

Resettlement Due Diligence Report

7 August 2017

Cambodia: Provincial Water Supply and Sanitation Project Proposed Kampong Cham Septage Subproject

Prepared by the Ministry of Public Works and Transport for the Asian Development Bank (ADB).

This resettlement framework is a document of the borrower. The views expressed herein do not necessarily represent those of ADB's Board of Directors, Management, or staff, and may be preliminary in nature.

CURRENCY EQUIVALENTS

(as of 7 August 2017)

Currency unit	-	riel (KR)
KR1.00	=	\$0.000244
\$1.00	=	KR4,103

ABBREVIATIONS

ADB	-	Asian Development Bank
AH	-	Affected Household
AP	-	Affected Person
DDR	-	Due Diligence Report
HH	-	Household
O&M	-	operation & management
PIU	-	Project Implementation Unit
PMU	-	Project Management Unit
PPTA	-	Project Preparation Technical Assistance
PWSSP	-	Provincial Water Supply and Sanitation Project
RF	-	Resettlement Framework
RoW	-	Right of Way
RP	-	Resettlement Plan
WWTP	-	Wastewater Treatment Plant

WEIGHTS AND MEASURES

ha	-	hectare/s
km	-	Kilometres
km ²	-	square kilometres
Lpcd	-	liters per capita per day
l/s	-	liters per second
m	-	meter
m ²	-	square meter
m ³	-	cubic meter
m ³ /day	-	cubic meter per day
sqm	-	square meter

NOTE

In this report, "\$" refers to US dollars.

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I. OVERVIEW OF THE PROJECT

A. Background of the Provincial Water Supply and Sanitation Project

1. The Provincial Water Supply and Sanitation Project (PWSSP) is to improve and expand urban water supply in selected towns and wastewater and septage management services in the same towns to contribute to the Government's targets for urban water supply and effective urban sanitation. The PWSSP outputs include: (i) water supply systems improved and service coverage increased through the development of new water supply intakes and treatment facilities, replacement of old water mains, and expansion of the distribution network; (ii) septage management and sewerage services provided through the provision of septage collection and treatment and the development of expanded sewerage systems; and (iii) project implementation and operation and maintenance (O&M) developed to complement ongoing institutional development and capacity building in procurement, financial management, and governance.

2. The PWSSP will extend water supply coverage and treatment in Battambang, and Kampong Cham and sanitation coverage and wastewater treatment capacities with improved septage management in Battambang and Sihanoukville, and improved septage management in Kampong Cham. The project will also provide for the replacement of the failed interceptor sewer in the town of Siem Reap.

B. Proposed Kampong Cham Septage Subproject

1. Existing Facilities

3. As indicated sanitation infrastructure in Kampong Cham currently comprises of septic tanks. There is no reticulated wastewater collection other than direct or indirect disposal to road drains by households and businesses within a limited central city area. At present, there are no septage treatment facilities and vacuum trucks dispose of the sludge from septic tanks in open fields, resulting in contamination of the surrounding environment. Sludge (septage) collected from septic tanks has already undergone a degree of anaerobic decomposition inside the septic tanks but requires further treatment prior to drying and release. This subproject focuses on establishing septage facilities for safe disposal of the sludge. Most households use a pour flush to septic tank or a pit system.

4. In Kampong Cham, there is at present only a small number of vacuum truck operators. As operators become busier, carrying more loads per day, the incentive to invest further in another truck will arise, which is likely to result in greater private sector participation. Currently the operators mostly deposit the septage onto agricultural land or at other locations whose suitability to safely receive the septage has not been confirmed

2. Proposed Improvements

5. The proposed subproject involves the construction of a septage treatment facility for receiving waste collected by privately and DPWT operated vacuum trucks from Kampong Cham town.

6. The proposed site of the septage facility is a 5.2 area of largely scrub land in Phkay Proek village area, Mien commune, Prey Chhor district, about 18 km outside Kampong Cham. The area has been allocated by the Provincial Governor. It is located on a plateau at an elevation between 15m and 20m above mean sea level (amsl).

7. Existing land use is mainly degraded shrub land interspersed with some irrigated rice fields, and quarrying for building stone. The subproject can be located on the available site with compromising the parcels of land currently used as rice fields. Treated and dried sludge will be disposed of at approved land fill sites where it will be suitable for use as a cover material.

