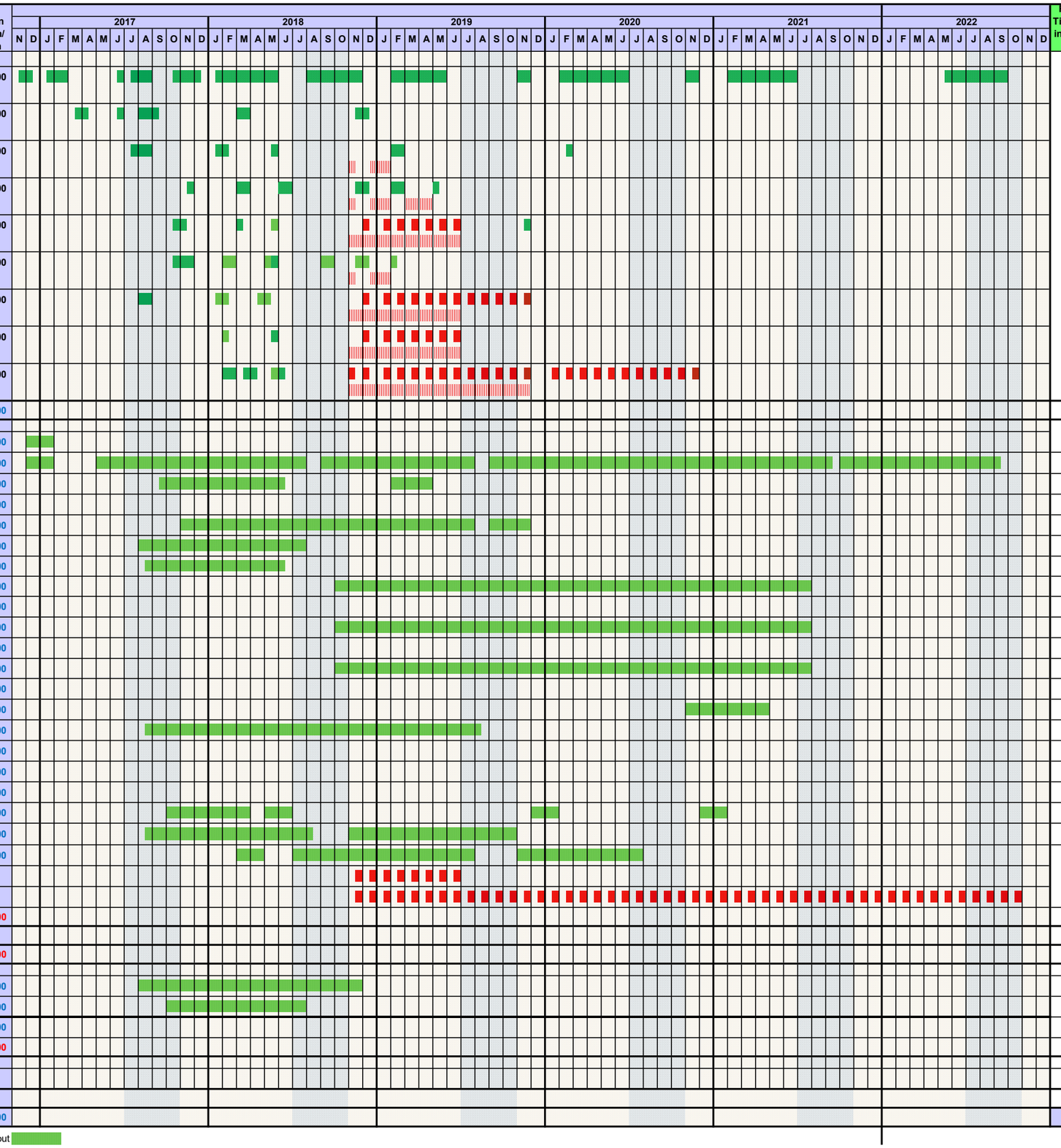
Project: Implementation schedu
Date: Tue 5/29/18

Task		Project Summary		Manual Task		Start-only	Deadline
Split		Inactive Task		Duration-only		Finish-only	Progress
Milestone		Inactive Milestone		Manual Summary Rollup		External Tasks	Manual Progress
Summary		Inactive Summary		Manual Summary		External Milestone	

Annex 2 : Revised Personnel Schedule

Annex 2: Revised Personnel Schedule

NAME	POSITION		Time Input in Person/ Month	Revised Time Input in Person/ Month	Difference (+/-)
KEY EXPERT (International)					
Louis Rijk	Team Leader & Municipal Engineer	Field	**35.00**	34.50	(0.50)
		Home Office	-	-	
Kim Dong Min,	Geotechnical Engineer	Field	**4.00**	3.50	(0.50)
		Home Office		0.50	0.50
Herkko Kristian Torsonnen,	Solid Waste Management Specialist	Field	**6.00**	4.50	(1.50)
		Home Office		1.50	1.50
Prashant Malla,	River Engineering Specialist	Field	**8.00**	5.00	(3.00)
		Home Office		3.00	3.00
Rachel Wildblood	Environment Specialist	Field	**4.00**	2.50	(1.50)
		Home Office		1.50	1.50
Teemu Jantunen	Social Development & Resettlement Specialist	Field	**6.00**	5.50	(0.50)
		Home Office		0.50	0.50
Kerry Maxwell Blanch,	Municipal Finance Specialist/Economist	Field	**6.00**	6.00	-
		Home Office		1.00	1.00
Eric Baye,	Private Sector Specialist	Field	**3.00**	3.00	-
		Home Office		1.00	1.00
Clifford Claes,	Institutional Specialist	Field	**6.00**	6.50	0.50
		Home Office		1.50	1.50
Total (KEY EXPERT (International)			**78.00**	81.50	3.50
KEY EXPERTS (National)					
Position merged with DTL/Civil Engineer 2			**33.00**	2.00	(31.00)
Srey Socheat,	DTL/Civil Engineer-2		**33.00**	64.00	31.00
Chea Ketia	Geotechnical Engineer		**12.00**	12.00	-
Position merged with Senior Civil Engineer 2			**12.00**	0.00	(12.00)
Sim Sen,	Senior Civil Engineer-2		**12.00**	24.00	12.00
Mam Sanoun	Civil Engineer -River Hydrology		**12.00**	12.00	-
Yim Mong Toeun,	Civil Engineer - Solid Waste Management		**10.00**	10.00	-
Chhoun Ravann,	Resident Engineer-1		**12.00**	34.00	22.00
Position Merged with Resident Engineer - 1			**12.00**	0.00	(12.00)
Chhor Ratha,	Site Engineer-1		**20.00**	34.00	14.00
Position Merged with Site Engineer - 1			**20.00**	0.00	(20.00)
Pong Veasna,	Site Engineer-3		**20.00**	34.00	14.00
Position Merged with Site Engineer - 3			**20.00**	0.00	(20.00)
Hep Sreyleak,	Gender& Development Specialist		**6.00**	6.00	-
Chap Samoeun,	Resettlement Specialist-1		**8.00**	24.00	16.00
Position Merged with Resettlement Specialist - 1			**16.00**	0.00	(16.00)
Task Transferred to PMU	Financial Management/Accounting Specialist		**60.00**	0.00	(60.00)
Task Transferred to PMU	Procurement Specialist		**24.00**	0.00	(24.00)
Chea Mong,	Environmental Specialist		**12.00**	12.00	-
Chan Vannak,	Municipal Finance /Tariff/Economic Specialist		**24.00**	24.00	-
Houth Ratanak,	Human Resource /Training Coordinator		**24.00**	24.00	-
TBN	Legal Specialist		**-**	2.00	2.00
TBN	Translator/interpreter		**-**	24.00	24.00
	Total (KEY EXPERTS (National)		**402.00**	342.00	(60)
	Reserved Person Month (National)				-
	Grand Total (KEY EXPERTS (National)		**402.00**	342.00	60
NON-KEY EXPERTS (National)					
Pen Titdara	AutoCAD Operator 1		**10.00**	16.00	(6.00)
Chhay Theara	AutoCAD Operator 2		**8.00**	10.00	(2.00)
Merged with AutoCAD Operator 1 and 2			**8.00**	0.00	8.00
	Total (NON-KEY EXPERTS (National)		**26.00**	26.00	-
UNALLOCATED					
TBN			**-**	60.00	(60.00)
	Total (UNALLOCATED (National)		**-**	60	(60.00)
	Total (International & National)		**532.00**	535.50	3.50



Continuous Field Input

Intermitted Home Office Input

Short term intermitted input (to be scheduled according to need)

Annex 3 : Fund Utilization

Status of Loan Utilization (Loan 3311)

As of 31 Dec 2017

Cat. Ref.	Category Name	US Dollars					
		Allocation	Contracts Awarded	Uncontracted Loan Balance	Contracts Disbursed	Undisbursed Loan Balance	Undisbursed Contract Balance
		A	B	C = A - B	D	E = A - D	F = B - D
01A	CW - KC Flood Protection	14,218,837	-	14,218,837	-	14,218,837	-
01B	CW - KC Solid Waste Mgt.	434,163	-	434,163	-	434,163	-
01C	CW - Pursat Flood Protection	604,727	-	604,727	-	604,727	-
01D	CW - Pursat Drainage	4,898,430	-	4,898,430	-	4,898,430	-
01E	CW - PS Solid Waste Mgt	1,029,023	-	1,029,023	-	1,029,023	-
01F	CW - KC Small-scale Inf. Dev.	740,051	-	740,051	-	740,051	-
01G	CW - PS Small-scale Inf. Dev.	740,051	-	740,051	-	740,051	-
02A	GD - KC Solid Waste Mgt.	737,231	-	737,231	-	737,231	-
02B	GD - PS Solid Waste Mgt	821,808	-	821,808	-	821,808	-
02C	GD - KC Embank. Manual Equipment	36,650	-	36,650	-	36,650	-
02D	GD - PS Flood Manual Equipment	36,650	-	36,650	-	36,650	-
02E	GD - PS Drainage Manual Equipment	36,650	-	36,650	-	36,650	-
03A	WS - Project Mgt & Implement Supp.	580,757	534,000	46,757	82,035	498,722	451,965
03B	WS - SSCD	9,867	-	9,867	-	9,867	-
04A	CS - PM & IS	3,407,553	3,577,913	(170,360)	536,381	2,871,172	3,041,532
04B	CS - SSCD	97,264	-	97,264	-	97,264	-
04C	CS - Survey & Investigations	67,010	85,000	(17,990)	12,621	54,389	72,379
05A	IA - Office and Travel Expense	401,742	40,369	361,373	48,337	353,405	(7,968)
05B	IA - Vehicles	152,239	134,500	17,739	134,500	17,739	-
05C	IA - Equipment	15,506	51,453	(35,947)	41,453	(25,947)	10,000
06	Interest During Implementation	1,402,476	-	1,402,476	8,633	1,393,843	(8,633)
07	Unallocatd	6,687,237	-	6,687,237	-	6,687,237	-
	Imprest Account	(22,509)	-	(22,509)	211,710	(234,219)	(211,710)
	Total	**37,133,413**	**4,423,235**	**32,710,178**	**1,075,670**	**36,057,743**	**3,347,565**

Status of Loan Utilization (Loan 8295)

As of 31 Dec 2017

Cat. Ref.	Category Name	US Dollars					
		Allocation	Contracts Awarded	Uncontracted Loan Balance	Contracts Disbursed	Undisbursed Loan Balance	Undisbursed Contract Balance
		A	B	C = A - B	D	E = A - D	F = B - D
1	CW - KC Flood Protection	4,982,000	-	4,982,000	-	4,982,000	-
2	Service During Implementaton	18,000	-	18,000	-	18,000	-
	Imprest Account			-	-	-	-
	Total	**5,000,000**	**-**	**5,000,000**	**-**	**5,000,000**	**-**

Status of Grant Utilization (Grant 0454)

As of 31 Dec 2017

Cat. Ref.	Category Name	US Dollars					
		Allocation	Contracts Awarded	Uncontracted Loan Balance	Contracts Disbursed	Undisbursed Loan Balance	Undisbursed Contract Balance
		A	B	C = A - B	D	E = A - D	F = B - D
01A	CW - PS Drainage	2,460,000	-	2,460,000	-	2,460,000	-
01B	CW - KC Sanitation Improvement	510,000	-	510,000	-	510,000	-
01C	CW - PS Sanitation Improvement	510,000	-	510,000	-	510,000	-
02A	WS - NGO SCEI	200,000	-	200,000	-	200,000	-
02B	WS - CCAUD	10,000	10,000	-	-	10,000	10,000
03A	CS - CCAUD	200,000	200,000	-	47,159	152,841	152,841
03B	CS - NGO SCEI	810,000	-	810,000	-	810,000	-
03C	CS - Survey and Investigation	100,000	165,796	(65,796)	-	100,000	165,796
04	Unallocated	200,000		200,000	-	200,000	-
	Imprest Account	-	-	-	146,841	-	-
	Total	**5,000,000**	**375,796**	**4,624,204**	**194,000**	**4,952,841**	**328,637**
							4%

Annex 4 : Contract Award and Disbursement Projections

CONTRACT AWARD AND DISBURSEMENT PLAN -- L3311/L8295/G0454-CAN

Quarterly Contract Awards Projections

No.	Category	Project and Item	Cost Est.	Source	2016				2017				2018				2019				2020				2021				2022	
					Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
1	G07	Supply of KC & Pursat Solid Waste Management Equipment (batch 2)	1.20	L3311 only																1.20										
2	G08	Supply of KC & Pursat Solid Waste Management Equipment (batch 1)	0.65	L3311 only																						0.65				
3	CW04	Construction of KC Embankment	17.30	L3311, L8295											-		17.30													
4	CW05	Construction of Pursat Drainage and WWTP	8.55	L3311, G0454													8.55													
5	CW05 (b)	Construction of Pursat Drainage (b)	Merged with CW05																											
6	CW06	Construction of Kampong Chhnang and Pursat Landfill Sites	2.25	L3311 only											2.25															
8	CW08	Construction of KC Landfill Site	Merged with CW06																											
9	CW09	KC and Pursat Community-driven Env. Improvements	2.48	L3311, G0454												0.41	0.41	0.41	0.41	0.41	0.41									
10	CS01	Project Management and Implementation Support	4.21	L3311 only			4.21																							
11	CS02	Climate Change Adaptation in Urban Development	0.29	G0454 only						0.29																				
13	CS04	NGO Support for Output 3 (CMEI)	0.90	G0454 only								0.90																		
14	G01	Supply of 5 units 4WD double cabin pick-up trucks	0.13	L3311 only	0.13																									
15	G02	Supply of 8 motorcycles	0.01	L3311 only	0.01																									
16	G03	Office furniture for PMU and PIUs (KC and Pursat)	0.02	L3311 only	0.02																									
17	G04	Office equipment for PMU and PIUs (KC and Pursat)	0.03	L3311 only	0.03																									
18	G05	Equipment for Pursat Drainage and Flood Protection	0.08	L3311 only											0.08															
19	G06	Manual Equipment for KC Embankment	0.04	L3311 only												0.04														
20	CW01	Office Repairs (PMU)	0.01	L3311 only	0.01																									
21	CW02	Office Repairs (PIU KC)	0.02	L3311 only	0.02																									
22	CW03	Office Repairs (PIU Pursat)	0.01	L3311 only	0.01																									
	Total		**38.18**		**0.23**	**-**	**4.21**	**-**	**-**	**0.29**	**-**	**0.90**	**-**	**-**	**2.33**	**0.46**	**26.26**	**0.41**	**0.41**	**1.61**	**0.41**	**-**	**-**	**-**	**-**	**0.65**	**-**	**-**	**-**	**-**

Quarterly Disbursement Projections

No.	Category	Project and Item	Cost Est.	Source	2016				2017				2018				2019				2020				2021				2022	
					Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
1	G07	Supply of KC & Pursat Solid Waste Management Equipment (batch 2)	1.20	L3311 only																	1.20									
2	G08	Supply of KC & Pursat Solid Waste Management Equipment (batch 1)	0.65	L3311 only																							0.65			
3	CW04	Construction of KC Embankment	17.30	L3311, L8295													3.46	2.60	0.87	2.60	2.60	2.60	0.87	1.73						
4	CW05 (a)	Construction of Pursat Drainage and WWTP	8.55	L3311, G0454													1.28	1.28	0.43	0.86	1.28	1.28	0.43	0.86	0.86					
5	CW05 (b)	Construction of Pursat Drainage (b)	Merged with CW05																											
6	CW06	Construction of Kampong Chhnang and Pursat Landfill Sites	2.25	L3311 only											0.34	0.38	0.38	0.34	0.27	0.27	0.27									
8	CW08	Construction of KC Landfill Site	Merged with CW06																											
9	CW09	KC and Pursat Community-driven Env. Improvements	2.48	L3311, G0454									0.17	0.17	0.17	0.17	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20				
10	CS01	Project Management and Implementation Support	4.21	L3311 only				0.63	-	-	-		0.10	0.46	0.26	0.35	0.35	0.35	0.12	0.35	0.17	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.11
11	CS02	Climate Change Adaptation in Urban Development	0.29	G0454 only						-	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03										
13	CS04	NGO Support for Output 3 (CMEI)	0.90	G0454 only								0.18	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05		
14	G01	Supply of 5 units 4WD double cabin pick-up trucks	0.13	L3311 only	0.13																									
15	G02	Supply of 8 motorcycles	0.01	L3311 only	0.01																									
16	G03	Office furniture for PMU and PIUs (KC and Pursat)	0.02	L3311 only	0.02																									
17	G04	Office equipment for PMU and PIUs (KC and Pursat)	0.03	L3311 only	0.03																									
18	G05	Equipment for Pursat Drainage and Flood Protection	0.08	L3311 only												0.08														
19	G06	Manual Equipment for KC Embankment	0.04	L3311 only												0.04														
20	CW01	Office Repairs (PMU)	0.01	L3311 only	0.01																									
21	CW02	Office Repairs (PIU KC)	0.02	L3311 only	0.02																									
22	CW03	Office Repairs (PIU Pursat)	0.01	L3311 only	0.01																									
	Total		**38.18**		**0.23**	**-**	**-**	**0.63**	**-**	**-**	**0.03**	**0.21**	**0.17**	**0.70**	**0.84**	**1.10**	**5.75**	**4.84**	**1.95**	**4.34**	**5.76**	**4.24**	**1.66**	**2.95**	**1.22**	**0.36**	**0.82**	**0.17**	**0.12**	**0.11**

Annex 5 : Overview of the input by Key International and National Specialists

Summary Input of International Experts

Name	Position	Input upto 31 December 2017	Input during this quarter Month	Total Input upto 31 March 2018	Original Input	Balance
Christopher Konecki/ Louis Rijk	*Team Leader / Minicipal Engineer*	7.57	1.00	9.70	35.00	**25.30**
KIM Dong Min	*Geotechnical Engineer*	1.57	0.70	2.27	4.00	**1.73**
Ricky Kwan/ Prashant Malla	*River Engineering Specialist*	0.50	0.23	0.73	8.00	**7.27**
Herkko Kristian Torssonen	*Solid Waste Management Specialist*	1.43		2.33	6.00	**3.67**
Cliff Massey/Rachel Wildblood	*Environment Specialist*	0.67	0.43	1.10	4.00	**2.90**
Paul van Strijp/Teemu Jantunen	*Social Development and Resettlement Specialist*	2.00	0.20	2.83	6.00	**3.17**
Kerry Maxwell Blanch	*Municipal Finance Specialist/Economist*	1.00		2.03	6.00	**3.97**
Eric Baye	*Private Sector Specialist*		0.27	0.27	3.00	**2.73**
Claes Clifford	*Institutional Specialist*		0.43	1.46	6.00	**4.54**
	Subtotal	**14.7**	**3.3**	**22.7**	**78.0**	**55.3**

Summary Input of National Experts

Name	Position	Input upto 31 December 2017	Input during this quarter	Total Input upto 31 March 2018	Original Input	Balance
Phai Sokheng	Deputy Team Leader/Civil Engineer 1	2.11		2.11	33	30.89
Srey Socheat	Deputy Team Leader/Civil Engineer 2	10	1	11	33	22
Ty Sopheak/ Chea Ketia	National Geotechnical Engineer	3.2	1	4.2	12	7.8
Som Kosal	Senior Civil Engineer 1			0	12	12
Sim Sen	Senior Civil Engineer 2	1.97	1	2.97	12	9.03
Phung Katry/Mam Sanoun	Civil Engineer-River Hydrology	2.97	1	3.97	12	8.03
Yim Mong Toeun	Civil Engineer-Solid Waste Management	4.83	1	5.83	10	4.17
Chhoeum Ravann	Resident Engineer 1			0	12	12
So Saran	Resident Engineer 2			0	12	12
Chhor Ratha	Site Engineer 1			0	20	20
Ro Rosbunnat	Site Engineer 2			0	20	20
Pong Veasna	Site Engineer 3			0	20	20
Vuth Ratha	Site Engineer 4			0	20	20
Chhay Theara	AutoCAD Operator-Solid Waste Management	2.53	1	3.53	10	6.47
Norm Mara	AutoCAD Operator-Drainage and River Bank			0	8	8
Pen Titdara	AutoCAD Operator-Flood Control	5	1	6	8	2
Hep Srey Leak	Gender and Development Specialist			0	6	6
Chap Samoeun	Resettlement Specialist 1- Pursat	4.8	1	5.8	24	18.2
Mel Sophanna	Resettlement Specialist 2- Kampon Chhnang			0	18	18
Chea Mong	Environment Specialist	1.97	0.3	2.27	12	9.73
Ouk Monyroath	Financial Management/ Accounting Specialist			0	60	60
Bun Sangvar	Procurement Specialist			0	24	24
Chan Vannak	Minicipal Finance/ Tariff/Economic Specialist	4.6	1	5.6	24	18.4
Houth Ratanak	Human Resource/Training Coordinator		1	1	24	23
	Subtotal	**44.0**	**10.3**	**54.3**	**446.0**	**391.7**
	Total	**58.7**	**13.6**	**77.0**	**524.0**	**447.0**

Annex 6 : Compliance with Loan Covenants

Ref	COVENANT	STATUS	ACTIONS	REMARKS
Covenants in the Loan Agreement				
Sched 5, para 2	**Tonle Sap Urban Areas Development Framework. Within 18 months of the Effective Date, the Borrower shall ensure the adoption of the Tonle Sap Urban Areas Development Framework,** an urban planning document that guides sustainable and climate resilient infrastructure development and growth of urban areas in the Tonle Sap basin.	Due in September 2017. Under review by Under Secretary of State.	Prakas to be adopted following further review by Secretary of State, Minister MPWT.	Adoption is pending
Sched 5, para 3	**Roadmap for Establishing Urban Service Units**: **Within 12 months of the Effective Date**, the Borrower shall ensure, and cause the Project Executing Agency to ensure, that the plans for establishing semi-autonomous USUs within the municipalities of Kampong Chhnang and Pursat are in place, including relevant draft ministerial prakas (or ministerial decisions) to be signed by MPWT for the establishment of USUs, its board of directors (or its equivalent), staffing requirements, human resource recruitment plan, office location, reporting responsibilities, financial management and audit requirements, good governance actions, assets transfer, and timeline and process of conversion from a PIU to a USU.	Due by 02 March 2017. **Non-compliant**	Ministerial Prakas (103 PRK/SK for Pursat and 104 PRK/SK for Kampong Chhnang), issued on 29 March 2017, establishes the Ministry's commitment for formally establishing a self-financed "wastewater and solid waste management unit in each of the municipalities. An Initial Note on Urban Service Unit Road Map has been prepared by the PIMS	Ministerial Prakas for this purpose were issued on issued on 29 March 2017, confirming the Ministry's commitment for formally establishing a self-financed "wastewater and solid waste management unit in each of the municipalities, these two Prakas, issued in December 2017 for Kampong Chhnang and Pursat (see attached working paper), are provided the legal basis to establish Wastewater Treatment System and Solid Waste Units (WTSSWUs) under control of the PDPWT, not the municipalities. In this respect it is worth noting that these prakas include solid waste management, for which responsibility has been decentralized to the municipalities..

Sched 5, para 4	**Environmental Sanitation Fees. Within 18 months of the Effective Date**, the Borrower shall ensure, and cause the Project Executing Agency to ensure, that each USU conducts a **review of existing Environmental Sanitation Fees** levied in the municipalities of Kampong Chhnang and Pursat and completes a **feasibility study on levying Environmental Sanitation Fees that recovers operations and maintenance costs and gradual depreciation** of solid waste management, flood control and drainage, taking into account affordability for the poor.	Due in September 2017. **Non-compliant**	Review ongoing under PMIS. In light of the scheduling of other activities related to the construction of solid waste and waste water/drainage infrastructure the date for the establishment of an environmental sanitation fee was premature	Studies on environmental sanitation fees that would ensure O&M cost recovery and gradual depreciation cost will be completed in the 3nd quarter of 2018. However initial assessments have revealed that self-financing of wastewater and SWM will be very difficult
Sched 5, para 5	**Project Performance Monitoring and Evaluation.** Within 18 months of the Effective Date, the Borrower shall ensure, and cause the Project Executing Agency to ensure, that a project performance monitoring and evaluation is established, acceptable to ADB, to monitor and evaluate the Project performance during implementation.	Due in September 2017	Project Performance Monitoring is ongoing, it has been agreed that the PPR can be expanded, incorporating a data set for the DMF, to form the PPME	Since multiple consultant teams are involved in the implementation of the project responsibilities for and coordination of data collection will need proper coordination. And possibly the development of an online data collection system
Sched 5, para 6	**Environmental Decommissioning of Open Dumpsites.** The Borrower shall ensure and cause the Project Executing Agency to ensure that the open dumpsites in Kampong Chhnang and Pursat relating to the Project shall be closed and properly decommissioned according to the plans set forth in the IEEs and finally in the IEEs updated during detailed design.	Not yet due	The existing open dumpsites are mainly located on private land owned or leased by the SWM contractors. The legal implications of closing these private dumpsites with public funds still have to be explored	It is proposed to add a national legal specialist to the PIMS team for assessment of legal issues with regard to closing private dumpsites
Sched 5, para 7	**Plan for Climate Change Adaptation. Within 36 months of the Effective Date**, the Borrower shall ensure that the Project Executing Agency has adopted the plan for climate change adaptation in urban areas around the Tonle Sap and revised building codes.	Not yet due.		
Sched 5, para 8	**Counterpart Funds.** The Borrower shall ensure that all counterpart funds necessary for the Project is provided on a timely basis.	Ongoing.		

Sched 5, para 9	**Environment.** The Borrower shall ensure, and cause the Project Executing Agency to ensure, that the preparation, design, construction, implementation, operation and decommissioning of the Project and all Project facilities comply with (a) all applicable laws and regulations of the Borrower relating to environment, health and safety; (b) the Environmental Safeguards; and (c) all measures and requirements set forth in the EARF, IEEs, the EMPs, and any corrective or preventative actions set forth in a Safeguards Monitoring Report. The Borrower shall ensure, and cause the Project Executing Agency to ensure, that the foregoing is applied and implemented for all outputs of the Project described in Schedule 1, regardless of the financing source.	Ongoing.	Preparatory activities are ongoing for updating the subproject IEEs and the preparation of the EMPs, as well as for the preparation of the government mandates IEAEs to be prepared by an independent licensed firm.	Updating of IEEs and preparation of EMP can only be done after the detailed designs have been substantially completed. It is expected that the detailed designs for the sanitary landfills will be completed by May 2018
Sched 5, para 10	**Land Acquisition and Involuntary Resettlement.** The Borrower shall ensure, and cause the Project Executing Agency to ensure, that all land and all rights-of-way required for the Project are made available to the Works contractor in accordance with the schedule agreed under the related Works contract and all land acquisition and resettlement activities are implemented in compliance with the RPs based on (a) all applicable laws and regulations of the Borrower relating to land acquisition and involuntary resettlement; (b) the applicable principles and requirements set forth in the SPS; and (c) any necessary corrective or preventative actions as agreed by the IRC set forth in a Safeguards Monitoring Report.	Resettlement and land acquisition for the construction of the flood embankment, landfill facilities and drainage improvement is being brought in compliance with the required steps as per ADB SPS (2009) This covers all AH who were relocated to the new resettlement area or self-relocated in the first half of 2017, but it is not clear if this requirement would also apply to the HH on floating houses who were removed from mooring along	Recruitment of external monitoring organization to monitor implementation of the RPs to be undertaken by the IRC.	
	Without limiting the application of the SPS or the RPs, the Borrower shall ensure or cause the Project Executing Agency to ensure that no physical or economic displacement takes place in connection with the Project until: (a) prior to the award of any Works contract which involves involuntary resettlement impacts, the Borrower has (i) updated the agreed RPs following completion of detailed design; and (ii) prepared, disclosed to affected persons and submitted to ADB the final RPs based on the Project's detailed design and obtained ADB's concurrence with such RPs; (b) compensation and other entitlements have been provided to affected people in accordance with the RPs; and (c) a comprehensive income and livelihood improvement program has been put in place in accordance with the RPs.		GDR has conducted a DMS of the AHs located and already moved from the Kampong Chhnang Flood Embankment alignment. Corrective Action Report was sent to ADB on 28th of February 2018. GRD is coordinating with the PMU and the PMIS on the ongoing activities	Further DMS/SES needs to be undertaken under the responsibility of the GDR for the AH in the alignment of the flood protection embankment at the tourist port, at the landing facilities at the old port and along the access road to the tourist port (shops and stalls) for additional AHs not covered by DMS/SES so far.

		the proposed embankment between September and November 2015.		
Sched 5, para 11	**Indigenous Peoples.** The Project, including Output 3 described in Schedule 1 hereto, shall benefit Ethnic Minorities. The Borrower shall ensure and cause the Project Executing Agency to ensure, that it adheres to applicable laws and regulations of the Borrower relating to indigenous peoples, and the Indigenous Peoples Safeguards and any corrective or preventative actions set forth in a Safeguard Monitoring Report.	Not yet due		
Sched 5, para 12	**Human and Financial Resources to Implement Safeguards Requirements.** The Borrower shall ensure, and cause the Project Executing Agency to ensure, to make available the necessary budgetary and human resources to fully implement the EARF, EMPs and the RPs.	Not yet due		
Sched 5, para 13	**Safeguards – Related Provisions in Bidding Documents and Works Contracts**. The Borrower shall ensure, and cause the Project Executing Agency to ensure, that all bidding documents and contracts for Works contain provisions that require contractors to:	Not yet due		
	(a) comply with the measures relevant to the contractor set forth in the EARF, IEEs, the EMPs and the RPs (to the extent they concern impacts on affected people during construction), and any corrective or preventative actions set forth in a Safeguards Monitoring Report;			
	(b) make available a budget for all such environmental and social measures; and			
	(c) provide the Borrower with a written notice of any unanticipated environmental, resettlement or indigenous peoples risks or impacts that arise during construction, implementation or operation of the Project that were not considered in the EARF, IEEs, the EMPs and the RPs.			
Sched 5, para 15	**Safeguards Monitoring and Reporting**. The Borrower shall ensure, and cause the Project Executing Agency to do the following:	Being brought in compliance		To be recruited

	(a) no later than the commencement of land acquisition and resettlement activities, engage qualified and experienced external monitoring organization(s) (EMO), under the terms of reference(s) acceptable to the Borrower and ADB to verify information produced through the Project monitoring process and facilitate the carrying out of any verification activities;		External monitoring organization to be recruited by GDR	
	(b) submit quarterly Safeguards Monitoring Reports relating to implementation of and compliance with the RPs and submit semi-annual Safeguards Monitoring Reports relating to the implementation of and compliance with the EARF, EMPs, and any IPP (if it becomes applicable), in each case to ADB and disclose relevant information from such reports to affected persons promptly upon submission;			
	(c) if any unanticipated environmental and/or social risks and impacts arise during construction, implementation or operation of the Project that were not considered in the EARF, IEEs, the EMPs and the RPs, promptly inform ADB of the occurrence of such risks or impacts, with detailed description of the event and proposed corrective action plan; and			
	(d) report any actual or potential breach of compliance with the measures and requirements set forth in the EARF, EMPs or the RPs promptly after becoming aware of the breach.			
Sched 5, para 16	**Gender and Development.** The Borrower shall ensure, and cause the Project Executing Agency to ensure, that (a) the GAP is implemented in accordance with its terms; (b) the bidding documents and contracts include relevant provisions for contractors to comply with the measures set forth in the GAP; (c) adequate resources are allocated for implementation of the GAP; (d) progress on implementation of the GAP, including progress toward achieving key gender outcome and output targets, are regularly monitored and reported to ADB; and (e) key gender outcome and output targets including, but not limited to, 30% of staff in the PMU and PIUs and 20% of staff of USUs shall be composed of women.	Ongoing.	This quarterly report includes the status of compliance with the Gender Action Plan.	

