

[APPENDICES]

1. Member List of the Survey Team

Name	Job title	Occupation
Mr. Shigeyuki MATSUMOTO	Leader (Design Change 1 st M/D)	Deputy Director General, and Group Director for Water Resources Group Global Environment Department, JICA HDQs
Ms. Eriko TAMURA	Leader (1 st M/D)	Director, Water Resources Team1, Water Resources Group Global Environment Department, JICA HDQs
Ms. Yasuyo KAWAMURA	Leader (2 nd M/D)	Deputy director, Water Resources Team1, Water Resources Group, Global Environment Department, JICA HDQs
Mr. Sadanobu SAWARA	Senior Advisor (1 st Survey)	Senior Advisor, JICA HDQs
Mr. Norihiro OBITSU	Senior Advisor (2 nd Survey)	In-house Technical Consultant for Water Supply, JICA Contractor, Water Resources Group, Global Environment Department, JICA HDQs
Mr. Shingo FUJIWARA	Project Planning (1 st Survey)	Deputy director, Water Resources Groupe, Global Environment Department, JICA HDQs
Mr. Hideki KONNO	Chief Consultant/Water Supply Planning Specialist 1	CTI Engineering International Co., Ltd.
Mr. Masashi YAYAMA	Sub Chief Consultant/Water Supply Planning Specialist 2	Water and Sewer Bureau, City of Kitakyushu
Mr. Hiroshi HIROWATARI	Sub Chief Consultant/Water Supply Planning Specialist 2	Water and Sewer Bureau, City of Kitakyushu
Mr. Takashi FURUKAWA	Water Resources/River and Flood Control Specialist	CTI Engineering International Co., Ltd.
Mr. Norifumi YAMAMOTO	Hydrogeologist	CTI Engineering International Co., Ltd.
Mr. Naohide MATSUMOTO	Water Treatment Plant Designer	TEC International Co., Ltd..
Mr. Junichi KAWAKAMI	Water Treatment Plant Designer (Support)	TEC International Co., Ltd..
Mr. Daigo TAKEDA	O&M Organization Specialist (Soft-component)	Water and Sewer Bureau, City of Kitakyushu
Mr. Oki SHINDO	Intake Facility Plan/River Structure Specialist	CTI Engineering International Co., Ltd.
Mr. Kiyoshi MIFUNE	Raw Water Conveyance Designer 1	TEC International Co., Ltd..
Mr. Takuro KOHARA	Raw Water Conveyance Designer 2	TEC International Co., Ltd..
Mr. Kouichi Naoi	Equipment Planning Specialist 1 (Electrical Equipment)	TEC International Co., Ltd..
Mr. Shuji SATO	Equipment Planning Specialist 2 (Machine Equipment)	CTI Engineering International Co., Ltd.
Mr. Naoki MATSUO	Construction and Procurement Planning 1/Cost Estimation Specialist	CTI Engineering International Co., Ltd.
Mr. Hirofumi MIYOSHI	Construction and Procurement Planning 1/Cost Estimation Specialist	CTI Engineering International Co., Ltd.
Mr. Asa KINUGAWA	Construction and Procurement Planning 2/ Coordinator	CTI Engineering International Co., Ltd.
Mr. Yasuko KAMEGAI	Environmental & Social Considerations /UXO Confirmation	CTI Engineering International Co., Ltd.

Annex1 Member List of the Survey Team

	Specialist	
Mr. Makoto YAJIMA	Financial Specialist	CTI Engineering International Co., Ltd.
Mr. Kazuo TAKAYAMA	Inspector (- March, 2018)	Water and Sewer Bureau, City of Kitakyushu
Mr. Yasushi KAKIGI	Inspector (April, 2018 -)	Water and Sewer Bureau, City of Kitakyushu

2. Survey Schedule

The survey schedule is attached as follows.

(2) Survey Schedule for the Second Work in Cambodia

Date	JICA												Consultant				Meeting		
	Tamura/Kawamura	Sawara/Ohitsu	Chief Consultant/Planner	Water Resource/River and Flood Control Specialist	Hydrogeologist	Inake/River Structure Specialist	Equipment Planning Specialist (Machine Equipment)	Construction and Procurement 2/Estimation Specialist	Construction and Procurement 1/Construction Coordinator	Environmental & Social Considerations (LUXO Confirmation Specialist)	Financial Specialist	Chief Consultant/Supply Planning Specialist 2	O&M Organization Specialist (Soft-component)	Water Treatment Plant Designer1	Water Treatment Plant Designer2	Raw Conveyance Designer1		Raw Conveyance Designer2	Water Engineers Designer2
10-Aug			NH817 10:50-15:10	Furukawa	Yamaoto	Shindo	Sato	Matsuo	Kinugawa	Kamegai	Yajima	Yayama	Takeda	Matsumoto	Kawakami	Mizufune	Kohara	Naoi	
11-Aug			Pursat WWS Meeting						Pursat WWS Meeting/Date Collection										
12-Aug																			
13-Aug																			
14-Aug																			
15-Aug																			
16-Aug																			
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23-Aug																			
24-Aug																			
25-Aug																			
26-Aug																			
27-Aug																			

Date	JICA Tamura/Kawamura/Sawara/Obitsu	Construction										Meeting						
		CTII Chief Consultant/Water Supply Planning Specialist 1	CTII Water Resources/River and Flood Control Specialist	CTII Hydrogeologist	CTII Intake/River Structure Specialist	CTII Equipment Planning (Mechanical Equipment)	CTII Construction and Procurement 2 (Electrical Equipment)	CTII Construction and Procurement 1 (Civil Engineering Specialist)	CTII Construction and Procurement 3 (Construction Coordinator)	CTII Environmental & Social Considerations Confirmation Specialist	CTII Financial Specialist		北九州 Chief Consultant/Water Supply Planning Specialist 2	北九州 O&M Organization Specialist (Software Component)	TECI Water Treatment Plant Designer1	TECI Water Treatment Plant Designer2	TECI Raw Water Conveyance Designer1	TECI Raw Water Conveyance Designer2
28-Aug		Konno	Furukawa	Yamaoto	Shindo	Sato	Matsuo	Kinugawa	Kamegai	Yajima	Yajima	Takeda	Matsumoto	Kawakami	Mizufune	Kohara	Naoi	
29-Aug		Field Survey	Data Analysis		Structure Design	EVM Meeting Data Arrange	PUR Survey						PUR	PUR	PUR	PUR		
30-Aug		PUR-SURVEY	PUR-PHN		PUR-PHN	PUR-PHN	PUR-PHN						PUR	PUR	PUR	PUR		
31-Aug		PHN	PHN		Design NH818	PHN	PHN						NH818 22:50-	NH818 22:50-	PHN	PHN		
1-Sep		NH818 22:50-	PHN		06:45Arrival	PHN	PHN						06:45Arrival	NH818 22:50-	NH818 22:50-	NH818 22:50-	NH818 22:50-	
2-Sep		06:45Arrival	PHN			NH818 22:50-	PHN							06:45Arrival	06:45Arrival	06:45Arrival	06:45Arrival	
3-Sep			PHN-BGK			06:45Arrival	Data Collection NH818 22:50-											
4-Sep							08:15Arrival											
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15-Oct																		

(3) Survey Schedule for the Third Work in Cambodia

Survey Schedule		PHN/Phnom Penh										PUR/Pusset		SVR/Svay Rieng								
日付	JICA	CTII		CTII		CTII		CTII		CTII		TECI		TECI		TECI						
		Center Consultant/Water Supplier and Flood Control	Water Resources/River Control	Hydrogeologist	Plan/River Structure Specialist	Equipment Planning Specialist/Mechanical	Construction and Procurement Planning	Construction and Procurement Planning	Construction and Procurement Planning	Environmental & Social Considerations	Financial Specialist	Sub Consultant/Water Supply	Water Treatment Plant Designer 1	Water Treatment Plant Designer 2	Raw Water Conveyance Designer 1	Raw Water Conveyance Designer 2	TECI Planning Specialist	TECI Equipment Specialist				
24-Jun	Sun	Kawamura Documentation	NH817 10:30-15:10 AM: Meeting at JICA Office Planning with MIH	Yamada	Shitdo	Sato	Matsuo	Kitagawa	Kamegaki	Yajima	Tayama	Takeda	TG849 11:35-19:55 AM: Meeting at JICA Office Planning with MIH	Matsunoto	NH817 10:30-15:10 AM: Meeting at JICA Office Planning with MIH	Kawakami	Mizutane	Kohara	Neoi	Meeting		
25-Jun	Mon																					
26-Jun	Tue																					
27-Jun	Wed																					
28-Jun	Thu																					
29-Jun	Fri																					
30-Jun	Sat																					