8. The sub-project will also include capacity building for DPWT and private vacuum truck operators and a public awareness campaign aimed at increased understanding of the operation of septic tanks and the need for maintenance.

9. For the sustainability of the septage treatment facility it is vital to have both the support of the private vacuum truck operators through licensing and increased awareness of the owners of the septic tanks in proper upkeep, including regular emptying. Across Cambodia it is currently apparent that householders only empty their septic tanks as a last resort when there is an odor or drainage problem due to overflow of the septic tanks.

10. Under the subproject support will be given to communities for a range of activities to be in line with the objectives of the project. This will include (i) local area environmental improvements, through promoting the use of household and community level sanitation and drainage facilities, (ii) stakeholder consultation and public participation to raise awareness and provide organizational support to implement the awareness programs, (iii) support to district authorities in facilitating sanitation and hygiene behaviour change leading to significant health and hygiene benefits, and (iv) the management and operation public sanitation facilities. A web based reporting system (adopting a World Bank system) will be utilised to assist in identifying and reporting water supply problems such as burst pipes, water leaks, and sewer surcharges and overflows.

C. Rational for Due Diligence

11. The feasibility study design considered components of a septage scheme, which would require no private land acquisition. This will have to be reviewed in detail during the detailed design stage. The subproject will involve physical changes through earth moving and constructing the septage facility.

12. Since preparation and submission of adequate social safeguards documents is a condition for ADB's approval of subproject loan, each component has been carefully reviewed in terms of involuntary resettlement and indigenous peoples (IP) impacts. In accordance with ADB's 2009 Safeguard Policy Statement and the Bank's OM Section F1/OP (January 2010) field validation and due diligence has confirmed that this subproject has no land acquisition and hence does not trigger the involuntary resettlement safeguard, and Indigenous People safeguards.