Sched 5, para 17	**Labor.** The Borrower shall ensure, and cause the Project Executing Agency to ensure (i) compliance with all applicable labor laws of the Borrower on the prohibition of child and forced labor; (ii) giving of equal pay for equal work regardless of gender, ethnicity or social group; and (iii) dissemination of information on sexually transmitted diseases (including HIV/AIDS) and human trafficking to sub-contractors/employees and local communities surrounding the Project construction sites.	Ongoing		
Sched 5, para 18	**Governance and Anticorruption**. The Borrower, the Project Executing Agency and the Project Implementing Agencies shall (a) comply with ADB's Anticorruption Policy (1998, as amended to date) and acknowledge that ADB reserves the right to investigate directly, or through its agents, any alleged corrupt, fraudulent, collusive or coercive practice relating to the Project; and (b) cooperate with any such investigation and extend all necessary assistance for satisfactory completion of such investigation.	Ongoing		
	The Borrower, the Project Executing Agency and the Project Implementing Agencies shall ensure that the anticorruption provisions acceptable to ADB are included in all bidding documents and contracts, including provisions specifying the right of ADB to audit and examine the records and accounts of the executing and implementing agencies and all contractors, suppliers, consultants, and other service providers as they relate to the Project.	Ongoing		
Sched 5, para 19	**Prohibited List of Investments**. The Borrower shall ensure that no proceeds of the Loan are used to finance any activity included in the list of prohibited investment activities provided in Appendix 5 of the SPS.	Ongoing		

Annex 7 : Kampong Chhnang, Flood protection embankment, requirements for finalizing the resettlement and compensation plans

Kampong Chhnang
Requirements for finalizing the RP and compensation plan

Site development and basic infrastructure of the relocation site to be completed

DMS/SES for 210 households completed

DMS for 2 AH in the tourist port area on the loading/unloading site still to be done

Relocation required of all shops and stalls along the area to be back filled.
DMS for 52 stalls/shops completed.
DMS to be done for additional 72 stalls/shops

Public consultation with households located along the existing embankment on the proposed landfilling in front of the existing embankment and on how to backfill under the houses on stilts

DMS required for loss of land use in the
in the area to be backfilled for strengthening the existing embankment and recreational/commercial development

Relocation required of 1 AH, houses of 4 AH will be affected by structural damage. DMS to be done

Land acquisition of the section connecting the existing embankment with the road embankment
Negotiated land acquisition (ongoing)

DMS required for the loss of land use and structural damage in the ROW of the road embankment. Exact ROW to be confirmed

0 500 1,000 2,000 Meters

Annex 8 : Initial Note on Urban Service Unit Road Map Maps

Ministry of Public Works and Transport

Integrated Urban Environmental Management in the Tonle Sap Basin Project

Initial Note on Training Need Assessment and Capacity Development Plan
DRAFT





April 2018

SUBMITTED BY_ Korea Engineering Consultants Corp.

IN JOINT VENTURE WITH_ NIRAS

IN ASSOCIATION WITH_ Key Consultants (Cambodia) Ltd.

Consulting Services for Project Management and Implementation Support (PMIS, Package 1)

Integrated Urban Environmental Management in the Tonle Sap Basin Project (IUEMTSBP)

ADB LoanNo.3311-CAM (SF) / 8295-CAM (SCF) / Grant 0454-CAM--Contract No. PMU/MPWT/IUEMTSP/QCBS/16/001

INTEGRATED URBAN ENVIRONMENTAL MANAGEMENT IN THE TONLE SAP BASIN PROJECT
TRAINING NEED ASSESSMENT AND CAPACITY DEVELOPMENT PLAN (DRAFT)

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ABBREVIATIONS

ADB	Asian Development Bank
EA	Executing Agency
CCA	Climate Change Adaptation
CDP	Capacity Development Plan
DRM	Disaster Risk Management (DRM)
GMS	Greater Mekong Subregion
IRITWG	Infrastructure and Regional Integration Technical Working Group
IUEMTB	Integrated Urban Environmental Management In Tonle Sap Basin
MEF	Ministry of Economy and Finance
MIH	Ministry and Industry and Handicraft
MOE	Ministry of Environment
MOI	Ministry of the Interior
MOWRAM	Ministry of Water Resources and Meteorology
MPWT	Ministry of Public Works and Transport
NGO	Nongovernment organizations
O&M	Operation and maintenance
PDIH	Provincial Departments of Industry and Handicraft
PDPWT	Provincial Departments of Public Works and Transport
PIU	Project implementation unit
PMIS	Project management and implementation support
PMU	Project management unit
SWM	Solid waste management
TNA	Training Needs Assessment
USU	Urban Service Unit
WTSSWU	Wastewater Treatment System and Solid Waste Units

1 INTRODUCTION

1.1 Background

1. The Integrated Urban Environmental Management In Tonle Sap Basin (IUEMTB) Project was approved on 10 November 2015 and declared effective on 2 March 2016. The impact of the project will be increased economic activities and environmental protection in the two towns in the Tonle Sap Basin. The outcome will be improved urban services and enhanced climate change resilience in Kampong Chhnang and Pursat municipalities. The project has five outputs: (i) Kampong Chhnang Urban Area Improvements; (ii) Pursat Urban Area Improvements; (iii) Community Mobilization and Environmental Improvements; (iv) Strengthened Sector Coordination and Operations; and (v) Strengthened Capacity for Project Implementation and Operations and Maintenance (O&M).

2. The key infrastructure financed under the project includes: flood protection infrastructure (embankment); construction of a new landfill facility and improvement of solid waste management (SWM); community-driven environmental improvements in Kampong Chhnang; and improvement of the stormwater drainage, river embankment erosion control, construction of a new landfill facility improvement of solid waste management and community-driven environmental improvements in Pursat. The locations of the project towns are shown in Annex 1.

1.2 Institutional Strengthening and Capacity Development

3. Strengthening the capacity of the MPWT, the provincial government and municipalities through on-the job training and formal training package in urban service development and management will be absolutely crucial to ensure the sustainability of the investments made under this project.

4. The terms “Capacity Development” are frequently used interchangeably and are frequently confused. While training is a key, and most often an essential aspect of capacity building, there are other important “dimensions” to capacity development and institutional strengthening to consider. These are being further described and analyzed in this working document.

5. At this stage, it is important to ensure that the MPWT, the provincial government and municipalities targeted for capacity development must itself welcome improved capacity and be prepared to change. If change is forced upon such entities as the PIUs and the future USUs - the effort is likely to fail. In other words, PIU/USU staff and other potential trainees need to accept the fact that there is room for improvement, and that the training/capacity development activities will result in improvement.

6. Furthermore, the staff must be clear as to the results (outputs and outcomes) they expect and require. If an organization, including its management and staff, does not have a clear understanding of what it is supposed to be doing, then it is impossible to know what capacity is required for it to produce the expected results.

1.3 Capacity Development Plan (2018 – 2022)

7. The Capacity Development Plan will integrate new concepts and initiatives linked directly to the IUEMTB, including (i) development of implementation capacities for urban infrastructures; (ii) education and training on management, operation and maintenance of urban infrastructures such as wastewater, drainage and river embankment – as well solid waste management; (iii) disaster risk management (planning, response, and recovery) to better prepare for and react to such climate change impacts; and (iv) mainstreaming of climate change directly into urban development initiatives.

8. The draft CDP developed under this PMIS consultancy will very comprehensively cover the key topics described in the ToR and of course much more. .

2 OVERALL METHODOLOGY AND APPROACH

2.1 Scope and Limitations of the Capacity Development (CD) Plan

9. The scope of the Capacity Development Plan is to strengthening the implementation of urban infrastructure but also to provide sustainable capacity development within the sector. The capacity development interventions will be aimed to be aligned to the capacity development programs of the national government in addressing institutional capacity gaps that are apparent in the context of the decentralization and deconcentration (D&D) reforms

10. The Consultant will also aim to integrate Climate Change Adaptation (CCA) and Disaster Risk Management (DRM) into the traditional urban infrastructure implementation. Also the plan will aim to overcome the gender gap, and to ensure that social development and gender needs are considered at all stages of the decision-making process. The CDP is based on the TOR for the PMIS consultancy, on proposals submitted to the Client by the Consultant, on discussions with stakeholders, and on the training needs assessment (TNA).

11. The Plan is divided into three parts. The first part (training packages 1-8) is managed and guided by the PMIS Team. The second part (training packages 9-15) is planned to be conducted by external training providers (training provided inside Cambodia) and the third part (training package 16-30) is planned as external training provided outside Cambodia either as training events, workshops or major seminar events.

12. In line with the project's TOR, the capacity development plan will be implemented by the EA through the PMU. It is foreseen that training on financial and procurement management will need to be coordinated with the Ministry of Economy and Finance. Furthermore training programs related to EMPs and mitigation measures on environment safeguards will involve MOE whereas capacity development on gender considerations will be coordinated with the Ministry of Women's Affairs. The training programs on the O&M of urban infrastructure will need the participation of both provincial department and municipal administrations to ensure sustainability of O&M arrangements.

13. This CD Plan and TA is prepared according to the ToR, available PMIS expertise, the number of man months and the allocated budget(s) for training, all of which constitute limitations. A wide range of training topics and wishes were recorded by the PMIS team during the course of deliberations with the stakeholders and from responses to questions on capacity needs. It is apparent that there is great demand for capacity development at the provincial level and possible also lower on several aspects - however, it is clear that this capacity development plan or package cannot address all of the expressed needs and the focus needs to stay committed to the ToR and to the agreed deliverables – namely implementation of sustainable urban infrastructures in Kampong Chhnang and Pursat.

2.2 Objectives and General Approach to Capacity Development

14. The TOR identifies the purpose of the Capacity Development Plan as building capacity in the urban development sector and ensure sustainability. This focus should represent a more holistic approach to the sector, which will result in urban services being more sustainable.

15. The Capacity Development Plan will integrate new concepts and initiatives linked directly to the IUEMTB, including (i) development of implementation capacities for urban infrastructures; (ii) education and training on management, operation and maintenance of urban infrastructures such as wastewater, drainage and river embankment – as well solid waste management; (iii) disaster risk management (planning, response, and recovery) to better prepare for and react to such climate change impacts; and (iv) mainstreaming of climate change directly into urban development initiatives.

16. This implies focusing on the Ministry of Public Work and Transport, the established Project Management Unit (PMU), the Project Implementation Units (PIU) but also other relevant departments at provincial level such as Environment, Water Resources and Meteorology and Industry and Handicrafts.

17. The terms "Training" and "Capacity Development" are frequently used interchangeably and are frequently confused. While training is a key, and most often an essential aspect of capacity building, there are other important "dimensions" to capacity development and institutional strengthening to consider.

18. A World Bank evaluation of capacity building projects found four main problem areas:

(i) Most capacity building support remains fragmented and not harmonised;
(ii) Sector-specific capacity building strategies need strengthening;
(iii) Tools and instruments could be more effectively and fully utilized; and
(iv) Quality assurance is inadequate.[1]

19. Therefore focus has shifted towards capacity development, which involves more than enhancing the knowledge and skills of individuals. It depends crucially on the quality of organizations - meaning that operations of particular organizations are influenced by the enabling environment, the power structure, and the institutions in which they are embedded. So capacity is not only about skills and procedures. It is also about incentives, structures and governance.

20. Change processes may focus more on one perspective than another, but constraints and opportunities may be overlooked unless all dimensions of capacity change are taken into account. Thus, a narrow focus on introducing "technical fixes" in response to what also stems from underlying constraints in power and incentive structures is usually doomed to failure. It is therefore clear that broad and sustained change is the result of complex processes that cannot be explained with reference to a few determining factors, nor created by means of a standard recipe across time, sectors and countries.

21. Importantly, the capacity of an organisation like MPWT needs also to be "adaptive". That is, in the face of the challenges of a changing "environment" brought about by such factors as rapid economic development, climate change and so on, an organisation needs to be able to adapt quickly and appropriately in response to that change if it is to be successful.

22. In proposing measures to address capacity needs at various levels in the context of a more holistic approach to urban development implementation, the PMIS Team has adopted the "System Capacity" approach developed by Potter and Brough (2004). This is because capacity weaknesses are seldom limited to single technical, organizational, institutional or infrastructural shortcomings, and in most cases a combination of different elements leads to capacity limitation. [2]

23. A systemic approach to analysis, formulation and implementation of organizational capacity can provide the foundation for capacity building plans. On this basis, capacity building activities, outputs, expected results, impact and outcomes can be formulated, implemented and monitored. It will be important to address capacity systemically – identifying the pyramid of nine separate but interdependent necessary capacities listed below:

(i) **Performance Capacity**: Are the tools, money, equipment and consumables available?

(ii) **Personal Capacity**: Are the staff sufficiently knowledgeable, skilled and confident?

(iii) **Workload Capacity**: Are there enough staff with broad enough skills to cope?

(iv) **Supervisory Capacity**: Are reporting, monitoring and accountability systems in place?

(v) **Facility Capacity**: Are offices big enough for the right amount of staff?

(vi) **Support Service Capacity**: Are there sufficient design consultancy services, supply organizations, contractors, laboratories and quality control experts?

[1] World Bank Operations Evaluation Department (2005): Capacity Building in Africa; An OED Evaluation of World Bank Support. Washington, D.C.
[2] Systemic Capacity Building: a Hierarchy of Needs; Potter, Christopher and Brough, Richard, Oxford University Press (2004). http://heapol.oxfordjournals.org/cgi/content/abstract/19/5/336

(vii) **Systems Capacity**: Do the flows of information, money and managerial decisions function in a timely and effective manner? Can purchases be made without lengthy delays for authorization? Are proper filing and information systems in use?

(viii) **Structural Capacity**: Are there decision-making forums where inter-disciplinary discussion can take place?

(ix) **Role capacity:** Are sufficient authority and responsibility being given?

24. These necessary capacities form a four-tier hierarchy of capacity building needs: covering: (i) structures, systems and roles; (ii) staff and facilities; (iii) skills; and (iv) tools. A capacity building plan should be based on the analysis of the whole hierarchy of capacity needs, following these four dimensions[2]

25. A single output in the form of a technical training of PIU staff in Kampong Chhnang may not be effective if other needs in the hierarchy are not met. The effectiveness of one form of capacity depends and builds on the effectiveness of the other elements of capacity (see Figure 1).

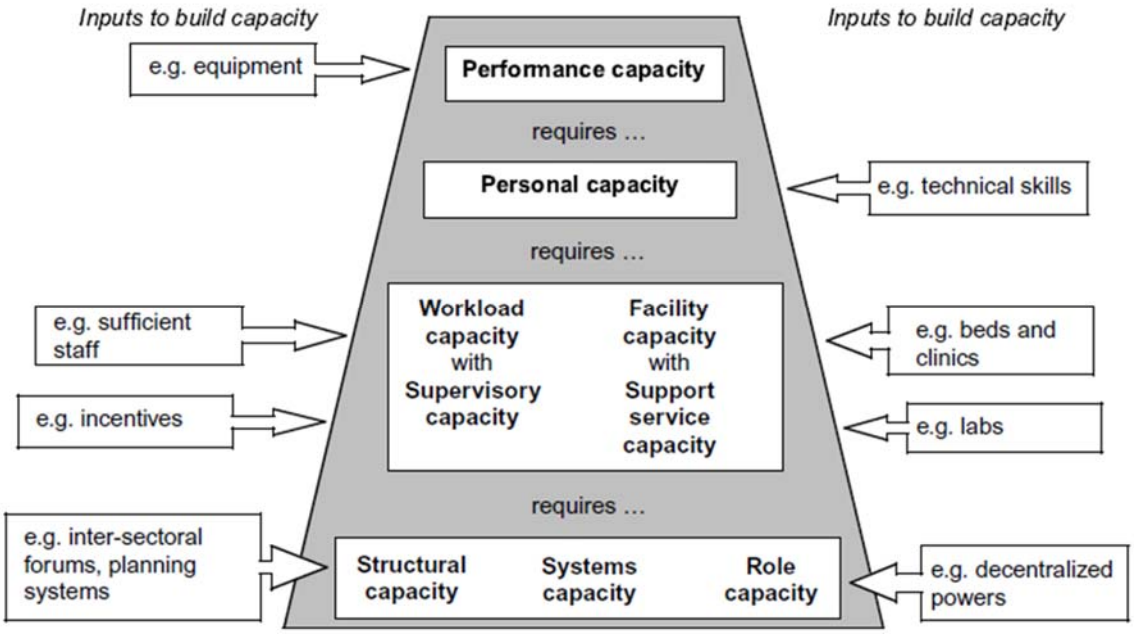


Figure 1: Pyramid of Effective Capacity Development

26. When assessing the core problems as given in the "Urban Institutional Analysis" prepared as part of the Tonle Sap 1 loan documents[3], it disclose the exact same inter-dependencies as given in Figure 1 – and these can all the summarized as shown below in Table 1.

27. Again, it becomes apparent that the substantial problems with urban environmental sanitation in provincial towns in Cambodia cannot be solved with "technical" fixes such as large scale infrastructure investments combined with intensive training packages only – but need much broader institutional changes related to autonomy, clarity on responsibilities of provincial entities and financial management and transparent and 100% cost recovery.

[3] https://www.adb.org/projects/documents/cam-integrated-urban-environmental-management-tonle-sap-basin-project-rrp.

Core problems versus Systematic Capacity Development	
Identified Core Problem	**Lack of/Limited**
Lack of equipment to carry out effective service and maintenance	Performance Capacity
Lack of equipment/spare parts due to lack of financial resources	Performance Capacity
Low staff capacity and skills that affects urban service delivery. Relevant skills are lacking in administration and efficient operation and maintenance of urban services like wastewater, drainage and solid waste	Personal Capacity
Limited local autonomy due to Municipal Administrations still not fully developed and mentally prepared to perform “autonomy”	Personal Capacity
Possible to few qualified staff to cover the anticipated tasks	Workload Capacity
Low level of support when implementing and enforcing building and planning regulations	Supervisory Capacity
Lack of solid waste collection and disposal facilities to carry out effective service and maintenance (no funds available for capital expenditure).	Facility Capacity
Lack of wastewater/drainage conveyance systems and treatment plants to carry out effective service and maintenance (no funds available for capital expenditure).	Facility Capacity
The private sector at provincial level not experienced/qualified to provide the required support service.	Support Service Capacity
The size of support service at provincial not big enough to attract bigger (and qualified) private service providers.	Support Service Capacity
Lack of equipment/spare parts, sufficient staff, sustainable infrastructures and support service due to lack of financial resources – due to fees and charges do not cover costs and therefore low level of cost recovery.	Personal, Workload, Facility and Support Service Capacity
Overlapping and unclear responsibilities for urban infrastructure between provincial and municipal administrations	Structural Capacity
Multiple agencies involved in provision of urban infrastructure (DPWT, PDWRAM, PDIME)	Structural Capacity
Weak implementation and enforcement of building and planning regulations due to limited spatial development plan(s), poor enforcement of land use planning and building regulations and limited guidance related to implement new rules and regulations.	System Capacity
Delays in transfer of infrastructure assets to the Municipalities	Role Capacity
Uncertainty of asset ownership	Role Capacity
Limited local autonomy due to the “mentality residual” of the previous centralized Government system	Role Capacity
Financial autonomy still to be given to the Municipalities	Role Capacity

Table 1: Core problems versus Systematic Capacity Development

28. The PMIS approach to capacity development will be output-orientated with a focus on the mandate and strategic goals of the Ministry of Public Work and Transportation, the external and internal context in which they operate, staff motivation and willingness to change. This is particularly important when aiming to introduce better and more climate resilient urban infrastructure designs and construction practices. The support to capacity development should enable the delivery of an agreed and clearly defined set of services.

29. Lastly, it is important to emphasize the importance of strong leadership. The role of the MPWT senior management team (the “leaders”) includes:

(i) Ensure strong leadership by providing the vision of the organization/unit to the staff and direction with respect to its operations;

(ii) Maximize the clarity of results expected of the organisation/unit;

iii) Argue persuasively for more resources, if these are inadequate;

(iv) Ensure that appropriate and robust strategies, structures and systems are in place.

Strong yet flexible organisation/unit leadership is a critical success factor in delivering the expected results. In a changing management environment, such as is being experienced in the water sector all over the world, such leadership should have the ability to think strategically in order to guide and direct the organisation/unit in adapting to the new challenges.

30. By means of assessments and questionnaires (Annex 5) the PMIS Team aimed to identify constraints other than just "need of skills", including lack of resources (supplies, equipment, transport and funds) – and other job related constraints. The Team will adopt the approach and concepts introduced in Figure 1 when structuring the TNA results found in section 3.5, 3.6 and 3.7 below. The full extent of this exercise is however not exhausted due to the limited amount of time available for the preparation of the Plan. This structuring exercise will continue as the PMIS consultancy progresses.

2.3 Detailed Approach to the Development of the Capacity Development Plan

31. The activities related to capacity development and training implementation were defined and elaborated upon in a broad manner in the Consultant's proposal, as follows:

32. The training needs assessment was guided by the findings from the preliminary proposed capacity development programme in the project preparatory TA (PPTA) which identified where capacity and knowledge related to urban service was lacking incl. climate change and adaptation measures worth considering with a focus on the specific project need being implemented under the IUEMTB.

33. Interviews (during field trip in January and March 2018) with the primary beneficiaries from the two provinces and assessment of capacity gaps and resource constraints through questionnaires (Annex 5, Annex 6 and Annex 7) that formed the central knowledge base for the TNA. The resulting information will be grouped according to categories of relevance/interest, knowledge, influence and power.

34. The CD Plan has been structured on the basis of the perceived needs with respect to urban services, and the integration of climate change, disaster risk management, social development and gender aspects.

35. Training sessions will be tailored to the needs of different target groups. Trainees will range from stakeholders at the national level to a "forum" of urban planners and urban water, wastewater and solid waste engineers at provincial level. Next will once again be the national level trainees for training in implementation arrangements and performance monitoring and review.

36. With this in mind, the Team has identified a draft list of requirements for capacity building and training, awareness raising and institutional development. The Team has also completed the overall training design, plan, budget and schedule for the Capacity Development Plan.

37. A key observation made very early in this process of developing the CD Plan was the strong inter-linkages that exist between wastewater management both treatment and conveyance, drainage in general of surface water and solid waste management and that these cannot be regarded as a "stand alone component" but needs to be integrated in all activities.

38. This led to the conclusion that the Team would not advocate for separate implementation of wastewater management or solid waste management but rather that these should be integrated and rolled out as one single package or message. This approach is supported by the fact that the draft prakas for the USUs in Pursat and Kampong Chhnang seem to advocate for merging the responsibilities and an integrated approach to urban services including both wastewater, drainage and solid waste management.

3 TRAINING (CAPACITY DEVELOPMENT) NEEDS ASSESSMENT

3.1 Training Needs Assessment at Provincial level

39. The Team focused primarily on the provincial level in Kampong Chhnang and Pursat for the training needs assessment partly due to the fact this level and staff are the prime initial focus for CD, and partly due to the limited availability of staff at national level. It is expected that an in-depth discussion for capacity development at national level will take place at a later stage- also synchronizing with CD efforts done under other parallel ADB funded urban development projects.

3.2 Status of staffing at provincial level

40. The status of appointed and posted staff within the PIUs as of end-March 2018 appears in Table 2 , below.

Positions	**Kampong Chhnang**		**Pursat**	
	Foreseen	Posted	Foreseen	Posted
Project Director	1	1	1	1
Deputy Project Manager	1	1	1	1
Construction Engineer	2	2	1	1
Water Resources Engineer	1	0	0	0
Community Coordinator	2	2	1	1
Resettlement Officer	1	1	1	1
Procurement Officer	0	0	1	1
Project Accountant	1	1	1	1
Total	9	8	7	7

Table 2: Status of Staff in PIUs

41. In general, the PUIs are well-staffed and the information made available to the Consultant shows that there are only one vacant position (Water Resources Engineer in KC). So as per PIU workload capacity, the PIUs are well staffed in terms of numbers.

42. As regards the gender balance, there is only 1 female out of 13 in the PIUs. As the project has a target of at least 20% of female staff in each of the semi-autonomous urban service units in Kampong Chhnang and Pursat municipality – the project need to consider how to achieve this with the present "un-balanced" gender situation in the PIUs. Also still most women occupy positions such accountants, secretaries etc. and not many are seen in senior management roles/positions.. There is an obvious need to address this imbalance or at least commence such efforts by promoting women leadership and confidence.

Position	Male	% Male	Female	% Female	Total
Project Manager	2	100	0	0	2
Deputy Project Manager	2	100	0	0	2
Construction Engineers	2	100	0	0	2
Community Coordinator (1)	2	100	0	0	2
Resettlement Officer	1	100	0	0	1
Procurement Officer	1	100	0	0	1
Project Accountant	2	67%	1	33%	3
Total PIU staff (future USUs)	**12**	**92%**	**1**	**8%**	**13**

Table 3: Status of Gender in PIUs

43. The average age in the two towns (based on the 33 respondents) is 35 years, the Kampong Chhnang team is relatively younger (2 years) compared with the Pursat. The average years of experience is approximately 10 years - and staff has on an average been in their current position in approximately 5 years. But there is substantial variation with staff having more than 30 years and others just started their working career.

3.3 Capacity required at PMU/MPWT level

44. It is expected that the PMU should have the capacity to perform the following duties:

(i) Effective organizational and fiscal implementation and management of IUEMTB Project

(ii) Identify project management needs, planning, strategies and schedules for execution

(iii) Formulate and implement practical measures to address shortcomings.

(iv) Monitor and evaluate the implementation and performance of the project

(v) Perform quality assurance and risk management

(vi) Supervise the design, construction and commissioning of the investments

(vii) Procurement, including tendering, evaluation, negotiation and awarding of contracts

45. The skills required to perform these duties above are expected to be embedded in the PMU Team. Nonetheless, it is still to be verified further whether additional skills and capacities are required at national level.

3.4 Capacity required at provincial level

46. As indicated in the review of the water sector that appears as Annex 1, the capacity for planning and implementation is weaker at sub-national level. It is expected that this project will address these issues and provide the training specifically related to the management, operation and maintenance of constructed infrastructures at the most appropriate level (e.g. the anticipated USUs or any temporary units).

47. In addition to the more traditional duties outlined, it is desirable that provincial staff be equipped with an understanding of climate change, disaster risk management, water and sanitation safely planning and social development and gender which could be applied to urban services.

3.5 Assessment of performance, personal and workload

48. **Performance**: The TNA identified 5 categories of performance related constraints. Figure 2 (below) shows that the performance constraints expressed are mainly related to office equipment, transportation and lack of funds. Only 6% of respondents stated that there are sufficient resources.

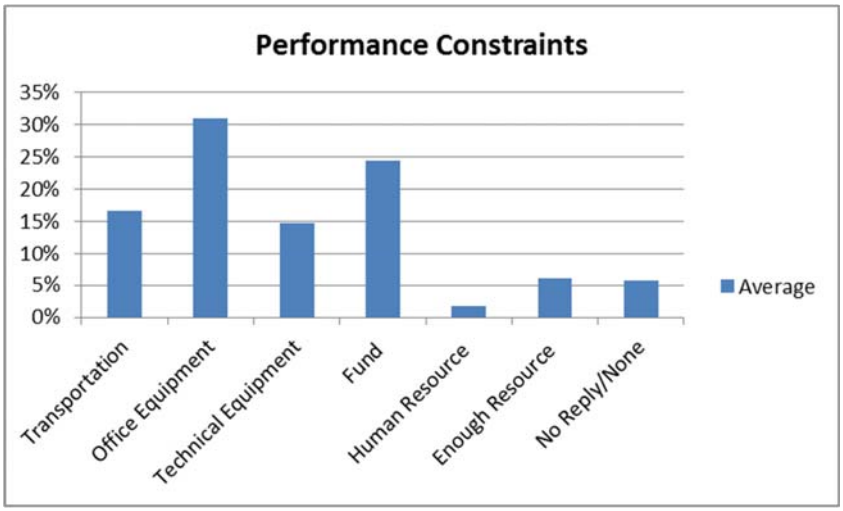


Figure 2: Performance Contraints (tool, equipment etc.)

49. Transportation is mainly related to too few vehicles for all staff, poor road conditions, limited budget for gasoline and no budget for repairs and maintenance. Constraints related to office supplies and comprised insufficient computer and printer availability, inadequate furniture, poor air conditioning, slow/no Internet, etc. In general, the PIUs / USUs might not yet sufficiently be well equipped to enable them to carry out their tasks in an effective manner.

50. When the provincial staff were asked to list the three (and only three) main job related constraints they faced during the past 12 months, the results shown in Figure 3 (below) emerged:

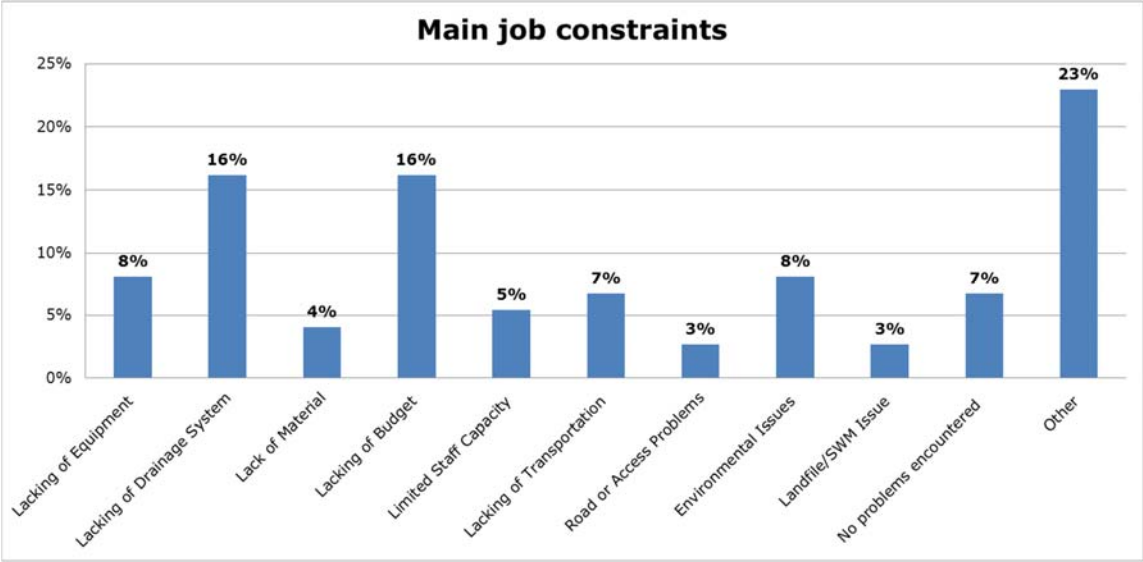


Figure 3: Main job constraints the past 12 months

51. Findings show that equipment, material, funds is again indicated as major job constraints but also transport is highlighted. Interestingly, lack of drainage system, environmental issues and solid waste is also mentioned with in total 27% as constraints in order to properly perform job duties.

52. In summary, performance capacity is constrained by lack of transportation, office equipment, funding and poor environmental sanitation.

53. **Personal**: In general, the provincial staff all seem to have sufficient educational background and skills to perform their assigned duties and therefore the qualifications of the staff are considered to be adequate. The educational status at provincial level is shown below in Table 4.

Education	Kampong Chhnang	Pursat	**Average**
Pre-high school	0%	6%	**3%**
High School	0%	12%	**6%**
Diploma	0%	0%	**0%**
Bachelor	94%	65%	**79%**
Master	6%	18%	**12%**

Table 4: Educational Status of PIUs Staff

54. The educational specialization is sufficiently broad to enable them to cope with the tasks assigned to them although there seem to be an overweight of administrative capacity (see Figure 7, below) – amount to more when 60% (63%). Only 22% of staff have a technical background.