(4) Survey Schedule for the First Work (Design Change) in Cambodia

Date		Consultant				Meeting	
		CTII	KKC	TECI	CTII		
		Chief Consultant/Water Supply Planning Specialist 1	Deputy Chief Consultant/Water Supply Planning Specialist 2	Water Treatment Plant Designer 1	Construction and Procurement Planning 1/Cost Estimation Specialist		
		Hideki KONNO	Hiroshi HIROWATARI	Naohide MATSUMOTO	Hirofumi MIYOSHI		
10-Feb	Sun	15:10 Arrival (NH817)	15:10 Arrival (NH817)				
11-Feb	Mon	Data Collection	Data Collection				
12-Feb	Tue	Meeting with MIH	Meeting with MIH			MIH	
13-Feb	Wed	Data Collection	Data Collection				
14-Feb	Thu	Meeting with MIH	Meeting with MIH			MIH	
15-Feb	Fri	22:50 Departure (NH818)	22:50 Departure (NH818)				
16-Feb	Sat	Arrive at Narita	Arrive at Narita				
Work in Japan							
14-Mar	Thu		22:00 Arrival (OZ739)				
15-Mar	Fri		Meeting with MIH			MIH	
16-Mar	Sat		Data Collection at PUR				
17-Mar	Sun	16:40 Arrival (VN920)	Data Collection at PUR				
18-Mar	Mon	Kampong Thom Kick-off Meeting	Site Survey at PUR				
19-Mar	Tue	Kampong Thom Kick-off Meeting	Kampong Thom Kick-off Meeting				
20-Mar	Wed	Water Demand Projection	Kampong Thom visit to Minister				
21-Mar	Thu	Mondolkiri WWs	Mondolkiri WWs				
22-Mar	Fri	Mondolkiri WWs	Mondolkiri WWs			Mondolkiri WWs	
23-Mar	Sat	Water Demand Projection	Analysis of Water Pressure Test Data				
24-Mar	Sun	Water Demand Projection	Water Demand Projection				
25-Mar	Mon	Kampong Thom Signing Ceremony	Kampong Thom Signing Ceremony				
26-Mar	Tue	Kampong Thom Signing Ceremony	Kampong Thom Signing Ceremony				
27-Mar	Wed	Water Demand Projection	Water Demand Projection				
28-Mar	Thu	Water Demand Projection	Study for Distribution Pipe				
29-Mar	Fri	Kampong Speu Private Company	Kampong Speu Private Company			Kampong Speu Private Company	
30-Mar	Sat	Water Demand Projection	Study for Distribution Pipe				
31-Mar	Sun	Reporting	Study for Distribution Pipe	15:10 Arrival (NH817)	16:40 Arrival (VN920)		
1-Apr	Mon	Visit to Construction Company	Kampot Completion Ceremony	Visit to Construction Company	Collection of Unit Price	Norak	
2-Apr	Tue	Site Survey at PUR	Kampot Completion Ceremony	Site Survey at PUR	Site Survey at PUR	PUR WWs	
3-Apr	Wed	Preparation of Meeting Material	Preparation of Meeting Material	Procurement Planning	21:10 Departure (VN3850)		
4-Apr	Thu	Preparation of Meeting Material	Preparation of Meeting Material	Reporting	Arrive at Narita		
5-Apr	Fri	Meeting with MIH	Meeting with MIH	Meeting with MIH		MIH	
6-Apr	Sat	Preparation of Technical Note	Preparation of Technical Note	22:50 Departure (NH818)			
7-Apr	Sun	Preparation of Technical Note	Preparation of Technical Note	Arrive at Narita			
8-Apr	Mon	Reporting	Reporting				
9-Apr	Tue	Reporting	Reporting				
10-Apr	Wed	Meeting with MIH	Meeting with MIH, 23:50 Departure(OZ740)			MIH (Technical Note)	
11-Apr	Thu	21:10 Departure (VN3850)	Arrive at Narita				
12-Apr	Fri	Arrive at Narita					
Note:		: work for other project					

3. List of Parties Concerned in the Recipient Country

Ministry of Industry and Handicraft (MIH)

•H.E. EK SONN CHAN	Secretary of State(original design phase)
•H.E. Say Phirum	Secretary of State (design change phase)
•Mr. SRENG Sokvung	Director
•Mr. PICH Sambattranak	Deputy Director of Department of Project
•Ms. THOR Kounthy	Official

Ministry of Environment (MOE)

•Mr. Duong Samkeat	Deputy Director of Environmental Impact Assessment Dept.
•Mr. Chhek Roth	Deputy Director of Department of Laboratory
•Mr. Siv Kung	Deputy Director of Environmental Quality Research and Laboratory

Cambodian Mine Action Centre (CMAC)

•Mr. Mong Sokunthearath	Demining Development Unit Manager
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Department of Industry and Handicraft of Pursat Province (Pursat DIH)

•Mr. CHHE Vansoda	Director
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Pursat Water Works

•Mr. KEO Sara	Director
•Mr. SIENG Sengputhea	Deputy Director

Department of Water Resources and Meteorology of Pursat Province (Pursat DOWRAM)

•Mr. KEO Vey	Director
•Mr. LAO Sokha	Technical Assistant
•Ms. Sok Solshor	

Department of Environment of Pursat Province (DOE)

•Pann Morokoth	Director
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Department of Public Work and Transportation of Pursat Province (DPWT Pursat)

•Mr. KHANG Penghak	Director
•Mr. KANG Kimchhun	Deputy Director
•Mr.SY VUTH	Deputy Director

EDC Pursat

•Mr. DY Sophann Manager

Pursat DOA

•Mr. Ray Visoth Director of DOA

•Mr. Sieng Seugputhea Deputy Director

•Mr. Phum Vimol Chief of Fishery

•Mr. To Chi Pech Admin.

Pursat Provincial Hall

•Mr. Chab Neang Governor of Pursat Municipality

Department of Land Management, Urban Planning, and Construction, Pursat (DOLMUPC)

•Mr. LEAM Bunroeurn Director

Police office of Pursat

•Mr. PRUM Sarun Deputy head of Pursat Police Commissioner

•Mr. YEM Makara Head of Pursat fire department

Pursat EDC

•Mr. DY Sophann Manager

Pursat Telecom company

•Mr. HUN NARITH

•Mr. Srun Noy Huy Manager of brunch in Pursat

Battambang Water Works

•Mr. Touch Chhuonsaorith Director

•Mr. Heom Siphann Voc chief production

•Mr. Khorn Narith Chief of Administrator

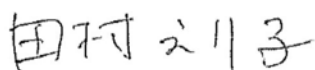
4. Minutes of Discussions

- (1) Minutes of Discussions on the Preparatory Survey for the Project for Explanation of Water Supply System in Pursat and Svay Rieng in the Kingdom of Cambodia (Signed on August 24, 2017)
- (2) Minutes of Discussions on the Preparatory Survey for the Project for Explanation of Water Supply System in Pursat in the Kingdom of Cambodia (Explanation on Draft Preparatory Survey Report) (Signed on June 28, 2018)
- (3) Minutes of Discussions on the 2nd Preparatory Survey for Explanation of Water Supply System in Pursat in the Kingdom of Cambodia (Signed on February 14, 2019)
- (4) Minutes of Discussions on the Preparatory Survey for the Project for Explanation of Water Supply System in Pursat in the Kingdom of Cambodia (Explanation on Draft Preparatory Survey Report) (Signed on September 3, 2019)

**Minutes of Discussions
on the Preparatory Survey for
the Project for
Expansion of Water Supply System
in Pursat and Svay Rieng
in the Kingdom of Cambodia**

Based on the several preliminary discussions between the Government of Kingdom of Cambodia (hereinafter referred to as “Cambodia”) and Embassy of Japan with reference to the No. 1523 AP3/MFA.IC dated on 26 June, 2017, Japan International Cooperation Agency (hereinafter referred to as “JICA”) dispatched the Preparatory Survey Team for the Outline Design (hereinafter referred to as “the Team”) of the Project for Expansion of Water Supply System in Pursat and Svay Rieng (hereinafter referred to as “the Project”) to Cambodia, headed by Ms. Eriko Tamura, Director, Water Resources Team 1, JICA, from 20th August to 27th August, 2017. The Team held a series of discussions with the officials of the Government of Cambodia and conducted a field survey. In the course of the discussions, both sides have confirmed the main items described in the attached sheets.

Phnom Penh, 24th August, 2017



Ms. Eriko Tamura ~
Leader
Preparatory Survey Team
Japan International Cooperation Agency
Japan



H. E. Ek Sonn Chan
Secretary of State
Ministry of Industry and Handicraft
Kingdom of Cambodia

ATTACHMENT

1. Objective of the Project

The objective of the Project is to improve the access to safe water in the cities of Pursat and Svay Rieng through the expansion and improvement of water supply system including construction of a new water treatment plant and water distribution system.

2. Title of the Preparatory Survey

Both sides confirmed the title of the Preparatory Survey as “the Preparatory Survey for the Project for Expansion of Water Supply System in Pursat and Svay Rieng”.

3. Project site

Both sides confirmed that the sites of the Project are in Pursat and Svay Rieng, which is shown in Annex 1.

4. Responsible authority for the Project

Both sides confirmed the authorities responsible for the Project are as follows:

- 4-1. The Ministry of Industry and Handicraft (hereinafter referred to as “MIH”) will be the executing agency for the Project (hereinafter referred to as “the Executing Agency”). The Executing Agency shall coordinate with all the relevant authorities to ensure smooth implementation of the Project and ensure that the undertakings for the Project shall be managed by relevant authorities properly and on time. The organization chart is shown in Annex 2.

5. Items requested by the Government of Cambodia

5-1. As a result of discussions, both sides confirmed as follows:

PURSAT

(1) Targeted area of the Project and capacity of water treatment plant

The Team explained the targeted area of the Project as shown in Annex 3 and Cambodian side agreed on it. In conjunction with targeted area, both sides agreed that the capacity of the new water treatment plant (hereinafter referred to as “WTP”) will be around 6,600 m³/day and final capacity will be decided through the preparatory survey. The targeted area is selected based on the priority by the Cambodian side and investment efficiency. The outline of the targeted area and

facility design are as follows:

Items	Existing	Expansion	Total
Included communes	Snam Preah, Anlong Vil, Kandieng, Svay Long, Veal, Lolok Sa, Phteah Prey, Prey Nhi, Roleab, Svay At, Bateay Dei	Snam Preah, Anlong Vil, Kandieng, Kaoh Chum, Lolok Sa, Prey Nhi, Roleab, Bateay Dei	Snam Preah, Anlong Vil, Kandieng, Svay Long, Veal, Kaoh Chum, Lolok Sa, Phteah Prey, Prey Nhi, Roleab, Svay At, Bateay Dei
Population served (thousand persons)	36.3	37.3	73.6
Piped water supply coverage ratio (%)	37.7	32.1	69.8
Piped water supply coverage ratio for Urban Area (%)	53.8	31.1	84.9
Maximum daily water supply (m ³ /day)	7,260	6,600	13,860
Number of service connections (places)	7,219	7,810	15,029
Length of distributing pipes (km)(ϕ 75 or more)	100.1(52.3)	128.1(57.1)	228.2(109.4)
Length of distributing pipes per population served (m/person)(ϕ 75 or more)	2.8(1.4)	3.4(1.5)	3.1(1.5)

Note:

*1: "Piped water supply coverage ratio" indicates the relation between the populations served by piped water and the population in whole administrative area.