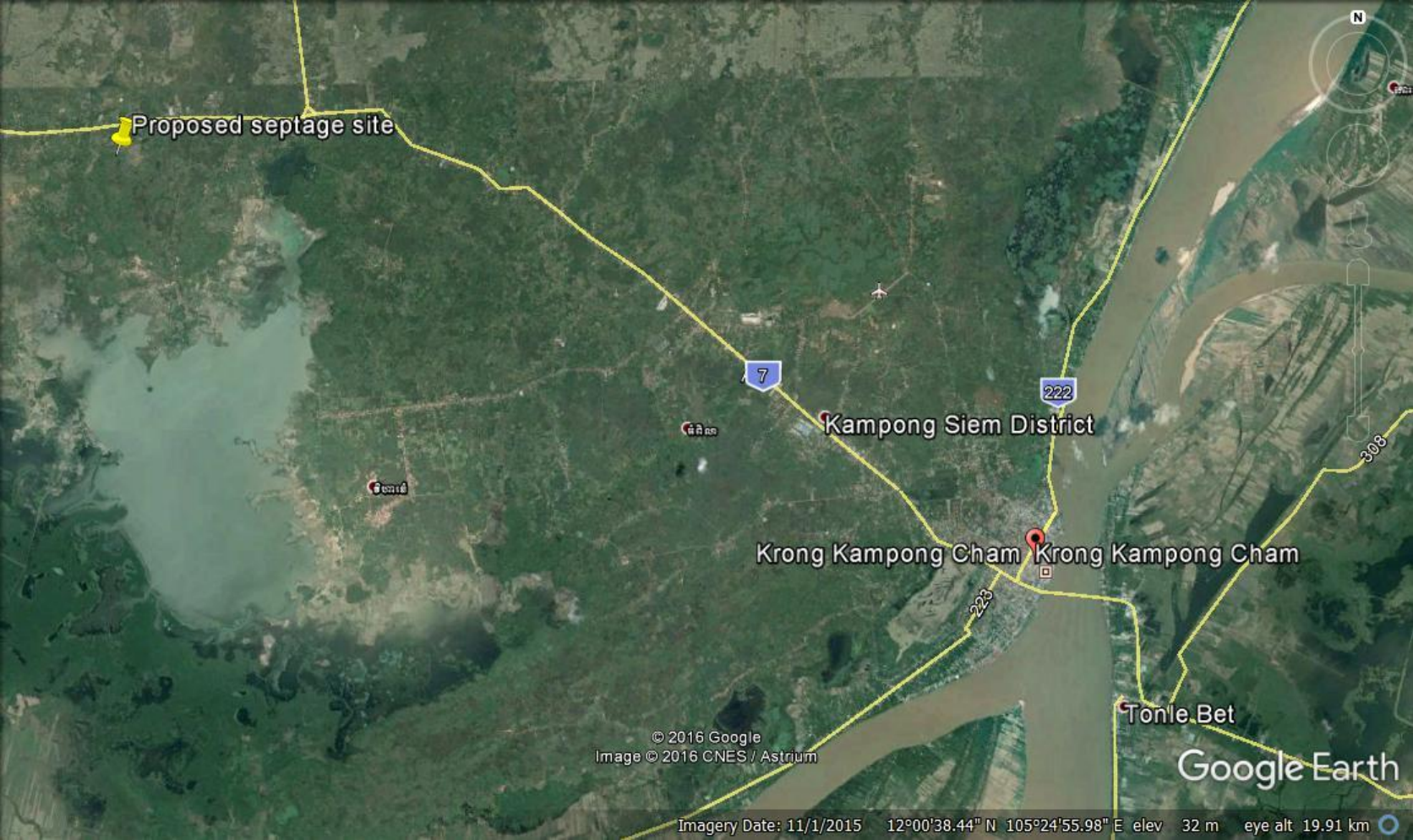


Figure 1: Proposed Location of Septage Area

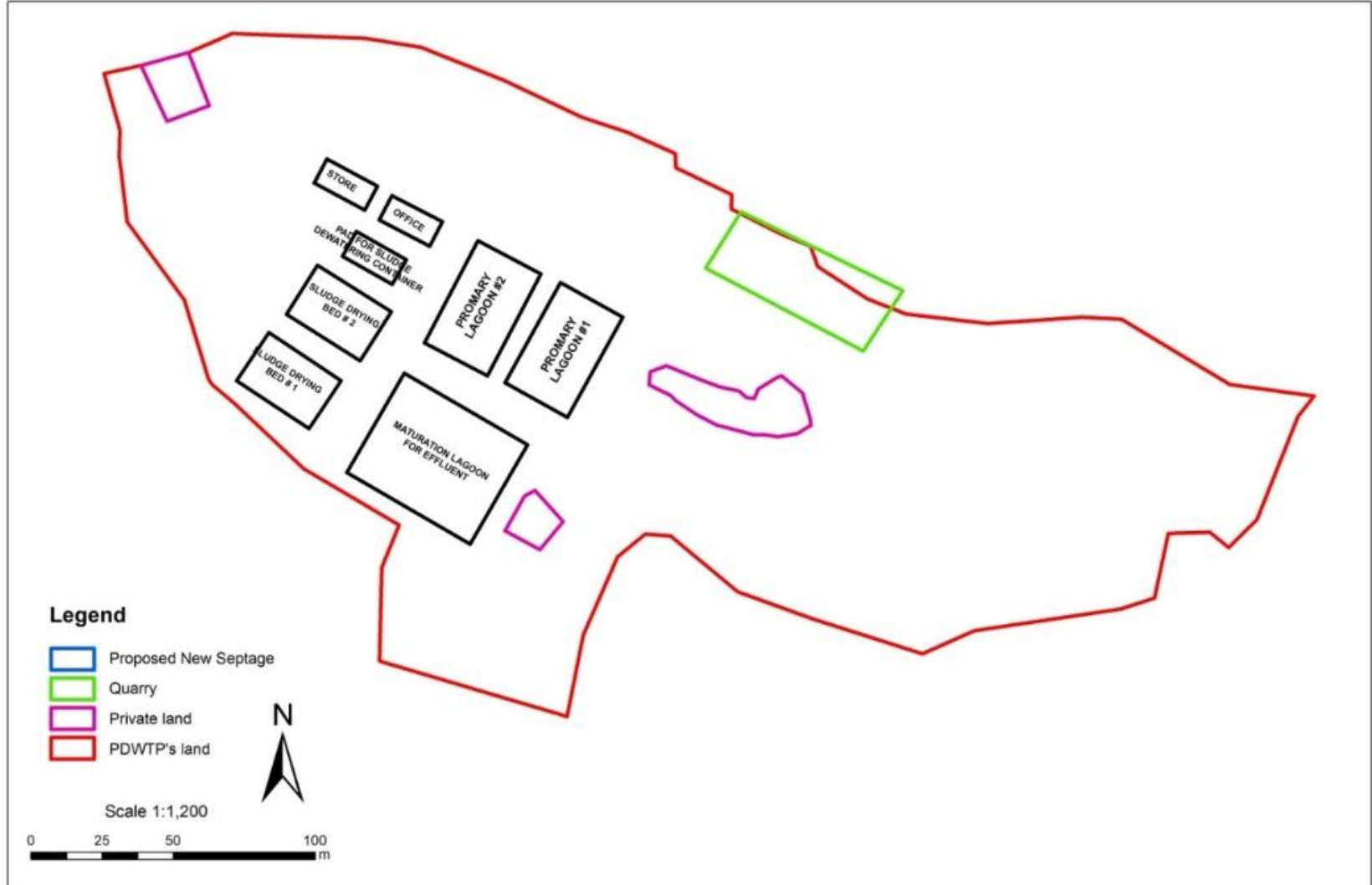


Figure 2: Proposed Layout of Septage Area

II. SCOPE OF LAND ACQUISITION

13. The land acquisition, resettlement and compensation related fieldwork for this subproject took place in December 2016 and February 2017 and included discussions with DPWT, and a site inspection and transect walk by FTP.

14. The due diligence assessment on resettlement aimed at using available public land rather than acquiring private plots at the proposed site, so that there are no impacts on owners and/or users of affected assets.

15. For any temporary land acquisition for site installation or other areas needed for the subproject activities, the contractor will have to propose in a site installation and access plan and obtain approval from the Project Implementation Unit (PIU). Where possible, public land will be used for temporary land use. The contractor shall lease the private space with agreed rental fee. Both private and public land shall be returned in the same or improved condition compared with pre-subproject situation. Through a transparent and contractual approach, the Employer will provide the contractor with the project's land acquisition and compensation principles to ensure that (i) official compensation rates are applied, (ii) re-instatement of affected assets contractually defined, (iii) consultation takes place, (iv) the grievance mechanism is followed, (v) the Environmental Management Plan (EMP) is applied, and (vi) other items specified are complied with. The requirements for items (i) to (v) for compliance by the contractor and monitoring by the PIU.

A. Affected Persons

