

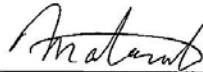
資料 4 討議議事録 (M/D)

- MINUTES OF DISCUSSIONS OF THE PREPARATORY SURVEY FOR THE PROJECT FOR EXPANSION OF WATER SUPPLY SYSTEM IN TA KHMAU IN THE KINGDOM OF CAMBODIA (29th March, 2019)
- TECHNICAL NOTES ON THE PREPARATORY SURVEY FOR THE PROJECT FOR EXPANSION OF WATER SUPPLY SYSTEM IN TA KHMAU IN THE KINGDOM OF CAMBODIA (5th April, 2019)
- MINUTES OF DISCUSSIONS OF THE PREPARATORY SURVEY FOR THE PROJECT FOR EXPANSION OF WATER SUPPLY SYSTEM IN TA KHMAU (EXPLANATION ON DRAFT PREPARATORY SURVEY REPORT) (28th June, 2019)
- MINUTES OF DISCUSSIONS OF THE PREPARATORY SURVEY FOR THE PROJECT FOR EXPANSION OF WATER SUPPLY SYSTEM IN TA KHMAU (EXPLANATION ON DRAFT PREPARATORY SURVEY REPORT) (21th November, 2019)

Minutes of Discussions
on the Preparatory Survey for the Project for
Expansion of Water Supply System in Ta Khmau

In response to the request from the Government of the Kingdom of Cambodia (hereinafter referred to as "Cambodia"), 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 Ta Khmau (hereinafter referred to as "the Project") to the Government of Cambodia. 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, 29th March, 2019



Dr. Shigeyuki Matsumoto
Leader
Preparatory Survey Team
Japan International Cooperation Agency
Japan



H.E. Dr. Sim Sitha
Director General
Phnom Penh Water Supply Authority (PPWSA)
Kingdom of Cambodia

Witness 



PEN Thirong

Ministry of Economy and Finance (MEF)
Kingdom of Cambodia

ATTACHMENT

1. Objective of the Project

The objective of the Project is to improve the access to safe water in Ta Khmau District through the expansion of water supply system including construction and operation and maintenance (hereinafter referred to as "O&M") of the new water treatment plant (hereinafter referred to as "WTP").

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 Ta Khmau".

3. Project site

Both sides confirmed that the construction site of the new WTP is located in Ta Khmau District, which is shown in Annex 1.

PPWSA is responsible for distribution plan, and explained that it should be flexible in accordance with change of water demand, future development of the Ta Khmau District and the surrounding area, the possibility of bulk water sale to local private water vendors, and other factors. The Team understood it, and pointed out that it would be necessary to clarify planning basis for the project appraisal as an assumption for the initial stage. Both sides agreed to further discuss the planning basis to set and justify the requirements for the SPC, such as production amount and water pressure.

4. Responsible authority for the Project

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

4-1. PPWSA will be the executing agency and the implementing agency for the Project.

The organization chart is shown in Annex 2.

4-2. PPWSA is autonomously able to agree with the O&M contract and off-take price if such agreement does not affect the current water tariff system.

5. Items requested for Japanese Grant Aid by the Government of Cambodia.

5-1. As a result of discussion, both sides confirmed that the items requested by the Government of Cambodia are as follows:

Facility

- Intake: Capacity of 33,000m³/day



- Raw Water Intake Pump Station: Quantity 22m³/min, Lift 23m
- Raw Water Transmission Pipe: D 600mm L=100m
- Water Treatment Plant: Capacity of 30,000m³/day, Solar Power System 146kWh
- Distribution Facility: Distribution Pump (Quantity 20m³/min)
- Bulk meters
- SCADA

Equipment

- Water Quality Analysis Equipment
- O&M Tools for Electrical and Mechanical Equipment

Consulting Service

- Tender Assistance, Construction and Procurement Supervision

Soft Component (technical assistance on O&M) was also requested in the Application Form for Grant Aid from Cambodia, but technical instruction will be implemented during O&M period that is not covered by Grant Aid. Both sides confirmed that the Soft Component is excluded from the items requested for Grant Aid.

Material and equipment for service connection was requested in the original request, but PPWSA explained that it would not be necessary and taken care of by PPWSA.