*2: "Piped water supply coverage ratio in Urban Area" indicates the relation between the populations served by piped water and the population in urban area.

The above figures and the design of facilities will be finalized by the subsequent detailed analysis.

(2) Location of intake facilities and Water Treatment Plant (WTP)

The Team explained the proposed locations of new intake facilities and WTP as shown in Annex 4-1, 4-2 and 4-3. Two candidate locations (Case 1 and Case 2) were compared. After the discussion, the Team and Cambodian side concluded that Case1 is further studied in the preparatory survey. The major reasons commented by Pursat Waterworks are as follows:

- 1) Enough amount of water at the intake site even in dry seasons
- 2) Cleaner raw water in the upper stream

- 3) Expectation for less soil in the intake facility
- 4) Less negative impact to neighboring community during construction and operation stages

Cambodian side promises to acquire land for those facilities by December 31, 2017.

(3) Permission of water intake

The Team requested MIH to secure permission from Ministry of Water Resources and Meteorology for intake amount at the agreed location by September 15.

(4) Current intake pump

The Team advised that the current intake pump should be repaired by Pursat Waterworks immediately to avoid further damages to the pump and possible suspension of water intake. Pursat Waterworks agreed to take necessary actions.

(5) House connections for the poor household

Cambodian side requested to Japanese side to assist the individual house connection for poor household through the provision of the materials such as water meters, fittings and pipes in the Project. Both sides confirmed that MIH will identify the poor household by poor's ID issued by Ministry of Planning according to the survey in 2010 and 2011. The Team will examine the necessity of provision and amount during the survey, in consideration of similar projects. Both sides also confirmed that Cambodian side will bear the cost for installation works.

(6) Financial sustainability

The Team explained that operational cost of Case 1 will be higher than Case 2. Annual electricity cost of Case 1 will be approximately 164,560,000 riel more than that of Case 2. The Team explained the financial analysis will be conducted in order to assess financial feasibility of the Project including impact by hiring new staff and revision of water tariff may be proposed. The Team also strongly advised to strengthen capacity for financial management such as utilization of SUMS system. In addition, the Team mentioned the simple and easily operated facilities will be considered to reduce operational and financial burden.

SVAY RIENG

(1) Change of water source to be studied in the preparatory survey

The Team explained that it is difficult to construct a new intake facility taking water

from Vay Kor Lake, since structure of existing Vay Kor Dam is weak and stable water intake will not be secured for several decades. Cambodian side understand the explanation and agreed to change water source to be studied in the preparatory survey, since the reinforcement of Vay Kor Dam is not easy and expected to take time. The Team will inform the additional study items and revised schedule of the study for Svay Rieng later.

(2) Consideration for sustainable water supply service in Svay Rieng

1) The current water tariff level in Svay Rieng is the lowest among the eight public waterworks involved in the ongoing technical cooperation project and increase of water tariff needs to be considered to cover operational cost for the new facilities. MIH committed to revise water tariff based on the financial analysis to be conducted in this preparatory survey. In addition MIH needs to reconsider to raise revised tariff by themselves again after the development of new facilities supported by Asian Development Bank (ADB) and World Bank (WB) if needed. The progress of these projects assisted by ADB and WB will be regularly informed to the Team in order to avoid duplication among projects.

2) According to the Census 2008, approximately 80% of households in Svay Rieng have tubed/pipe wells in their premises and most households may expect to use shallow wells even after the development of new water supply facilities. The detail social survey will be conducted to better understand the customers intention to use new facility and to consider measures to promote house connection. The financial analysis to assess feasibility of the project will be conducted in parallel. The implementation of the grant aid project will be decided based on the results of these feasibility studies.

(3) Permission of groundwater intake

MIH promised to request the permission for groundwater intake from Ministry of Water Resources and Meteorology after the necessary groundwater intake amount is identified by the additional study.

5-2. JICA will assess the feasibility of the all requested items through the preparatory survey and will report the findings to the Government of Japan. The final scope of the Project will be decided by the Government of Japan.

6. Procedures and Basic Principles of Japanese Grant

6-1. The Cambodian side agreed that the procedures and basic principles of Japanese Grant as described in Annex 5 shall be applied to the Project.

As for the monitoring of the implementation of the Project, JICA requires Cambodian side to submit the Project Monitoring Report, the form of which is attached as Annex 6.

6-2. The Cambodian side agreed to take the necessary measures, as described in Annex 7, for smooth implementation of the Project. The contents of the Annex 7 will be elaborated and refined during the Preparatory Survey and be agreed in the mission dispatched for explanation of the Draft Preparatory Survey Report.

The contents of Annex 7 will be updated as the Preparatory Survey progresses, and eventually, will be used as an attachment to the Grant Agreement.

7. Schedule of the Survey

PURSAT

7-1. The Team will proceed with further survey in Cambodia until 4th September, 2017.

7-2. JICA will prepare a draft Preparatory Survey Report in English and Khmer and dispatch a mission to Cambodia in order to explain its contents around February, 2018.

7-3. If the contents of the draft Preparatory Survey Report is accepted and the undertakings for the Project are fully agreed by the Cambodian side, JICA will finalize the Preparatory Survey Report and send it to Cambodia around May, 2018.

7-4. The above schedule is tentative and subject to change.

SVAY RIENG

The Team will inform the revised schedule of the survey for Svay Rieng later.

8. Environmental and Social Considerations

8-1. The Cambodian side confirmed to give due environmental and social considerations before and during implementation, and after completion of the Project, in accordance with the JICA Guidelines for Environmental and Social Considerations (April, 2010).

8-2. The Project is categorized as "B" from the following considerations:

The project is not located in a sensitive area, nor has sensitive characteristics, nor falls into sensitive sectors under the JICA guidelines for environmental and social considerations (April 2010), and its potential adverse impacts on the environment are not likely to be significant.

The Cambodian side confirmed to conduct the necessary procedures concerning the environmental assessment (including stakeholder meetings, Initial Environmental Impact Assessment (IEIA) and information disclosure, etc.) and make IEIA report of the Project. The IEIA approval shall be received from the responsible authorities and submitted to JICA by April 2, 2018.

- 8-3. For the Project that will result in involuntary resettlement, the Cambodia side confirmed to prepare a Resettlement Action Plan (RAP)/Abbreviated Resettlement Action Plan (ARAP) and make it available to the public. In addition, the Cambodian side confirmed to provide the affected people with sufficient compensation and/or support in accordance with RAP/ARAP, which is consistent with JICA Guidelines for Environmental and Social Considerations (April, 2010), in a timely manner.

9. Other Relevant Issues

Annex 1 Project Site

Annex 2 Organization Chart

Annex 3 Targeted area of Pursat

Annex 4 Location of intake and WTP in Pursat

Annex 5 Japanese Grant

Annex 6 Project Monitoring Report (template)

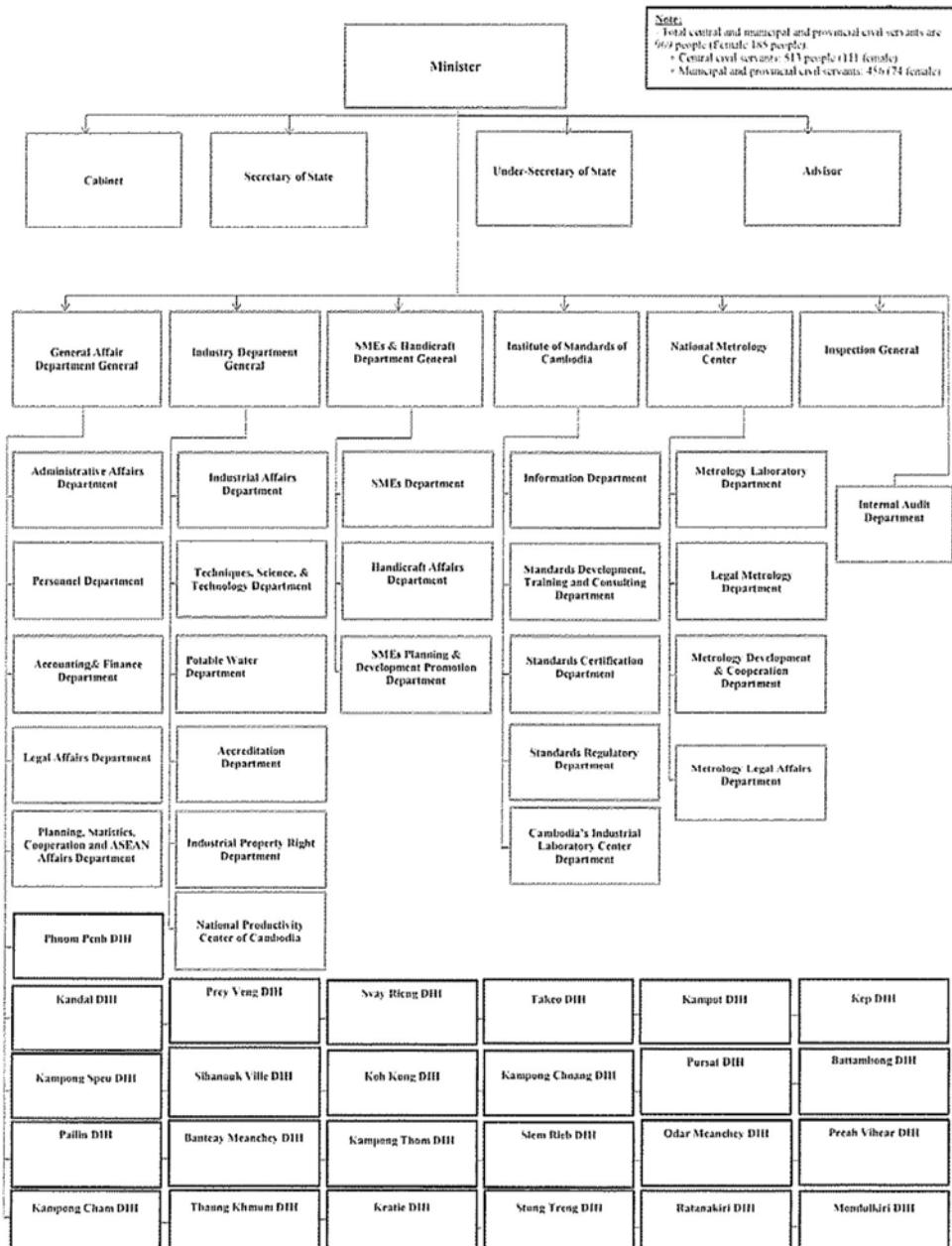
Annex 7 Major Undertakings to be taken by the Government of Cambodia