16. Selected items are listed in **Table 1** and indicate, that there are no assets affected and therefore no affected owners and/or users to be reported. More details are given in the resettlement fact finding and screening of **Appendix 1**. Pictures are shown in **Appendix 2**.

Table 1: Summarized LAR Overview

Item		Cases and Description
1	Loss of land	▪ No cases of temporary or permanent land acquisition to report.
2	Loss of houses / structures	▪ No cases of primary/secondary structures on private land to report.
3	Loss of crops	▪ No cases of damaged crops to report.
4	Loss of trees	▪ No cases of loss of trees to report.
5	Loss of services / resources	▪ No cases of loss of services and resources to report.
6	Loss of Income	▪ No cases of loss of income to report.
7	Relocation	▪ No cases of relocation to report.
8	Vulnerability support	▪ No cases of physical or economic displacement to report.

B. Assessment of Resettlement Impacts

The due diligence report (DDR) of the Subproject is prepared under the PPTA is based on ADB's Safeguard Policy Statement (SPS) 2009 and provisions of the RGC's Laws, Regulations and Policies on Land Acquisition. As indicated in Table 1 above, transect walk through the Subproject site validated no LAR requirements. However, contractor may need temporary land acquisition for construction activities. After the detailed engineering design and prior to the implementation of the Subproject, the GDR personnel with the assistance of project management unit (PMU) and PIU will be required to undertake a review of this due diligence, prepare a confirmation letter or report documenting any modifications on any resettlement aspects and submit to ADB, and receive no objection confirmation from ADB prior to the start of construction works.