The original request mentioned the water treatment process as rapid sand filtration, but PPWSA explained that other process such as the membrane filtration could be acceptable if it is proposed by the SPC and it has cost advantages.

Regarding the water quality analysis equipment, PPWSA requested only equipment necessary for daily test because it had the central laboratory.

Although the original request mentioned to the lift of distribution pump as 50m, both sides agreed to reconsider it from the technical viewpoint, because PPWSA generally use 35 to 40m to keep the pressure 20m at taps.

PPWSA requested to include a bulk meter to measure the amount of water which

PPWSA received from SPC. The Team suggested two bulk meters, one for SPC and the other for PPWSA, but PPWSA confirmed only one bulk meter is sufficient for the measurement.

PPWSA requested to include SCADA for the operation of WTP and minimize the number of required staff.

- 6-2. JICA will assess the feasibility of the above requested items through the 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 3 shall be applied to the Project.

As for the monitoring of the implementation of the Project, JICA requires the Cambodian side to submit the Project Monitoring Report that the form is attached as Annex 4.
 - 6-2. The Cambodian side agreed to take the necessary measures, as described in Annex 5, for smooth implementation of the Project. The contents of the Annex 5 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 5 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
 - 7-1. The Team will proceed with further survey in Cambodia until April 2019.
 - 7-2. JICA will hold a project briefing session for Japanese companies to give information in terms of project outline, draft requirements to be stipulated in the bidding documents, and draft term sheet of the contracts around July, 2019.
 - 7-3. JICA will prepare a draft Preparatory Survey Report in English, and dispatch a mission to Cambodia in order to explain its contents around October, 2019.
 - 7-4. If the contents of the draft Preparatory Survey Report are 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 the Cambodian side around March, 2020.
 - 7-5. The above schedule is tentative and subject to change.

8. Environmental and Social Considerations

8-1. The Cambodian side confirmed to give due environmental and social considerations 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:

PPWSA confirmed to conduct the necessary procedures concerning the environmental assessment (including stakeholder meetings, Environmental Impact Assessment (EIA) / Initial Environmental Examination (IEE) and information disclosure, etc.). Both sides agreed that the team would make EIA/IEE report of the Project and support for approval. The EIA/IEE approval shall be received from the responsible authorities and submitted to JICA by October 2019 before the signing of the G/A.

9. Other Relevant Issues

9-1. Application of the Japanese Grant Aid with O&M

The Team explained that the Project would be implemented by applying the Japanese Grant Aid with O&M, whose outline is explained in Annex 3. The Team also explained important matters as follows and the Cambodian side understood them:

- 1) The Japanese Grant Aid shall be used for construction of the facilities and procurement of equipment necessary for the Project, and the consulting service for procurement and supervision of the above-mentioned facilities and equipment,
- 2) The prime contractor(s), namely, special purpose company (hereinafter referred to as "SPC"), and the prime consulting firm, which enter into contracts with the Recipient, are limited to "Japanese nationals", in principle,
- 3) The SPC shall be responsible for the construction, procurement and O&M consistently,
- 4) Quality and Cost Based Selection (QCBS) that includes technical, financial and legal evaluation will be applied for the bidding of SPC,
- 5) Contracts consist (a) comprehensive contract which consolidates both contracts for the purchase of the products and/or services and for the operation and maintenance, (b) contract(s) for the purchase of products and/or

services and (c) contract(s) for the operation and maintenance, and

- 6) 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.

9-2. Tax exemption

The Cambodian side confirmed that it gives necessary support to collect the information of tax exemption.

The Team explained the precondition that the tax such as corporate tax, personal income tax, value added tax and customs to be imposed for the construction work and the service which will be covered by the Japanese Grant Aid shall be exempted or reimbursed, and the Cambodian side understood it.


The Team will also study the possibility for tax exemption during the period of O&M and Cambodian side agreed to offer necessary cooperation to the Team. The Cambodian side explained that the tax exemption for the O&M phase should be discussed with General Department of Taxation (GDT) and the Council for the Development of Cambodia (CDC).

PPWSA recommended the Team to pay attention to subcontractors to be exempted from tax, because this point had been a cause of dispute in some previous Grant Aid projects.