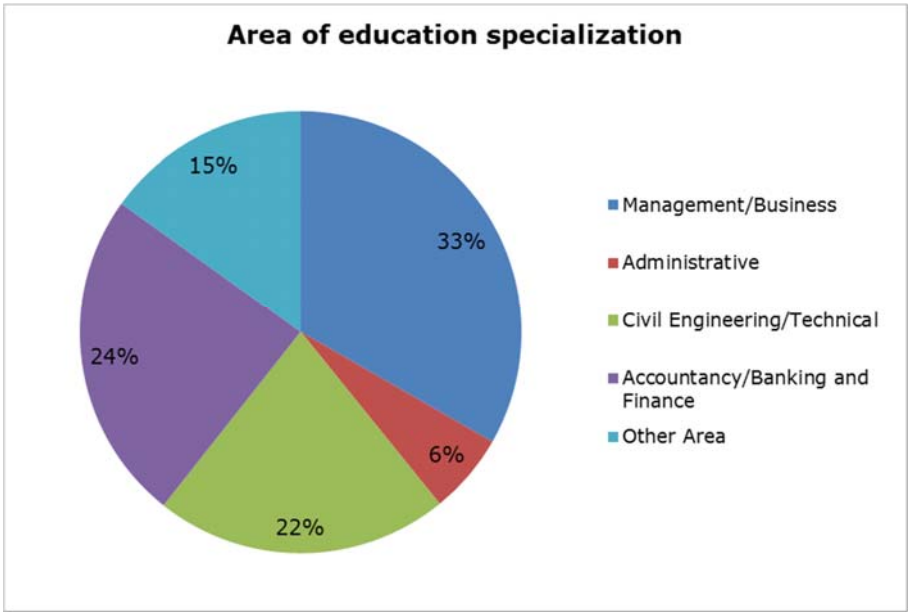


Figure 4: Area of education specialization

55. Specialized technical training on solid waste and wastewater management received by PIU and other provincial staff appears to have been very limited, with an average duration of 1-2 days (see Annex 7). Furthermore, it is uncertain whether the knowledge gained during the course of these training sessions has been put into practice.

56. When asked what type of training would enable the respondent to perform better in her/his current job the replies and subsequent analysis identified 7 different categories of training needs (see Figure 9). The greatest demand was in the area of solid waste management and wastewater management and treatment. Other needs expressed was administration and finance, water supply/water quality, road construction and HRM. General training included planning, reporting, M&E and the roles and responsibilities as well as English language and IT software More details on these expressed training needs can be found in Annex 5 and Annex 7

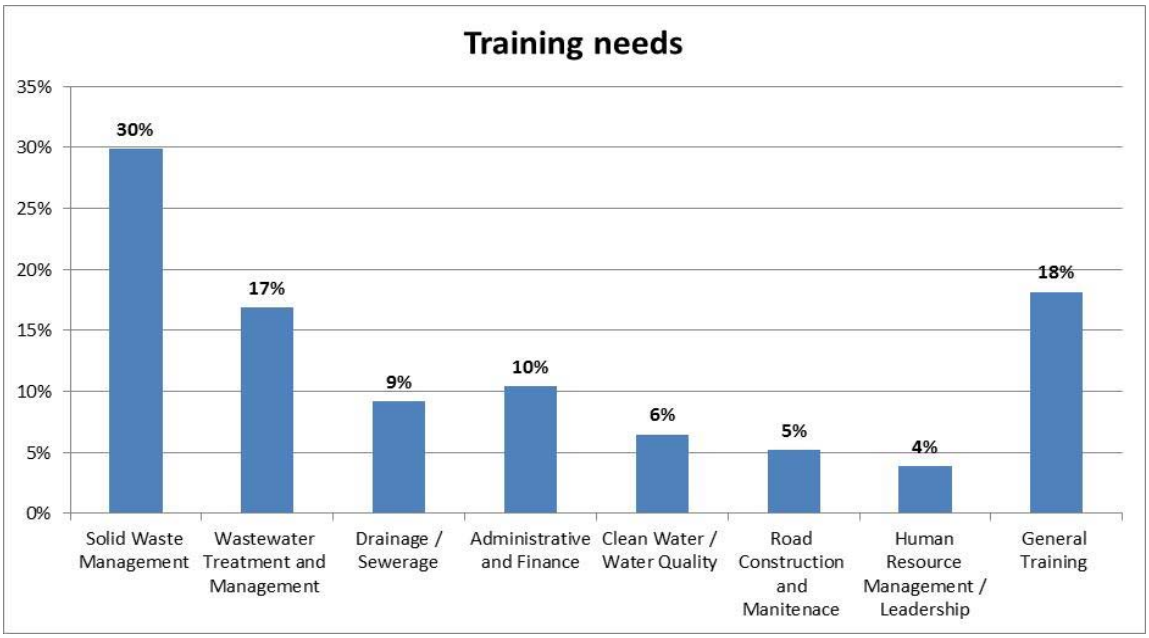


Figure 5: Expressed Training Needs Retrieved from the Questionnaires

57. It should be mentioned that the identified categories are related to each other and that they should not be complete separate training blocks. Human Resource Management / Leadership and Administrative and Finance is for example crosscutting and essential in any training as well as project management. Community involvement and gender equity are for example important elements of project planning and management.

58. In conclusion, there is **substantial demand for capacity development on urban service management in the provinces.** The project may not be entirely satisfactory, indicating a need for additional continued capacity development support in the area of project and public service management. The results of interviews conducted in March 2018 with all PIU teams and the information retrieved from the questionnaires indicate that knowledge of SWM and WWM as practically non-existent. In fact, 75 % of respondents indicated that they had "no idea" or no specific knowledge of solid waste management. .

59. **Workload**: As indicated above, it appears that the number of PIU staff is sufficient – at least to oversee and conduct the duties of the PIU. On the other hand it seems doubtful that the skills they possess are adequate when it comes to providing urban services in the future as staff member of a Urban Service Unit. In fact, it can be said that their skills in the area of SWM and WWM are virtually non-existent. As the exact staffing of these USUs has not yet been finalized, it is therefore too early to judge whether there is sufficient of staff – and hence the workload capacity.

3.6 Assessment of supervisory, facility and support capacity

60. **Supervisory**: It appears that supervision, monitoring and guidance provided by the PIU's "senior management" is sufficient, although relatively less attention was given to this area due to the limited time allocated during the course of the TNA.

61. **Facilities**: The facilities around and available to the PIU and the linkage to facilities at PDPWT seem not to be entirely satisfactory and sufficient to enable effective performance – judging upon the job constraints expressed – see Figure 3. More in depth investigation(s) on this could reveal a more detailed and possible different picture. But again, due to the limited time allocated, this has not been fully explored.

62. **Support**: It is assessed that there are limited support available, within the urban environmental sanitation sector, for engineering design consultancy services (both semi-governmental, non-governmental and private), supply organizations, national contractors, training institutes, laboratories and quality control experts to support the PIUs and the provinces as and when required.

3.7 Assessment of systems, structure and role capacity

63. **System**: Information handling, sharing and dissemination is a constraint in Cambodia in general and within the urban service sector in particular due to the separation between ministries (refer to Annex 2). The Infrastructure and Regional Integration Technical Working Group (IRITWG) is chaired by the Minister of MPWT (Ministry of Public Works and Transport) and in 2010 a formal sub-group was established, chaired by the Ministry of Industry and Handicraft – but for urban water supply only – and this sub-TWG has not yet officially augmented its official mandate to cover urban sanitation which remains a constraint for more programmatic support to the urban sector.

64. There seem to be no information platform where information related to urban service can be uploaded and shared among provinces. There is a strong need for regular review of progress and of experience sharing through regular meetings. Some PIU staff mentioned this as a potential improvement that would increase efficiency. It may be that most provinces staff are not aware of the benefits of information sharing, or at least of proper management and organization of data and information.

65. **Structure**: Decision making forums where inter-disciplinary discussion can take place are described in Annex 2. The Ministry of Public Works and Transport is the lead agency for urban sanitation and is responsible for policy, planning, coordination and the implementation of investment projects. In 2011 a mandated department under MPWT was established to set technical standards and tariffs for urban sanitation. However, this department is in the early stages of development and is not yet fully staffed and resourced. Provincial departments of MPWT are responsible for planning, project implementation and O&M of drainage, sewer and treatment facilities (treatment facilities are only present in Siem Reap, Sihanoukville

and Battambang) but still overall management is still managed directly through the ministry in a top-down implementation mode.

66. There are numerous local and international NGOs working with urban water supply and sanitation, but these efforts are fragmented and not always mutually supportive due to a lack of consistency in operational approaches. PDPWT offices often do not effectively coordinate NGO inputs at national or sub-national level and no programmatic guidelines seem to exist for implementation of the urban service developments. The TNA questionnaires and observations made during the field visits during project implementation so far have revealed that there have been problems with sectoral collaboration on urban service activities.

67. **Role:** As indicated above, although provinces and municipalities are supposed to be in charge of urban service provision, there is no clear description of duties for various entities and staff positions. The absence of job descriptions makes the delineation of duties and responsibilities unclear, and it is difficult to know whether sufficient authority and responsibility is being given to the provinces and municipalities.

68. The delegation of responsibilities is hampered partly by the fact that institutional arrangements under deconcentration and decentralization are not clear. Accountability mechanisms and clear procedures are missing. Urban citizens' views are not included to a satisfactory extent in social accountability initiatives, such as through community scorecards under a social accountability framework. This leaves a vacuum in the urban service sector, where sustainable post-construction support, both technical and managerial, seem to be missing.

3.8 Summary of capacity gaps and capacity development required

69. Firstly, it must be recognized that an organisation targeted for capacity development must itself welcome improved capacity and be prepared to change. If change is forced upon such entities as the PIUs and the future USUs - the effort is likely to fail. In other words, PIU/USU staff and other potential trainees of the Capacity Development Program need to accept the fact that there is room for improvement, and that the training/capacity development activities will result in improvement.

70. Furthermore, the staff must be clear as to the results (outputs and outcomes) they expect and require. If an organization, including its management and staff, does not have a clear understanding of what it is supposed to be doing, then it is impossible to know what capacity is required for it to produce the expected results. The requests for improvement and change found in the TNA questionnaires indicate that there is scope for capacity building initiatives.

71. The list of training requirements that appears in was provided by provincial staff. The individual items in the list are prioritized on the basis of the number of requests received for each specific training topic.

Training requirement proposed to enhance their skills	Percentage of total requests
Solid Waste Management	34%
Wastewater Treatment	15%
Sewerage Systems	12%
Drainage System	10%
Wastewater Management	9%
Financial Management	9%
Landfill Management	6%
No idea	3%
Human Resource	1%
Planning Management	1%

Table 5: Training requirement proposed to enhance their skills

72. The PMIS TA Team has proposed a **draft capacity development plan** that is based on the TNA of provincial staff and on the institutional overview. The plan is intended for the staff of the PMU (still tentative), the PIUs/USUs, and other provincial government staff involved and relevant for urban environmental sanitation service provision. Direct PMIS intervention lower than provincial level will be limited - due to budget constraints.

73. Other institutional constraints (required institutional capacities as per Figure 1) identified during this TNA exercise are listed in Table 6 below:

No.	Recommendation	Action to be taken by
1.	Provide adequate resources, including transportation, office equipment, funding for environmental sanitation to provincial and municipality entities.	MPWT, MOI
2.	Allocation of sufficient and qualified human resources to support the urban service units	Government
3.	Provide enabling environment to increase the non-governmental and private support sector within urban environmental sanitation for engineering, consultancy and contractor services, training institutes, laboratories and quality control	MPWT, MOI
4.	Revise the mandate for the sub-group (under the IRITWG) to cover urban sanitation	MPWT
5.	Increase urban service sector coordination and information sharing between provinces.	MPWT/MIH
6.	Delegate power and responsibility to PIUs and USUs including collection of revenue and enforcement for non-payment.	MPWT
7.	Advocate for a coordinated sector-wide approach for urban development efforts and activities adopted by the Government.	ADB
8..	A road map for strengthening decentralized urban management agreed to by all stakeholders	Government

Table 6: Recommendations to remove institutional constraints

4 OPTIONS FOR MEETING TRAINING NEEDS

74. Training options available to meet present needs are of two main types: "formal" training, meaning training in a classroom-type or workshop environment by a presenter, lecturer or trainer (including academic training); and "on-the-job" training where the principles and techniques learned in the classroom are reinforced through actual application in the work environment. Ideally, this second type of training would be facilitated by a "mentor" or "coach", who could provide guidance and support during the "on-the-job" training period.

75. Training can be of a technical (or "skills-based" nature) – for instance, how to use GIS software for flood modelling – or "non-technical", meaning that the training will lead to raised awareness and better understanding of the principles or issues associated with the urban service sector. An example of this latter category is training in facilitation and communication, to provide the trainee with an understanding of the related principles for application at community levels, for example. Both types of training are important for effective execution of urban service improvement initiatives which under this project include waste water management, drainage, flood protection and solid waste.

76. Different training activities will normally be required for different staff within an organization, and even the "style" of the training will normally differ according to the staff being trained.

77. The immediate training needs have been identified through the TNA and are described in Section 4. The various identified options available to meet the training needs will be discussed and commented on by stakeholders at a later stage (June/July 2018) and the recommendations received will be seriously considered. Some of the training activities may require the services of a number of different training providers or of specialized training institutes.

78. As mentioned earlier, training planning is intended to be a rolling exercise, since needs might change and/or new and unforeseen training needs may arise later on during the course of TA implementation. Such changes or additional training will managed through planned bi-annual revision of the capacity development plan. Details on course content, intended trainees, venue and cost of training are provided in Section 6 and in the annexes.

4.1 On the job training and interaction with the PMIS team/experts

79. The Terms of Reference provide some guidance on certain training and capacity development responsibilities under the descriptions of the individual expert positions. The PMIS consultants provide support the PMU and PIU in implementing the TA activities, which are linked directly to IUEMTB loan infrastructure implementation. As such, part of the training will be provided by the PMIS as on-the-job training in the area of technical design, community engagement and facilitation.

80. This is an excellent opportunity for capacity development not only of the PIUs but also of other provincial staff, and other potential trainees. The consultants will serve as providers of "on the job training".

81. It is important to follow-up the formal training provided by the PMIS consultants with "on-the-job" training to ensure that the information gained is reinforced and put into practice. In this way, knowledge can be translated into practical skills that will make the trainee more effective on a day-to-day basis.

4.2 Formal training and in-country workshops

82. The preferable venue and mode for formal training activities is at specialized hotels and seminar centers equipped with modern training facilities and equipment for large groups. Such facilities will be able to accommodate short-term tailor-made training programs on request.

83. There are several training and capacity development facilities that can be utilized to train government staff. The PMIS team will aim to establish connections with such institutions.

84. The scheduling and implementation of training events will be organized and monitored by the PMIS training coordinator and supported by the PMIS Project Office.

5 DRAFT TRAINING PLAN AND IMPLEMENTATION ARRANGEMENTS (2018-22)

5.1 Training planned as part of the IUEMTB Project (done by the PMIS)

85. The tentative training planned for the rest of 2018 and in 2019, 2020, 20121 and 2022 is listed in brief in Table 7, Table 8 and Table 9 (below), described more fully in Annex 8

86. The training schedule and budget are enclosed in Annex 9 and Annex 10

Training done by the PMIS (Expert Team) under this TA	
No.	**Course / Training Name (ID)**
1.1	Project Management and Administration (Best Practices in PM of ODA funded Projects)
1.2	Standard Project Administrative Management Procedures
1.3	PPMS Training, Physical and Financial Progress Reporting
1.4	Work and Financial Planning
1.5	Coordination and Networking Mechanisms
1.6	Human Resource Development
2.1	Fundamentals of Solid Waste Management and Sanitary Landfill
2.2	Basics of supervision, QA and control during construction of Solid Waste Landfill Sites
3.1	Fundamentals of Flood Protection and Drainage
3.2	Basics of supervision, QA and control during construction of Flood Protection Embankment
4.1	Resettlement Planning and Monitoring - compliance with ADB
4.2	Livelihood Restoration Planning - compliance with ADB
4.3	Monitoring Social Safeguards and Social Project Performance
5.1	Introduction to Environmental Safeguards and Environmental Management Planning (Senior Managers)
5.2	Environmental Management Planning (safeguards, monitoring, reporting and mitigation measures)
5.3	Environmental Design, Monitoring, and Compliance Procedures for Contractors
6.1	Gender Sensitization Training
6.2	Gender Action Plan
6.3	Poverty and Social Impact Assessment
7.1	Private Sector Involvement (options, pros and cons, financial implication and role and responsibilities)
7.2	Detailed training on private sector contracting (options, best practices, conditions and supervision)
8.1	Setting tariff and calculation of cost recovery
8.2	Implementing awareness campaigning for cost recovery / tariff for urban services

Table 7: Training done by the PMIS (Expert Team) under this TA

87. The PMIS consultants are aware of their training duties and will coordinate these with one another under the overall leadership of the PMIS Team Leader. Some of the training will have to be planned and conducted alongside other training sessions where PMIS consultants participate as “guest lecturers” or as resource persons (if available in the country).

5.2 Training planned as part of the IUEMTB Project (done inside Cambodia)

88. The training planned to be provided the external specialized training providers available inside Cambodia, is listed in Table 8 below.

Training conducted by external training providers (training provided inside Cambodia)	
No.	**Course / Training Name (ID)**
9	MS Package Skill Improvement
10	Standard Office Management and Administration
11	Health and Safety - General Training for Project Managers
12	Health and Safety - training sessions for Contractors
13	Health and Safety - training on exposure to communicable and infectious diseases
14	FIDIC Contract Management
15	Implementation of ADB Project Performance Monitoring System (PPMS)

Table 8: Training conducted by external training providers (provided inside Cambodia)

5.3 Training planned as part of the IUEMTB Project (done outside Cambodia)

89. The training planned to be provided the external specialized training providers not available inside Cambodia but only possible to be conducted outside is listed in Table 9 below.

Training conducted by external training providers (training provided outside Cambodia)	
No.	**Course / Training Name (ID)**
16	Policies and Guidelines on Involuntary Resettlement during Implementation
17	Use of GIS in the planning of urban infrastructure projects
18	Climate Change Resilience Measures and Disaster Risk Management of Urban Infrastructures
19	Design of Anaerobic Waste Water Treatment Plant FIDIC Contract Management
20	Tendering, Procurement, and Negotiation Skills
21	FIDIC CLAIMS CLASS Contract course
22	Supervision, QA and control during construction of drainage/sewerage conveyance
23	Supervision, QA and control during construction of Anaerobic Waste Water Treatment Plant
24	Basic Operation and Maintenance of Solid Waste
25	Basic Operation and Maintenance of Wastewater and Drainage
26	Urban Asset Management
27	Management, Operation and Maintenance (MOM) of Solid Waste - Exposure Visit
28	Management, Operation and Maintenance (MOM) of Wastwater/Drainage - Exposure Visit
29	Exposure on Urban Planning and Management
30	World Water Week (Stockholm International Water Institute) - 2018 and/or 2020

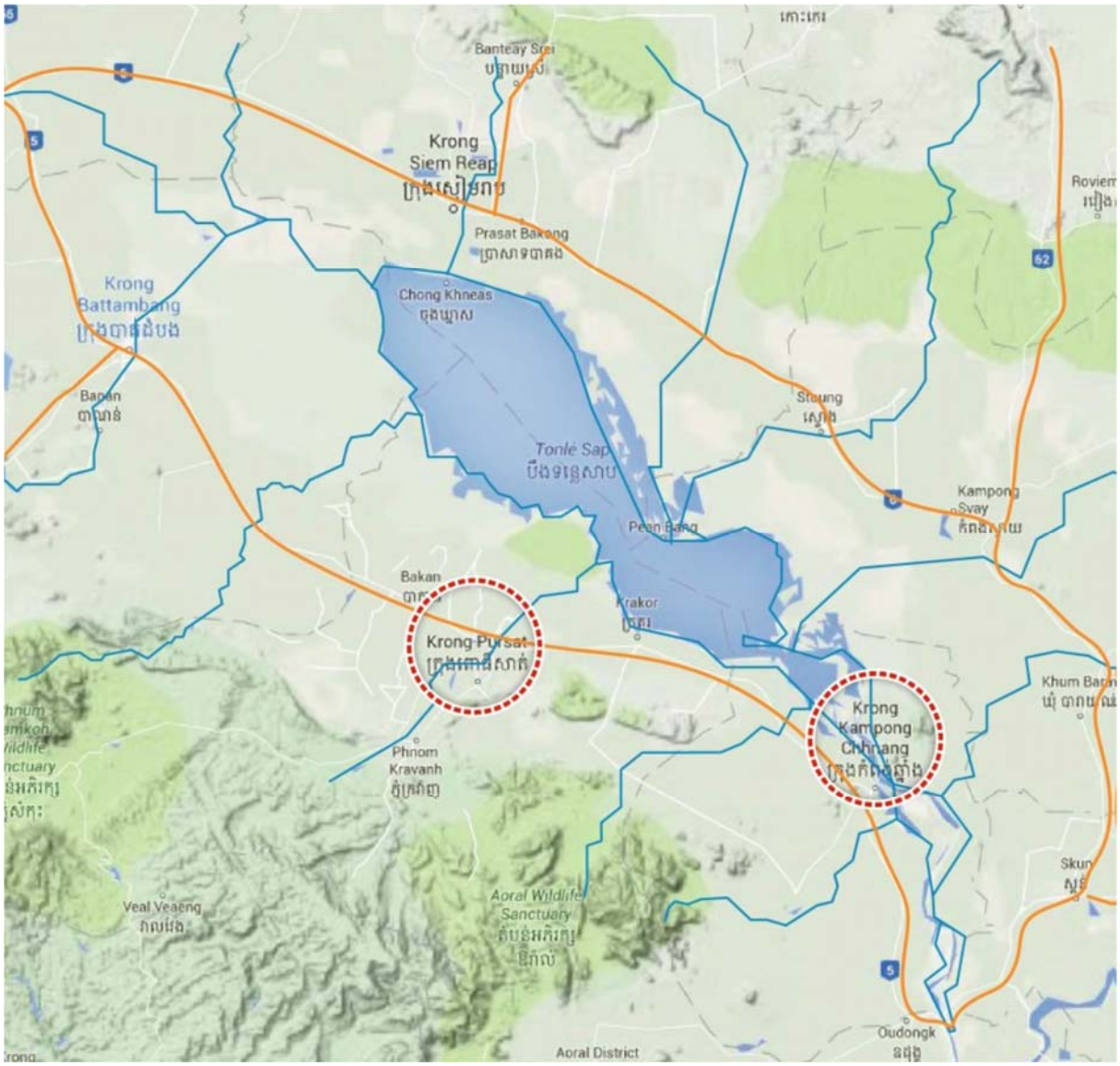
Table 9: Training conducted by external training providers (provided outside Cambodia)

90. When referring to Output 1 of this PMIS consultancy, namely to “strengthening the capacity of the MPWT, provincial government and municipalities through on-the job training in urban management, project

identification and structuring" along with the more detailed description of project deliverables of the ToR, it can be seen that the training packages developed (packages 1 to 30) will very comprehensively cover the key topics described in the ToR and of course much more.

Annexes

Annex 1: Map of Target Areas/Municipalities



Annex 2: Overview of Water Sector Institutions in Cambodia

Sector Leadership Roles

Responsibility for water supply and sanitation lies primarily with three ministries: the Ministry of Industry and Handicrafts (MIH) for urban water supply; the Ministry of Public Works and Transport (MPWT) for urban drainage, sewerage and operation of treatment plants; and the Ministry of Rural Development (MRD) for rural water supply and sanitation. Provincial departments of these ministries undertake related functions at sub-national level such as drainage and sewerage under PDPWT, while in the urban water supply sector two state-owned enterprises are functioning as autonomous utilities in Phnom Penh and Siem Reap whereas PDIH is in charge of operation water supplies in other cities. MRD extends its presence to provincial level and to a much lesser extent to district offices, as the latter are not well resourced and have limited or no staff responsible for water supply and sanitation. Other central agencies with lesser roles in the sector include the following:

The Ministry of Water Resources and Meteorology (MOWRAM) issues permits which are required for water abstraction of water over a defined level.

The Ministry of the Environment (MOE) is responsible for setting standards, monitoring, and regulation for effluents discharging into water bodies as defined by the sub-decree on water pollution control issued in 1999. However, in practice, it only monitors industrial on-site wastewater treatment facilities and does not monitor domestic or public wastewater.

The Ministry of Education, Youth and Sport (MOEYS) has responsibility – in coordination with MRD - for school sanitation via the School Health Department, though activity in this area has generally been limited to donor-funded construction of facilities with little attention to hygiene promotion. A positive step is the issuance of a joint decree (prakas) by MOEYS and MRD on “School to Community WASH” in 2010, which is operationalized with the support of UNICEF, GiZ (German International Cooperation) and NGOs active in this area. However, as of 2013 access to clean water and sanitation in schools remained low, with many sanitation installations reportedly locked and inoperable, according to the Education Management Information System. Information on access to WASH (Water, Sanitation and Hygiene) facilities in health centers is not routinely recorded. It is expected that sector-wide education and health programs will pay increasing attention to improving these low access rates.

The Ministry of Health is responsible for adequate water, sanitation and hand washing facilities in health centers, in coordination with MRD. The Department of Preventive Health also has a role in hygiene promotion and has issued an Environmental Health Action Plan, although its implementation on the ground is limited and coordination with MRD has room for improvement.

The Ministry of Land Management, Urban Planning and Construction is responsible for checking the adequacy of water supply provision in new development areas.

The Ministry of Interior, notably the Secretariat of the National Committee for Sub-National Democratic Development, play a role in supporting the implementation of the decentralization and deconcentration reform in close coordination with line ministries, such as MRD. While the Organic Law of 2008 formalized the start of decentralization and deconcentration, control of financing and of most technical capacity remains at central government level. Local authorities such as municipalities, as part of their general mandate for poverty reduction, could play, and to some extent are already playing, a much more pronounced role in water supply and sanitation with support from provincial departments. However, capacity for planning and implementation is weak at sub-national level.

Sector Coordination

Two working groups have been set up to help coordinate the activities of government and external agencies operating in the sector. The Infrastructure and Regional Integration Technical Working Group (IRITWG) is chaired by the Minister of MPWT (Ministry of Public Works and Transport) and in 2010 a formal sub-group for urban water supply was established, chaired by the Ministry of Industry and Handicraft. The frequency of meetings and the fact that the sub-TWG has not yet officially augmented its official mandate to cover urban sanitation remains a constraint for more programmatic support to the urban sector.

The Technical Working Group for Rural Water Supply, Sanitation and Hygiene, which includes a secretariat, was formally established in 2007. Meetings are expected to take place quarterly and are chaired by the Minister of MRD with a development partner acting as co-chair on a rotating basis (since 2011 UNICEF). The rural subsector also has a monthly coordination meeting for knowledge sharing, which has been in place for over 20 years and is chaired by the Director of the Department of Rural Water Supply. Subgroups are formed under this umbrella to focus on particular areas of interest. Currently, the rural subsector is considering ways to improve the monthly coordination meeting so as to play a more strategic role for sector development.

Urban Water Supply

In the absence of an independent regulator, and as outlined in the National Strategic Development Plan 2014-2018, the MIH, through its Department of Potable Water Supply, has responsibility for urban water supply policy, strategic planning, regulation and sector oversight, including the licensing of private water operators. While tariffs of public utilities require approval from the Prime Minister, in the recent past the tariffs of private operators have mostly been determined through local negotiation with hands-off involvement of MIH. As per the 2014 licensing decree, tariffs will be stipulated in the license issued by MIH, requiring consultation at local level. No official guidelines, procedures nor method is presently available for tariff setting and review for public and private water operators. The Department of Potable Water Supply, which has around 20 staff, is faced with high demand, leaving some departmental functions only implemented in full when there is technical and financial support from development partners. MIH responsibilities in provincial and small towns include monitoring drinking water quality standards in piped systems and supporting the licensing of private operators.

Following extensive reforms and investment and capacity building support from multiple development partners, the Phnom Penh Water Supply Authority (PPWSA) has become very successful over the last decades. It has a listing on the Cambodia Stock Exchange and a high level of operational autonomy, with its Board of Directors headed by the Governor of Phnom Penh Municipality. As a state-owned enterprise, the water supply infrastructure remains in government ownership. Similarly, Siem Reap has also moved to an autonomous utility model. Following the recent privatization of a number of provincial public water works, there still remain ten provincial water works under the Department of Potable Water Supply. Institutional arrangements for the non-autonomous utilities are in stark contrast to the PPWSA; they are bound by government rules and compensation systems, have difficulty attracting skilled staff, have little incentives to improve performance and operational efficiency, and suffer from limited public investment allocation for the expansion of services.

Small-scale private operators also play a significant role in water supply provision, particularly in rural growth centers and emerging towns. There are an estimated 300 operators at present, though only 147 (approximately) are licensed, while MIH is currently trying to bring all non-licensed operators into its sphere of monitoring with, as a first step, a survey to identify all unlicensed ones. In 2013 it was estimated that over 1 million people were currently being served by the domestic private sector. However, small private operators are not yet properly regulated, have limited capabilities and struggle to access capital for service improvements and expansion. Several development partners have been supporting private operators, through experimenting with various Public Private Partnership arrangements in the past. Understanding the potential of the private water market, development partners like AFD and WSP have focused on creating a more favorable environment to access financing through local banks, and the provision of business development services to improve performance and develop bankable investment proposals. The Cambodia Water Association of private water operators, established in 2012, now serves over 50 members with 70 licenses.

Urban Sanitation

The Ministry of Public Works and Transport is responsible for policy, planning, coordination and the implementation of investment projects. In 2011 a mandated department under MPWT was established to set technical standards and tariffs for urban sanitation. However, this department is in the early stages of development and is not yet fully staffed and resourced. Provincial departments of MPWT are responsible for planning, project implementation and O&M of drainage, sewer and treatment facilities (treatment facilities are only present in Siem Reap, Sihanoukville and Battambang). Fee collection arrangements differ from city

to city, with PPWSA providing this service through their water bill. Improving on-site sanitation and the safe collection, management, treatment and disposal of fecal sludge does not rank high on the priority list of MPWT and/or cities themselves. Private sector involvement in fecal sludge management is so far limited and largely unregulated.

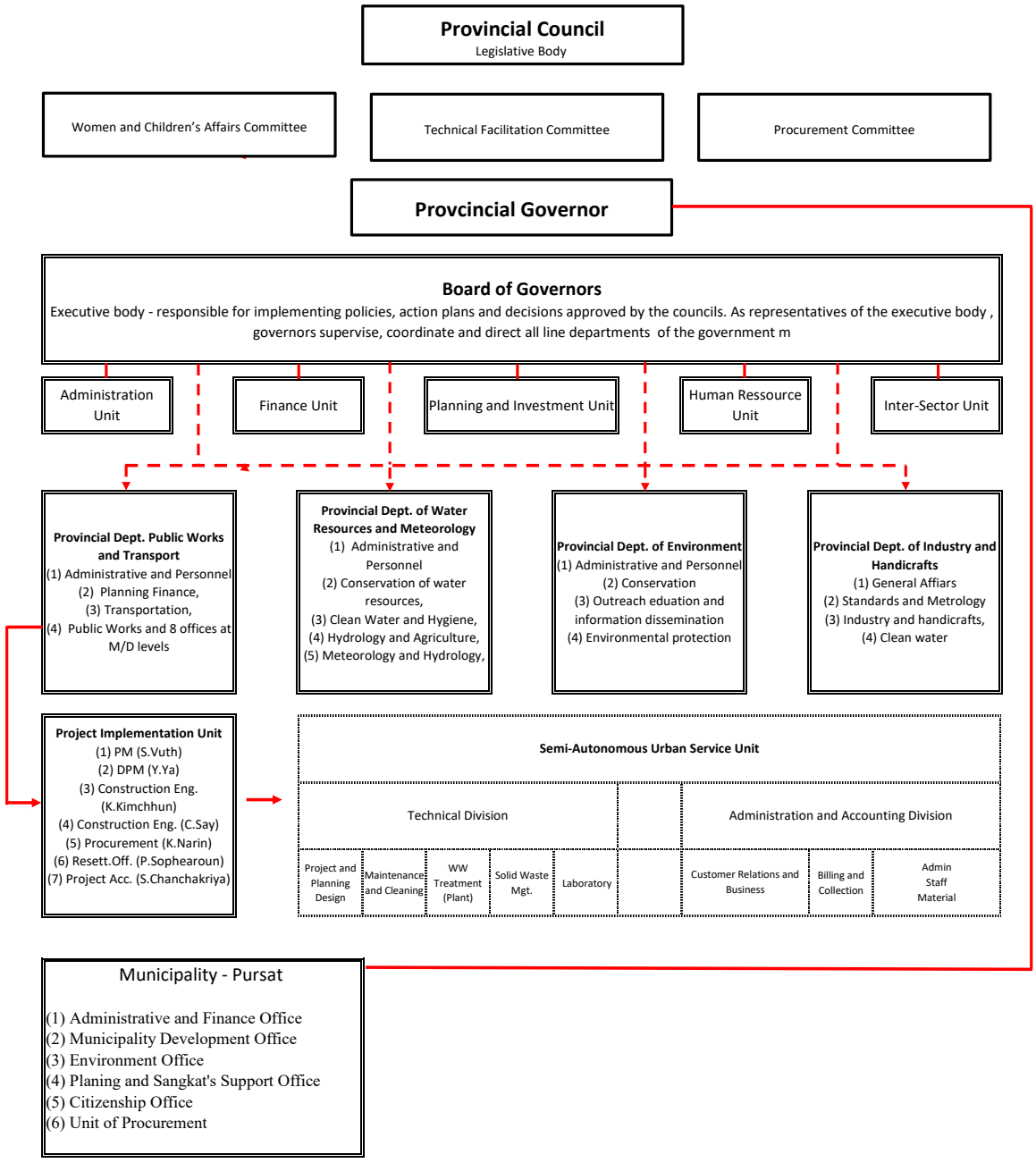
Rural Water Supply and Sanitation

The Ministry of Rural Development (MRD) is the lead agency for rural sanitation and water supply, via the Departments of Rural Health Care (DRHC) and Rural Water Supply (DRWS) respectively. MRD has offices at provincial and district level. In line with the Strategic Plan for Rural Water Supply, Sanitation and Hygiene (RWSSH), the intention is to strengthen the district offices; few district offices are functional in the water and sanitation domain. Both domestic and externally funded projects are channeled through the ministry, leading to rather top-down implementation in limited geographic areas. While there are numerous local and international NGOs facilitating service delivery and demand creation in rural water supply and sanitation, these efforts are fragmented and not always mutually supportive due to a lack of consistency in operational approaches. PDRD offices often do not effectively coordinate NGO inputs at national or sub-national level and no programmatic guidelines have been issued for implementation of the RWSSH Strategy. The NSDP 2014-2018 provides the directions to move to a programmatic national approach. The vision is for MRD and PDRD to be facilitating and technical supporting the district offices and sub-national administrations. Districts and communes, including the Commune Council for Women and Children, are expected to then play a larger role in the delivery of services, in close coordination with local private sector businesses. This will also require that sufficient human and financial resources are made available at local level. The clarifications of institutional roles and responsibilities and the legal basis for such functional assignment will be an important part of putting the Strategy into practice. Moreover, enforcement of water quality guidelines for rural water supply is under resourced, nor is much attention given to regulating multiple bottled water plants. Regulations on drilling, that could help prevent contamination of shallow aquifers, have not yet been developed.