III. CONSULTATION, PARTICIPATION AND INFORMATION DISCLOSURE

A. Consultation

17. For this subproject a preliminary inventory of loss and a survey of all AHs were carried out subsequent to the feasibility study during due diligence assessment determining a record of preliminary measurements of type and extend of loss related both related to AHs' eligibility of entitlements.

18. Transparent consultation processes with public village meetings during the detailed design and construction stages as defined by RF of the PWSSP have been identified with the DPWT and commune/sangkat authorities. The APs will therefore be properly informed on all subproject activities. The information required to be made available includes the specific activities, schedules, impacts and mitigation measures. The information will be provided through public meetings led by PIU, local authorities and/or committees as required in the consultation and participation section of the RF.

B. Participation

19. During site visits to prepare the subproject, a number of meetings were held with key stakeholders, including provincial and district officials, village office holders.

20. The meetings covered social and resettlement issues. The participants have a good understanding about the subproject and its land acquisition related aspects. Attending officials, as well as village representatives have been informed about the subproject. An overview list of contacted persons is given in **Appendix 3**.

C. Information Disclosure

21. The disclosure of LAC information, consultation and participation of residents in the subproject took place in a public meeting from 22-23 September 2016. In total there are 31 participants including villagers, village chief and staffs from department of public works and transport. They have a good understanding about the subproject and its land acquisition related aspects. The contacted participants (i) showed always high interest in the subproject and repeatedly (ii) mentioned their expectations towards the subproject as it is important for city development.

IV. IMPLEMENTATION SCHEDULE

22. In general, the planning and executing of LAR tasks are mainly related to the pre-construction phase containing (a) detailed engineering design, (b) bid document preparation & approval and (c) procurement of civil works contractor before start of the construction phase. The subproject is estimated to commence its construction from January 2018 and completed by June 2021. Any acquisition of land or loss of assets will be verified and confirmed after the detailed engineering design. However, changed layout of the subproject and/or adjustment of the feasibility study design can lead to a change of subproject categorization from Category C to B with respect to the impacts on involuntary resettlement. In the event of this change in classification a resettlement plan (RP) will be prepared following the RF of PWSSP.

V. CONCLUSION

23. Taking into consideration that there are no adverse impacts on private households, and communal/governmental asset are already available or would be made available if required, this Subproject is classified as Category C, as no involuntary resettlement impacts are included. Confirmation of any LAR will be confirmed at detailed engineering design stage of the Subproject. If LAR impacts are identified under the Subproject, the EA will follow the policies and procedures stipulated in the PWSSP's RF in compliance with the RGC's Laws and Regulations and SPS 2009 requirements of ADB on LAR.

Year	2017					2018				2019				2020				2021				2022				
Quarter	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
		▼ CDIA closes Dec 2016																								
		▼ PPTA closes Mar 2017																								
			▼ ADB Board Meeting Sept 2017																							
			▼ Loan Effectiveness Nov 2017																							
1. Consultant Services																										
		TOR and Recruitment								Project Implementation and Technical Assistance																
PIAC		10 Months										46 Months														
2. Siem Reap Interceptor Sewer (Plant – Design, Build, Installation)																										
		Bid Approval			Procurement			Construction Activity						Defects Liability Period												
MPWT-01		5 Months			6 Months			15 Months						12 Months												
3. Wastewater Treatment Plants and Septage Facilities at Battambang and Sihanoukville and Septage Facilities at Kampong Cham (Plant- Design, Build, Installation)																										
		Bid Prep & Approval						Procurement						Construction Activity						Defects Liability Period						
MPWT-02		6 Months			6 Months			30 Months						12 Months												
4. Wastewater Trunk Mains Pump Stations, Pump Rising Mains, Conveyance and Collector Pipelines and Household Connections at Battambang and Sihanoukville																										
		Design, Bid Prep & Approval						Procurement						Construction Activity						Defects Liability Period						
MPWT-03		12 Months						6 Months						24 Months						12 Months						
5. Procurement of Vehicles and Equipment (Multiple Contracts)																										
		Bid Prep & Approval						Procurement						Delivery Schedule (Staggered Delivery)						Warranty Period						
MPWT-04		10 Months						24 Months						12 Months												
6. Water Supply Intake, Raw Water Transmission Mains, Water Treatment Plants, Reservoirs - Battambang and Kampong Cham (Design, Build, Installation)																										
		Bid Prep & Approval						Procurement						Construction Activity						Defects Liability Period						
MIH-01		6 Months			6 Months			30 Months						12 Months												
7. Water Distribution Networks at Battambang and Kampong Cham (Measurement Based Contracts using FIDIC – Design by Client/ Client Consultant (PIAC))																										
		Design, Bid Prep & Approval						Procurement						Construction Activity						Defects Liability Period						
MIH-02		12 Months						6 Months						24 Months						12 Months						
8. Procurement of Vehicles and Equipment (Multiple Contracts)																										
		Bid Prep/Proc						Delivery																		
MIH-03		Vehicles First then Test Equipment																								