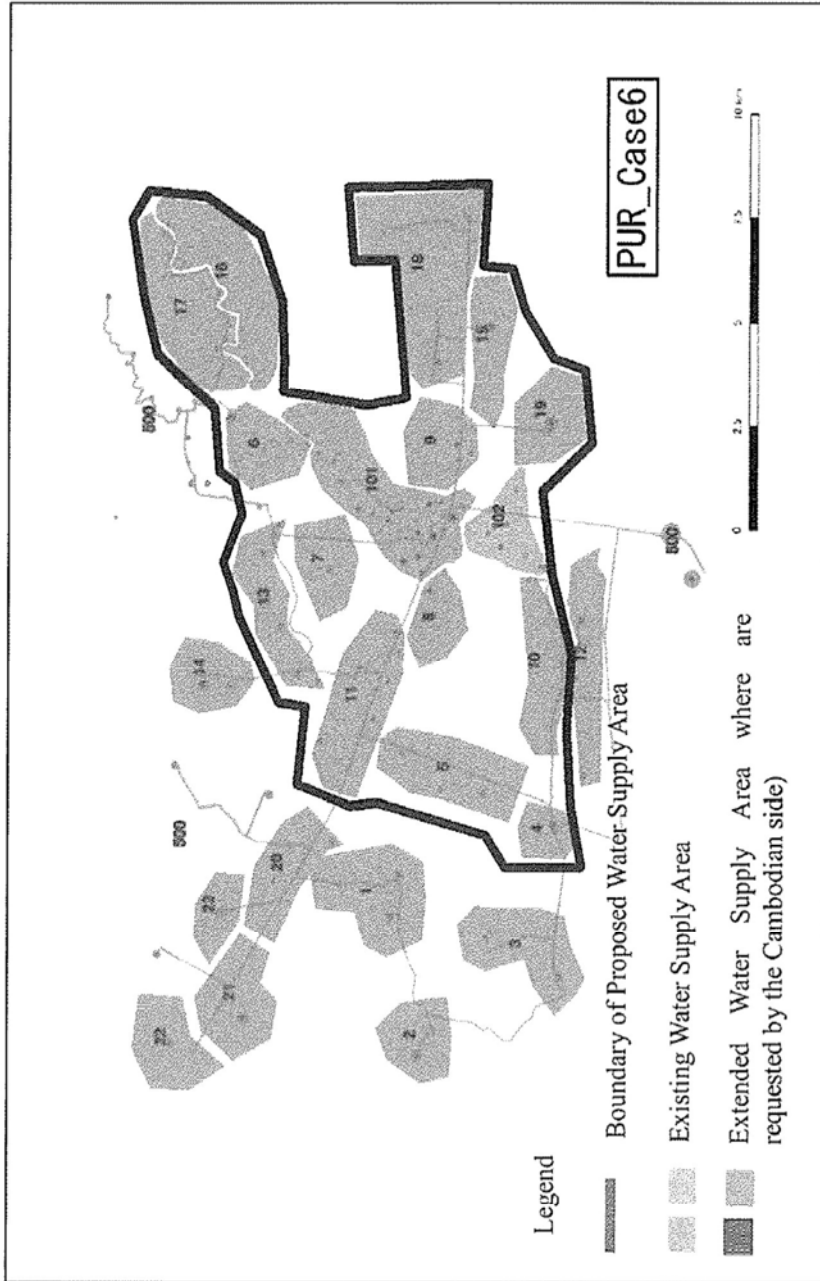
Annex 1



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Annex 2



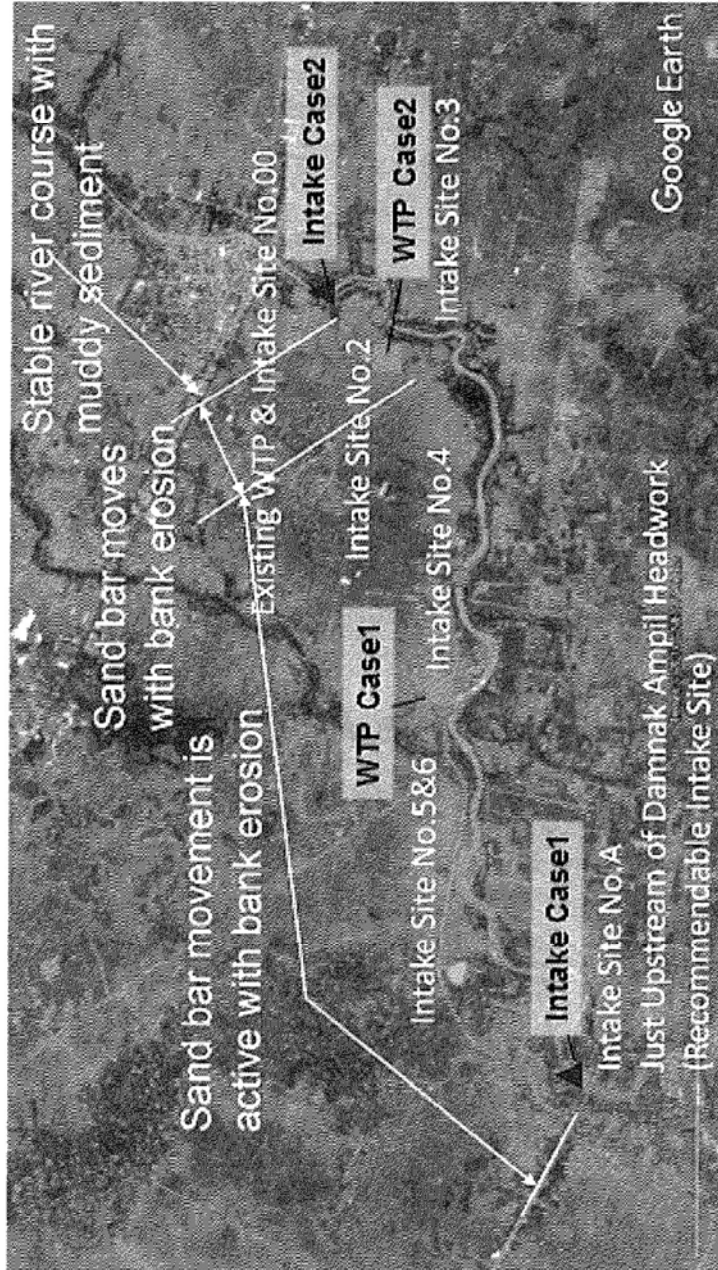


Increased Population Served: 37,300 persons Increased Maximum Daily Water Supply: 6,600 m³ / day
 Note) Numbers "1" to "23" show the expansion priority for the groups of villages based on expansion priorities set by the Cambodian side. Small numbers have high priority. Number "101" to "102" are the existing water supply areas and number "500" are the groups of villages with lower priority.

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Annex 4-1

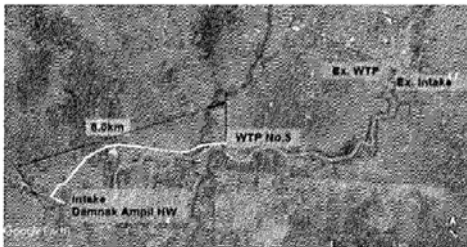
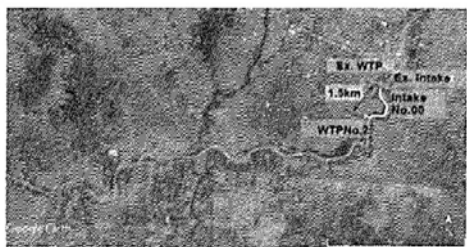
Candidate Intake Sites and Recommendable Intake Site along the Pursat River



16

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Pursat water intake and WTP site Selection