9-3. Necessity of reclamation of the banana plant area

The Team explained that considering the limitation of the area of the site, multi-level WTP would be one option to be considered. However, the Team also explained that the multi-level WTP has some negative aspects such as higher electricity cost, additional waterproofing work and space limitation for rehabilitation work. Both sides agreed that the banana plant area could be used to create extra space, and the necessity of reclamation work would be further discussed technically between PPWSA and the Team.

9-4. Issue of raw water quality



The Team explained concern about worsening raw water quality of the Bassac River, and its survey policy to check odor-causing substances and Ammonium in the raw water. PPWSA explained that it considered chlorine dosing to treat Ammonium, and the pretreatment process would not be necessary, because the problem of odor was limited to the dry season.

9-5. Relocation of the tariff collection office

Both sides agreed that the existing office in the Ta Khmau site should be transferred to clear the space for the new WTP before the expected start of the construction work by PPWSA.

9-6. Unexploded ordnance (UXO)

PPWSA explained that the site had been already cleared from UXO, and nothing had been found when the existing water tower was constructed. Both sides agreed that in case that UXO was found during the survey and the Project, the Cambodian side should take necessary measures to secure the safety of the site.

9-7. Conditions for handover of bulk water

The Team proposed the basic concepts of conditions for handover of bulk water in terms of handover point, water quality, water pressure and off-take price.

Both sides agreed that PPWSA would purchase the bulk water of at least 30,000m³/day throughout the O&M phase.

Both sides agreed that off-take price should be affordable for PPWSA and acceptable for the operations by SPC, and be decided based on the formula, which is taken safe water production O&M costs, extra service cost, administration cost, reasonable expected return for SPC, inflation rate, and so on into consideration. Both sides also agreed that inflation rate can be adopted the rate in the Quarterly Bulletins published by the National Bank of Cambodia.

PPWSA explained their opinion that it is necessary to discuss which cost items should be included into off-take price first, and the off-take price should be equal to or lower than the average production cost of PPWSA. The Team explained that the current PPWSA's average O&M cost and average tariff in Ta Khmau District should not serve as a benchmark to determine the off-take price, because PPWSA



could have significant advantage to receive Japanese Grant to construct WTP by paying the off-take price, and there would be some project-specific factors to make the off-take price higher than the current PPWSA's average O&M cost such as the involvement of Japanese companies for quality assurance and technical transfer, and space limitation of the site which could result in higher electricity cost.

Both sides agreed that the conditions for handback should be discussed further on a priority basis to reach consensus by the middle of June, 2019, before the project briefing session for Japanese companies.

PPWSA explained that the off-take price should be approved by the Board of Directors of PPWSA and no other approval would be necessary, if such approval does not affect the current water tariff system. Both sides agreed that PPWSA would further study whether other ministries and authorities need to be informed or involved for the approval process.

9-8. Conditions for hand-back after the termination of O&M contract

The Team proposed the basic concepts of conditions for hand-back after the termination of O&M contract as follows.

- PPWSA shall have the option to require SPC to transfer to PPWSA all of its right, title and interest in and to the Assets. The Value of the Asset shall be net book value of the assets.

PPWSA requested that SPC should keep good conditions of the facility and equipment, and SOP for operation to reduce the risk of breakdown soon after the hand-back.

Both sides agreed that this topic should be discussed further on a priority basis to reach consensus by the middle of June, 2019, before the project briefing session for Japanese companies.

9-9. Conditions for hand-back in case of the early termination of O&M contract

The Team proposed the basic concepts of conditions for hand-back in case of the early termination of O&M contract as follows.

1) Termination for convenience (Unilateral termination):

PPWSA has the right to terminate the contract early for public interest. In this case the SPC shall be compensated in full, for all the private investments, additional costs incurred by the termination of the contract, and opportunity costs for the equity.

2) Termination for default by PPWSA:

The termination condition shall be in line with the case of the termination for convenience.

3) Termination for default by SPC.

PPWSA shall have the option to require SPC to transfer to PPWSA all of its right, title and interest in and to the Assets. The Value of the Asset shall be net book value of the assets minus cost of damages and losses suffered by PPWSA, which is equivalent to 30% of the net book value.