Figure 3: Overall PWSSP Project Implementation Schedule

APPENDIX 1-1: SCREENING OF LAND ACQUISITION & IR PROJECT CATEGORY

TECHNICAL DESCRIPTION			
FEATURES	YES	NO	
Upgrading or rehabilitation		x	Provision of new septage receiving and treatment facility with improved septage management.
Construction of new physical facilities	x		Construction of new septage receiving and treatment facility.
Estimated present population served (2014 census)	x		36,031 people.
MAIN COMPONENTS	YES	NO	DESCRIPTION
Access	x		Proposed site for septage facility is over government land and clear from any land use of occupation
Wastewater treatment plant (WWTP)		x	N/A
Sewer pump stations		x	N/A
Sewer Network		x	N/A
Septage facilities			Located on Government land at Phkay Proek Village, Mien Commune, and 18 km from Kampong Cham town. Construction of separate and self-contained septage receiving and treatment facility with receiving well, primary lagoons, maturation pond and sludge drying bed. Provision of collection, cleansing and desludging equipment (vacuum truck, water blaster, small wheeled excavator, sludge pump and dewatering container). Also improved septage management.
House connections		x	N/A
Upgrading or rehabilitation		x	Provision of new septage receiving and treatment facility with improved septage management
IMPACTS ON LAND AND OTHER ASSETS AND RELATED FACILITIES/SERVICES			
GENERAL ASPECTS	YES	NO	EXPLANATIONS
Requirement of land acquisition		x	
Sites of land acquisition		x	Required sites are governmental land.
Easement utilized within existing Row		x	Only one site required.
Permanent land acquisition		x	
Temporary land acquisition		x	If necessary for construction, then contractor to arrange.
Change of ownership of land		x	
Change of usage of land		x	






APPENDIX 1-2: SCREENING LAND ACQUISITION & IR PROJECT CATEGORY

IMPACTS ON LAND AND OTHER ASSETS AND RELATED FACILITIES/SERVICES				
LOSS OF ASSETS	YES	NO	DESCRIPTION	
Loss of residential land		X	No land affected No primary or secondary private structures affected. No property road access points affected.	
Loss of agricultural land		X		
Loss of residential structures		X		
Loss of productive structures		X		
Loss of trees /crops		X		
EFFECTS ON COMMUNAL/PUBLIC FACILITIES	YES	NO	DESCRIPTION	
Loss of access to facilities		X		
Loss of access to services		X		
Loss of community assets/ties		X		
Loss of cultural / historical properties		X		
IMPACTS OF PEOPLE				
PHYSICAL DISPLACEMENT	YES	NO	EXPLANATIONS	
Replacement of houses		X		
Relocation of households		X		
ECONOMIC DISPLACEMENT	YES	NO	EXPLANATIONS	
Loss of incomes		X		
Loss of businesses/enterprises		X		
Loss of access to income sources		X		
Loss of access to natural resources		X		
AFFECTED HOUSEHOLDS / PEOPLE	YES	NO	CASES AND NUMBERS	
Number of AH/AP		X	0 AHs	
Vulnerable AH/AP		X		
Severely AH/AP		X		
Non-owning AHs (users of assets)		X		
FINDINGS				
Category		Categorization		
A	Not applied by PWSSP		Feasibility Study	√
B			Design and Tendering	
C	√		Design, Construct and Install	
Conclusion:	There are minor impacts of assets and their owning affected households and/or users (temporary land acquisition).			
Note:	The listed items are in accordance with checklists as defined by ADB guidelines			