		Case1 (Intake : Dhamnak Ampil, Water Treatment Plant : No.5)	Case2 (Intake : near the existing intake point, Water Treatment Plant : No.2)
Plan Drawing			
Outline of Intake Site and Facilities		<p>Site Condition</p> <ul style="list-style-type: none"> - WL Condition: LWL+16.300m, HWL+18.200m Water Level Fluctuation:1.9m - Land: 100mx100m (Intake and Yard for Construction) - Not Flood Prone Area <p>Civil Work</p> <ul style="list-style-type: none"> - Conveyance Pipe: DIP350 x 8.000m - Pump Room and ancillary works : LxWxH=37.3mx8.4mx10.5m - Generator Room: LxWxH=6mx5mx4m - Land Creation: 0.5m up (EL18.070m→EL18.570m) <p>Temporary Work</p> <ul style="list-style-type: none"> - Cofferdam of River Side, Steel Sheet Pile SP-III - Excavation by Open Cut <p>Mechanical Works</p> <ul style="list-style-type: none"> - Pump Type: Horizontal End Suction Pump - Pump Head:37m - Pump :150mm/ 2duty +1 stand-by/ 30kW - Q=5.04m³/min 	<p>Site Condition</p> <ul style="list-style-type: none"> - WL Condition: LWL+11.635m, HWL+17.635m Water Level Fluctuation:6.0m - Land: 50mx50m, Residential houses are adjacent. (Intake and Yard for Construction) - Flood Prone Area, 1.5m of inundation depth from the ground in 1996 and 2006 <p>Civil Work</p> <ul style="list-style-type: none"> - Conveyance Pipe: DIP350 x 1,500m - Size of Pump Room and ancillary works : LxWxH=44.0mx8.1mx14.5m - Generator Room: LxWxH=6mx5mx4m - Land Creation: 2.0m up (EL16.135m→EL18.135m) <p>Temporary Work</p> <ul style="list-style-type: none"> - Cofferdam of River Side, Steel Sheet Pile SP-IV - Retaining Wall for Civil Work Construction SP-IV <p>Mechanical Works</p> <ul style="list-style-type: none"> - Pump Type: Horizontal End Suction Pump - Pump Head:21m - Pump :150mm/ 2duty +1 stand-by/ 15kW - Q=5.04m³/min
Outline of WTP Site and Facilities		<p>Site Condition</p> <ul style="list-style-type: none"> - Candidate Site No.5 - Area:100mx100m - Not Flood Prone Area - Distance from the River: Approx.400m <p>Civil Work</p> <ul style="list-style-type: none"> - Land Creation: 1.0m up (EL17.650m→EL18.650m) - Land Creation of Access Road: not Required (EL18.650m) <p>Temporary Work</p> <ul style="list-style-type: none"> - Access from the Main Road 	<p>Site Condition</p> <ul style="list-style-type: none"> - Candidate site No.2 - Area:100mx100m, Elementary school is adjacent. - Flood Prone Area, 1.5m of inundation depth from the ground in 1996 and 2006 - Distance from the River: Approx.400m - 4 Residential Houses along Access Road <p>Civil Work</p> <ul style="list-style-type: none"> - Land Creation: 2.0m up (EL15.260m→EL17.260m) - Land Creation of Access Road: 1.0m (EL16.260m→EL17.260m) <p>Temporary Work</p> <ul style="list-style-type: none"> - Construction Road: L=500m,W=10m
Status of the water source	Stability of water intake	<ul style="list-style-type: none"> ○ Stable river channel ○ Proven track records of the water intake for the irrigation ○ Sufficient amount of water and water depth in the dry season 	<ul style="list-style-type: none"> ○ Stable river channel ○ Located near the existing water intake facilities (upstream side) ○ Sufficient amount of water and water depth in the dry season

		Case1 (Intake : Dhamnak Ampil, Water Treatment Plant : No.5)	Case2 (Intake : near the existing intake point, Water Treatment Plant : No.2)
	Situation of sediment	<ul style="list-style-type: none"> ○ Coarse sand and a certain amount of floating sand accumulate in the flooded pond of the weir. ○ The flow is relatively slow because of the wide flooded pond, and the migration and floating of the silt part are less. ○ Sedimentation volume is less than Case2 and the damage to the intake pump will be less. 	<ul style="list-style-type: none"> ▲ Move of sandy soil (bedload, floating sand wash load) is relatively large. ▲ The flow is relatively fast and the silt is easy to move and float. ▲ Sedimentation volume is more than Case1 and the damage to the pump will be more.
Construction	Workability	<ul style="list-style-type: none"> ○ Large-scale temporary facilities are unnecessary because changes in the water level during the dry season and rainy season are small. ○ The traffic of heavy construction machinery is easy because of flat ground shape and the stability of heavy construction machinery can be secured. ○ Easy access from the main road. ○ Construction period for pump station is relatively short because the scale of the facilities (sedimentation basin and pumping station) are smaller than Case 2. ▲ It takes time to install conveyance pipes because of long distance. 	<ul style="list-style-type: none"> ▲ Large-scale temporary earth retaining work is required, because changes in the water level during the dry season and rainy season are large and houses are adjacent to facilities. ▲ The traffic of heavy construction machinery is difficult due to the narrow space of intake site and the stability of rough terrain crane with vibro hammer cannot be secured due to the unevenness of ground surface shape. ▲ It is difficult to carry in/out construction vehicles, because the access road to the water treatment plant is narrow and passes through a residential area. It is required the embankment and widening of the existing access road, or the provision of new construction road. ▲ Construction period for pump station is relatively long because the scales of the facilities (pump station and ancillary works) are larger than Case 1. ○ The conveyance pipe is short, so the construction period is short.
	Impact on surrounding environment	<ul style="list-style-type: none"> ○ Neighboring construction is not required because there are few adjacent houses at the intake pump station and the water treatment plant site. ○ There is no houses near the WTP site ○ There is no important facilities near WTP site. 	<ul style="list-style-type: none"> ▲ Neighboring construction is required because there are houses around the intake facility. ▲ Impact on houses by widening the access road to the WTP site. ▲ Using the school route of elementary school as the access road to the treatment plant is not preferred for safety reasons. It must be set such as the detour path or the temporary school road. In addition, there is the possibility that adverse effects on the school activities by noise and vibration during the construction will occur. Therefore, measures must be taken against them.
Facilities	Civil engineering facility	<ul style="list-style-type: none"> ○ Both pumping station and ancillary works of the water intake point are smaller than those of Case 2. ○ The risk of flooding is small, and the height of land forming is low. ▲ The water conveyance pipe extension is long (8.0 km). 	<ul style="list-style-type: none"> ▲ Both pumping station and ancillary works of the water intake point are larger than those of Case 1. ▲ Since WTP site is in flood prone, it is necessary to raise the ground (about 2 m, in 1996 and 2006). ○ The water conveyance pipe extension is relatively short (1.5 km).
	Electromechanical equipment	<ul style="list-style-type: none"> ▲ Large motor output. Electricity cost is higher than Case2. 	<ul style="list-style-type: none"> ○ Small motor output. Electricity cost is lower than Case1.

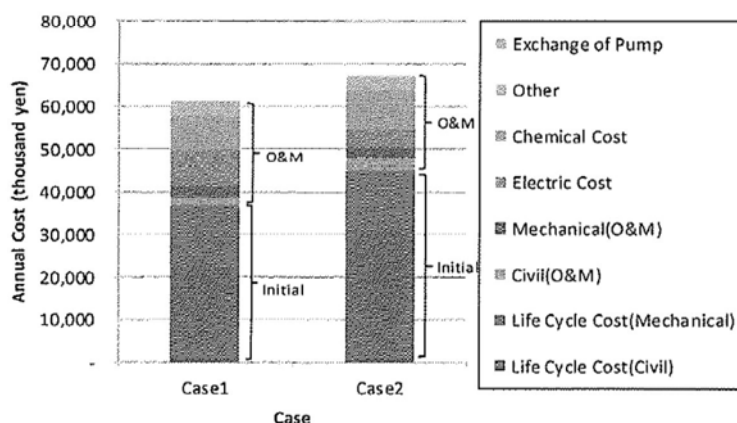
	Case1 (Intake : Dhannak Ampil, Water Treatment Plant : No.5)	Case2 (Intake : near the existing intake point, Water Treatment Plant : No.2)
Operation and Maintenance	○The cleaning and parts exchange frequency of the sand sedimentation is low. ▲The distance is far between the water treatment plant and the intake pump station.	▲The cleaning and parts exchange frequency of the sedimentation basin is high. ○Easy access between the water treatment plant and the intake pump station
Cost	○Initial cost : 344,633 (thousand yen) : 36,531(thousand yen/year) ○Running cost : 24,616 (thousand yen/year)	▲Initial cost : 423,067 (thousand yen) : 44,845 (thousand yen/year) ○Running cost : 22,054 (thousand yen/year)

Unit:Thousand/yen

	Life Cycle Cost			O&M						Exchange of Pump	OM + Exchange of Pump	Total
	Civil	Mechanical	sub-total	Civil(O&M)	Mechanical (O&M)	Electric	Chemical	Other	sub-total			
Case1	22,928	13,603	36,531	2,163	2,567	8,801	7,759	75	21,365	3,251	24,616	61,147
Case2	31,660	13,185	44,845	2,987	2,488	4,401	8,819	208	18,902	3,151	22,054	66,899

Note: O&M cost of civil work is 1% of initial cost. The initial cost of civil work includes the cost of temporary work.

O&M cost of mechanical work is 2% of initial cost.



Note:

- 1 JPY=approx . 37.4 riel(as of Aug.22, 2017)
2. The above comparison is based on the cost for yearly basis during lifecycle time.
3. The gap of electricity cost between Case 1 and Case 2 is approximately 4,400,000 yen/year (approx.164,560,000 riel) . The gap of cost for 30 years is approximately 75,000,000 yen as the present value.

Annex 5

JAPANESE GRANT

The Japanese Grant is non-reimbursable fund provided to a recipient country (hereinafter referred to as "the Recipient") to purchase the products and/or services (engineering services and transportation of the products, etc.) for its economic and social development in accordance with the relevant laws and regulations of Japan. Followings are the basic features of the project grants operated by JICA (hereinafter referred to as "Project Grants").