Since 2006 the Department of Rural Health Care has worked closely with development partners to introduce and scale up demand responsive approaches to sanitation and hygiene promotion, including Community Led Total Sanitation (CLTS) and behavior change communications. A lot of experience has been gained in sanitation marketing, leading to over 150,000 latrines being sold through the private sector over recent years. However, there is as yet no roadmap to show how the engagement of the private sector can effectively be institutionalized and facilitated by government at different levels.

For rural water supply, current policy envisages community management of rural water supplies via Water and Sanitation User Groups (WSUG). Progress here is hampered partly by the fact that institutional arrangements under deconcentration and decentralization are not clear, accountability mechanisms and clear procedures are missing, and citizen engagement and voice is not yet mainstreamed in social accountability initiatives, such as through community scorecards under the social accountability framework. This leaves a vacuum in the rural water supply sector, where sustainable post-construction support, both technical and managerial, is missing.

Annex 3: Organisational Set-up at Provincial Level (related to wastewater and SWM)



Annex 4: Proposed Capacity Development Programme (as proposed by the PPTA)

Project Implementation Staff in the Project Towns, who will service on the Project Management Units, (PIU) will require **extensive training in project management** to carry out their duties. Many of these staff have not been involved in the implementation of ADB projects in the past and will need increased project management capacity to assist with project implementation. While staff of the Executing Agency/Project Management Unit (EA/PMU) have had prior experience in project implementation a number have been included in the proposed training to update their knowledge and experience.

The Capacity Development Plan proposes training to be provided in the following:

- Project Management
- Procurement Management
- Financial Management
- Customer Management
- Social and Safeguards
- Gender Mainstreaming
- Environment Management
- Urban Infrastructure Operations and Maintenance
- Monitoring, Reporting and Evaluation
- Solid Waste Management

The rationale and training needs under each of these headings are explained in the paragraphs below. A summary of proposed training activities is shown in Table 9.2. and the estimates costs of the capacity development programme are shown in Table 9.3.

For all Project training activities, it is recommended that a PMU Officer be responsible for the coordination of training activities, through consultation with the PIC and the Provincial and Municipal Administrations. Consultation will also need to take place with training programs being carried out by of other donors, such as the EU SPACE Project and the ADB TA Capacity Management for Urban Management Project.

Informal training, consisting of participation in construction works is foreseen as one of the most important components of the training program targeting the technical personnel.

The Capacity Building Plan will be implemented by the EA through the PMU. Capacity building assistance and training programs on financial and procurement management will need to be closely coordinated with the Ministry of Economy and Finance. PMU will work closely with MOE on the training programs involving the updating of the EMPs and mitigation measures on environment safeguards. The capacity development on gender consideration will need to be coordinated with the Ministry of Women's Affairs and sustainability measures will need to be developed during Project implementation. The training programs on the O&M of urban infrastructure will need the participation of both provincial Municipal Administrations to ensure sustainability of O&M arrangements.

Specialized capacity building and training programs will be coordinated with relevant training institutions and Human Resource Development learning centers.

<u>Project Management</u>

Project Implementation Staff in the Project Towns, who will service on the Project Management Units, (PIU) will require extensive training in project management to carry out their duties. Many of these staff have not been involved in the implementation of ADB projects in the past and will need increased project management capacity to assist with project implementation. While staff of the Executing Agency/Project Management Unit (EA/PMU) have had prior experience in project implementation a number have been included in the proposed training to update their knowledge and experience.

<u>Procurement Management</u>

The EA, PMU and PIUs will **need to understand and follow ADB and RGC procurement** procedures. This assistance will need to include formal and informal training through on-the- job sessions which will include bidding documents, including specifications, selection criteria as well as bid evaluation processes. It

is envisaged that most Project procurement will be carried out by the EA/PMU however knowledge of the systems and procedures of both ADB and RGC will be required by PIUs as they will be involved in the preparation of procurement plans and terms of reference.

The Ministry of Public Works and Transport (MPWT) has a Procurement Committee but no formal Procurement Department. Procurement staff from MPWT, who will serve on the PMU, will have had some procurement experience from previous donor projects but further capacity building will be required.

The capacity building and training programs for procurement management has been identified for the training of EA, PMU, PIUs of the Project Towns as well as Provincial and municipal authority staff.

Financial and Management

Kampong Chhnang Municipality

The Financial Management Assessment (FMA) shows that Kampong Chhnang Municipality (KM) has no experience in implementing ADB- or other donor-funded projects. The finance staff of KM has experience only with the Government's accounting policies and procedures, and are not familiar with ADB's Loan Disbursement Handbook and the government's May 2012 Standard Operating Procedures (SOP) Manual for externally-financed programs and projects. Their experience and past training have been limited to public financial management. Establishing and organizing the PIU with competent staff, preferably by staff knowledgeable in implementing ADB- or other donor-funded projects will need to be a priority of the municipality. The finance staff of KM is relatively young but eager to learn. Training them in all facets of project financial management and reporting will be essential if the project is to be implemented successfully as well as ongoing accounting, budgeting and financial reporting procedures.

The KM has no computerized financial management and reporting system for the proposed PIU. They are aware of computerized accounting software, such as Quick Book and Peachtree, but have no experience working with such systems. Financial reports are prepared using spreadsheets. Since the computerized accounting software is one of the key internal controls stated in the government's financial management manual for externally-financed programs and projects, it is recommended that a computerized accounting system be procured and/or developed by KM for use in the project. Training the staff on the use of the computerized accounting system will be necessary.

Pursat Municipality

Pursat Municipality (PM) accounting staff are similar to KM staff as they do not have experience in implementing ADB- or other donor-funded projects. It has no experience in managing an imprest fund and in preparing SOEs. The PIU which will be staffed from the various offices and units of the municipality and will need training in financial management and reporting for ADB projects. The finance and accounting staff of the municipality are trained in the government's accounting policies and procedures, but are not familiar with ADB's Loan Disbursement Handbook and the government's May 2012 SOP for externally financed programs and projects.

Developing a computerized project financial management and accounting system will have to be a priority for the PIU. The current system in use is very basic and needs to be further developed. Staff training on the uses and applications of the system is recommended for the ongoing operations and financial management and reporting functions for the municipality.

Ministry Public Works and Transport/General Department Public Works

The preliminary results of the FMA indicate that MPWT/GDPW has the basic financial reporting and management systems necessary to implement the project. It has previous experience using an imprest fund and is familiar with the SOE procedures of the ADB. While GDPW has no accounting and finance staff, MPWT as in the case of previous ADB-funded projects will assign financial staff to the PMU. All project transactions will be verified by the finance officer and approved by the project director. MPWT has an existing chart of account which is adequate to generate the financial reports of the project. It has policies and procedures manual for projects which comprises standard operation procedures (SOP), a procurement manual, a financial management manual, and a project administration manual.

Preliminary recommendations for improving the financial management system of MPWT/GDPW for the project include: (i) technical support in project financial management and administration, and (ii) a

computerized project accounting system. In addition, staff training on financial management and project accounting will have to be conducted.

Customer Management

The One Window Service Office (OWSO) is operating in the municipal offices in both Project Towns as pilot programs to provide services which were previously provided by a number of different departments. However, the Municipality does not have enough technical staff to implement OWSO, and the Program deputes technical staff from Provincial Departments to work under the OWSO within the Municipality.

In the process of Decentralization and Deconcentration (D&DD, all approvals (permits, licenses, etc) which were previously secured from the Departments are now available through the OWSO. The public services provided through the OWSO are supposed to be provided effectively, efficiently, timely, reliably, inexpensively and with good quality. OWSO performance monitoring indicators were introduced under the Demand for Good Governance Project (DFGG) supported by World Bank. To meet these standards training is required in the different functional areas.

Social and Environmental Safeguards

Social and environmental safeguards are an important component of all ADB Projects and training of EA/PMU and PIU staff will be required in the design and methodology for undertaking the poverty and social assessment (PSA), conducting PSA surveys as well as data and information analysis. These training programs will incorporate the provisions of the national policies and requirements of the ADB Safeguard Policy Statement.

Gender Mainstreaming

Gender mainstreaming forms part of project activities to assess risk of being disadvantaged by the project impacts, or have the risk of not realizing the full potential of project benefits and opportunities if gender issues are not mainstreamed in project management and implementation. Participatory workshops with Provincial and Municipal authorities, as well as Project Staff will be required for updating the gender action plan (GAP).

Capacity building measures will also be required to improve knowledge and skills of Project staff in respect of gender issues in relation to urban infrastructure. Training programs have been provided towards increasing women's participation in key decision making and implementation arrangements. On-the-job training will be provided on gender related matters.

Information, Education and Communication (IEC) programs have also been provide for in the Capacity Development Plan to improve improving the participation of women in urban community development through the Project Towns urban communities.

Environmental Management

Project staff will require training to review the Initial Environmental Examination (IEE) Reports as well as updating the Environmental Management Plan (EMP). Seminars and workshops are proposed as well as consultative forums, to provide public awareness on the impacts and mitigating measures required for urban infrastructure projects in the Project Towns.

Operation and Maintenance of Urban Infrastructure

Operation and maintenance manuals will need to be prepared by the Project Implementation Consultancy (PIC) in cooperation with the PMU and PIUs and training will be provided on the implementation of these manuals. This training will need to be provided to Provincial, Municipal and Project implementation staff. The training can be provided by workshop sessions, group discussions as well as on-the-job training. . The workshop sessions will need to include details on operation and maintenance activities required and the delineating the roles and responsibilities of each organization.

It is assumed that the Municipality in each town will be responsible for the ongoing operation, maintenance and repair of the urban infrastructure being constructed under the Loan Project. It is recommended that the PIU staff that receive extensive training and work experience on the PIU be transferred to the permanent staff on the Municipalities on completion of the Project, to increase the organizations institutional capacity to carry out its functions efficiently and effectively.

Training programs are also required for revenue generation and collection to provide funds for operation and maintenance of the urban infrastructure being constructed. The management and maintenance of revenue generation and collection will need to be included in the TOR for the PIC.

Monitoring, Reporting and Evaluation

A Project Performance and Monitoring System (PPMS) will need to be developed with the assistance of the PIC at project commencement and this will involve the use of projected targets, performance indicators, assumptions and risks in the Design and Monitoring Framework.

The PMU will be required to monitor report and evaluate Project progress against the PPSM. This will involve site inspections and validation activities against approved plans. The training provided in Table 6.9 will assist the Project staff carry out the monitoring, reporting and evaluation activities that are required during Project implementation.

Solid Waste Management

The skills and experience of Provincial and Municipal staff will need substantial upgrading in solid waste management to manage the controlled landfill operations and associated activities to be established under the Project.

Training would be best achieved by spending some time at a correctly functioning controlled landfill to observe all aspects of operation. Formal education is not a prerequisite as it is experiential knowledge that is required. These required skills are not text book based and observation is the best form of education together with some office based training on the theory.

Institutionally the waste management general manager will also need to attend controlled landfill operations training as well have an accounting capability to manage costs and budgets, as well as review monthly operational reports and prepare summaries for senior management.

The engineer will need training on controlled landfill design by visiting operational controlled landfills of a similar type. These skills are not only text book based and observation is the best form of education together with some office based training on the theory.

This initial support could be made part of the responsibilities of the PIC who will undertake the detail design, construction supervision, commissioning and training for the project.

However the main requirement for institutional support revolves around the ongoing operation of the facility. In most cases with the contract for detailed design and construction supervision of a new Solid Waste Management facility, there is a training program prior to handing over the works as part of the deliverables. However this alone is unsustainable as the skills learned during the short term training program do not translate well to the on-going operational responsibilities.

Further information is provided in the Project's Solid Waste Management Reports for Pursat and Kampong Chhnang on costs for Information, Education and Communication Costs relating to solid waste management.

Table 9.2 Summary of Proposed Training Activities

Activity	Short Courses	On-Site Training	Study tours	Workshops Seminars Lectures Forums
Project Management				
Project Management	■	■		■
Work and Financial Plans		■		■
Public Awareness				■
Project Administration	■	■		
Establish & Manage Project Website		■		
Procurement Management:				
ADB Procurement Guidelines		■		■
Contract Management		■		■
Prepare Procurement Plans	■			
Procurement Methods and Procedures	■	■		■
Financial Management				
Financial Procedures & Management	■	■		■
Imprest Account and Funds Disbursement	■			■
Project Financial Controls & Accounting		■		■
Financial Accounting & Management	■	■		■
Customer Management:				
Customer Service	■			■
Customer Complaints Management	■			■
Social and Safeguards				
Poverty & Social Assessment				
Consultation and Participation Approaches	■			■
Stakeholder Awareness Raising	■			■
Data Generation &PFMS				■
Gender Mainstreaming				
Gender Sensitization				■
Gender Action Training				■
Gender Awareness and IEC Training	■			■
Environmental Management				
Legal Framework, Environment Assessment, Aspects of EA Processes	■			■
EMP Implementation				■
Good Engineering & Construction Practices, Climate Change Adaption & Impacts on Urban Infrastructure	■	■		■
Urban Infrastructure – O & M				
O & M Planning		■		■
O & M Systems & Procedures		■		■
Management Systems for Revenue Collection		■		■
Urban Infrastructure Management Systems & Procedures		■	■	■
Monitoring, Reporting and Evaluation				
PPMS Training		■		■
Physical & Financial Reporting		■		■
Monitoring Compliance of Safeguards				■
Solid Waste Management				
Management Systems & Procedures		■	■	■
Landfill Management		■	■	
Solid Waste Collection		■		■

Table 9.3 Estimated Costs for Capacity Development

			Unit	Quantity	Unit Cost	Total Cost
1	**a**	**Consultant Renumeration & Per Diems**				
		International Consultant				
		Capacity Development Specialist	P/Mths	8	22,000	176,000
		Human Resource`Specialist	P/Mths	5	18,000	90,000
		Per Diems - International	Days	390	90	35,100
		Sub-total (International Consultants)				**301,100**
		National Consultant				
		Capacity Development Specialist	P/Mths	18	3,500	63,000
		Training Coordinator	P/Mths	12	3,000	36,000
		Human Resources Specialist	P/Mths	8	2,500	20,000
		Per Diems - National	Days	200	30	6,000
		Sub-total (National Consultants)				**125,000**
	b	**International and Local Travel**				
		International				
		International Airfare	No. Trips	8	2,000	16,000
		Local Travel				
		Vehicle Running Costs	Months	24	1,500	36,000
		Sub-total (National Consultants)				**52,000**
2		**Training Seminars & Workshops**				
		Domestic Training, Seminars & Workshops	LS			150,000
		Study Tours - Outside Regional	No. Participants	16	4,000	64,000
		Study Tours - Regional	No. Participants	16	1,500	24,000
		Travel Expenses	LS			33,900
		Sub-total (Capacity Development Plan)				**271,900**
				Sub-total 1 + 2		**750,000**
			Total Training Plan & Consultancy			**750,000**

Annex 5: Training Needs Assessment Questionnaire

Integrated Urban Environmental Management in the Tonle Sap Basin Project (IUEMTSBP)

Consulting Services for Project Management and Implementation Support (PMIS, Package 1)

Training Needs Assessment Questionnaire

To be completed by Municipality/PIU Staff
(Kampong Chhnang and Pursat municipalities)

This questionnaire will support the identification of your training needs as a staff member of the municipalities/PIUs. The assessment will provide information that will be used in the preparation of the Capacity Development Program/Plan for submission to the PMU/ADB.

The questionnaire includes questions related to your educational background, skills required for executing your job responsibilities, training/s received, training needed, etc.

For further information, contact:

- **Mr. Srey Socheat, DTL - IUEMTSB/PMIS, sreysocheat2002@yahoo.com)**
- **Mr. Claes Clifford, , CDTA Deputy Team Leader [0969381939, ccl@niras.dk]**

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1. **Province:**
2. **Full name [Ms/Mr]:**
3. **Age group: [20-29]; [30-39]; [40-49]; [above 50]**
4. **Phone number:**
5. **Email address:**
6. **Current position:**
7. **Number of subordinates (if any):**
8. **Level of education:**
9. **Area of education specialization:**
10. **Years of experience:**
11. **Number of years in your current position:**
12. **What are your current three most important duties/responsibilities?**

    (i) _____

    (ii) _____

    (iii)_____

13. List any Urban Service (water supply, wastewater or solid waste management) related training courses you attended (if any):

14. What is the total number of days of training you have received?

15. Describe the type of training you need to enable you to better perform in your current job:

16. Do you have the resources (supplies, equipment, transport & funds) you require to do your job? Please explain.

17. What are the three main job related constraints that you faced during the past 12 months?

(i)_____

(ii)_____

(iii)_____

18. Describe what you know about solid waste management:

19. Describe what you know about drainage and wastewater management:

20. Describe the type of training you need to enable you to plan and implement solid waste management and drainage/wastewater management duties in the future:

_____

General Remarks:

_____

Thank you for your time!

Annex 6: Summary of TNA Replies (Based on Province)

Provincial Department of Public Works and Transport Kampong Chhnang	Existing			Responses	
	Adm.Staff	Tech.Staff	PIU	PIU	Others
Management Department	1	4	2	2	0
Administrative and Personnel	2	3	0	0	0
Planning Finance,	2	8	2	2	0
Transportation,	1	13	0	0	0
Public Works and 8 offices at M/D levels	6	9	2	2	8
Total	12	37	6	6	8

Provincial Department of Water Resources and Meteorology Kampong Chhnang	Existing			Responses	
	Adm.Staff	Tech.Staff	PIU	PIU	Others
Administrative and Personnel,	0	0	0	0	0
Meteorology and Hydrology,	0	0	0	0	0
Conservation of water resources,	0	0	0	0	0
Clean Water and Hygiene,	0	0	0	0	0
Hydrology and Agriculture,	0	0	0	0	0
Total	0	0	0	0	0

Provincial Department of Environment Kampong Chhnang	Existing			Responses	
	Adm.Staff	Tech.Staff	PIU	PIU	Others
Personnel and Finance,	0	0	0	0	0
Local Development,	0	0	0	0	0
National Park,	0	0	0	0	0
Sanctuary,	0	0	0	0	0
Multiple Usage,	0	0	0	0	0
Education and Information Dissemination,	0	0	0	0	0
Environmental Protection,	0	0	0	0	0
Total	0	0	0	0	0

Provincial Department of Industry and Handicrafts Kampong Chhnang	Existing			Responses	
	Adm.Staff	Tech.Staff	PIU	PIU	Others
General Affairs,	0	0	0	0	0
Standards and Metrology,	0	0	0	0	0
Industry and Handicrafts,	0	0	0	0	0
Clean Water,	0	0	0	0	0
Unit of Water Supply,	0	0	0	0	0
Total	0	0	0	0	0

Kampong Chhnang Municipality	Existing			Responses	
	Adm.Staff	Tech.Staff	PIU	PIU	Others
Management Department				1	
Administrative and Finance	1	5	0		
Economy and Society				1	
Planning and Sangkat's Support					
One Window Service					
Municipality development					
Citizenship					
Unit of Procurement				2	0

Provincial Department of Public Works and Transport Pursat	Existing			Responses	
	Adm.Staff	Tech.Staff	PIU	PIU	Others
Management Department	0	3	2	2	0
Administrative and Personnel	2	4	1	1	0
Planning Finance,	1	5	1	1	0
Public Works,	1	6	1	0	0
Transportation,	3	6	0	0	0
Unit of Road and Bridge,	0	5	0	0	1
Unit of Drainage and sewage treatment plants	2	3	0	0	0
Unit of Public Order Management,	1	2	0	0	0
Total	10	34	5	4	1

Provincial Department of Water Resources and Meteorology Pursat	Existing			Responses	
	Adm.Staff	Tech.Staff	PIU	PIU	Others
Administrative and Personnel,					
Meteorology and Hydrology,					
Conservation of water resources,					
Clean Water and Hygiene,					
Hydrology and Agriculture,					
Total	0	0	0	0	0

Provincial Department of Environment Pursat	Existing			Responses	
	Adm.Staff	Tech.Staff	PIU	PIU	Others
Management Department				0	1
Personnel and Finance,				0	0
Local Development,				0	1
National Park,				0	1
Sanctuary,				0	0
Multiple Usage,				0	1
Education and Information Dissemination,				0	1
Environmental Protection,				0	2
Total	0	0	0	0	7

Provincial Department of Industry and Handicrafts Pursat	Existing			Responses	
	Adm.Staff	Tech.Staff	PIU	PIU	Others
Management Department	0	3	0	0	0
General Affairs,	1	0	0	0	0
Standards and Metrology,	0	1	0	0	0
Industry and Handicrafts,	1	0	0	0	0
Clean Water,	0	1	0	0	0
Unit of Water Supply,	0	0	0	0	0
Total	2	5	0	0	0

Pursat Municipality	Existing			Responses	
	Adm. Staff	Tech. Staff	PIU	PIU	others
Management of Municipality				1	0
Administrative and Finance					1
Municipality Development					1
Environmental					1
Planningg and Sangkat's Support					
Citizenship					
Unit of Procurement	0	0	0	1	3

Integrated Urban Environmental Management in the Tonle Sap Basin Project - Overview of responses from TNA questionnaires (Kampong Chhnang)

02	Full name [Ms/Mr]:	Mr. Chhay Leaphea	Mr. Yin Borinn	Mr. Keo Vet	Mr. Eang Huor	Mr. Meas Yuthynavann	Mak Solim (Mr.)	Mr. Prum Chansopheap	Mr. Sok Chanveasna	Ms. Rom Sreyroth	Ms. San Phanna	Ms. Say Somuntha	Ms. Trasom Sophineat	Mr. Khut Khemara	Mr. Dun Sokly	Mr. Keo Monorum	Mr. Lao Pros Tit	Accum.	%
	Age group:																	16	
	20-29										1	1	1		1		1	5	31%
03	30-39			1	1	1	1	1	1	1				1		1		9	56%
	40-49	1	1															2	13%
	above 50																	0	0%
04	**Phone number:**	089 777 785	012 947 463	098 353 906	012 64 74 36	012 971 773	092 386 000	010 22 55 86	095 69 50 40	078 89 30 63	015 32 65 83	096 23 64 622	093 29 27 84	070 817 207	087 35 64 76	010 65 93 46	070 77 66 87		
05	**Email address:**			kchdpw@gmail.com	ieng_huo@yahoo.com		www.moksolim@gmail.com		sokchanveasna02@gmail.com		sanphanna999@yahoo.com		phenettrasom@gmail.com	khemrace2007@gmail.com	dunsoklybest168@gmail.com	monoromnpic@yahoo.com	laoprostit87@gmail.com		
06	**Current position:**	Deputy Director	Deputy Director	Vice Chief of PW office	Technical staff	Chief of Planning Office	Deputy Director, KPC Municipality	Chief of Office-Economy and Society	Staff of P&F Office	Staff of PW office	Contracted Staff PW office	Contracted Staff PW office	Contracted Staff PW office	Staff of PW Office	Staff of PW Office	Contracted staff	Staff of PW office		
	Organization	PDPWT	PDPWT	PDPWT	PDPWT	PDPWT	Municipality	Municipality	PDPWT	PDPWT	PDPWT	PDPWT	PDPWT	PDPWT	PDPWT	PDPWT	PDPWT		
	PIU ?	Project Manager	Deputy PM	Construction Eng.	Construction Eng.	Community Coor.	Community Coor.	Resettlement Officer	Project Accountant										
		1	1	1	1	1	1	1	1								0	8	
07	**Number of subordinates (if any):**	24	20	10	0	3	25	2	0	0	0	0	0	0	0	0	0		
	Level of education:																	16	
08	Bachelor Degree	1	1		1	1	1	1	1	1	1	1	1	1	1	1	1	15	94%
	Master Degree			1														1	6%
09	**Area of education specialization:**	Civil Engineering	Civil Engineering	Business	Rural Development	Tourism	General Management	Philosophy	Banking and Finance	Accounting	Accounting	Accounting	Management	Civil Engineering	Management	Civil Engineering	General Management		
10	**Years of experience:**	27	23	12	8	12	11	11	7	9	7	3	5	4	3	7	6		
11	**Number of years in your current position:**	8	5	5	4	2	1	4	6	5	7	2	3	0,5	3	3	6		
12	**What are your current three most important duties/responsibilities?**	Staff monitoring and management	administrative management	I/C of set up of annual planning	Technical QA of infrastructure (roads, drainage, canal)	Coordinator for 3 or 5 year planning setup	Administrative and procurement	Monitoring and documentation	Annual planning setup of provincial dept.	Office work related to accounting and finances	Summary of financial reports	Preparing and archiving	Compiling and preparing report	Design & drawing preparation	Data collection, document management for road-bridge	Supervision of drainage connection & shoulder pavement	Data collection, document management for road-bridge		
		Planning of activities	Staff administrative management	Public work and conduction meeting(s)	Monitoring for right-of-way use, curb/shoulder pavement	Overall supervision of districts, commune/Sangkat	Urban development	Field work (coordination and upervision)	Monthly/quarterly annual report	Prepare financial reports	Annual financial plaining	Delivery of documentation	Data collection and delivery of documentation	Construction supervision	Resettle of affected people RN5, right-of-way	Design and prepare cost estimation for project proposal	Surrey/inventory roads, bridge, drainage		
		Problem solving	Monitoring and problem solving	Staff management	Various reports, project preparation for proposal	Problem solving	Community development	Accountability with leaders & inter-relationship	Administration	Administration	Road maintenance report	Data collection from construction sites	Administration	Data collection	Reporting	Field work monitoring	Reporting		
13	**List any Urban Service (water supply, wastewater or solid waste management) related training courses you attended (if any):**	Joined training for wastewater management	Wastewater management	Wastewater management	SWM , clean water, wastewater	No	Solid waste management	SWM, clean water and drainage	No	No	No	SWM	No	Wastewater management	No	No	No		
14	**What is the total number of days of training you have received?**	3	3	3 days @ Sihanouk Ville 3 days @ Siem Reap	5 days in Thailand, 5 days in Sihahouk Ville and 5 days in Siem Reap	0	1	3, 2 and 1	0	0	0	4	0	1	0	0	0		
15	**Describe the type of training you need to enable you to better perform in your current job:**	SWM	Wastewater management	SWM	Drainage and road	SWM, wastewater and drainage	Leadership, management of funds and public administrative	Enough - and no need	Training related to account or finance	Training related to account or finance	No need	Enough - and no need	No	Wastewater Management and SWM	Training related to current work such as resettlement	SWM, Recycle	Need training SWM, drainage/sewerage for understanding		
16	**Do you have the resources (supplies, equipment, transport & funds) you require to do your job? Please explain.**	Not enough as requirement	Lack of equipment	No	Equipment at field work	No	Fund, transportation	More lacking of resource such as fund	Enough	Fund	Enough	Need some such as equipment	Not enough	No	Funding	Equipment	More lacking of equipment, transport and fund		
17	**What are the three main job related constraints that you faced during the past 12 months?**	Lacking of equipment and fund	Lacking of Drainage System	Lacking of drainage system	Lacking of sewerage system	No problem	Multi work can't manage	No problem	software not update	People do not obey the law	no problem	document difficult to control	Lacking of equipment	Block Sewer	Equipment	Flooded by SW in front of sewer	Lacking of equipment		
		Lack of cooperation from the authorities	Lacking of Sewerage System	Lacking of sewerage system	Lacking of budget for maintenance		Staff lack of knowledge			Overweight trucks		difficult to collect documents	Lacking of fund	People lacking of awareness	resource supplies	No budget for monitoring	Lacking of transport		
		Lacking of drainage system	Roads was subject to damage	Roads was subject to damage	Poor SWM		Human resource						Lacking of transportation		Fund	Need standard landfill	Other equipment		
18	**Describe what you know about solid waste management:**	No specific knowledge	No specific knowledge	No specific knowledge	No specific knowledge	No specific knowledge	Necessity to separate SW, keep, collection, SWM	No specific knowledge	No specific knowledge	No specific knowledge	No specific knowledge	No specific knowledge	No specific knowledge	No specific knowledge	No specific knowledge	No specific knowledge	No specific knowledge		
	Your observations made in KC	The current solid waste mgt. is very poor and does not comply with any standard	Current SWM is not so good - and service not sufficient	Currently poor SWM	Still poor SWM	The poor solid waste mgt. is causing harm to environment	No comments made	The poor SWM causes damage to the environment - but also risk for general public health	No comments made	Observing collecting truck every week to the dumpsite	No comments made	No comments made	No comments made	Not awareness	No comments made	No comments made	Collection truck to take SW and depose to dumping site every week		
19	**Describe what you know about drainage and wastewater management:**	Some - but not sufficient	Some - but not sufficient to management WW well enough	Some - but probably not sufficient	Some - but not sufficient	Some - but probably not sufficient	Know some	Some - but not sufficient	No specific knowledge	No specific knowledge	No specific knowledge	No specific knowledge	No specific knowledge	Some - but not sufficient	No specific knowledge	No specific knowledge	Some - but not sufficient		
	Your observations made in KC	No comments made	Drainage and wastewater is not proper flowing due to blocks and this cause road/HH flooding	Drainage systems not maintained causing flooding	No comments made	No wastewater treatment plant to treat sewerage and HH uses septic tanks	No comments made	Current drainage and sewerage is not proper functioning	No comments made	No comments made	No comments made	No comments made	No comments made	Not awareness	No comments made	No comments made	No comments made		
20	**Describe the type of training you need to enable you to plan and implement solid waste management and drainage/wastewater management duties in the future:**	Technical matters related to sewerage system and SWM	Wastewater and SWM	Drainage and SWM training	Preparation of location of Wastewater treatment (Plant)	SWM and sewerage system	Finance management, planning, SWM at landfill	Technical matters related to SWM, wastewater conveyance system and clean water supply	Wastewater treatment (plant) and SWM	Wastewater treatment (plant) and budget management	No comments made	Strategy to control budget planning	SWM and Drainage	Wastewater treatment (plant)	Technical matters related to SWM, drainage system and clean water	Wastewater treatment (plant)	Wastewater treatment (plant), landfill and planning		

Integrated Urban Environmental Management in the Tonle Sap Basin Project - Overview of responses from TNA questionnaires (Pursat)