Abbreviation

AP = affected person(s); AH = affected households; GRP = glass reinforced pipe; ha = hectare; km = kilometer; m³ = cubic meter; PWSSP = provincial water supply and sanitation project; uPVC = unplasticised polyvinyl chloride; WWTP = wastewater treatment plan

APPENDIX 2: PICTURED IMPRESSIONS FROM THE SUBPROJECT AREA

		
<p>PHOTO 1 TECHNICAL MEETING BETWEEN PPTA AND DPWT (MARCH 2017)</p>	<p>PHOTO 2 TECHNICAL MEETING BETWEEN ADB/AFD AND DPWT (MARCH 2017)</p>	<p>PHOTO 3 VILLAGE REPRESENTATIVE, AUTHORITY STAFF AND PPTA CONSULTANT DURING LARC AND ENVIRONMENTAL RECONNAISSANCE VISIT (NOVEMBER 2016)</p>
		
<p>PHOTO 4-6 IMPRESSION FROM THE PROPOSED SEPTAGE SITE UNDER DISCUSSION</p>		

APPENDIX 3: OVERVIEW OF CONSULTED REPRESENTATIVES AND OFFICIALS

No.	Name	Function	Institution	Contact
Tree selected site visits				
Site visit 22-23 September 2016				
1	Mr. Sok Srun	Director	PDPWT	
2	Mr. Ros Kim Thorn	Deputy Director,	PDPWT	012 977 987
3	Mr. Nil Bunly	Chief of Sewage Unit	PDPWT	012336688
4.	Mr. Thuon Vithavin	Office Chief	DLMUPC	012 578 766
5.	Mr. Suon Dy	Director	PDIH	012 821 925
6.	Mr. Ches Bo	Office Chief	PDIH	
7.	Mr. Preap Somala	Chief of Waterworks	Kampong Cham Waterworks	012 527053
8.	Mr. Teng Savoeun	Deputy Chief	Kampong Cham Waterworks	012 769788
9.	Mr. Nguon Chandara	Staff	Kampong Cham Waterworks	097 698 3838
10.	Mr. Lim Sothy	Chief of Business Sector	Kampong Cham Waterworks	012 443764
11.	Mr. Eng Watanak	Chief of Production Sector	Kampong Cham Waterworks	088 6669333
12.	Mr. Va Samden	Deputy Chief	Kampong Cham Waterworks	016 897339
13.	Mr. Chheang Chanvira	Accounting Chief	Kampong Cham Waterworks	012 629484
14.	Mr. Oun Van Chan Ra	Water supply network staff	Kampong Cham Waterworks	078 836 343
15.	Mrs. Srey Kim Choy	District Governor	Kampong Siem District	097 865 7880
16.	Mr. Roth Kim Hay	Commune Chief	Ampil commune	092 650 860
17.	Mr. Chus Ngun Lay	Commune Chief	Krala commune	092 669 412
18.	Mr. Kork Samalay	Village Chief	Andoung Chres village	092 597 6604
19.	Mr. Ngim Soeun	Village Chief	Trapeang Char village	077 255 281
20.	Mr. Phorn Pho	Commune Council member	Koh Roka commune	097 505 0487
21.	Mr. An Rithea	Village Chief	Krala village	092 962 711
22.	Mr. Yim Yorn	Village Chief	Koh Roka Knong village	096 293 1586
Site visit 25-28 November 2016				
1	Nil Bun Ly	WW Unit	PDPWT	012 336 688
2	Khy Taing Lay	Director	PDOE	017 357 766
3	Pech Chanty	Deputy Director	PDIH	012 958 832
4	Try Teang Hong	Unit Chief	Waterworks	097 603 3726
5	Han Lina	Deputy Governor	Kampong Cham Town	
6	Sok Chanda	Deputy Director	Multi-sector	012 425 368
Site visit 13 March 2017				
1	Nil Bunly	Chief of Unit	Drainage/Sewerage Unit	012336688
2	Sok Srin	Director	PDPWT	
3	Ros Kimthorn	Deputy Director	PDPWT	012977987