1. Procedures of Project Grants

Project Grants are conducted through following procedures (See "PROCEDURES OF JAPANESE GRANT" for details):

(1) Preparation

- The Preparatory Survey (hereinafter referred to as "the Survey") conducted by JICA

(2) Appraisal

-Appraisal by the government of Japan (hereinafter referred to as "GOJ") and JICA, and Approval by the Japanese Cabinet

(3) Implementation

Exchange of Notes

-The Notes exchanged between the GOJ and the government of the Recipient

Grant Agreement (hereinafter referred to as "the G/A")

-Agreement concluded between JICA and the Recipient

Banking Arrangement (hereinafter referred to as "the B/A")

-Opening of bank account by the Recipient in a bank in Japan (hereinafter referred to as "the Bank") to receive the grant

Construction works/procurement

-Implementation of the project (hereinafter referred to as "the Project") on the basis of the G/A

(4) Ex-post Monitoring and Evaluation

-Monitoring and evaluation at post-implementation stage

2. Preparatory Survey

(1) Contents of the Survey

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

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

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

JICA requests the Recipient to take measures necessary to achieve its self-reliance in the implementation of the Project. Such measures must be guaranteed even though they may fall outside of the jurisdiction of the executing agency of the Project. Therefore, the contents of the Project are confirmed by all relevant organizations of the Recipient based on the Minutes of Discussions.

(2) Selection of Consultants

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

(3) Result of the Survey

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

3. Basic Principles of Project Grants

(1) Implementation Stage

1) The E/N and the G/A

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

to the Japanese Grant are stipulated in the "General Terms and Conditions for Japanese Grant (January 2016)."

2) Banking Arrangements (B/A) (See "Financial Flow of Japanese Grant (A/P Type)" for details)

a) The Recipient shall open an account or shall cause its designated authority to open an account under the name of the Recipient in the Bank, in principle. JICA will disburse the Japanese Grant in Japanese yen for the Recipient to cover the obligations incurred by the Recipient under the verified contracts.

b) The Japanese Grant will be disbursed when payment requests are submitted by the Bank to JICA under an Authorization to Pay (A/P) issued by the Recipient.

3) Procurement Procedure

The products and/or services necessary for the implementation of the Project shall be procured in accordance with JICA's procurement guidelines as stipulated in the G/A.

4) Selection of Consultants

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

5) Eligible source country

In using the Japanese Grant disbursed by JICA for the purchase of products and/or services, the eligible source countries of such products and/or services shall be Japan and/or the Recipient. The Japanese Grant may be used for the purchase of the products and/or services of a third country as eligible, if necessary, taking into account the quality, competitiveness and economic rationality of products and/or services necessary for achieving the objective of the Project. However, the prime contractors, namely, constructing and procurement firms, and the prime consulting firm, which enter into contracts with the Recipient, are limited to "Japanese nationals", in principle.

6) Contracts and Concurrence by JICA

The Recipient will conclude contracts denominated in Japanese yen with Japanese nationals. Those contracts shall be concurred by JICA in order to be verified as eligible for using the Japanese Grant.

7) Monitoring

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

8) Safety Measures

The Recipient must ensure that the safety is highly observed during the implementation of the Project.



9) Construction Quality Control Meeting

Construction Quality Control Meeting (hereinafter referred to as the "Meeting") will be held for quality assurance and smooth implementation of the Works at each stage of the Works. The member of the Meeting will be composed by the Recipient (or executing agency), the Consultant, the Contractor and JICA. The functions of the Meeting are as followings:

- a) Sharing information on the objective, concept and conditions of design from the Contractor, before start of construction.
- b) Discussing the issues affecting the Works such as modification of the design, test, inspection, safety control and the Client's obligation, during of construction.

(2) Ex-post Monitoring and Evaluation Stage

- 1) After the project completion, JICA will continue to keep in close contact with the Recipient in order to monitor that the outputs of the Project is used and maintained properly to attain its expected outcomes.
- 2) In principle, JICA will conduct ex-post evaluation of the Project after three years from the completion. It is required for the Recipient to furnish any necessary information as JICA may reasonably request.

(3) Others

1) Environmental and Social Considerations

The Recipient shall carefully consider environmental and social impacts by the Project and must comply with the environmental regulations of the Recipient and JICA Guidelines for Environmental and Social Considerations (April, 2010).

2) Major undertakings to be taken by the Government of the Recipient

For the smooth and proper implementation of the Project, the Recipient is required to undertake necessary measures including land acquisition, and bear an advising commission of the A/P and payment commissions paid to the Bank as agreed with the GOJ and/or JICA. The Government of the Recipient shall ensure that customs duties, internal taxes and other fiscal levies which may be imposed in the Recipient with respect to the purchase of the Products and/or the Services be exempted or be borne by its designated authority without using the Grant and its accrued interest, since the grant fund comes from the Japanese taxpayers.

3) Proper Use

The Recipient is required to maintain and use properly and effectively the products and/or services under the Project (including the facilities constructed and the equipment purchased), to assign staff necessary for this operation and maintenance and to bear all the expenses other than those covered by the Japanese Grant.

4) Export and Re-export

The products purchased under the Japanese Grant should not be exported or re-exported from the Recipient.

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Annex 6

<p><u>Project Monitoring Report</u> on <u>Project Name</u> Grant Agreement No. <u>XXXXXXXX</u> 20XX, Month</p>
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Organizational Information

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

General Information:

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

Handwritten initials/signature

G/A NO. XXXXXXXX
 PMR prepared on DD/MM/YY

1: Project Description	
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1-1 Project Objective

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1-2 Project Rationale

- Higher-level objectives to which the project contributes (national/regional/sectoral policies and strategies)
- Situation of the target groups to which the project addresses

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1-3 Indicators for measurement of "Effectiveness"

Quantitative indicators to measure the attainment of project objectives		
Indicators	Original (Yr)	Target (Yr)
Qualitative indicators to measure the attainment of project objectives		

2: Details of the Project

2-1 Location

Components	Original <i>(proposed in the outline design)</i>	Actual
1.		

2-2 Scope of the work

Components	Original* <i>(proposed in the outline design)</i>	Actual*
1.		

Reasons for modification of scope (if any).

KC
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G/A NO. XXXXXXXX
 PMR prepared on DD/MM/YY

(PMR)

2-3 Implementation Schedule

Items	Original		Actual
	<i>(proposed in the outline design)</i>	<i>(at the time of signing the Grant Agreement)</i>	

Reasons for any changes of the schedule, and their effects on the project (if any)

2-4 Obligations by the Recipient

2-4-1 Progress of Specific Obligations

See Attachment 2.

2-4-2 Activities

See Attachment 3.

2-4-3 Report on RD

See Attachment 11.

2-5 Project Cost

2-5-1 Cost borne by the Grant(Confidential until the Bidding)

Components			Cost (Million Yen)	
	Original <i>(proposed in the outline design)</i>	Actual <i>(in case of any modification)</i>	Original ¹⁾²⁾ <i>(proposed in the outline design)</i>	Actual
	1.			
Total				

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

2-5-2 Cost borne by the Recipient

Components			Cost (1,000 Taka)	
	Original <i>(proposed in the outline design)</i>	Actual <i>(in case of any modification)</i>	Original ¹⁾²⁾ <i>(proposed in the outline design)</i>	Actual

G/A NO. XXXXXXXX
 PMR prepared on DD/MM/YY

	1.			

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

Reasons for the remarkable gaps between the original and actual cost, and the countermeasures (if any)

(PMR)

2-6 Executing Agency

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

Original (at the time of outline design)
 name:
 role:
 financial situation:
 institutional and organizational arrangement (organogram):
 human resources (number and ability of staff):

Actual (PMR)

2-7 Environmental and Social Impacts

- The results of environmental monitoring based on Attachment 5 (in accordance with Schedule 4 of the Grant Agreement).
- The results of social monitoring based on in Attachment 5 (in accordance with Schedule 4 of the Grant Agreement).
- Disclosed information related to results of environmental and social monitoring to local stakeholders (whenever applicable).

3: Operation and Maintenance (O&M)

3-1 Physical Arrangement

- Plan for O&M (number and skills of the staff in the responsible division or section, availability of manuals and guidelines, availability of spareparts, etc.)

Original (at the time of outline design)

G/A NO. XXXXXXXX
 PMR prepared on DD/MM/YY

Actual (PMR)

3-2 Budgetary Arrangement
 - Required O&M cost and actual budget allocation for O&M

Original (at the time of outline design)
Actual (PMR)

4: Potential Risks and Mitigation Measures

- Potential risks which may affect the project implementation, attainment of objectives, sustainability
- Mitigation measures corresponding to the potential risks

Assessment of Potential Risks (at the time of outline design)

Potential Risks	Assessment
1. (Description of Risk)	Probability: High/Moderate/Low
	Impact: High/Moderate/Low
	Analysis of Probability and Impact:
	Mitigation Measures:
	Action required during the implementation stage:
2. (Description of Risk)	Probability: High/Moderate/Low
	Impact: High/Moderate/Low
	Analysis of Probability and Impact:
	Mitigation Measures:
	Action required during the implementation stage:
3. (Description of Risk)	Probability: High/Moderate/Low
	Impact: High/Moderate/Low

G/A NO. XXXXXXXX
 PMR prepared on DD/MM/YY

	Analysis of Probability and Impact:
	Mitigation Measures:
	Action required during the implementation stage:
	Contingency Plan (if applicable):
Actual Situation and Countermeasures	
(PMR)	

5: Evaluation and Monitoring Plan (after the work completion)

5-1 Overall evaluation

Please describe your overall evaluation on the project.