	Full name [Ms/Mr]:	Sy Vuth (Mr.)	Bun Tanglay (Mr.)	Phin Narin (Mr.)	Mr. Chou Soeum	Kim Chakriya (Ms.)	Bun Soupheng (Mr.)	Dang Rady (Mr.)	Eng Reaksmey (Mr.)	Koam Entheany (Ms.)	Rin Vanda (Mr.)	Un Chanreaksa (Mr.)	Chea Keosovannarith (Mr.)	OUM Koeun (Mr.)	Long Seng (Ms.)	Suong Sopheanamaly (Ms.)	Sou Sitha (Ms.)	Nhem Ratha (Mr.)	Accum.	%
	Age group:																		17	
	20-29						1					1				1			3	18%
03	30-39		1			1		1	1	1	1		1	1			1	1	10	59%
	40-49														1				1	6%
	above 50	1		1	1														3	18%
04	**Phone number:**	012 986 267	012 39 24 74	012 679 933	012 533 281	092 281 155	086 999 608	012 496 893	012 426 776	088 386 8787	012 68 06 99	088 884 4196	012 818 887	012 875388	097 433 7676/ 092176443	016 778 126	012 543 257/096 871 87 37	077 777 885		
05	**Email address:**			narinphin50@yahoo.com	chousoeum168@gmail.com	kimchakriya@gmail.com	souphengbun@gmail.com	dangradymg@gmail.com	engreaksmey@yahoo.com			unreaksa@gmail.com	narith00007@yahoo.com	umkoeun168@gmail.com				nhemrather@gmail.com		
06	**Current position:**	Deputy Chief	Deputy Governor	Deputy Chief	Chief of Accounting & Planning Office	Vice Chief of Personnel & Adm. Office	Staff of Bridge and Road Unit	Chief of Office, Environmental Protection	Deputy Director, Dept. Of Environment	Staff Office of Education and Publications	Chief of Office Multiuse	Staff of office Environmental protection	Deputy Chief of Local Development Office	Chief of National Park Office	Chief of Office	Administration Staff	Vice Chief of Office	Solid waste collection contractor		
	Organization	PDPWT	Municipality	PDPWT	PDPWT	PDWT	PDPWT	PDE	PDE	PDE	PDE	PDE	PDE	PDE	Environment Office Municipality	Administrative and Finance Office, Municipality	Development, Municipality	n.a.		
	PIU	Project Manager	Deputy Project Manager																	
		1	1	1	1	1													5	
07	**Number of subordinates (if any):**	65	50	64	5	4	0	2	60	0	11	0	1	13	0	0	0	10		
	Level of education:																		17	
	Pre-high school														1				1	6%
08	High school				1					1									2	12%
	Bachelor Degree	1		1		1	1	1			1	1	1	1		1	1		11	65%
	Master Degree		1						1								1		3	18%
09	**Area of education specialization:**	Civil Engineering	Public Administrative	Accounting & Finance	Finance, Accounting & Budget	Management	Civil Engineering	General Management	Management	Public Administration	General Management	Environment	Accounting & Finance	Business management	General Environmental	Agriculture	Accounting	Management of business		
10	**Years of experience:**	24	7	31	30	10	0,5	6	12	5	2	1	5	5	33	2	11	1		
11	**Number of years in your current position:**	6	5	1	1	5	0,25	1	1	5	2	1	0,25	0,25	33	2	11	1		
12	**What are your current three most important duties/responsibilities?**	Site manager	Investment planning-Sangkats	Accounting & Finance PDWT	Proposed budged revenues/expense and prepared projected salaries	Summarized departmental activities	Site engineer of sewers and roads	Promote, control and assess dept. activities	Administration	Education and dissemination of information related to the environment	environment awareness and hygiene	Admin in office	Community alliance in natural conservative area	Planning and operation of local work	Watchdog and monitoring	Municipal admin staff	Jobs assigned or delegated by superiors	Contractor to transport waste out of Pursat town		
		Control site work progress	Health, religion, tourism	General administration	Prepared budged plans, accounting system and record.	Issued various application letters for/of the dept.	Administration	Supervision on water quality (pollution)	Human resources	Preparation of technical material	Monitoring fishery regulation and enforcement	GIS database and mapping for natural protection	Create of new communities	Field work	Inspecting, ensuring non-polluted contracts if any in Sangkats	General work at office	Economy, society, environmental protection, & natural resources	To clean (hygiene) and transport solid waste out of Phathei Pursat		
		Road maintenance	Finance, clean city, clean water, 3 year rolling Plan	Road works, Budget, repairs and maintenance	Administration	Staff management	Data collection / monitoring	General environment education and awareness	Finance & state-owned properties	Administration	Monitoring forestry regulation and enforcement	Various jobs assigned by director	Find partner organization to provide training agricultural and eco-tourist communities	Management	Management	Management	Data analysis of birth rate			
13	**List any Urban Service (water supply, wastewater or solid waste management) related training courses you attended (if any):**	Preliminary study on IUEMTSB II. Second Interim Workshop Agenda Capacity Building and SWM pre-feasibility study designs	Wastewater management Water treatment tank (constructed wetland)	None	None	Natural wastewater treatment of urbane environment management	None	Wastewater treatment by nature	Never attended	Never	Never	Visited wastewater treatment in Battambang	None	Never	Solid waste and economic	Never	None	None		
14	**What is the total number of days of training you have received?**	4	4days @Siem Reap 2days @ADB's office	0	0	2	0	2	0	0	0	1	0	0	420 (14 months)	0	0			
15	**Describe the type of training you need to enable you to better perform in your current job:**	SWM, new technology for road construction, road maintenance, road topography survey	Human resource, finance, wastewater management, SWM	Job in relation with ADB project, Tonle sap I & II administrative, finance and general management	Drainage and maintenance sewer system	SWM of ADB, administrative skill, wastewater management	Road and bridge design, structural of roads and bridges	Water quality, wastewater treatment plant, solid waste in city	Leadership & human resources	General environment, waste management, dump site management	SWM , wastewater management clean water Wastewater	Water quality, laboratory and SWM	Map installation/design Training on local/abroad communities agricultural/eco-tourist communities	Mapping, forestry skill	Training on: (1) dump site (2) SWM & wastewater mgt (3) general environment	Training on: (1) dump site (2) general training (3) human resources development	Wastewater management & SWM General Environment	(1) Training on SWM , (2) financial management on stall and medium enterprises		
16	**Do you have the resources (supplies, equipment, transport & funds) you require to do your job? Please explain.**	We have leaks some construction equipment such as excavator, motor- grader, dump truck, bulldozer, trash loader	Lack of resource for daily operation	Stationary, transportation for field work	Fund, stationary and transportation	Funds, transport and equipment	Fund and equipment	No, use own equipment, and no fund	Just for personal expense, and impossible to accomplish the targets of the job	Old and spent equipment	Insufficient resources	Currently I used my personal belonging such as motorbike, electronic equipment to facilitate my daily job	Insufficient because of new office establishment	Not enough because don't have counterpart	The resources such as supplies, equipment…etc. are impossible to achieve the goals/purposes.	Don't know	Insufficient human resources to accomplish the expected targets			
17	**What are the three main job related constraints that you faced during the past 12 months?**	Addressing flooding during rain storm due to limited drainage sys, some existing drainage system was blocked by garbage	Lack of enforcement and respect for law and rules in relation to wastewater and SWM	Lack of equipment	Language (lack of English language skills)	People's knowledge is limited	No problems	Lack of SWM and separation	No funding to support disseminating	The disposal of garbage in public places	Keeping solid waste and wastewater services proper	Lack of updated data	Limited-knowledge of communities to take part in natural conservation	Crimes are increasing	Communities have no money or transportation to attend dissemination, training, workshop and awareness sessions	No problems	Lack of human resources and capacity	Households in Pursat town not paid waste service fee - over 12000 out of 15000 household (> 80%).		
		Get complaints from the people at downstream of urban areas due to exposure to un-treated wastewater	Lack of capable investors to operate and manage garbage collection in town	Lack of transportation	New unfamiliar work	Lack of trash bin at public places		Lack of water quality testing equipment and proper wastewater disposal	No funds to support SWM	Limited solid waste collection services	Keeping water supplies safe and clean	Lack of water quality testing equipment	Offences happened in night-time when there are a little civil servants	Human resource and capacities are limited	Insufficient sewerage system		Lack of knowledge	Lack of awareness about SWM , untidily dispose of garbage in public places.		
			No standard dump sites to reserve solid waste.		Weak of computer skills	No wastewater treatment plant		During constructions - communities not abided the rules	No business (private sector) interested to be engaged in wastewater/solid waste	No proper landfill sites		People do not obey or respect the law	Lack of transportation so get equipment to where it is needed	Lack of transportation and funds	No company to collect garbage from city			Monthly fees collected cannot cover the monthly operation - some month running at a loss		
18	**Describe what you know about solid waste management:**	No comment	SWM should be managed as otherwise it affect environment and public security.	Solid waste is from kitchen. Poor SWM lead to affecting environment. Solid waste mgt. need a joint effect from all parties - for example a good collecting without dump site is of no use.	Don't know a lot	Solid waste, substance impacts environment, healthcare, is from households, restaurants, factories industries. It requires to be properly manage or recycled	It is required to have dump site and recycled to fertilizer or soil	Collection and transportation of garbage to dispose of dump site is very important	As far as SWM is very concerned, both awareness and packing as well as collection company	Separation of kitchen waste and plastic waste	No comments	3R Principle: Reduce, Reuse, Recycle solid waste separation, power from waste, burning solid waste.	SWM is required to take part in parties involved especially local authority and communities. Local authority must support solid waste collection company how to collect, fees especially labour fees of waste collectors	Unknown	As far as wastewater especially SWM are concerned, communities not engaged in and packed it properly	Never Known	problems is that the communities not engaged in packing/putting properly garbage to be collected by company	As far as I have known, waste should be separated as medical, plastic, solid, kitchen waste - and it should not be buried.		
	Your observations made in PS	SWM is the problem, dump site is filled up, trucks cannot accessible when it's raining and hence disposing along access roads. Current dump site smells bad lead to affecting severe environment	There is no appropriate SWM due to limited local capacity and lack of communities' awareness. Also medical waste management is often mixed with domestic waste	No comment	No comment	No comment	Private contractor should collect garbage from household, hotels or public places from bins											The current SWM contractor has 2 trucks capable of 5 tonne to clean the town, 2 temporary land fill sites (5 ha), 10 workers - and need to transport 4 times/day equivalent to 20T - which is not done		
19	**Describe what you know about drainage and wastewater management:**	When drainage and solid waste mgt. is insufficient, sewers is blocked when heavily raining	Wastewater and sewerage systems a necessity for public health	Wastewater have an impact on environment when it runs in to canals or streams untreated.	Don't know	Poor drainage system leads to flooding and poor traffic conditions. Wastewater consists of polluted substance making exposure to humans dangerously	Wastewater treatment plant before running in to canals, or streams. Static tanks in households to run into public sewerage	Drainage and sewerage already installed without wastewater treatment	Never engaged or been exposure to SWM or WWM	Heard about wastewater treatment plant	Unknown	Blank	All households, guesthouses etc. must be connected to sewers. The sewerage system must be lower than ground level.	Unknown	Never known about this	Unknown	Unknown	Big septic tank far away from living area is required with proper maintenance		
	Your observations made in PS	Sewage without treatment flowing directly in canals (Kbal Hong) affecting people and natural waters as well as Tonle Sap	Sewerage system problems during heavy rains leading to flooding as sewers are blocked, wrong levels, or out of order. Also a serious problem is that Pursat is without wastewater treatment plant	Sewerage very limited and no wastewater treatment plant.	No comment	Sewerage very poor and wastewater is not treated							There is no wastewater treatment in Pursat					More sewers need to be added along public roads		
20	**Describe the type of training you need to enable you to plan and implement solid waste management and drainage/wastewater management duties in the future:**	Wastewater management and treatment incl. O&M, SWM, landfill management (O&M)	Wastewater management, SWM and medical waste and human resources and financial management	Planning management, SWM, drainage and sewerage	O&M solid waste and wastewater, planning of finance	SWM, drainage and sewerage	Planning management, wastewater treatment, SWM and drainage	Solid waste separation, SWM, wastewater treatment plant, sewerage system	Management on wastewater treatment plant, landfill, solid waste separation and SWM	Training on solid waste separation, wastewater disposal, recycling	Management and Maintenance landfill, solid waste and wastewater management and sewer system management	Management landfill, solid waste separation, wastewater treatment plant and O&M	Training on solid waste separation, packing garbage or recycling to fertilizer. Training on wastewater sewerage system.	SWM incl. waste separation, recycle of solid waste to compost fertilizer	SWM, recycle, sewerage system and drainage	Landfill management, SWM and sewerage system	Landfill management, solid waste and wastewater management	Training and disseminating on affection from SWM. Planning and financial management		

Kampong Chhnang

Position	Entity	Gender		Reply	Age				Number of subordinates	Level of education				Area of education specialization					Years of experience	Number of years in your current position	What are your current three most important duties/responsibilities?						List any urban service (water supply, wastewater or solid waste management) related training courses you attended (if any)					What is the total number of days of training you have received?
		Female	Male		[20-29]	[30-39]	[40-49]	[above 50]		Completed High School	Completed Diploma	Completed Bachelor	Completed Master	Management and Business	Administrative	Engineering or other technical subject	Accountancy and/or Finance	Other Area			Management and Planning	Reporting /Preparing Report	General Technical Matters	Administrative management	Data Collection / Monitoring	Operating and Maintenance	Solid Waste Management	Wastewater Management	Drainage / Sewerage System	Clean Water (Water Supply)	None	
6		**2**			**3**				**7**	**8**				**9**					**10**	**11**	**12**						**13**					**14**
Project Manager	PIU/PDPWT		1	1			1		24			1				1			27	8	1			1	1			1				3
Deputy Project Manager	PIU/PDPWT		1	1			1		20			1				1			23	5	1			1	1			1				3
Construction Engineer (1)	PIU/PDPWT		1	1		1			10				1	1					12	5	1	1		1				1				6
Construction Engineer (2)	PIU/PDPWT		1	1		1			0			1				1			8	4		1			1	1	1		1			15
Community Coordinator (2)	PIU/PDPWT		1	1		1			3			1						1	12	2	1	1		1							1	0
Community Coordinator (1)	PIU/PDPWT		1	1		1			25			1		1					11	1	1		1	1		1						1
Resettlement Officer	PIU/PDPWT		1	1		1			2			1						1	11	4		1			1	1	1		1	1		6
Project Accountant	PIU/PDPWT		1	1		1			0			1					1		7	6	1	1		1							1	0
Staff of PW office	PDPWT	1		1		1			0			1					1		9	5	1	1		1							1	0
Contracted Staff	PDPWT	1		1	1				0			1					1		7	7	1	1				1					1	0
Contracted Staff	PDPWT	1		1	1				0			1					1		3	2		1		1	1		1					4
Contracted Staff	PDPWT	1		1	1				0			1		1					5	3		1		1	1						1	0
Staff of PW Office	PDPWT		1	1		1			0			1				1			4	0,5			1		1	1		1				1
Staff of PW Office	PDPWT		1	1	1				0			1		1					3	3		1		1		1					1	0
Contracted staff	PDPWT		1	1		1			0			1				1			7	3			1		1	1					1	0
Staff of PW Office	PDPWT		1	1	1				0			1		1					6	6		1		1		1					1	0
Total (when appropriate)	**No.**	**4**	**12**	16	5	9	2	0		0	0	15	1	5	0	5	4	2	9,69	4,0	8	11	3	11	8	7	4	5	1	2	8	34
Percentage		25%	75%		31%	56%	13%	0%		0%	0%	94%	6%	31%	0%	31%	25%	13%			17%	23%	6%	23%	17%	15%	20%	25%	5%	10%	40%	

Pursat

Position	Entity	Gender		Reply	Age				Number of subordinates	Level of education					Area of education specialization					Years of experience	Number of years in your current position	What are your current three most important duties/responsibilities?						List any urban service (water supply, wastewater or solid waste management) related training courses you attended (if any)					What is the total number of days of training you have received?
		Female	Male		[20-29]	[30-39]	[40-49]	[above 50]		Pre-high school	Completed High School	Completed Diploma	Completed Bachelor	Completed Master	Management and Business	Administrative	Engineering or other technical subject	Accountancy and/or Finance	Other Area			Management and Planning	Reporting /Preparing Report	General Technical Matters	Administrative management	Data Collection / Monitoring	Operating and Maintenance	Solid Waste Management	Wastewater Management	Drainage / Sewerage System	Clean Water (Water Supply)	None	
6		**2**			**3**				**7**	**8**					**9**					**10**	**11**	**12**						**13**					**14**
Project Manager	PIU		1	1				1	65				1				1			24	6	1		1			1	1					4
Deputy Project Manager	PIU		1	1		1			50					1		1				7	5	1				1	1		1				6
Procurement officer	PIU		1	1				1	64				1					1		31	1				1	1	1					1	0
Project Accountant and Finance (2)	PIU		1	1				1	5		1							1		30	1	1	1		1							1	0
Project Accountant and Finance (1)	PIU	1		1		1			4				1		1					10	5	1	1			1			1				2
Staff of Bridge and Road Unit	PWT		1	1	1				0				1				1			0,5	0,25			1	1	1						1	0
Chief of Office, Environmental Protection	PDE		1	1		1			2				1		1					6	1			1		1	1		1				2
Deputy Director, Dept. Of Environment	PDE		1	1		1			60					1	1					12	1	1			1	1						1	0
Staff Office of Education and Publications	PDE	1		1		1			0		1					1				5	5	1		1	1							1	0
Chief of Office Multiuse	PDE		1	1		1			11				1		1					2	2	1		1			1					1	0
Staff of office Environmental protection	PDE		1	1	1				0				1						1	1	1			1	1	1		1					1
Deputy Chief of Local Development Office	PDE		1	1		1			1				1					1		5	0,25	1		1			1					1	0
Chief of National Park Office	PDE		1	1		1			13				1		1					5	0,25	1		1			1					1	0
Chief of Office	Municipality	1		1			1		0	1									1	33	33	1		1			1	1					10
Administration Staff	Municipality	1		1	1				0				1						1	2	2	1	1		1							1	0
Vice Chief of Office	Municipality		1	1		1			0				1					1		11	11		1	1		1						1	0
Solid Waste Collection Contractor	Private		1	1		1			10					1	1					1	1	1		1			1					1	0
Total (when appropriate)	**No.**	**4**	**13**	**17**	**3**	**10**	**1**	**3**		**1**	**2**	**0**	**11**	**3**	**6**	**2**	**2**	**4**	**3**	10,9	6,3	12	4	11	7	8	9	2	4	0	0	11	25
Percentage		24%	76%		18%	59%	6%	18%		6%	12%	0%	65%	18%	35%	12%	12%	24%	18%			24%	8%	22%	14%	16%	18%	12%	24%	0%	0%	65%	

Annex 7: Training Need Assessment (Analyzation)

This TNA analysis aims to analyze the replies of the TNA questionnaires and subsequent interviews which have been conducted to identify the training needs of the provincial staff in January and March 2018. The questionnaires consisted of both quantitative and qualitative questions. The qualitative results have first been categorized and subsequently quantified in order to compare results. The analysis will mainly present the average findings of all the provinces and project staff (referred to as average) but will sometimes emphasize on variations between the two provinces and/or different positions of staff.

	Overview of quantitative questions	Kampong Chhnang	Pursat	**Average**
2	Percentage female	25%	24%	**24%**
3	Estimated average age	33	37	**35,2**
8	**Education**			
	Pre-high school only	0%	6%	**3%**
	Completed High School	0%	12%	**6%**
	Completed Diploma	0%	0%	**0%**
	Completed Bachelor	94%	65%	**79%**
	Completed Master	6%	18%	**12%**
9	**Area of education specialization**			
	Management and Business	31%	35%	**33%**
	Administrative	0%	12%	**6%**
	Engineering or other technical subject	31%	12%	**22%**
	Accountancy and/or Finance	25%	24%	**24%**
	Other Area	13%	18%	**15%**
10	**Years of experience**	9,7	10,9	**10,3**
11	**Number of years in your current position**	4,0	6,3	5,2
12	**What are your current three most important duties / responsibilities?**			
	Management and Planning	17%	24%	**20%**
	Reporting /Preparing Report	23%	8%	**15%**
	General Technical Matters	6%	22%	**14%**
	Administrative management	23%	14%	**18%**
	Data Collection / Monitoring	17%	16%	**16%**
	Operating and Maintenance	15%	18%	**16%**
13	**List any urban service (water supply, wastewater or solid waste management) related training courses you attended (if any)**			
	Solid Waste Management	20%	12%	**16%**
	Wastewater Management	25%	24%	**24%**
	Drainage / Sewerage System	5%	0%	**3%**
	Clean Water (Water Supply)	10%	0%	**5%**
	None	40%	65%	**52%**
14	**Average training received (in days)**	2,1	1,5	

Table 10: Overview of replies on question 1 to 14

2. Gender: On average the gender division of responsive staff is 24% female and 76% male – and very similar in the two provinces. When looking at various positions with the PIUs – the gender division below can be observed and the gender inclusion in the PIU is much lower than the average. .

Position	Male	% Male	Female	% Female	Total
Project Manager	2	100	0	0	2
Deputy Project Manager	2	100	0	0	2
Construction Engineers	2	100	0	0	2
Community Coordinator (1)	2	100	0	0	2
Resettlement Officer	1	100	0	0	1
Procurement Officer	1	100	0	0	1
Project Accountant	2	67%	1	33%	3
Total PIU staff (future USUs)	**12**	**92%**	**1**	**8%**	**13**

Table 11: Gender distribution in PIUs

As the project has a target of at least 20% of female staff in each of the semi-autonomous urban service units in Kampong Chhnang and Pursat municipality – the project/PMU need to consider how to achieve this with the present "un-balanced" gender situation in the PIUs. Also the level of women in leading and management position need to be addressed as still most women still occupy positions such a accountant, secretaries etc. and not many are seen in senior management roles/positions.

3. Age group: The average age is 35 years, the Kampong Chhnang team is relatively younger compared with the Pursat.

8. Level of education: The general basis educational level is good and suitable for the project implementation with 91% of the staff having either a Bachelor or a Master degree. When looking in detail in the main table above, it is apparent that Pursat have a slightly higher level with 18% having a Master degree compared with 6% in Kampong Chhnang.

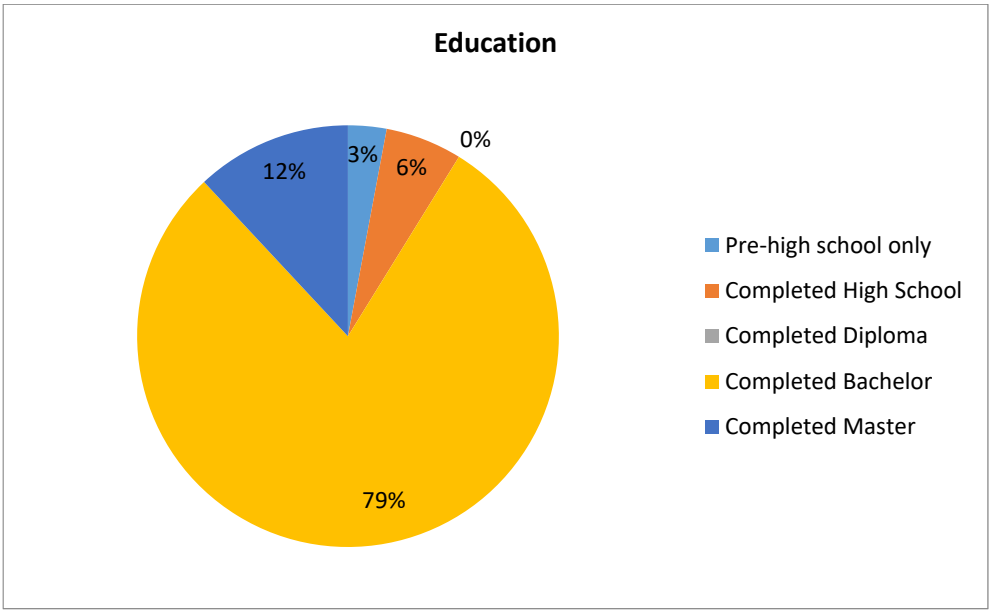


Figure 6: Level of Education in provinces

9. Area of education specialization:

The educational specialization of provincial staff seem to be sufficiently broad to cope with the tasks ahead. The only area of seemingly with less capacity is technical in Pursat where only 12% has this background - which nonetheless is expected as some of the technical appointed staff in the Pursat PIU did not submit replies on the questionnaire.

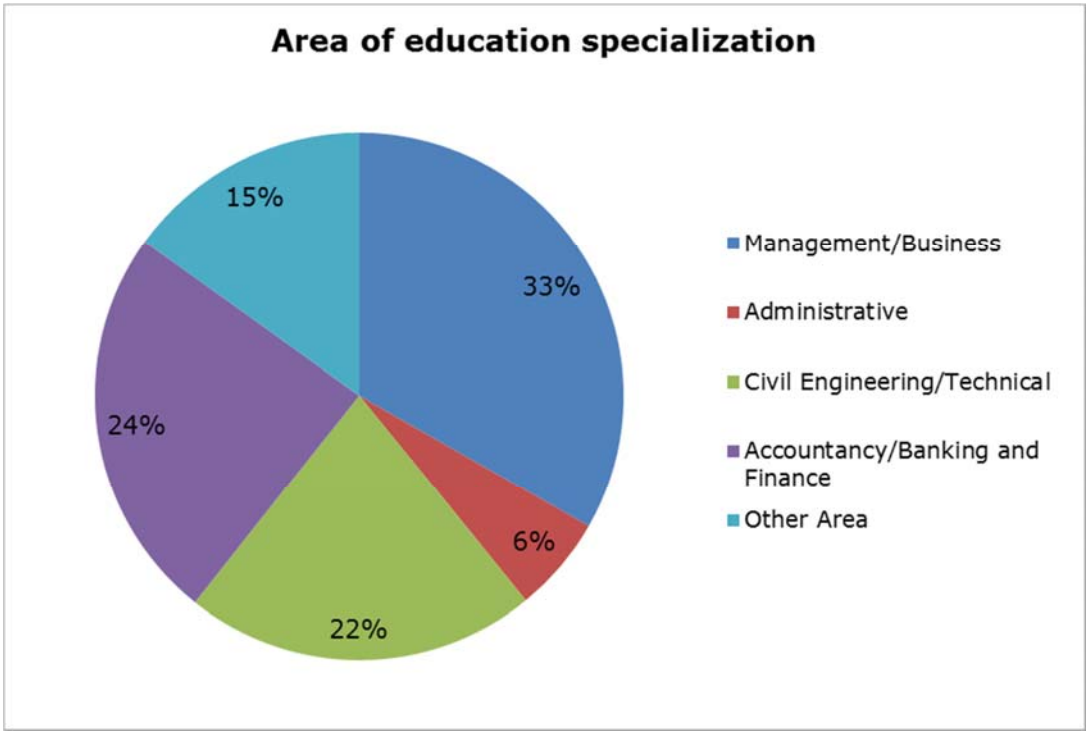


Figure 7: Educational Specialization

Area of education specialization	Kampong Chhnang	Pursat	Average
Management and Business	31%	35%	**33%**
Administrative	0%	12%	**6%**
Civil Engineering/Technical	31%	12%	**22%**
Accountancy and/or Finance	25%	24%	**24%**
Other Area	13%	18%	**15%**

Table 12: Area of education specialization

However, when considering the future tasks of the PIU, when being "converted" into USUs – the overweight of management, administration and accounting/financing educational background (63%) might prove to be inappropriate due to the required more hands on and technical nature of the work anticipated for the USUs.

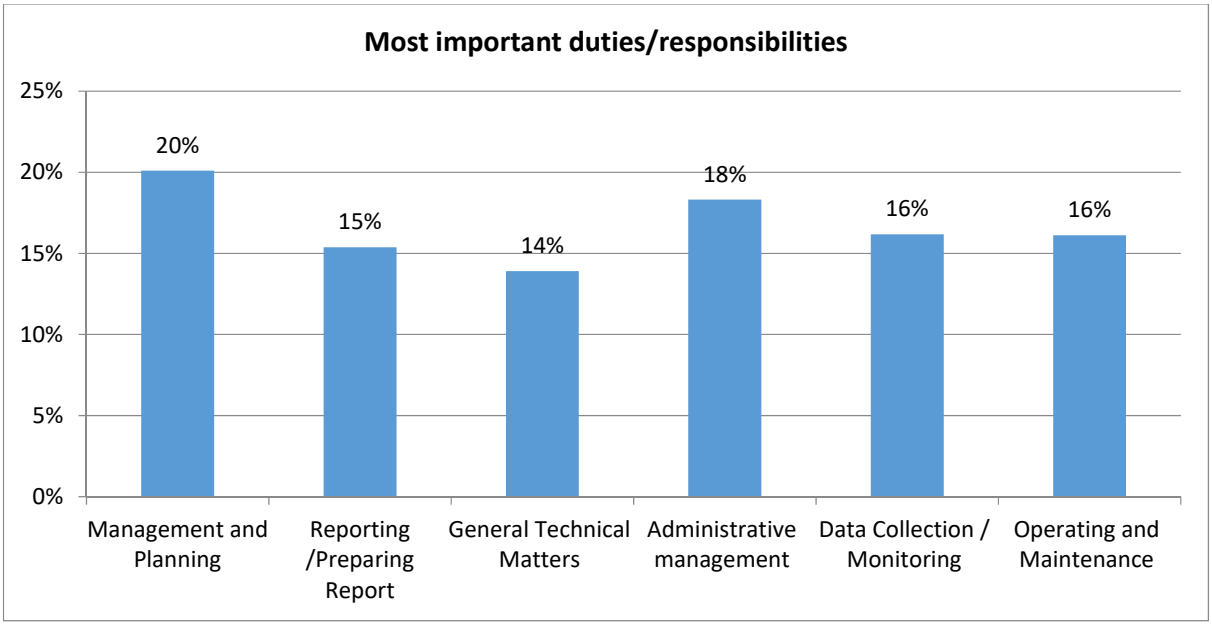
10/11. Years of RWSS experience – and in the current job: The average years of experience is approximately 10 years - and staff has on an average been in their current position in approx. 5 years. But there is substantial variation with staff having more than 30 years and others just started their working career.

12. What are your current three most important duties/responsibilities?

The most important area of focus seem to be on management, administration, monitoring and reporting (in total 70%) – whereas technical duties represent 30%.

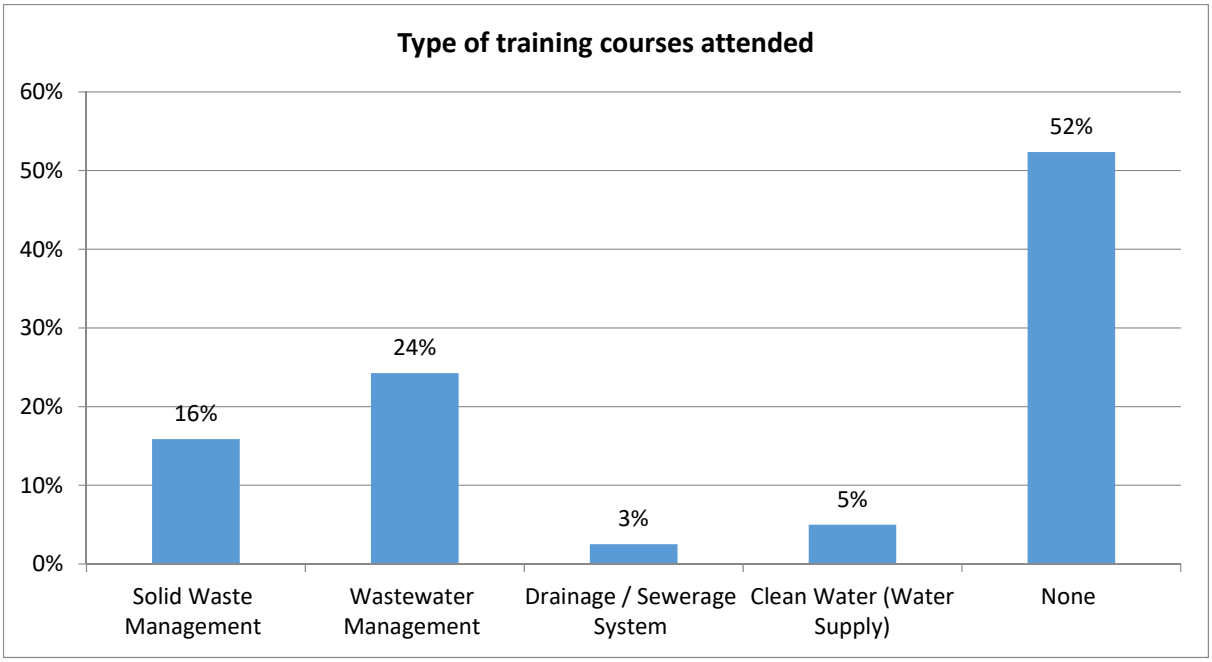
From a sustainability point of view and considering the importance of technical insight and operation and maintenance, it is concerning that only 16 % of the provincial staff have indicated O&M as an area of responsibility. It is recognized that the staff at the provincial level having responded might not have a direct

responsibility for O&M - but they DO HAVE an overall supervisory and monitoring role and they have to ensure support where O&M seems to be failing.