5-2 Lessons Learnt and Recommendations

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

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

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

Handwritten initials/signature

G/A NO. XXXXXXXX
PMR prepared on DD/MM/YY

Attachment

1. Project Location Map
 2. Specific obligations of the Recipient which will not be funded with the Grant
 3. Monthly Report submitted by the Consultant
- Appendix - Photocopy of Contractor's Progress Report (if any)
- Consultant Member List
 - Contractor's Main Staff List
4. Check list for the Contract (including Record of Amendment of the Contract/Agreement and Schedule of Payment)
 5. Environmental Monitoring Form / Social Monitoring Form
 6. Monitoring sheet on price of specified materials (Quarterly)
 7. Report on Proportion of Procurement (Recipient Country, Japan and Third Countries) (PMR (final) only)
 8. Pictures (by JPEG style by CD-R) (PMR (final) only)
 9. Equipment List (PMR (final) only)
 10. Drawing (PMR (final) only)
 11. Report on RD (After project)

Monitoring sheet on price of specified materials

1. Initial Conditions (Confirmed)

Items of Specified Materials	Initial Volume A	Initial Unit Price (¥) B	Initial total Price C=A×B	1% of Contract Price D	Condition of payment Price (Increased) F=C+D
Item 1	●●t	●	●●	●●	●●
Item 2	●●t	●	●●	●●	
Item 3					
Item 4					
Item 5					

2. Monitoring of the Unit Price of Specified Materials

(1) Method of Monitoring : ●●

(2) Result of the Monitoring Survey on Unit Price for each specified materials

Items of Specified Materials	1st month, 2015	2nd month, 2015	3rd month, 2015	4th	5th	6th
Item 1	●	●	●			
Item 2						
Item 3						
Item 4						
Item 5						

(3) Summary of Discussion with Contractor (if necessary)

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Report on Proportion of Procurement (Recipient Country, Japan and Third Countries)
 (Actual Expenditure by Construction and Equipment each)

	Domestic Procurement (Recipient Country) A	Foreign Procurement (Japan) B	Foreign Procurement (Third Countries) C	Total D
Construction Cost	(A/D%)	(B/D%)	(C/D%)	
Direct Construction Cost	(A/D%)	(B/D%)	(C/D%)	
others	(A/D%)	(B/D%)	(C/D%)	
Equipment Cost	(A/D%)	(B/D%)	(C/D%)	
Design and Supervision Cost	(A/D%)	(B/D%)	(C/D%)	
Total	(A/D%)	(B/D%)	(C/D%)	

Annex 7

Major Undertakings to be taken by the Government of Cambodia

1. Specific obligations of the Government of Cambodia which will not be funded with the Grant

(1) Before the Tender

NO	Items	Deadline	In charge	Estimated Cost	Ref.
1	To open bank account (B/A)	within 1 month after the signing of the G/A	MEF		
2	To issue A/P to a bank in Japan (the Agent Bank) for the payment to the consultant	within 1 month after the signing of the contract	MIH		
3	To approve IEIA(Conditions of approval should be fulfilled, if any) and secure the necessary budget for implementation.	within 1 month after the signing of the G/A	MIH		
4	To secure the necessary budget and implement land acquisition and resettlement (including preparation of resettlement sites), and compensation with full replacement cost in accordance with RAP	before start of the construction	MIH		
5	To implement social monitoring, and to submit the monitoring results to JICA, by using the monitoring form, on a quarterly basis as a part of Project Monitoring Report	till land acquisition and resettlement complete	MIH		
6	To secure and clear the following lands 1) project sites for water treatment plants and intake facilities in both sites 2) temporary construction yard and stock yard near the Project area	before notice of the bidding document	MIH		
7	To obtain the planning, zoning, building permit	before notice of the bidding document	MIH		
8	To clear, level and reclaim the following sites	before notice of the bidding document	MIH		
9	To submit Project Monitoring Report (with the result of Detail Design)	before preparation of bidding documents	MIH		

(2) During the Project Implementation

NO	Items	Deadline	In charge	Estimated Cost	Ref.
1	To issue A/P to a bank in Japan (the Agent Bank) for the payment to the Supplier(s)	within 1 month after the signing of the contract(s)	MIH		
2	To bear the following commissions to a bank in Japan for the banking services based upon the B/A				
	1) Advising commission of A/P	within 1 month after the signing of the contract(s)	MIH		
	2) Payment commission for A/P	every payment	MEF		
3	to ensure prompt unloading and customs clearance at ports of disembarkation in recipient country and to assist the Supplier(s) with internal transportation therein	during the Project	MIH		
4	To accord Japanese nationals and/or physical persons of third countries whose services may be required in connection with the supply of the products and the services such facilities as may be necessary for their entry into the country of the Recipient and stay therein for the performance of their work	during the Project	MIH		
5	To ensure that customs duties, internal taxes and other fiscal levies which may be imposed in the country of the Recipient with respect to the purchase of the products and/or the services be exempted	during the Project	MIH		
6	To bear all the expenses, other than those covered by the Grant, necessary for the implementation of the Project	during the Project	MIH		
7	1) To submit Project Monitoring Report	every month	MIH		
	2) To submit Project Monitoring Report (final)	within one month after signing of Certificate of Completion for the works under the contract(s)	MIH		
8	To submit a report concerning completion of the Project	within six months after completion of the Project	MIH		
9	To construct access roads 1) Outside the site	3 months before completion of the construction	MIH		
10	To provide facilities for distribution of electricity, water supply and drainage and other incidental facilities necessary for the implementation of the Project outside the site(s)		MIH		
	1) Electricity The distributing line to the site	before start of the construction			
	2) Water Supply The city water distribution main to the site	6 months before completion of the construction			
	3) Drainage The city drainage main (for storm, sewer and others) to the site	6 months before completion of the construction			
	4) Furniture and Equipment General furniture	1 month before completion of the construction			

11	To take necessary measure for safety construction - traffic control - rope off	during the construction	MIH		
12	To implement EMP and EMoP	during the construction	MIH		
13	To submit results of environmental monitoring to JICA, by using the monitoring form, on a quarterly basis as a part of Project Monitoring Report	during the construction	MIH		
14	To implement social monitoring, and to submit the monitoring results to JICA, by using the monitoring form, on a quarterly basis as a part of Project Monitoring Report - Period of the monitoring may be extended if affected persons' livelihoods are not sufficiently restored. Extension of the monitoring will be decided based on agreement between MIH and JICA.	- for two years after land acquisition and resettlement complete	MIH		

(3) After the Project

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

2. Other obligations of the Government of Cambodia funded with the Grant

NO	Items	Deadline	Amount (Million Japanese Yen)*
1			/
2			
Total			

* The Amount is provisional. This is subject to the approval of the Government of Japan.

Minutes of Discussions
on the Preparatory Survey for the Project for
Expansion of Water Supply System in Pursat in the Kingdom of Cambodia
(Explanation on Draft Preparatory Survey Report)

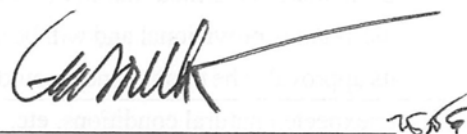
With reference to the minutes of discussions signed between Ministry of Industry and Handicraft (hereinafter referred to as "MIH") and the Japan International Cooperation Agency (hereinafter referred to as "JICA") on 24th August, 2017 and in response to the request from the Government of Kingdom of Cambodia (hereinafter referred to as "Cambodia") dated on 26th June, 2017, JICA dispatched the Preparatory Survey Team (hereinafter referred to as "the Team") for the explanation of Draft Preparatory Survey Report (hereinafter referred to as "the Draft Report") for the Project for Expansion of Water Supply System in Pursat (hereinafter referred to as "the Project").

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

Phnom Penh, June 28, 2018

川村 康子

Ms. Yasuyo Kawamura
Leader
Preparatory Survey Team
Japan International Cooperation Agency



H.E. EK Sonn Chan
Secretary of State
Ministry of Industry and Handicraft
Kingdom of Cambodia

ATTACHMENT

1. Objective of the Project
The objective of the Project is to improve the access to safe water in Pursat through the expansion and improvement of water supply system including construction of a new water treatment plant and water distribution system, thereby contributing to improving the people's quality of life in Pursat.
2. Title of the Preparatory Survey
Both sides confirmed the title of the Preparatory Survey as "the Preparatory Survey for the Project for Expansion of Water Supply System in Pursat".
Although request was made for both Pursat and Svay Rieng City, the Preparatory Survey for the Project for Expansion of Water Supply System in Svay Rieng will be implemented separately due to change of water resources.
3. Project site
Both sides confirmed that the site of the Project is shown in Annex 1.
4. Contents of the Draft Report
After the explanation of the contents of the Draft Report by the Team, the Cambodian side agreed to its contents.
5. Cost estimate
Both sides confirmed that the cost estimate including the contingency explained by the Team is provisional and will be examined further by the Government of Japan for its approval. The contingency would cover the additional cost against natural disaster, unexpected natural conditions, etc.
6. Confidentiality of the cost estimate and technical specifications
Both sides confirmed that the cost estimate and technical specifications of the Project should never be disclosed to any third parties until all the contracts under the Project are concluded.
7. Procedures and Basic Principles of Japanese Grant
The Cambodian side agreed that the procedures and basic principles of Japanese Grant as described in Annex 3 shall be applied to the Project. In addition, the

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Cambodian side agreed to take necessary measures according to the procedures.

8. Timeline for the project implementation

The Team explained to the Cambodian side that the expected timeline for the project implementation is as attached in Annex 4.

9. Expected outcomes and indicators

Both sides agreed that key indicators for expected outcomes are as follows. The Cambodian side will be responsible for the achievement of agreed key indicators targeted in year 2025 and shall monitor the progress based on those indicators.

[Quantitative indicators]

Indicator	Baseline Data (Year 2016)	Target (Year 2025) 【4 years after completion of the new facilities】
Water Supply Capacity (m ³ /day)	5,464	10,900
Served Population	38,436	77,800

[Qualitative indicators]

- Improving living environment of the residents
- Increasing house connections for the poor household

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

Considering the sustainable operation and maintenance of the products and services granted through the Project, following technical assistance is planned under the Project. The Cambodian side confirmed to deploy necessary number of counterparts who are appropriate and competent in terms of its purpose of the technical assistance as described in the Draft Report.

11. Undertakings of the Project

Both sides confirmed the undertakings of the Project as described in Annex 5. With regard to exemption of customs duties, VAT, internal taxes and other fiscal levies as stipulated in (2)- 5 of Annex 5, both sides confirmed that such customs duties, internal taxes and other fiscal levies, which shall be confirmed in the bid documents by MIH during the implementation stage of the Project.

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The Cambodian side assured to take the necessary measures and coordination including allocation of the necessary budget which are preconditions of implementation of the Project. It is further agreed that the costs are indicative, i.e. at Outline Design level. More accurate costs will be calculated at the Detailed Design stage.

Both sides also confirmed that the Annex 5 will be used as an attachment of G/A.

Japanese side requested MIH for assistance for VAT exemption and refund procedure by Japanese Consultant and Contractor during the Project and Cambodian side agrees on it.

12. Monitoring during the implementation

The Project will be monitored by the Executing Agency and reported to JICA by using the form of Project Monitoring Report (PMR) attached as Annex 6. The timing of submission of the PMR is described in Annex 5.

13. Project completion

Both sides confirmed that the project completes when all the facilities constructed and equipment procured by the grant are in operation. The completion of the Project will be reported to JICA promptly, but in any event not later than six months after completion of the Project.

14. Ex-Post Evaluation

JICA will conduct ex-post evaluation after three (3) years from the project completion, in principle, with respect to five evaluation criteria (Relevance, Effectiveness, Efficiency, Impact, and Sustainability). The result of the evaluation will be publicized. The Cambodian side is required to provide necessary support for the data collection.

15. Schedule of the Survey

JICA will finalize the Preparatory Survey Report based on the confirmed items. The report will be sent to the Cambodian side around September 2018.

16. Environmental and Social Considerations

16-1 General Issues

16-1-1 Environmental Guidelines and Environmental Category

The Team explained that 'JICA Guidelines for Environmental and Social

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Considerations (April 2010)' (hereinafter referred to as "the Guidelines") is applicable for the Project. The Project is categorized as B because the Project is not located in a sensitive characteristics, nor falls into sensitive sectors under the JICA guidelines for environmental and social considerations (April 2010), and its potential adverse impacts on the environment are not likely to be significant.

16-1-2 Environmental Checklist

The environmental and social considerations including major impacts and mitigation measures for the Project are summarized in the Environmental Checklist attached as Annex 7. Both sides confirmed that in case of major modification of the content of the Environmental Checklist, the Cambodian side shall submit the modified version to JICA in a timely manner.

16-2 Environmental Issues

16-2-1 Initial Environmental Impact Assessment (IEIA)

Both sides confirmed the IEIA report will be approved by Ministry of Environment by end of November, 2018.

16-2-2 Environmental Management Plan and Environmental Monitoring Plan

Both sides confirmed Environmental Management Plan (EMP) and Environmental Monitoring Plan (EMoP) of the Project is as Annex 8, respectively. Both sides agreed that environmental mitigation measures and monitoring shall be conducted based on the EMP and EMoP, which may be updated during the detailed design stage.

16-3 Social Issues

16-3-1 Land Acquisition

Both sides confirmed the 1.27 ha (0.27 ha for intake facility and 1 ha for water treatment plant) of land has been already acquired by Cambodian side.

16-4 Environmental and Social Monitoring

16-4-1 Environmental Monitoring

Both sides agreed that the Cambodian side will submit results of environmental monitoring to JICA with PMR by using the monitoring form attached as Annex 9. The timing of submission of the monitoring form is described in Annex 5.

16-4-2 Social Monitoring

The Cambodian side and the Team agreed that MIH will submit results of social monitoring to JICA with PMR by using the monitoring form attached as Annex 9.

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16-4-3 Information Disclosure of Monitoring Results

Both sides confirmed that the Cambodian side will disclose results of environmental and social monitoring to local stakeholders through their website / in their field offices.

The Cambodian side agreed JICA will disclose results of environmental and social monitoring submitted by the Cambodian side as the monitoring forms attached as Annex 9 on its website.

17. Other Relevant Issues

17-1. Disclosure of Information

Both sides confirmed that the Preparatory Survey Report from which project cost is excluded will be disclosed to the public after completion of the Preparatory Survey. The comprehensive report including the project cost will be disclosed to the public after all the contracts under the Project are concluded.

17-2. Increasing water service connections

Cambodian side will be expected to complete seven thousand five hundred (7,500) service connections including poor household, under the Project. Both sides confirmed that it is important to carry out the connections as planned. In order to smooth implementation, Cambodian side agreed to increase the construction teams from 2021 to 2025. Expected number of connection for each year is written in (3) - 4 of Annex 5. Both sides also confirmed that facilitating connections also means increasing revenue for provincial waterworks, which is important for sound management of waterworks.

17-3. Recruitment of new staff

Considering the sustainable operation and maintenance of the provided new facility, Cambodian side is requested to recruit twenty-one (21) new staff by 2025. Break down of the new staff are described in the Annex 2.

Cambodian side agreed to secure enough staff and budget for appropriate operation and maintenance of the facilities.

17-4. Type of filter to be adopted for the new water treatment plant in Pursat

Both sides agreed that filtration will be self-balancing method. Japanese side proposed to define specification of filtration basin and accept several types as long

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as it meets the mentioned specification in order to secure competitiveness in tender. Alternatives for filtration will be (1) Syphon, (2) Gate, and (3) combination of Syphon and gate. And alternative for supply methods of treated water will be (1) Backwash tank, and (2) Self-washing. Backwash pump method will be excluded, because of high maintenance cost. Cambodian side agreed on it.

Cambodian side requested to adopt air-wash as washing method, since it is common in Cambodia considering turbidity of water sources. Japanese side agreed on it.

17-5. Access bridges for laying water pipes

Japanese side mentioned that four (4) access bridges would be built before the laying water pipes under the Project. Cambodian side explained that building bridges in the sites are required to get permit from each local community, and MIH facilitates and takes necessary action to get permit for construction of access bridges. Cambodian side also requested to remain access bridges after the Project for the convenience for local communities and agreed that Cambodian side has all responsibility of bridges after handing-over.

17-6. Embankments at proposed sites for water treatment plant and intake facility

Japanese side requested embankments of proposed sites by before the tender. Embankments volume for water treatment plant is 15,184 m³ and for intake facility is 5,113m³. Cambodian side agreed on it.

17-7. Specification of customer meters procured in the Project

Cambodian side requested that specification of customer meter will be velocity (Impeller type) and Class C. Cambodian side also requested to have Japanese-manufactured meter which is used by private water supplier in Cambodia.

17-8. Land of temporary use for construction

Both side confirmed that MIH will prepare land of temporary use necessary for construction and storage, and the land should be cleared for UXO.

17-9. Number of flow meters

Japanese side explained that two (2) flow meter would be installed. However Cambodian side requested that it would be better to have 1 (one) meter for not setting zoning or three (3) meter for setting zoning.

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17-10 Introducing remote control system

Cambodian side requested to have remote control system in new treatment plant, not only monitoring system.

Annex 1 Project Site

Annex 2 Organization Chart

Annex 3 Japanese Grant

Annex 4 Project Implementation Schedule

Annex 5 Major Undertakings to be taken by the Government of Cambodia

Annex 6 Project Monitoring Report (template)

Annex 7 Environmental Check List

Annex 8 Environmental Management Plan/Environmental Monitoring Plan

Annex 9 Environmental and Social Monitoring Form

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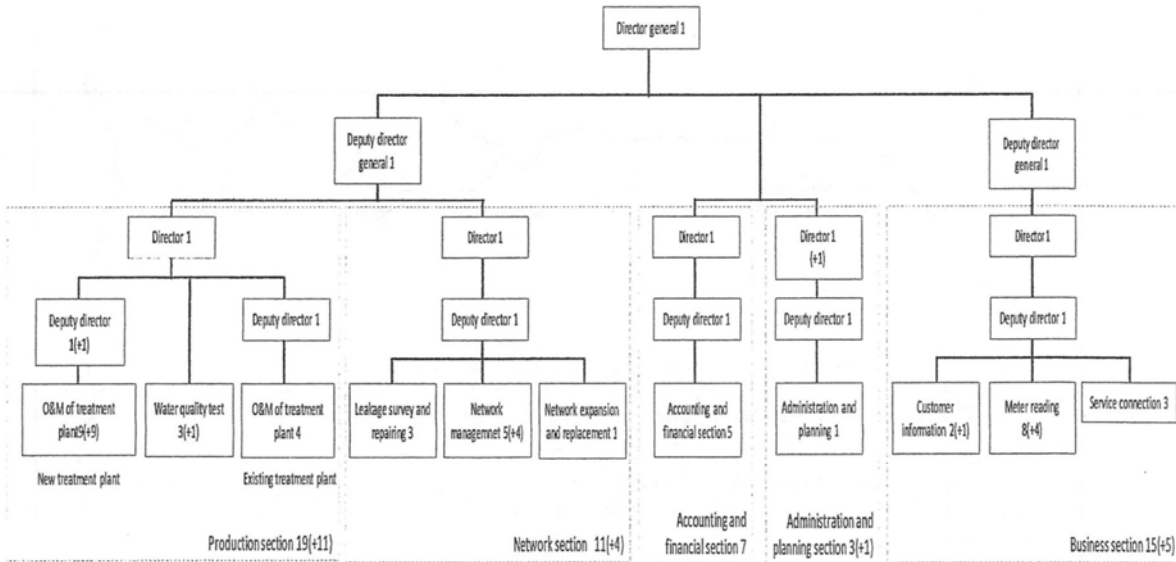
Annex1 Project Site Map



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Annex2 Organization Chart of Pursat Waterworks



*Highlighted sections/positions are expected to increase the number of staff.

**Proposed increased number of staff is noted in brackets.

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