13/14. List any urban service (water supply, wastewater or solid waste management) related training courses you attended (if any) – and if so how many days.

Provincial staff have in general receive some – but still very limited training related to water supply, wastewater or solid waste management – around 2 days (refer to Table 10). From the questionnaires, the following can be retrieved. It is worth noticing that more than 50% have not received any training – and this include indeed also technical/field staff where such knowledge is highly required.



15. Describe the type of training you need to enable you to better perform in your current job:

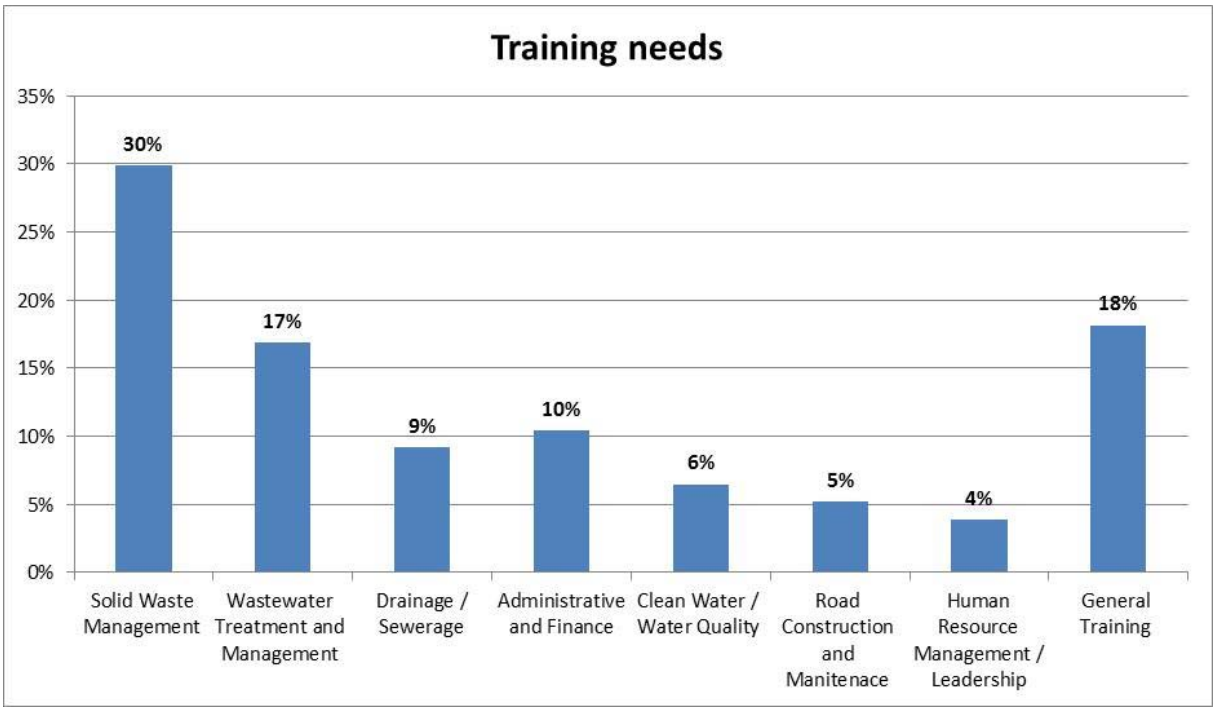
The analysis has identified 8 different categories of training needs. The table below shows the specific indicated training needs for Kampong Chhnang and Pursat and the average.

Training needed	CPC	PS	Average
Solid Waste Management	32%	28%	**30 %**
Wastewater Treatment and Management	16%	18%	**17 %**
Drainage / Sewerage	16%	3%	**9 %**
Administrative and Finance	11%	10%	**10 %**
Clean Water / Water Quality	5%	8%	**6 %**
Road Construction and Maintenance	5%	5%	**5 %**
Human Resource Management / Leadership	0%	8%	**4 %**
General Training	16%	21%	**18 %**

The figure below shows the average training needs. It can be concluded that the training needs are highest for solid waste management and specifically dump site management is mentioned. Due to the poor solid waste management in both town, such expressed needs for individual improvement is not surprising and should be useful for all staff in both towns.

Also wastewater management and drainage is an expressed need whereas administrative and finance naturally is expressed by such A&F staff categories. General training reveals training needs in planning, reporting, M&E and the roles and responsibilities as well as English language and IT software

It should be mentioned that the identified categories are related to each other and that they should not be complete separate training blocks. Human Resource Management / Leadership and Administrative and Finance is for example crosscutting and essential in any training as well as project management. Community involvement and gender equity are for example important elements of project planning and management.



Summarization: Strongest need for training on solid waste management followed by wastewater and drainage management and administration, finance and project management. Training subjects nonetheless were related to each other for example HRM and A&F and water quality as well as cross cutting issues like gender and project management.

16. Do you have the resources (supplies, equipment, transport & funds) you require to do your job?

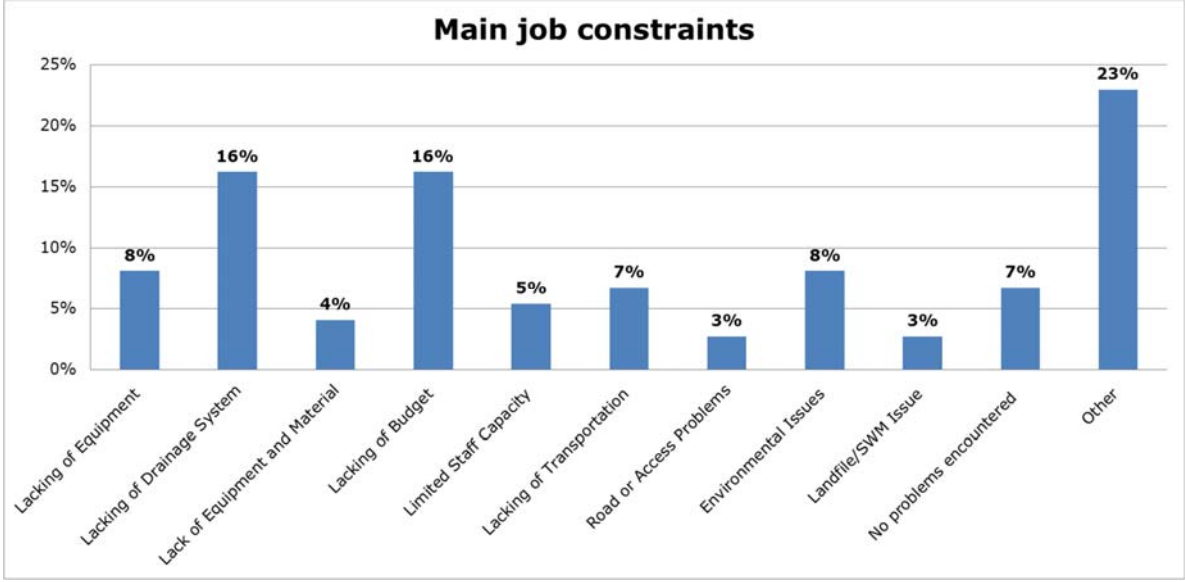
The analysis has identified 6 categories for resource constraints. The table below shows that the average resource constraints are mainly in office equipment, fund and transportation in general. Only 2% have indicated that they consider lack of human resources as an issue. Transportation is mainly related to too few motorcycles for all staff, bad roads, limited budget for gasoline and no budget for repairing. Office equipment varies from limited computers to printers, limited chairs, no air conditioning and cabinet. Lack of resources in general is generally not specified.

Resources needed	Transportation	Office Equipment	Technical Equipment	Fund	Human Resource	Enough Resource	No Reply/None
Kampong Chhnang	16%	24%	12%	28%	0%	12%	8%
Pursat	17%	38%	17%	21%	3%	0%	3%
Average	**17%**	**31%**	**15%**	**24%**	**2%**	**6%**	**6%**

Summarization: Mainly office equipment, fund and transportation

17. What are the three main job related constraints that you faced during the past 12 months?

This question is not only about resources but any job related constraints. The analysis distinguishes 10 different categories. The average findings show that poor drainage and lack of funds have been the largest job related constraints. The lack of equipment, transportation and proper environment is also identified as job constraint.

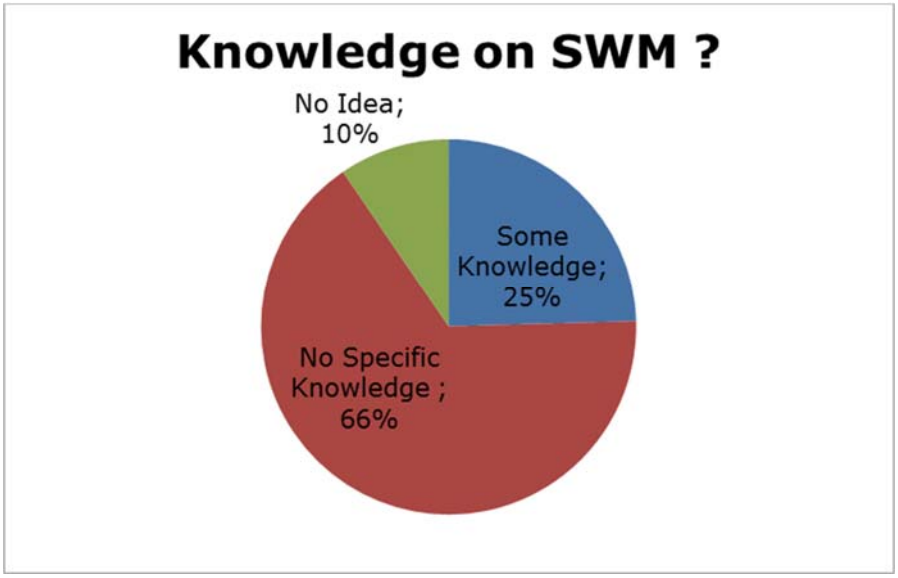


Main constraints	Lacking of Equipment	Lacking of Drainage System	Lack of Equipment and Material	Lacking of Budget	Limited Staff Capacity	Lacking of Transportation	Road or Access Problems	Environmental Issues	Landfill/SWM Issue	No problems encountered	Other
Kampong Chhnang	11%	14%	5%	24%	3%	5%	5%	0%	3%	8%	22%
Pursat	5%	19%	3%	8%	8%	8%	0%	16%	3%	5%	24%
Average	**8%**	**16%**	**4%**	**16%**	**5%**	**7%**	**3%**	**8%**	**3%**	**7%**	**23%**

Summarization: Poor drainage (consequently flood and urban areas inundated is considered together with lack of funds as the biggest constrain followed by lack of equipment, transportation and proper (clean) environment.

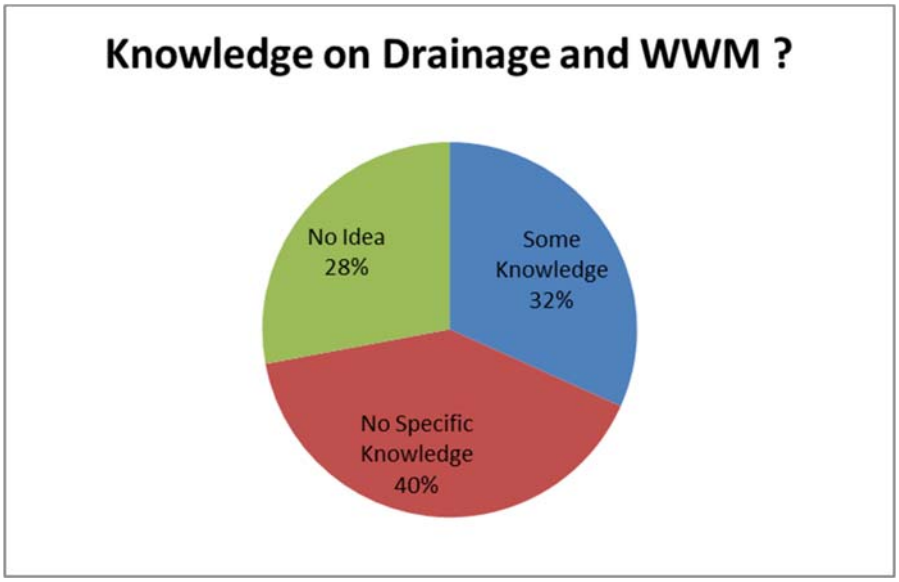
18. Describe what you know about solid waste management:

In general, there is limited knowledge on solid waste management – and only 25% was able to define and express some sort of coherent statements related to SWM. There seem be an relative big difference between the two cities as per stated SWM as respondents in 43 % Pursat has indicated "some knowledge" compared with only 6 % in KC. On the other hand, all respondents seem to be aware based on own experiences that the SWM is seriously poor in both towns.



19. Describe what you know about drainage and wastewater management:

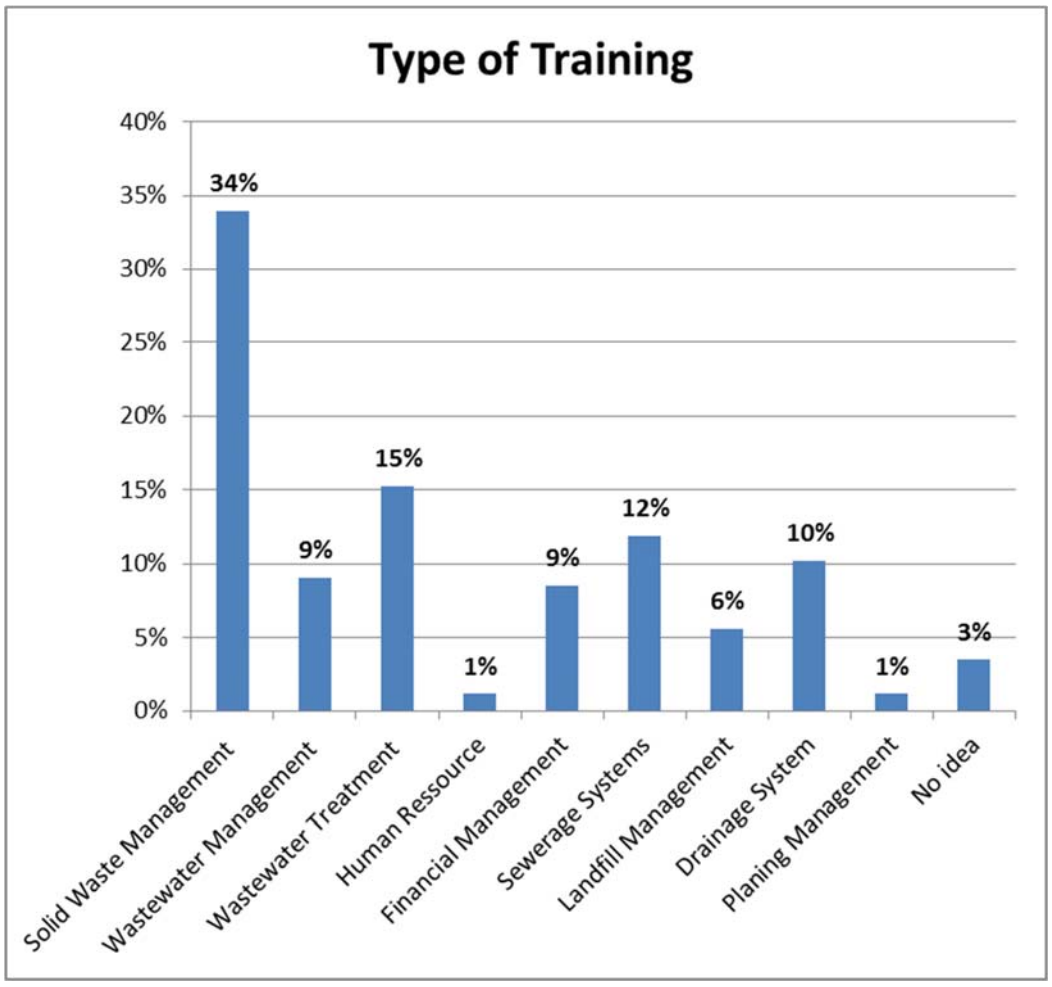
In general, there is limited or no specific knowledge on drainage and wastewater management – and only 32% have some knowledge. It is indicated that they are lacking knowledge about drainage and wastewater management, so this course is needed.



20. Describe the type of training you need to enable you to plan and implement solid waste management and drainage/wastewater management duties in the future:

The analysis has identified 9 categories for training need to enable the plan and implement solid waste management and drainage/wastewater management duties in the future. It can be concluded that the training needs are highest for solid waste management (34%), wastewater management, treatment and sewerage/drainage system (9 + 15 + 12 + 10 = 46%) – so a strong preference for technical topics.

Type of Training	Solid Waste Management	Wastewater Management	Wastewater Treatment	Human Resource	Financial Management	Sewerage Systems	Landfill Management	Drainage System	Planning Management	No idea
CPC	34%	7%	17%	0%	10%	10%	0%	14%	0%	7%
PS	33%	11%	13%	2%	7%	13%	11%	7%	2%	0%
Average	**34%**	**9%**	**15%**	**1%**	**9%**	**12%**	**6%**	**10%**	**1%**	**3%**



Annex 8: Overview of the Capacity Development Plan (draft)

Integrated Urban Environmental Management in the Tonle Sap Basin (IUEMTB) Project
Consulting Services for Project Management and Implementation Support (PMIS, Package 1)
ADB LoanNo.3311-CAM (SF) / 8295-CAM (SCF) / Grant 0454-CAM–Contract No. PMU/MPWT/IUEMTSP/QCBS/16/001

Capacity Development Plan for 2018-2022

No.	Training course and packages (2018-2022)	Project Management Unit	Project Implementation Consultants	Others		Total Participants
		PMU/MPWT	PIC	National level	Provincial level	
	Training done by the PMIS (Expert Team) under this TA	Suggested number of participants from various entities				
1.1	Project Management and Administration (Best Practices in PM of ODA funded Projects)	5	7	0	6	18
1.2	Standard Project Administrative Management Procedures	6	8	0	6	20
1.3	PPMS Training, Physical and Financial Progress Reporting	4	6	0	0	10
1.4	Work and Financial Planning	1	2	1	2	6
1.5	Coordination and Networking Mechanisms	10	16	0	0	26
1.6	Human Resource Development	2	2	2	4	10
2.1	Fundamentals of Solid Waste Management and Sanitary Landfill	2	3	1	2	8
2.2	Basics of supervision, QA and control during construction of Solid Waste Landfill Sites	2	3	1	2	8
3.1	Fundamentals of Flood Protection and Drainage	2	3	1	2	8
3.2	Basics of supervision, QA and control during construction of Flood Protection Embankment	2	3	1	2	8
4.1	Resettlement Planning and Monitoring - compliance with ADB	1	7	2	0	10
4.2	Livelihood Restoration Planning - compliance with ADB	1	5	2	0	8
4.3	Monitoring Social Safeguards and Social Project Performance	1	7	2	0	10
5.1	Introduction to Environmental Safeguards and Environmental Management Planning (Senior Managers)	5	7	3	0	15
5.2	Environmental Management Planning (safeguards, monitoring, reporting and mitigation measures)	4	5	2	4	15
5.3	Environmental Design, Monitoring, and Compliance Procedures for Contractors	4	5	2	4	15
6.1	Gender Sensitization Training	1	14	0	10	25
6.2	Gender Action Plan	1	7	0	2	10
6.3	Poverty and Social Impact Assessment	2	7	2	4	15
7.1	Private Sector Involvement (options, pros and cons, financial implication and role and responsibilities)	4	5	2	4	15
7.2	Detailed training on private sector contracting (options, best practices, conditions and supervision)	2	4	0	6	12
8.1	Setting tariff and calculation of cost recovery	2	2	2	4	10
8.2	Implementing awareness campaigning for cost recoverytariff for urban services	0	5	0	6	11
	Training conducted by external training providers (training provided inside Cambodia)	Suggested number of participants from various entities				
9	MS Package Skill Improvement	0	0	0	20	20
10	Standard Office Management and Administration	0	0	0	20	20
11	Health and Safety - General Training for Project Managers	3	5	0	0	8
12	Health and Safety - training sessions for Contractors	0	5	0	10	15
13	Health and Safety - training on exposure to communicable and infectious diseases	3	5	0	10	18
14	FIDIC Contract Management	5	5	0	0	10
15	Implementation of ADB Project Performance Monitoring System (PPMS)	2	2	0	0	4
	Training conducted by external training providers (training provided outside Cambodia)	Suggested number of participants from various entities				
16	Policies and Guidelines on Involuntary Resettlement during Implementation	1	4	1	0	6
17	Use of GIS in the planning of urban infrastructure projects	0	0	2	2	4
18	Climate Change Resilience Measures and Disaster Risk Management of Urban Infrastructures	2	3	0	0	5
19	Design of Anaerobic Waste Water Treatment Plant FIDIC Contract Management	1	1	2	2	6
20	Tendering, Procurement, and Negotiation Skills	3	1	1	0	5
21	FIDIC CLAIMS CLASS Contract course	2	3	0	0	5
22	Supervision, QA and control during construction of drainage/sewerage conveyance	1	3	0	0	4
23	Supervision, QA and control during construction of Anaerobic Waste Water Treatment Plant	1	1	1	2	5
24	Basic Operation and Maintenance of Solid Waste	2	3	0	4	9
25	Basic Operation and Maintenance of Wastewater and Drainage	2	3	0	4	9
26	Urban Asset Management	0	5	0	5	10
27	Management, Operation and Maintenance (MOM) of Solid Waste - Exposure Visit	3	2	0	2	7
28	Management, Operation and Maintenance (MOM) of Wastwater/Drainage - Exposure Visit	3	2	0	2	7
29	Exposure on Urban Planning and Management	0	2	2	2	6
30	World Water Week (Stockholm International Water Institute) - 2018 and/or 2020	2	4	1	0	7

Integrated Urban Environmental Management in the Tonle Sap Basin (IUEMTB) Project
Consulting Services for Project Management and Implementation Support (PMIS, Package 1)
ADB LoanNo.3311-CAM (SF) / 8295-CAM (SCF) / Grant 0454-CAM–Contract No. PMU/MPWT/IUEMTSP/QCBS/16/001

Capacity Development Plan for 2018-2022

No.	Proposed training course and packages (2017-2019)	No. of training days	Project Management Unit MPWT										Project Implementation Units Kampong Chhnanag								Project Implementation Units Pursat						Other		Total Participants
			Project Director	Project Manager	Supervisory Engineer (1)	Supervisory Engineer (2)	Social & Resettlement Officer	Environment Officer	Office Manager	Procurement Officer	Accounting and Financial Management Officer	Accounting Officer	Project Director	Project Manager	Construction Engineer (1)	Construction Engineer (2)	Water Resources Engineer	Community Coordinator (1)	Community Coordinator (2)	Resettlement Officer	Project Accountant	Project Director	Project Manager	Construction Engineer (1)	Community Coordinator (1)	Resettlement Officer	Procurement Officer	Project Accountant	National Level	Provincial Level	
	Training done by the PMIS (Expert Team) under this TA																													
1.1	Project Management and Administration (Best Practices in PM of ODA funded Projects)	2		1					1	1	1	1	1	1						1		1	1				1	1		6	18
1.2	Standard Project Administrative Management Procedures	3			1	1			1	1	1	1		1	1	1				1			1	1			1	1		6	20
1.3	PPMS Training, Physical and Financial Progress Reporting	2	1	1							1	1	1	1						1		1	1								10
1.4	Work and Financial Planning	2										1								1								1	1	2	6
1.5	Coordination and Networking Mechanisms	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			26
1.6	Human Resource Development	2		1					1					1									1					2	4	10
2.1	Fundamentals of Solid Waste Management and Sanitary Landfill	1			1	1									1	1								1				1	2	8
2.2	Basics of supervision, QA and control during construction of Solid Waste Landfill Sites	2			1	1									1	1								1				1	2	8
3.1	Fundamentals of Flood Protection and Drainage	1			1	1									1	1								1				1	2	8
3.2	Basics of supervision, QA and control during construction of Flood Protection Embankment	2			1	1									1	1								1				1	2	8
4.1	Resettlement Planning and Monitoring - compliance with ADB	1					1							1				1	1	1			1		1	1			2		10
4.2	Livelihood Restoration Planning - compliance with ADB	1					1											1	1	1					1	1			2		8
4.3	Monitoring Social Safeguards and Social Project Performance	1					1							1				1	1	1			1		1	1			2		10
5.1	Introduction to Environmental Safeguards and Environmental Management Planning (Senior Managers)	1	1	1	1	1		1					1	1	1	1						1	1	1					3		15
5.2	Environmental Management Planning (safeguards, monitoring, reporting and mitigation measures)	1		1	1	1		1						1	1	1							1	1					2	4	15
5.3	Environmental Design, Monitoring, and Compliance Procedures for Contractors	2		1	1	1		1						1	1	1							1	1					2	4	15
6.1	Gender Sensitization Training	1					1						1	1	1	1	1	1	1	1		1	1	1	1	1	1			10	25
6.2	Gender Action Plan	1					1							1	1			1	1				1	1	1					2	10
6.3	Poverty and Social Impact Assessment	2		1			1							1				1	1	1			1		1	1			2	4	15
7.1	Private Sector Involvement (options, pros and cons, financial implication and role and responsibilities)	1	1	1						1	1		1	1								1	1			1			2	4	15
7.2	Detailed training on private sector contracting (options, best practices, conditions and supervision)	2								1	1			1							1		1					1		6	12
8.1	Setting tariff and calculation of cost recovery	3								1	1										1							1	2	4	10
8.2	Implementing awareness campaigning for cost recoverytariff for urban services	2												1				1	1				1		1					6	11
	Training conducted by external training providers (training provided inside Cambodia)																													
9	MS Package Skill Improvement	5																											20	20
10	Standard Office Management and Administration	3																											20	20
11	Health and Safety - General Training for Project Managers	2		1	1	1								1	1	1							1	1							8
12	Health and Safety - training sessions for Contractors	3												1	1	1							1	1					10	15
13	Health and Safety - training on exposure to communicable and infectious diseases	3		1	1	1								1	1	1							1	1					10	18
14	FIDIC Contract Management	3		1	1	1				1	1			1	1	1							1	1							10
15	Implementation of ADB Project Performance Monitoring System (PPMS)	3	1	1									1									1									4
	Training conducted by external training providers (training provided outside Cambodia)																													
16	Policies and Guidelines on Involuntary Resettlement during Implementation	4					1							1						1			1					1		6	
17	Use of GIS in the planning of urban infrastructure projects	5																										2	2	4	
18	Climate Change Resilience Measures and Disaster Risk Management of Urban Infrastructures	5			1	1									1	1								1						5	
19	Design of Anaerobic Waste Water Treatment Plant FIDIC Contract Management	10			1																			1				2	2	6	
20	Tendering, Procurement, and Negotiation Skills	3	1	1					1																	1		1		5	
21	FIDIC CLAIMS CLASS Contract course	4			1	1									1	1								1						5	
22	Supervision, QA and control during construction of drainage/sewerage conveyance	5			1										1	1								1						4	
23	Supervision, QA and control during construction of Anaerobic Waste Water Treatment Plant	5			1																			1				1	2	5	
24	Basic Operation and Maintenance of Solid Waste	5			1	1									1	1								1					4	9	
25	Basic Operation and Maintenance of Wastewater and Drainage	5			1	1									1	1								1					4	9	
26	Urban Asset Management	5												1	1	1							1	1					5	10	
27	Management, Operation and Maintenance (MOM) of Solid Waste - Exposure Visit	7	1	1		1									1									1					2	7	
28	Management, Operation and Maintenance (MOM) of Wastwater/Drainage - Exposure Visit	7	1	1		1									1									1					2	7	
29	Exposure on Urban Planning and Management	7												1									1						2	2	6	
30	World Water Week (Stockholm International Water Institute) - 2018 and/or 2020	7	1	1									1	1								1	1						1		7	

Annex 10: Budgeting of the Capacity Development Plan (draft)

Integrated Urban Environmental Management in the Tonle Sap Basin (IUEMTB) Project
Consulting Services for Project Management and Implementation Support (PMIS, Package 1)
ADB LoanNo.3311-CAM (SF) / 8295-CAM (SCF) / Grant 0454-CAM--Contract No. PMU/MPWT/IUEMTSP/QCBS/16/001

Capacity Development Budget for 2018-2022

Overall budget (2016 to 2020) Proposed training course and packages		Venue PP=Phnom Penh KC=Kampong Chhnang PS=Pursat		No. of Participants	Currency	Unit Cost (if applicable)	Cost for ressource persons (if applicable)	Course fee per participant	Total Per Diem Cost in Cambodia	Total DSA outside country	Travel Cost per person	Total cost per participant (in USD)	Total cost per participant per day (in USD)	Total Cost (in USD)
1.1	Project Management and Administration (Best Practices in PM of ODA funded Projects)	PP	Phnom Penh	18	USD	0	250	0	1.326		30	118	59	2.116
1.2	Standard Project Administrative Management Procedures	KC	Provinces	20	USD	0	620	0	816		30	102	34	2.036
1.3	PPMS Training, Physical and Financial Progress Reporting	PP	Phnom Penh	10	USD	0	250	0	612		30	116	58	1.162
1.4	Work and Financial Planning	PS	Provinces	6	USD	0	465	0	204		30	142	71	849
1.5	Coordination and Networking Mechanisms	PP	Phnom Penh	26	USD	0	250	0	1.632		30	102	51	2.662
1.6	Human Resource Development	PP	Phnom Penh	10	USD	0	250	0	612		30	116	58	1.162
2.1	Fundamentals of Solid Waste Management and Sanitary Landfill	PS	Provinces	8	USD	0	310	0	204		30	94	94	754
2.2	Basics of supervision, QA and control during construction of Solid Waste landfill Sites	PS	Provinces	8	USD	0	465	0	306		30	126	63	1.011
3.1	Fundamentals of Flood Protection and Drainage	KC	Provinces	8	USD	0	310	0	204		30	94	94	754
3.2	Basics of supervision, QA and control during construction of Flood Protection Embankment	KC	Provinces	8	USD	0	465	0	306		30	126	63	1.011
4.1	Resettlement Planning and Monitoring - compliance with ADB	PP	Phnom Penh	10	USD	0	125	0	476		30	90	90	901
4.2	livelihood Restoration Planning - compliance with ADB	PP	Phnom Penh	8	USD	0	125	0	340		30	88	88	705
4.3	Monitoring Social Safeguards and Social Project Performance	PP	Phnom Penh	10	USD	0	125	0	476		30	90	90	901
5.1	Introduction to Environmental Safeguards and Environmental Management Planning (Senior Managers)	PP	Phnom Penh	15	USD	0	125	0	476		30	70	70	1.051
5.2	Environmental Management Planning (safeguards, monitoring, reporting and mitigation measures)	PP	Phnom Penh	15	USD	0	125	0	612		30	79	79	1.187
5.3	Environmental Design, Monitoring, and Compliance Procedures for Contractors	PP	Phnom Penh	15	USD	0	250	0	918		30	108	54	1.618
6.1	Gender Sensitization Training	PP	Phnom Penh	25	USD	0	125	0	1.632		30	100	100	2.507
6.2	Gender Action Plan	PP	Phnom Penh	10	USD	0	125	0	612		30	104	104	1.037
6.3	Poverty and Social Impact Assessment	PP	Phnom Penh	15	USD	0	250	0	1.122		30	121	61	1.822
7.1	Private Sector Involvement (options, pros and cons, financial implication and role and responsibilities)	PP	Phnom Penh	15	USD	0	125	0	612		30	79	79	1.187
7.2	Detailed training on private sector contracting (options, best practices, conditions and supervision)	PP	Phnom Penh	12	USD	0	250	0	1.020		30	136	68	1.630
8.1	Setting tariff and calculation of cost recovery	PP	Phnom Penh	10	USD	0	375	0	816		30	149	50	1.491
8.2	Implementing awareness campaigning for cost recoverytariff for urban services	PP	Phnom Penh	11	USD	0	250	0	1.122		30	155	77	1.702
9	MS Package Skill Improvement	PP	Phnom Penh	20	USD	0	0	250	4.080		30	484	97	9.680
10	Standard Office Management and Administration	PP	Phnom Penh	20	USD	0	0	250	2.720		30	416	139	8.320
11	Health and Safety - General Training for Project Managers	PP	Phnom Penh	8	USD	0	0	50	510		30	144	72	1.150
12	Health and Safety - training sessions for Contractors	PP	Phnom Penh	15	USD	0	0	250	2.040		30	416	139	6.240
13	Health and Safety - training on exposure to communicable and infectious diseases	PP	Phnom Penh	18	USD	0	0	250	2.040		30	393	131	7.080
14	FIDIC Contract Management	PP	Phnom Penh	10	USD	0	0	250	272		30	307	102	3.072
15	Implementation of ADB Project Performance Monitoring System (PPMS)	PP	Phnom Penh	4	USD	0	0	200	272		30	298	99	1.192
16	Policies and Guidelines on Involuntary Resettlement during Implementation	Group 1	S.E.Asia	6	USD	0	0	439		6.500	750	2.273	568	13.636
17	Use of GIS in the planning of urban infrastructure projects	Group 1	S.E.Asia	4	USD	0	0	800		5.280	750	2.870	574	11.480
18	Climate Change Resilience Measures and Disaster Risk Management of Urban Infrastructures	Group 1	S.E.Asia	5	USD	0	0	1.000		6.540	750	3.058	612	15.290
19	Design of Anaerobic Waste Water Treatment Plant FIDIC Contract Management	Group 3	Europe	6	USD	0	0	2.500		22.440	1.400	7.640	764	45.840
20	Tendering, Procurement, and Negotiation Skills	Group 1	S.E.Asia	5	USD	0	0	1.200		4.520	750	2.854	951	14.270
21	FIDIC CLAIMS CLASS Contract course	Group 1	S.E.Asia	5	USD	0	0	1.200		5.450	750	3.040	760	15.200
22	Supervision, QA and control during construction of drainage/sewerage conveyance	Group 1	S.E.Asia	4	USD	0	0	1.800		5.160	750	3.840	768	15.360
23	Supervision, QA and control during construction of Anaerobic Waste Water Treatment Plant	Group 1	Europe	5	USD	0	0	2.500		6.540	1.400	5.208	1.042	26.040
24	Basic Operation and Maintenance of Solid Waste	Group 3	South Korea	9	USD	0	0	500		18.060	1.200	3.707	741	33.360
25	Basic Operation and Maintenance of Wastewater and Drainage	Group 3	South Korea	9	USD	0	0	500		18.060	1.200	3.707	741	33.360
26	Urban Asset Management	Group 1	S.E.Asia	10	USD	0	0	1.250		12.600	750	3.260	652	32.600
27	Management, Operation and Maintenance (MOM) of Solid Waste - Exposure Visit	Group 3	T.B.D	7	USD	0	0	1.000		18.960	1.000	4.709	673	32.960
28	Management, Operation and Maintenance (MOM) of Wastwater/Drainage - Exposure Visit	Group 3	T.B.D	7	USD	0	0	1.000		18.960	1.000	4.709	673	32.960
29	Exposure on Urban Planning and Management	Group 3	South Korea	6	USD	0	0	500		16.160	1.200	4.393	628	26.360
30	World Water Week (Stockholm International Water Institute) - 2018 and/or 2020	Group 3	Sweden	7	USD	0	0	915		18.960	1.400	5.024	718	35.167
Sub-Total														451.873
Contingency (15%)														67.781
Grand Total														519.654
Budget Available														534.000
Balance														14.346

Annex 9 : Initial Note on Training Need Assessment and Capacity Development Plan

Ministry of Public Works and Transport

Integrated Urban Environmental Management in the Tonle Sap Basin Project

Initial Note on Urban Service Unit Road Map
DRAFT





April 2018

SUBMITTED BY_ Korea Engineering Consultants Corp.

IN JOINT VENTURE WITH_ NIRAS

IN ASSOCIATION WITH_ Key Consultants (Cambodia) Ltd.

Consulting Services for Project Management and Implementation Support (PMIS, Package 1)

Integrated Urban Environmental Management in the Tonle Sap Basin Project (IUEMTSBP)

ADB LoanNo.3311-CAM (SF) / 8295-CAM (SCF) / Grant 0454-CAM--Contract No. PMU/MPWT/IUEMTSP/QCBS/16/001

INTEGRATED URBAN ENVIRONMENTAL MANAGEMENT IN THE TONLE SAP BASIN PROJECT
INITIAL NOTE ON URBAN SERVICE UNIT ROAD MAP (DRAFT)

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ABBREVIATIONS

ADB	Asian Development Bank
APSARA	Authority for the Protection and Management of Angkor and the region of Siem Reap
EA	Executing Agency
GAEA	Global Action for Environment Awareness
GMS	Greater Mekong Subregion
HRM	Human Resource Management
KPI	Key Performance Indicators
MEF	Ministry of Economy and Finance
MIH	Ministry and Industry and Handicraft
MOE	Ministry of Environment
MOI	Ministry of the Interior
MOWRAM	Ministry of Water Resources and Meteorology
MPWT	Ministry of Public Works and Transport
NGO	Nongovernment organizations
O&M	Operation and maintenance
PDIH	Provincial Departments of Industry and Handicraft
PDPWT	Provincial Departments of Public Works and Transport
PIU	Project implementation unit
PMIS	Project management and implementation support
PMU	Project management unit
SWM	Solid waste management
USU	Urban Service Unit
WTSSWU	Wastewater Treatment System and Solid Waste Units

1 INTRODUCTION

1.1 Background

1. The Integrated Urban Environmental Management In Tonle Sap Basin (IUEMTB) Project was approved on 10 November 2015 and declared effective on 2 March 2016. The impact of the project will be increased economic activities and environmental protection in the two towns in the Tonle Sap Basin. The outcome will be improved urban services and enhanced climate change resilience in Kampong Chhnang and Pursat municipalities. The project has five outputs: (i) Kampong Chhnang Urban Area Improvements; (ii) Pursat Urban Area Improvements; (iii) Community Mobilization and Environmental Improvements; (iv) Strengthened Sector Coordination and Operations; and (v) Strengthened Capacity for Project Implementation and Operations and Maintenance (O&M).

2. The key infrastructure financed under the project includes: flood protection infrastructure (embankment); construction of a new landfill facility and improvement of solid waste management (SWM); community-driven environmental improvements in Kampong Chhnang; and improvement of the stormwater drainage, river embankment erosion control, construction of a new landfill facility improvement of solid waste management and community-driven environmental improvements in Pursat. The locations of the project towns are shown below in Figure 1.

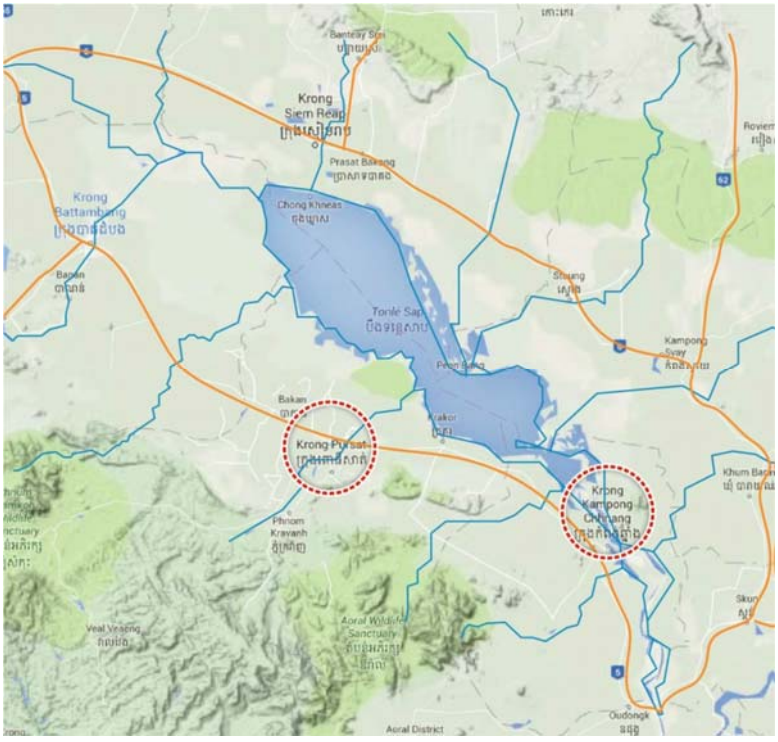


Figure 1: Location of the project towns Kampong Chhnang and Pursat

1.2 Compliance with Loan Covenants related to Urban Service Units

3. One of the loan covenants is related to the establishment of a roadmap for Urban Service Units (USUs) in Kampong Chhnang and Pursat. This roadmap entails plans for establishing semi-autonomous USUs including relevant ministerial or inter-ministerial *prakas* (or ministerial decisions) to be signed for the establishment of USUs, its board of directors (or equivalent), staffing requirements, human resource recruitment plan, office location, reporting responsibilities, financial management and audit requirements, good governance actions, assets transfer, and timeline for this process.

4. The roadmap, defining an overarching strategic objective and capturing the major steps planned for achieving that objective, was envisaged to be done through a TA package (Package III: Sector Strengthening and Capacity Development) having the objective to assist the Ministry of Economy and Finance (MEF), the Ministry of Public Works and Transport (MPWT) and its provincial departments in Kampong Chnnang and Pursat, and the Municipalities of Kampong Chhnang and Pursat to establish these USUs.

5. Nonetheless, as of this date, the procurement and contracting of this TA package has not yet been finalized and therefore limited attention has been given on USUs so far under the PMIS TA. This note will therefore only provide a preliminary overview of the status on the USU establishment process, the discussions and initial thoughts held so far and for a possible way forward.

2 URBAN SERVICE UNIT

2.1 Concept of Urban Service Unit – Goal and Objectives

6. The long-term vision for urban service delivery in Cambodia is that such service should be provided by semi-autonomous and self-financing entities/authorities. In fact such entities are already in place in Phnom Penh and Siem Reap[1] successfully providing water supply, being financial viable (reported full cost recovery) and having very commendable collection ratio – close to 100%. Nonetheless, as in many other places globally, the management of wastewater and solid waste (the "dirty" part of urban services or urban environmental sanitation) has proven to be much more complicated and is lagging far behind compared with the provision of water supply.

7. One of the core problems relates to the overlapping and unclear responsibilities for urban services between provincial and municipal administrations. Presently water supply is provided by the Provincial Departments of Industry and Handicraft (PDIH), wastewater management is predominantly provided by Provincial Departments of Public Works and Transport (PDPWT) and solid waste management is provided by municipalities (nearly always by contracting a private solid waste operator). But as illustrated in the picture below, the management of water supply, wastewater, drainage and solid waste is inherently interconnected and each impacts on the others. If not implemented and managed in a coordinated manner this has the potential lead to exposure to diseases.

Figure 2: Interlinkages between water supply, wastewater, drainage and solid waste

[1] On 10 January 2007, SRWSA was transferred as a public enterprise with full administrative & financial autonomy by Sub-Decree of Royal Government of Cambodia.

8. In addition, there has been a strong focus on construction of new infrastructure to achieve coverage targets that have been set, and less or little on operation and maintenance of the same infrastructure, leading to neglect and poor urban environmental sanitation services. During the initial surveys among government staff made in Kampong Chhnang and Pursat (part of the on-going training needs assessment), it has become evident that that focus is on management, administration, monitoring and reporting (in total 70%), whereas technical duties represent just 30% of the total effort. This might lead to advocacy for more emphasize on technical capacity in the provinces/municipalities in order to make urban services sustainable.

9. Lastly, the relatively higher (compared with water supply) capital investments required for adequate wastewater conveyance and treatment generally make full cost recovery challenging in emerging developing countries. Also managing, operating and maintaining environmental sanitation services can be a cumbersome and less attractive exercise.

10. With this in mind, the establishment of Urban Service Units (USUs) has emerged as a possible and feasible solution to achieve the goal of substantially improve the urban environment sanitation in Cambodian provincial towns and such units could eventually evolve into fully-functioning urban management authorities. It is envisaged that such USUs will take departure from the existing Project Implementation Units (PIUs) in Kampong Chhnang and Pursat, and evolve further through appropriate *Prakas* to be allowed to operate independently and collect revenues/fees, which will gradually be increased in parallel with service improvements and steadily move towards full recovery of costs for operation and maintenance.

2.2 Sewerage Unit and Wastewater Treatment Station in Siem Reap Province

11. Under the GMS Mekong Tourism Development Project (ADB funded) and the Korean loan project to build a wastewater treatment station in Siem Reap[2] (see Figure 3), a special unit was established for operation and management the infrastructure investments – namely the Siem Reap Sewerage and Wastewater Treatment Plant Unit (SSWTPU).

Figure 3: The Wastewater Treatment Station in Siem Reap

12. The responsibilities of the SSWTPU included collection of user fees for the wastewater management and specific *Prakas* were issued to legally allow the unit to perform such collections. Extracts from Inter-Ministerial *Prakas* (132) regarding the SSWTPU are included in Annex 3.

13. A detailed cost recovery analysis[3] for that Sewerage and Wastewater Treatment Plant Unit was finalized in 2014 with the aim to: establish sewerage service fees and connection fees sufficient to recover

[2] The total investment amounted to approximately 34 million US dollars.

[3] Final Report on Cost Recovery Analysis for Siem Reap Sewerage and Wastewater Treatment Plant Unit (SSWTPU) 30 September 2014

targeted costs; to be affordable for low-income households; to acceptable to the prospective urban customers; and to provide adequate cash flow and working capital to commence and sustain the operations of the SSWTPU.

14. Based on the more than 5,700 anticipated customers, a new (and revised) schedule of sewerage connection fees and the sewerage service fees (compared with the fees that were approved by both MEF and MPWT on Ministerial *Prakas* 132) is enclosed in Annex 4. These proposed sewerage service fees have been calculated to recover target costs with O&M cost plus 40% depreciation cost – and it was recommended to increase the fee to recover O&M cost plus 60% depreciation cost in 2016, 80% in 2016, and 100% in 2017.

15. The status of today (2018) is that the original fee regime as approved in *Prakas* 132 still remains unchanged and only 10% of the anticipated customers (about 500 customers) are making regular fee payments. The funds to meet the operation and maintenance costs required by SSWTPU[4] is therefore still heavily dependent upon government subsidies. Lastly, there is no enforcement such as penalties or a "cut-off of service" mechanism for non-payment.

16. As per solid waste management (SWM), in Siem Reap this is handled by the municipality through two private operators – one managing SWM in Siem Reap town area (Global Action for Environment Awareness (GAEA)), and the second in and around the Angkor Wat tourist and recreational area (the Authority for the Protection and Management of Angkor and the region of Siem Reap (APSARA)). The exact nature and performance of this service have not yet been assessed, but seem to be working and need to be further investigated.

2.3 Possible Road Map

17. As indicated above, the establishment of the Urban Service Units is envisaged to take departure from the existing Project Implementation Units in Kampong Chhnang and Pursat. So one of the first steps and actions will be to define how, when and where to transfer the provincial project implementing units into the urban service-providing units. It is envisaged that the duties of the PIUs for the coming one to two years (2018-20) will focus on project implementation and only thereafter will "service providing" duties commence - so from 2020 and beyond, refer to Figure 5 in Section 2.4. On the other hand, it is also expected that the service providing units will be fully capable and ready to take over the project implemented infrastructure when commissioned. Therefore, activities to prepare for this transfer need to be commenced well in advance.

18. The two *prakas*, issued in December 2017 for Kampong Chhnang and Pursat (Annex 6), provided the legal ground to establish Wastewater Treatment System and Solid Waste Units (WTSSWUs) under control of the PDPWT. It is worth noting that these *prakas* included solid waste, which presently is being managed by the municipalities. This makes the *prakas* difficult to fully put into effect before having decided on the location of responsibility for solid waste management.

19. It is nonetheless recommended to formally establish the two WTSSWUs under PDPWT with the understanding that this would be the first step towards to semi-autonomous USUs – and the mandate, responsibilities, staffing and organizational position is likely to be changed over the coming one to three years. There will need to be a review on staffing of the WTSSWUs in the near future – and later on a second review is required when formally establishing USUs with more extended mandate(s) and responsibilities.

20. When developing the staffing and organization of WTSSWU/USUs, it will also be important to access and suggest approaches for **retention of staff, job satisfaction and incentives** for good performance. Such elements need to be embedded in the setup of the organizations.

21. Solid waste management is currently the responsibility of the municipality which also include activities like street cleaning, park maintenance etc. In both project towns, this urban service is being secured by contracting private operators through a service or management contract to collect solid waste from

[4] For example - the monthly cost for pumping sewerage from central Siem Reap to the wastewater treatment station amounts to 5-6.000 USD, Pers. Com. With Head of SSWTPU, Im Vibil.

households, and the transport and disposal of the waste on privately-owned land. However, this system appears not to be efficient in either of the project towns, and secondly, it is also questionable, from an environmental point of view, that solid waste is disposed of on private land, where monitoring the impact on the environment could be difficult to carry out effectively.

22. In case that it is decided to keep the responsibility for SWM with the municipalities, substantial support and capacity development will be required.

23. The responsibilities of the suggested USUs are foreseen to include SWM in addition to wastewater and drainage. Often solid waste is seen piled up along roads and drains. Often (if not always) solid waste ends up in drains and sewerage systems (see Figure 2) and eventually blocking these, creating severe inundation and floods in some cases. So obviously combining the responsibilities for wastewater conveyance, drainage and solid waste under one unit would substantially improve this current situation of lack of coordination.

24. In addition to deciding upon the location of solid waste management responsibilities in the two towns, the **nature of this management** also need to be clarified – refer to Table 1.

Options for SWM	Collection of solid waste (and payments) from HH and transportation to landfill site	Receiving solid waste and management and operate the landfill site
Option 1	Government (USUs)	Government (USUs)
Option 2	Government (USUs)	Private Sector
Option 3	Private Sector	Government (USUs)
Option 4	Private Sector	Private Sector

Table 1: Options for solid waste management (simplified)

25. So, a detailed discussion and decision(s) related to the **future mode of operandi for SWM** to the two project towns will be required.

26. The *Prakas* no. 103 and 104 do not set out any rights for these units to collect fees nor provide guidance on staffing, mandates, and so on. So revised ministerial/inter-ministerial *prakas* for semi-autonomous and self-financing USUs need to be formulated with a focus on urban “clean environment” service provision – possibly similar the *Prakas* 132 issued for Siem Reap SSWTPU and including details related to solid waste management responsibilities unless otherwise decided.

27. In parallel with the issuing of such detailed *prakas*, a 3-year rolling corporate plan for the USUs – acceptable to MPWT, MEF and ADB – will need to be developed. This is expected to be addressed in 2019, where again staff positions/new recruitment need to be reviewed and decided upon. It might very well be that the existing head/director of the PIU/WTSSWU (the project implementation unit) will not be the right and most suitable candidate as head of the future USU (the service providing unit). Such an assessment and consideration need to be done by the human resource management (HRM) units/dept. of the government.

Figure 4: Selection the right candidate for the position

28. Given the key considerations above, the key activity milestones shown in Figure 5 as part of a possible roadmap have been identified.

2.4 Time Schedule for Activities and Key Milestones

29. In the time available and within the timeframe of the IUEMTB project, we envisage the key milestones as seen below in Figure 5,

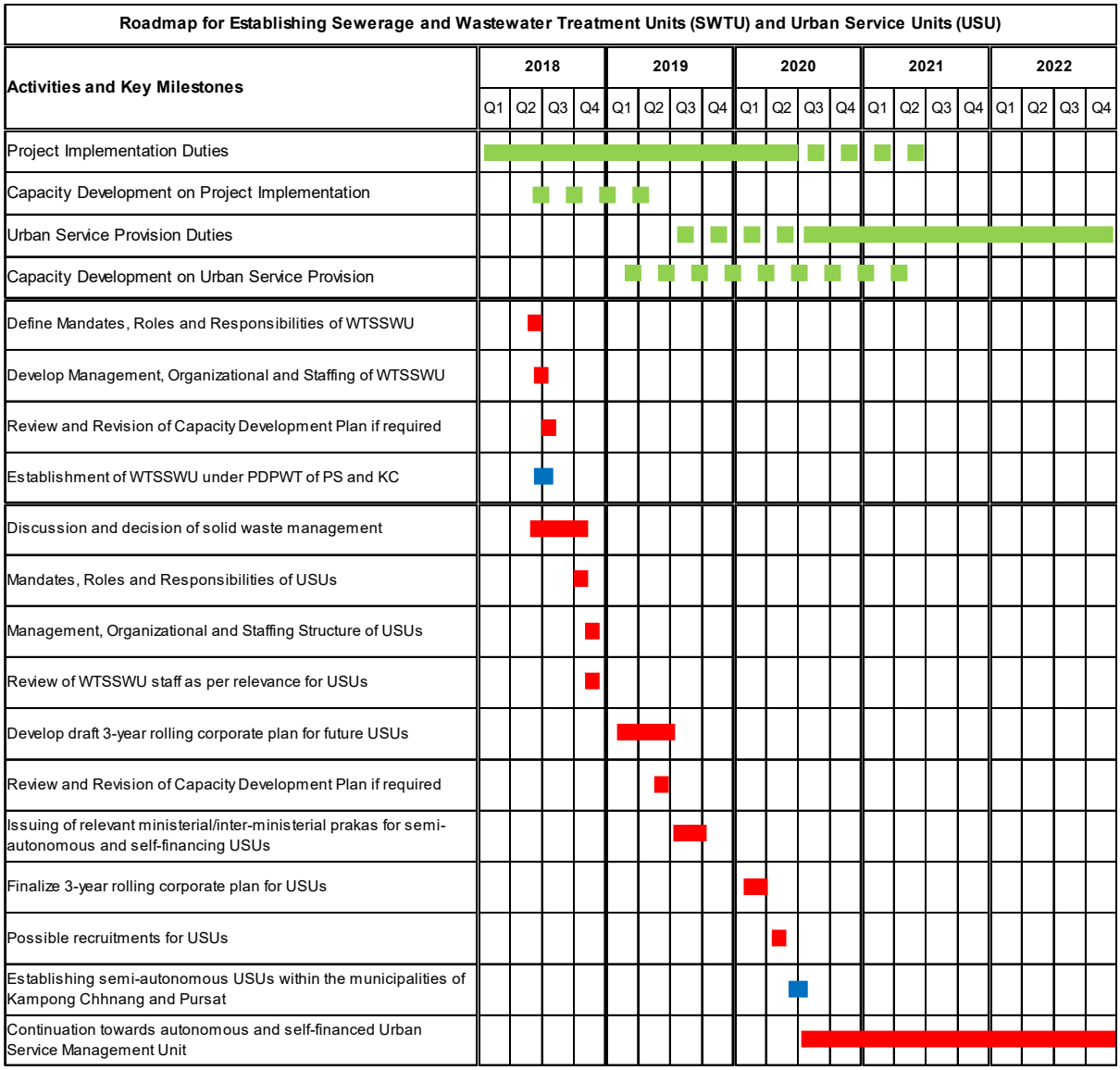


Figure 5: Tentative Roadmap towards autonomy and self-financing (2018-22)

30. The Consultant considers the long-term road map of Urban Service Units and Progression to Urban Management Agencies as depicted and presented in the Urban Institutional Analysis (for reference attached as Annex 5) as still relevant, valid and realistic.

31. The present pace of decentralization, capacity development, and service improvement at provincial and municipality level, together with experiences in general on creating autonomy, do not provide any evidence that this can be developed sooner nor speeded up. The indicated scheduling of 10 years before autonomous and self-financed Urban Service Management Units in Kampong Chhnang and Pursat can be expected to be fully operational seem to be a reasonable outlook (2025 and beyond).

32. However, what still need to be addressed and discussed is the option to merge all urban services (water supply, wastewater and solid waste) into one single urban service "authority". This will make it easier to achieve self-financing and overall cost recovery – but it is recognized that this should only be done when the water supply operation is being managed successfully with positive key performance indicators (KPIs).

2.5 Risks (or Challenges) and Assumptions (Dependencies) – Tentative Listing

33. The follow risks and mitigation measures has been identified and summarized in **Error! Reference source not found.** below.

No.	Risks	Management Plan or Measures
1.	Urban service provision is devolved to the provincial (and municipal governments) without sufficient support, guidance, and an overarching framework	The Government should stay committed to the process of decentralisation and deconcentration through NCDD. The required legal framework need to be developed and approved – and the capacity development plan developed under the PMIS TA need to be efficient and followed through.
2.	Government lacks commitment to strengthening the urban management agencies	A coordinated sector-wide approach is to be promoted by ADB and others for all urban development efforts and activities and adapted by the Government. A road map for strengthening decentralized urban management has to be agreed to by stakeholders.
3.	The government will not allocate sufficient and qualified human resources to support the urban service units	The capacity development plan and development of staffing requirements for USUs will need to be respected and the PMIS consultants will help to strengthen capacities of USU staff.
4.	Arrangements for the operation and maintenance of investment assets are not implemented effectively.	The project will develop USU corporate plans and develop efficient approaches for O&M and asset management. Community engagement and awareness through the NGO package will ensure better acceptance for user payments and for ownership of the facilities.
5.	Lack of trained and qualified staff in the PIUs/USUs	PIU/USU staff will be eligible for training – and the PMIS TA will make great efforts to ensure that the right candidates for the positions in the USUs will be selected. The PMIS consultants will provide technical support, oversight and training.
6.	USUs not able to fully collect revenues for operation and maintenance of urban infrastructure.	Full delegation to USUs for collection of revenue through fees and tariffs must be assured by Government.

Table 2: Identified risk for not achieving autonomy and self-financing USUs

34. The following tentative assumptions need to be monitored.

- Government allocates adequate and qualified staff and resources for PIUs and USUs;
- Local provincial and municipal governments recognize the importance and value of integrated urban management;
- Government is committed to continued decentralization, including local financial management.

Annexes

Annex 1: Overview of Water Sector Institutions in Cambodia

Sector Leadership Roles

Responsibility for water supply and sanitation lies primarily with three ministries: the Ministry of Industry and Handicrafts (MIH) for urban water supply; the Ministry of Public Works and Transport (MPWT) for urban drainage, sewerage and operation of treatment plants; and the Ministry of Rural Development (MRD) for rural water supply and sanitation. Provincial departments of these ministries undertake related functions at sub-national level such as drainage and sewerage under PDPWT, while in the urban water supply sector two state-owned enterprises are functioning as autonomous utilities in Phnom Penh and Siem Reap whereas PDIH is in charge of operation water supplies in other cities. MRD extends its presence to provincial level and to a much lesser extent to district offices, as the latter are not well resourced and have limited or no staff responsible for water supply and sanitation. Other central agencies with lesser roles in the sector include the following:

The Ministry of Water Resources and Meteorology (MOWRAM) issues permits which are required for water abstraction of water over a defined level.

The Ministry of the Environment (MOE) is responsible for setting standards, monitoring, and regulation for effluents discharging into water bodies as defined by the sub-decree on water pollution control issued in 1999. However, in practice, it only monitors industrial on-site wastewater treatment facilities and does not monitor domestic or public wastewater.

The Ministry of Education, Youth and Sport (MOEYS) has responsibility – in coordination with MRD - for school sanitation via the School Health Department, though activity in this area has generally been limited to donor-funded construction of facilities with little attention to hygiene promotion. A positive step is the issuance of a joint decree (prakas) by MOEYS and MRD on “School to Community WASH” in 2010, which is operationalized with the support of UNICEF, GiZ (German International Cooperation) and NGOs active in this area. However, as of 2013 access to clean water and sanitation in schools remained low, with many sanitation installations reportedly locked and inoperable, according to the Education Management Information System. Information on access to WASH (Water, Sanitation and Hygiene) facilities in health centers is not routinely recorded. It is expected that sector-wide education and health programs will pay increasing attention to improving these low access rates.

The Ministry of Health is responsible for adequate water, sanitation and hand washing facilities in health centers, in coordination with MRD. The Department of Preventive Health also has a role in hygiene promotion and has issued an Environmental Health Action Plan, although its implementation on the ground is limited and coordination with MRD has room for improvement.

The Ministry of Land Management, Urban Planning and Construction is responsible for checking the adequacy of water supply provision in new development areas.

The Ministry of Interior, notably the Secretariat of the National Committee for Sub-National Democratic Development, play a role in supporting the implementation of the decentralization and deconcentration reform in close coordination with line ministries, such as MRD. While the Organic Law of 2008 formalized the start of decentralization and deconcentration, control of financing and of most technical capacity remains at central government level. Local authorities such as municipalities, as part of their general mandate for poverty reduction, could play, and to some extent are already playing, a much more pronounced role in water supply and sanitation with support from provincial departments. However, capacity for planning and implementation is weak at sub-national level.

Sector Coordination

Two working groups have been set up to help coordinate the activities of government and external agencies operating in the sector. The Infrastructure and Regional Integration Technical Working Group (IRITWG) is chaired by the Minister of MPWT (Ministry of Public Works and Transport) and in 2010 a formal sub-group for urban water supply was established, chaired by the Ministry of Industry and Handicraft. The frequency of meetings and the fact that the sub-TWG has not yet officially augmented its official mandate to cover urban sanitation remains a constraint for more programmatic support to the urban sector.

The Technical Working Group for Rural Water Supply, Sanitation and Hygiene, which includes a secretariat, was formally established in 2007. Meetings are expected to take place quarterly and are chaired by the Minister of MRD with a development partner acting as co-chair on a rotating basis (since 2011 UNICEF). The rural subsector also has a monthly coordination meeting for knowledge sharing, which has been in place for over 20 years and is chaired by the Director of the Department of Rural Water Supply. Subgroups are formed under this umbrella to focus on particular areas of interest. Currently, the rural subsector is considering ways to improve the monthly coordination meeting so as to play a more strategic role for sector development.

Urban Water Supply

In the absence of an independent regulator, and as outlined in the National Strategic Development Plan 2014-2018, the MIH, through its Department of Potable Water Supply, has responsibility for urban water supply policy, strategic planning, regulation and sector oversight, including the licensing of private water operators. While tariffs of public utilities require approval from the Prime Minister, in the recent past the tariffs of private operators have mostly been determined through local negotiation with hands-off involvement of MIH. As per the 2014 licensing decree, tariffs will be stipulated in the license issued by MIH, requiring consultation at local level. No official guidelines, procedures nor method is presently available for tariff setting and review for public and private water operators. The Department of Potable Water Supply, which has around 20 staff, is faced with high demand, leaving some departmental functions only implemented in full when there is technical and financial support from development partners. MIH responsibilities in provincial and small towns include monitoring drinking water quality standards in piped systems and supporting the licensing of private operators.

Following extensive reforms and investment and capacity building support from multiple development partners, the Phnom Penh Water Supply Authority (PPWSA) has become very successful over the last decades. It has a listing on the Cambodia Stock Exchange and a high level of operational autonomy, with its Board of Directors headed by the Governor of Phnom Penh Municipality. As a state-owned enterprise, the water supply infrastructure remains in government ownership. Similarly, Siem Reap has also moved to an autonomous utility model. Following the recent privatization of a number of provincial public water works, there still remain ten provincial water works under the Department of Potable Water Supply. Institutional arrangements for the non-autonomous utilities are in stark contrast to the PPWSA; they are bound by government rules and compensation systems, have difficulty attracting skilled staff, have little incentives to improve performance and operational efficiency, and suffer from limited public investment allocation for the expansion of services.

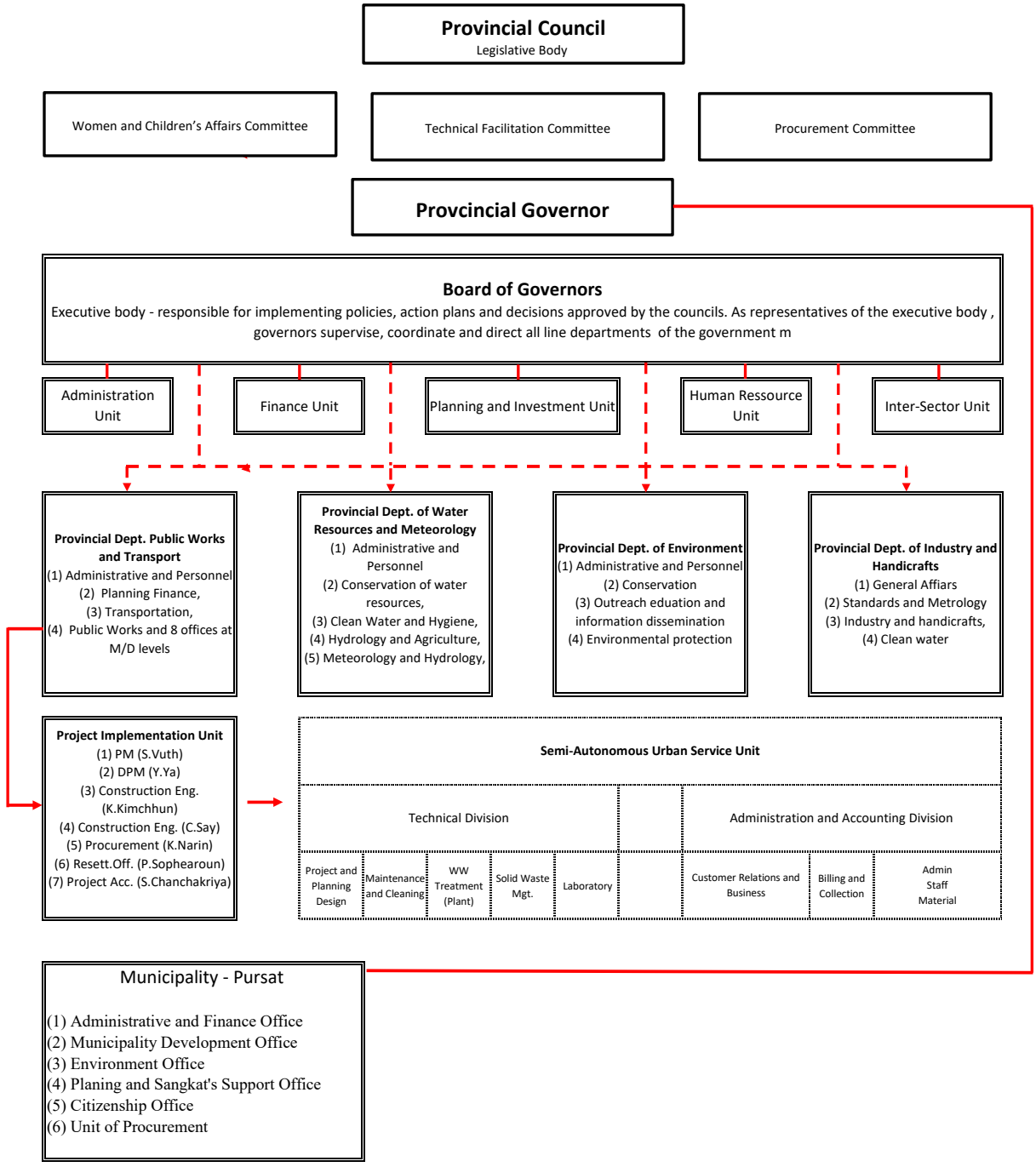
Small-scale private operators also play a significant role in water supply provision, particularly in rural growth centers and emerging towns. There are an estimated 300 operators at present, though only 147 (approximately) are licensed, while MIH is currently trying to bring all non-licensed operators into its sphere of monitoring with, as a first step, a survey to identify all unlicensed ones. In 2013 it was estimated that over 1 million people were currently being served by the domestic private sector. However, small private operators are not yet properly regulated, have limited capabilities and struggle to access capital for service improvements and expansion. Several development partners have been supporting private operators, through experimenting with various Public Private Partnership arrangements in the past. Understanding the potential of the private water market, development partners like AFD and WSP have focused on creating a more favorable environment to access financing through local banks, and the provision of business development services to improve performance and develop bankable investment proposals. The Cambodia Water Association of private water operators, established in 2012, now serves over 50 members with 70 licenses.

Urban Sanitation

The Ministry of Public Works and Transport is responsible for policy, planning, coordination and the implementation of investment projects. In 2011 a mandated department under MPWT was established to set technical standards and tariffs for urban sanitation. However, this department is still in the early stages of development and is not yet fully staffed and resourced. Provincial departments of MPWT are responsible for planning, project implementation and O&M of drainage, sewer and treatment facilities (treatment facilities are only present in Siem Reap, Sihanoukville and Battambang). Fee collection arrangements differ from city

to city, with PPWSA providing this service through their water bill. Improving on-site sanitation and the safe collection, management, treatment and disposal of fecal sludge does not rank high on the priority list of MPWT and/or cities themselves. Private sector involvement in fecal sludge management is so far limited and largely unregulated.

Annex 2: Organisational Set-up at Provincial Level (related to wastewater and SWM)



Annex 3: Extracts from Inter-Ministerial Prakas No. 132 (Siem Reap SWTP Unit)

Extracts from Inter-Ministerial Prakas No. 132 MEF regarding the Siem Reap Sewerage and Wastewater Treatment Plant Unit (Prakas issued by The Deputy Prime Minister, Minister of Economy and Finance, Minister of Public Works and Transport)

Article 2: The service fees shall be determined for customers who are:

- Landowner or resident possessing building located in the service coverage areas;
- Landowner or resident possessing house or building that is not connected with sewage network, but is disposing or discharging wastewater into public sewage system and public premises in the service coverage areas;

Article 3: The Siem Reap Sewerage and Wastewater Treatment Plant Unit may enter into a contract on or expand service system network authorizing villages, groups, communities, organizations, businesses or companies to discharge wastewater into the sewage system. The service charge shall be appropriate according to the standard and technical specifications, including the fees for treatment and disposal of wastewater as well as the fee for connection of sewage system;

Article 4: The Siem Reap Sewerage and Wastewater Treatment Plant Unit that is a financially independent entity shall undertake to be responsible for operation work and maintenance of sewage system consisting of drainage system and treatment station as well as for sanitary pumping service and transportation of wastewater serving the public in Siem Reap province and ensuring water quality in response to the provisions of the Law on Environment;

Article 5: The Siem Reap Sewerage and Wastewater Treatment Plant Unit shall be obliged to pay taxes and duties according to the laws and regulations in force;

Article 6: All incomes and expenditures shall be implemented according to the financial procedures and with a regular co-inspection by auditing officials from the Ministry of Economy and Finance and the Drainage Unit and Wastewater Treatment Station of Siem Reap province;

Article 7: All customers who are landowners or residents possessing buildings located in the service coverage areas shall be obliged to pay service fees defined in Article 1 in order to actively contribute to guarantee of sustainability, good sanitation of environment and aesthetics of public premises;

Article 8: Any provisions that are contrary to the said Prakas shall be abrogated;

Article 9: The secretary-general; the director-general; the inspector-general; the chief of cabinet; the chiefs of all relevant departments and entities under the supervision of the Ministry of Economy and Finance and the Ministry of Public Works and Transport as well as all customers in the service system areas shall undertake to comply with the said Prakas from the date of signature onwards.

Annex 4: Wastewater fees proposed vs. fees approved (Siem Reap)

Customer Type	Connection Fees				Sewerage Service Fees			
	Previous Fees Approved[a/] (KHR)	New Fees Proposed[b/] (KHR)	Percentage Change (%)	Remarks	Previous Fees Approved[a/] (KHR)	New Fees Proposed[b/] (KHR)	Percentage Change (%)	Remarks
Residential								
Residential Size 70m² (Cat. 1)	82,000	82,000	0%	No change	4,000	5,000	25%	Increased
Residential Size 70m² - 300m² (Cat. 2)	123,000	123,000	0%	No change	13,000	14,000	8%	Increased
Residential Size 70m² - 300m² (Cat. 3)	205,000	164,000	-20%	Decreased	35,000	33,000	-6%	Decreased
Hotel								
Hotel 1 to 20 Rooms (Cat. 1)	164,000	164,500	13%	Increased	110,000	109,000	-1%	Decreased
Hotel 21 to 40 Rooms (Cat. 2)	246,000	246,000	0%	No change	123,000	121,000	-2%	Decreased
Hotel 41 to 60 Rooms (Cat. 3)	287,000	287,000	0%	No change	186,000	182,000	-2%	Decreased
Hotel 61 to 100 Rooms (Cat. 4)	410,000	410,000	0%	No change	522,000	516,000	-1%	Decreased
Hotel 101Rooms and Over (Cat. 5)	902,000	902,000	0%	No change	1,260,000	1,244,000	-1%	Decreased
Apartment								
Apartment 1 to 20 Rooms (Cat. 1)	-	164,500	100%	New	-	109,000	100%	New
Apartment 21 to 40 Rooms (Cat. 2)	-	246,000	100%	New	-	121,000	100%	New
Apartment 41 to 60 Rooms (Cat. 3)	-	287,000	100%	New	-	182,000	100%	New
Apartment 61 to 100 Rooms (Cat. 4)	-	410,000	100%	New	-	516,000	100%	New
Apartment 101Rooms and Over (Cat. 5)	-	902,000	100%	New	-	1,244,000	100%	New
Guesthouse								
Guesthouse 1 to 7 Rooms (Cat. 1)	82,000	164,000	100%	Increased	30,000	36,000	20%	Increased
Guesthouse 8 to 15 Rooms (Cat. 2)	164,000	164,500	13%	Increased	58,000	66,000	14%	Increased
Guesthouse 16 and over Rooms (Cat.3)	287,000	287,000	0%	No change	145,000	112,000	-23%	Decreased
Karaoke								
Karaoke 1 to 7 Rooms (Cat. 1)	-	164,000	100%	New	-	36,000	100%	New
Karaoke 8 to 15 Rooms (Cat. 2)	-	164,500	100%	New	-	66,000	100%	New
Karaoke 16 and over Rooms (Cat.3)	-	287,000	100%	New	-	112,000	100%	New
Discotheque								
Discotheque 1 to 7 Rooms (Cat. 1)	-	164,000	100%	New	-	36,000	100%	New
Discotheque 8 to 15 Rooms (Cat. 2)	-	164,500	100%	New	-	66,000	100%	New
Discotheque 16 and over Rooms (Cat.3)	-	287,000	100%	New	-	112,000	100%	New
Restaurant								
Restaurant 1 to 40 Seats (Cat. 1)	164,000	164,000	0%	No change	37,000	49,000	32%	Increased
Restaurant 41 to 100 Seats (Cat. 2)	205,000	205,000	0%	No change	46,000	58,000	26%	Increased
Restaurant 101 and over Seats (Cat. 3)	246,000	246,000	0%	No change	187,000	170,000	-9%	Decreased
Other								
Warehouse/Car Park	205,000	205,000	0%	No change	41,000	39,000	-5%	Decreased
Gas Stations/Gareges	164,000	164,000	0%	No change	73,000	69,000	-5%	Decreased
Massage, Nightclubs, Entertainment clubs	205,000	205,000	0%	No change	42,000	40,000	-5%	Decreased
Administration Buildings (Public)	164,000	164,000	0%	No change	44,000	39,000	-11%	Decreased
Wats, Churches	82,000	82,000	0%	No change	22,000	39,000	77%	Increased
Schools (Private/ Public)	41,000	-	0%	Replaced	41,000	-	0%	Replaced
Large Schools (Private/ Public)	-	164,500	100%	New	-	218,000	100%	New
Medium Schools (Private/ Public)	-	143,500	100%	New	-	59,000	100%	New
Small Schools (Private/ Public)	-	123,000	100%	New	-	25,000	100%	New
Hospitals/ Clinics (Private/ Public)	205,000	-	0%	Replaced	62,000	-	0%	Replaced
Large Hospitals/ Clinics (Private/ Public)*	-	205,000	100%	New	-	49,000	100%	New
Medium Hospitals/ Clinics (Private/ Public)*	-	164,000	100%	New	-	37,000	100%	New
Small Hospitals/ Clinics (Private/ Public)*	-	143,500	100%	New	-	32,000	100%	New
Factory/ Handicraft	287,000	287,000	0%	No change	68,000	63,000	-7%	Decreased
Car/ Motor Wash	205,000	205,000	0%	No change	57,000	52,000	-9%	Decreased
Banks	205,000	205,000	0%	No change	90,000	87,000	-3%	Decreased
NGO/ Company Office	164,000	164,000	0%	No change	69,000	63,000	-9%	Decreased
Souvenir Shop/ Super Market	144,000	143,500	0%	No change	25,000	37,000	48%	Increased
Snooker	144,000	143,500	0%	No change	24,000	36,000	50%	Increased
Other Center	164,000	164,000	0%	No change	208,000	182,000	-13%	Decreased
Other Small Commercial Businesses	123,000	123,000	0%	No change	11,000	10,000	-9%	Decreased
Canteen	-	123,000	100%	New	-	14,000	100%	New
Market								
Kandal Market	287,000	246,000	-14%	Decreased	473,000	167,000	-65%	Decreased
Old Market	246,000	642,000	161%	Increased	174,000	433,000	149%	Increased
Nhe Market	213,000	182,000	-15%	Decreased	50,000	123,000	146%	Increased
Angkor Night Mart	-	531,000	100%	New	-	358,000	100%	New
Tany Market	-	88,000	100%	New	-	60,000	100%	New
Huy Leng Market	-	177,000	100%	New	-	119,000	100%	New
Phoum Traing Market	-	88,000	100%	New	-	60,000	100%	New
Loeu Thom Thmey Market	-	2,761,000	100%	New	-	1,861,000	100%	New
Samaki Market	-	1,380,000	100%	New	-	931,000	100%	New
Angkor Thmei Market	-	319,000	100%	New	-	215,000	100%	New
Wat Por Langka Market	-	354,000	100%	New	-	239,000	100%	New
Fees Per Stall (In case a new market is established)	-	2,000	100%	New	-	1,000	100%	New
Public Latrine	41,000	41,000	0%	No change	9,000	10,000	11%	Increased
Septage Charges Per Cleaning								
CAT. I (Residential)					120,000	115,000	-4%	Decreased
CAT. II (Cat. 1&2 of Hotel/ Apartment/ Guesthouse/ Karaoke/ Discotheque and Restaurant)					200,000	205,000	3%	Increased
CAT. III (Cat. 3, 4&5 of Cat. 1&2 of Hotel/ Apartment/ Guesthouse/ Karaoke/ Discotheque and Restaurant)					400,000	410,000	3%	Increased
CAT. IV Other Customers and Residential Outside Project Area					250,000	250,000	0%	Addition

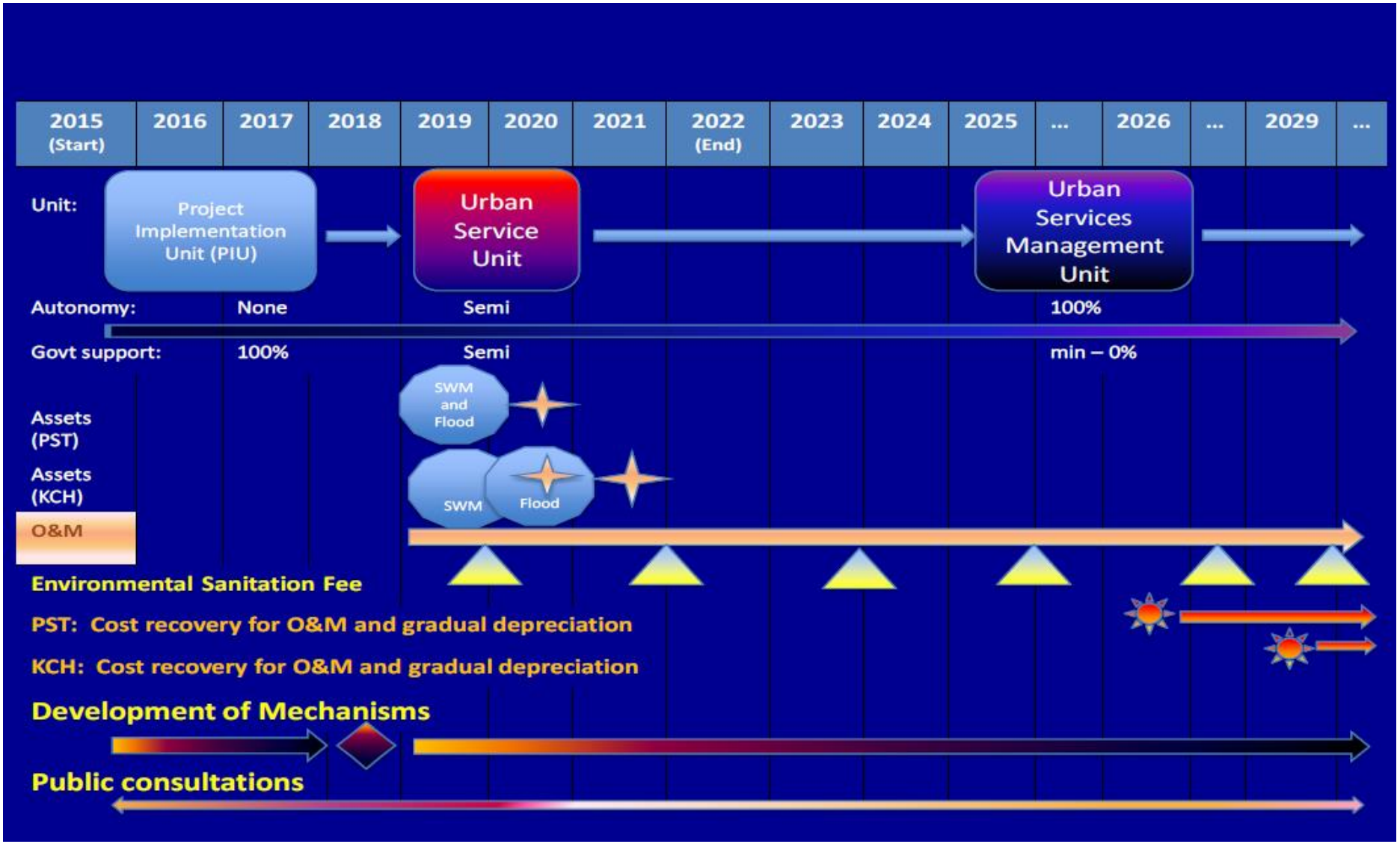
Note:

* The sewerage service fees is not charged for any hospitals/clinics that provide treatment free of charge (FOC)

a/ The Ministerial Prakas No. 132 តប, Dated 02 March 2009, Signed by both Minister of MEF and MPWT

b/ The New proposed sewerage service fees at target Cost Recovery level 2014 O&M Costs Plus 40% Depreciation

Annex 5: Road Map of Urban Service Units and Progression to Urban Management Agencies



Annex 6: Prakas no. 103 & 104 (Wastewater and Solid Waste Units in KC and PS)

ព្រះរាជាណាចក្រកម្ពុជា
ជាតិ សាសនា ព្រះមហាក្សត្រ

ក្រសួងសាធារណការ និងដឹកជញ្ជូន
លេខ: ១០៣ ០៨ សក.

រាជធានីភ្នំពេញ, ថ្ងៃ២៩ ខែ៧ ឆ្នាំ២០១៧

ប្រកាស

ស្តីពីការបង្កើតអង្គភាពសំណង់ប្រព័ន្ធបង្ហូរទឹកកខ្វក់ និងសំណល់រឹង ខេត្តពោធិ៍សាត់

ទេសរដ្ឋមន្ត្រី រដ្ឋមន្ត្រីក្រសួងសាធារណការ និងដឹកជញ្ជូន

- បានឃើញរដ្ឋធម្មនុញ្ញនៃព្រះរាជាណាចក្រកម្ពុជា
- បានឃើញព្រះរាជក្រឹត្យលេខ នស/រកត/០៩១៣/៩០៣ ចុះថ្ងៃទី២៤ ខែកញ្ញា ឆ្នាំ២០១៣ ស្តីពីការតែងតាំងរាជរដ្ឋាភិបាលនៃព្រះរាជាណាចក្រកម្ពុជា
- បានឃើញព្រះរាជក្រឹត្យលេខ នស/រកត/០៤១៦/៣៦៨ ចុះថ្ងៃទី០៤ ខែមេសា ឆ្នាំ២០១៦ ស្តីពីការកែសម្រួល និងបំពេញបន្ថែមសមាសភាពរាជរដ្ឋាភិបាល នៃព្រះរាជាណាចក្រកម្ពុជា
- បានឃើញព្រះរាជក្រមលេខ ០២/នស/៩៤ ចុះថ្ងៃទី២០ ខែកក្កដា ឆ្នាំ១៩៩៤ ដែលប្រកាសឱ្យប្រើច្បាប់ស្តីពីការរៀបចំ និងការប្រព្រឹត្តទៅនៃទីស្តីការគណៈរដ្ឋមន្ត្រី
- បានឃើញព្រះរាជក្រមលេខ នស/រកម/០១៩៦/០៣ ចុះថ្ងៃទី២៤ ខែមករា ឆ្នាំ១៩៩៦ ដែលប្រកាសឱ្យប្រើច្បាប់ស្តីពីការបង្កើតក្រសួងសាធារណការនិងដឹកជញ្ជូន
- បានឃើញអនុក្រឹត្យលេខ២១៦ អនក្រ.បក ចុះថ្ងៃទី១៣ ខែតុលា ឆ្នាំ២០១៦ ស្តីពីការរៀបចំ និងការប្រព្រឹត្តទៅរបស់ក្រសួងសាធារណការនិងដឹកជញ្ជូន
- យោងកិច្ចព្រមព្រៀងឥណទានលេខ ៣៣១១-CAM (SF) ចុះថ្ងៃទី២២ ខែធ្នូ ឆ្នាំ២០១៥ រវាងរាជរដ្ឋាភិបាលកម្ពុជាជាមួយធនាគារអភិវឌ្ឍន៍អាស៊ី
- យោងតាមតម្រូវការចាំបាច់របស់ក្រសួងសាធារណការនិងដឹកជញ្ជូន ។

សម្រេច

ប្រការ១: បង្កើត **អង្គភាពសំណង់ប្រព័ន្ធបង្ហូរទឹកកខ្វក់ និងសំណល់រឹង** ឱ្យស្ថិតនៅក្រោមការគ្រប់គ្រងរបស់មន្ទីរសាធារណការ និងដឹកជញ្ជូនខេត្តពោធិ៍សាត់ ។

ប្រការ២: អគ្គនាយកនៃអគ្គនាយកដ្ឋានរដ្ឋបាល អគ្គនាយកនៃអគ្គនាយកដ្ឋានសាធារណការ ត្រូវធ្វើទម្រង់បែបបទដើម្បីរៀបចំអង្គភាពដូចកំណត់ក្នុងប្រការ១ ខាងលើ ទៅជា *អង្គភាពម្ចាស់ការហិរញ្ញវត្ថុ* ។

ប្រការ៣: នាយកខុទ្ទកាល័យ អគ្គនាយកនៃអគ្គនាយកដ្ឋានរដ្ឋបាល អគ្គនាយកនៃអគ្គនាយកដ្ឋានសាធារណការ គ្រប់អគ្គនាយកនៃអគ្គនាយកដ្ឋាន ប្រធានមន្ទីរសាធារណការនិងដឹកជញ្ជូនខេត្តពោធិ៍សាត់ ព្រមទាំងអង្គភាពដែលពាក់ព័ន្ធត្រូវទទួលបន្ទុកអនុវត្តរៀងៗខ្លួន តាមខ្លឹមសារនៃប្រកាសនេះ ចាប់ពីថ្ងៃចុះហត្ថលេខាតទៅ ។

ទេសរដ្ឋមន្ត្រី
រដ្ឋមន្ត្រីក្រសួងសាធារណការ និងដឹកជញ្ជូន

ស៊ុន ចាន់ថុល

កន្លែងទទួល :
- ទីស្តីការគណៈរដ្ឋមន្ត្រី
- ក្រសួងសេដ្ឋកិច្ច និងហិរញ្ញវត្ថុ
- សាលាខេត្តពោធិ៍សាត់ "ដើម្បីជូនជ្រាប"
- ដូចប្រការ ៣ "ដើម្បីអនុវត្ត"
- ឯកសារ កាលប្បវត្តិ

មហាវិថីព្រះនរោត្តម កែងផ្លូវលេខ១០៦, សង្កាត់វត្តភ្នំ, ខណ្ឌដូនពេញ, រាជធានីភ្នំពេញ, កម្ពុជា ទូរស័ព្ទ/ទូរសារ: (៨៥៥) ០២៣ ៨២៦ ១១០

KINGDOME OF CAMBODIA

Nation Religion King

Ministry of Public Works and Transport
No. 103 RBKSK.

PRAKAS

The Establishment of Wastewater Treatment System and Solid waste units in Pursat Province

Senior Minister, Minister of ministry of Public Works and Transport

- Has seen the constitution of the kingdom of Cambodia
- Has seen the Royal Decree No. NS / RKT / 0913/903 dated September 25, 2013 on the formation of the Royal Government of Cambodia;
- Has seen Preah Reach Kram No. NS / RKT / 0416/368 dated April 4, 2016 on the edition and additional Government component of kingdom of Cambodia.
- Has seen Preah Reach Kram No. 02/NS/94 dated July 20, 1994, to allow using the law on the organization and functioning of the council of Ministers.
- Has seen Preah Reach Kram No. NS / RKM / 0196/03, dated January 24, 1996, announcing to use the Law on the Establishment of the Ministry of Public Works and Transport.
- Has seen sub-degree No. 216 ANRK.BK, dated on October 13, 2016 on the organization and functioning of the ministry of Public works and Transport,
- Refer to loan agreement No. 3311-CAM (SF), dated on December 22, 2015, Between the Royal Government of Cambodia and the Asian Development Bank
- According to the need of the Ministry of Public Works and Transport

DECISION

Article 1: The Establishment of Wastewater Treatment System and Solid waste units is under control of Department of Public Works and Transport in Pursat province.

Article 2: General Directorate of the General Department of Administration, General Directorate of the General Department of Public Works are formulate the organization of the units as defined in Article 1 above to the Financial Unit.

Article 3: Director Cabinet, General Directorate of the General Department of Administration, General Directorate of the General Department of Public Works, all General Directorate of the General Department, Director of Department of Public Works and Transport in Pursat province and all enclosed unit is responsible for implementation of respective according to the contents of this Prakas from the date of signing on.

ព្រះរាជាណាចក្រកម្ពុជា

ជាតិ សាសនា ព្រះមហាក្សត្រ

ក្រសួងសាធារណការ និងដឹកជញ្ជូន

លេខៈ ១០៤ ប.ក. សក.

រាជធានីភ្នំពេញ, ថ្ងៃទី២៩ ខែ០៧ ឆ្នាំ២០១៧

ប្រកាស

ស្តីពីការបង្កើតអង្គភាពសំណង់ប្រព័ន្ធបង្ហូរទឹកកខ្វក់ និងសំណល់រឹង ខេត្តកំពង់ឆ្នាំង

ទេសរដ្ឋមន្ត្រី រដ្ឋមន្ត្រីក្រសួងសាធារណការ និងដឹកជញ្ជូន

- បានឃើញរដ្ឋធម្មនុញ្ញនៃព្រះរាជាណាចក្រកម្ពុជា
- បានឃើញព្រះរាជក្រឹត្យលេខ នស/រកត/០៩១៣/៩០៣ ចុះថ្ងៃទី២៤ ខែកញ្ញា ឆ្នាំ២០១៣ ស្តីពីការតែងតាំងរាជរដ្ឋាភិបាល នៃព្រះរាជាណាចក្រកម្ពុជា
- បានឃើញព្រះរាជក្រឹត្យលេខ នស/រកត/០៤១៦/៣៦៨ ចុះថ្ងៃទី០៤ ខែមេសា ឆ្នាំ២០១៦ ស្តីពីការកែសម្រួល និងបំពេញបន្ថែមសមាសភាពរាជរដ្ឋាភិបាល នៃព្រះរាជាណាចក្រកម្ពុជា
- បានឃើញព្រះរាជក្រមលេខ ០២/នស/៩៤ ចុះថ្ងៃទី២០ ខែកក្កដា ឆ្នាំ១៩៩៤ ដែលប្រកាសឱ្យប្រើច្បាប់ស្តីពីការរៀបចំ និងការប្រព្រឹត្តទៅនៃទីស្តីការគណៈរដ្ឋមន្ត្រី
- បានឃើញព្រះរាជក្រមលេខ នស/រកម/០១៩៦/០៣ ចុះថ្ងៃទី២៤ ខែមករា ឆ្នាំ១៩៩៦ ដែលប្រកាសឱ្យប្រើច្បាប់ស្តីពីការបង្កើតក្រសួងសាធារណការនិងដឹកជញ្ជូន
- បានឃើញអនុក្រឹត្យលេខ២១៦ អនក្រ.បក ចុះថ្ងៃទី១៣ ខែតុលា ឆ្នាំ២០១៦ ស្តីពីការរៀបចំ និងការប្រព្រឹត្តទៅរបស់ក្រសួងសាធារណការនិងដឹកជញ្ជូន
- យោងកិច្ចព្រមព្រៀងឥណទានលេខ ៣៣១១-CAM (SF) ចុះថ្ងៃទី២២ ខែធ្នូ ឆ្នាំ២០១៥ រវាងរាជរដ្ឋាភិបាលកម្ពុជាជាមួយធនាគារអភិវឌ្ឍន៍អាស៊ី
- យោងតាមតម្រូវការចាំបាច់របស់ក្រសួងសាធារណការនិងដឹកជញ្ជូន ។

សម្រេច

ប្រការ១: បង្កើត **អង្គភាពសំណង់ប្រព័ន្ធបង្ហូរទឹកកខ្វក់ និងសំណល់រឹង** ឱ្យស្ថិតនៅក្រោមការគ្រប់គ្រងរបស់មន្ទីរសាធារណការ និងដឹកជញ្ជូនខេត្តកំពង់ឆ្នាំង ។

ប្រការ២: អគ្គនាយកនៃអគ្គនាយកដ្ឋានរដ្ឋបាល អគ្គនាយកនៃអគ្គនាយកដ្ឋានសាធារណការ ត្រូវធ្វើទម្រង់បែបបទដើម្បីរៀបចំអង្គភាពដូចកំណត់ក្នុងប្រការ១ ខាងលើ ទៅជា *អង្គភាពម្ចាស់ការហិរញ្ញវត្ថុ* ។

ប្រការ៣: នាយកខុទ្ទកាល័យ អគ្គនាយកនៃអគ្គនាយកដ្ឋានរដ្ឋបាល អគ្គនាយកនៃអគ្គនាយកដ្ឋានសាធារណការ គ្រប់អគ្គនាយកនៃអគ្គនាយកដ្ឋាន ប្រធានមន្ទីរសាធារណការនិងដឹកជញ្ជូនខេត្តកំពង់ឆ្នាំង ព្រមទាំងអង្គភាពដែលពាក់ព័ន្ធត្រូវទទួលបន្ទុកអនុវត្តរៀងៗខ្លួន តាមខ្លឹមសារនៃប្រកាសនេះ ចាប់ពីថ្ងៃចុះហត្ថលេខាតទៅ ។

ទេសរដ្ឋមន្ត្រី

រដ្ឋមន្ត្រីក្រសួងសាធារណការ និងដឹកជញ្ជូន

ស៊ុន ចាន់ថុល

កន្លែងទទួល :
- ទីស្តីការគណៈរដ្ឋមន្ត្រី
- ក្រសួងសេដ្ឋកិច្ច និងហិរញ្ញវត្ថុ
- សាលាខេត្តកំពង់ឆ្នាំង "ដើម្បីជូនជ្រាប"
- ដូចប្រការ ៣ "ដើម្បីអនុវត្ត"
- ឯកសារ កាលប្បវត្តិ

មហាវិថីព្រះនរោត្តម កែងផ្លូវលេខ១០៦, សង្កាត់វត្តភ្នំ, ខណ្ឌដូនពេញ, រាជធានីភ្នំពេញ, កម្ពុជា ទូរស័ព្ទ/ទូរសារ: (៨៥៥) ០២៣ ៨២៦ ៩៩០

KINGDOME OF CAMBODIA
Nation Religion King

Ministry of Public Works and Transport
No. 104 RBKSK.

PRAKAS

The Establishment of Wastewater Treatment System and Solid waste units in Kampong Chhnang Province

Senior Minister, Minister of ministry of Public Works and Transport

- Has seen the constitution of the kingdom of Cambodia
- Has seen the Royal Decree No. NS / RKT / 0913/903 dated September 25, 2013 on the formation of the Royal Government of Cambodia;
- Has seen Preah Reach Kram No. NS / RKT / 0416/368 dated April 4, 2016 on the edition and additional Government component of kingdom of Cambodia.
- Has seen Preah Reach Kram No. 02/NS/94 dated July 20, 1994, to allow using the law on the organization and functioning of the council of Ministers.
- Has seen Preah Reach Kram No. NS / RKM / 0196/03, dated January 24, 1996, announcing to use the Law on the Establishment of the Ministry of Public Works and Transport.
- Has seen sub-degree No. 216 ANRK.BK, dated on October 13, 2016 on the organization and functioning of the ministry of Public works and Transport,
- Refer to loan agreement No. 3311-CAM (SF), dated on December 22, 2015, Between the Royal Government of Cambodia and the Asian Development Bank
- According to the need of the Ministry of Public Works and Transport

DECISION

Article 1: The Establishment of Wastewater Treatment System and Solid waste units is under control of Department of Public Works and Transport in Kampong Chhnang Province.

Article 2: General Directorate of the General Department of Administration, General Directorate of the General Department of Public Works are formulate the organization of the units as defined in Article 1 above to the Financial Unit.

Article 3: Director Cabinet, General Directorate of the General Department of Administration, General Directorate of the General Department of Public Works, all General Directorate of the General Department, Director of Department of Public Works and Transport in Kampong Chhnang Province and all enclosed unit is responsible for implementation of respective according to the contents of this Prakas from the date of signing on.