4) Termination for Force Majeure:

A Force Majeure is an event that is external, unpredictable, and irresistible and has a significant impact on the project. Both parties may terminate the contract if the impact of a Force Majeure lasts for a certain period. Neither party has any obligation to each other for the cost of mitigation measures to prevent increasing loss caused by Force Majeure. PPWSA shall have the option to require SPC to transfer to PPWSA all of its right, title and interest in and to the Assets. The Value of the Asset shall be net book value of the assets.

Both sides agreed that this topic should be discussed further on a priority basis to reach consensus by the middle of June, 2019, before the project briefing session for Japanese companies.

9-10. Risk allocation during the O&M period

The Team proposed the basic concept of risk allocation as follows.

1) Facilities Design and Construction Risks: Facilities Design and Construction Risks are taken by SPC under conditions to be defined in the contracts.

2) Safe water production quality and quantity variation risk: Maintaining the quality and quantity of safe water production is under control of SPC, therefore

such variation risks are taken by SPC under conditions to be defined in the contracts.

3) Demand variation risk: Water demand variation risk is not under control of SPC, therefore such risk is taken by PPWSA.

4) Inflation variation risk: Inflation variation risk is not under control of SPC, therefore such risk is taken by PPWSA.

5) Intake water quality variation risk: Intake water quality variation risk is not under control of SPC, therefore such risk is taken by PPWSA.

6) Electricity price variation risk: Electricity price variation risk is not under control of SPC therefore such risk is taken by PPWSA.

7) Law change risk especially related with water requirement is not under control of SPC, therefore such risk is taken by PPWSA.

Both sides agreed that risk allocation should be discussed further on a priority basis to reach consensus by the middle of June, 2019, before the project briefing session for Japanese companies.

9-11. Reconfirmation of the Minutes of Meetings (M/M) concluded between PPWSA and JICA Cambodia Office.

Both sides reconfirmed the M/M which had been signed on March 22, 2019 attached as Annex 6.

9-12. Applicable procurement rule and the domestic law in Cambodia

The Team explained that the bidding for Japanese Grant Aid with O&M should be Japan-tied in accordance with JICA's procurement rule based on the Article 3 of the Public Procurement Law in Cambodia. MEF and PPWSA agreed with it.

9-13. Duration of O&M phase

PPWSA explained that the duration of O&M should be 10 years at the longest after the commencement of the O&M.

9-14. Dispatch of PPWSA staff to SPC

PPWSA expressed its interest to dispatch its staff to SPC for technical transfer.

9-15. The schedule of the Project

The Cambodian side requested to accelerate the schedule to complete the construction before July 2023. The Team replied that possibility to shorten the schedule would be studied.

9-16. Water quality

The Cambodian side requested that SPC should comply with the water quality standards of PPWSA, because PPWSA is highly evaluated by its good quality of supplied water.

9-17. Ownership of the WTP

MEF and PPWSA confirmed that PPWSA would own the WTP to be constructed in the Project.

Annex 1 Project Site

Annex 2 Organization Chart

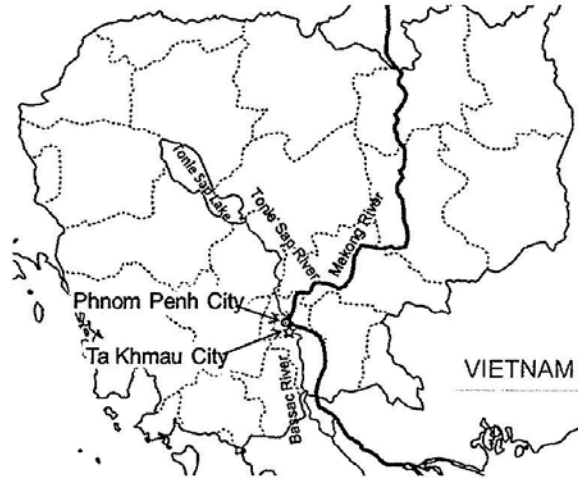
Annex 3 Japanese Grant Aid Scheme

Annex 4 Project Monitoring Report (template)

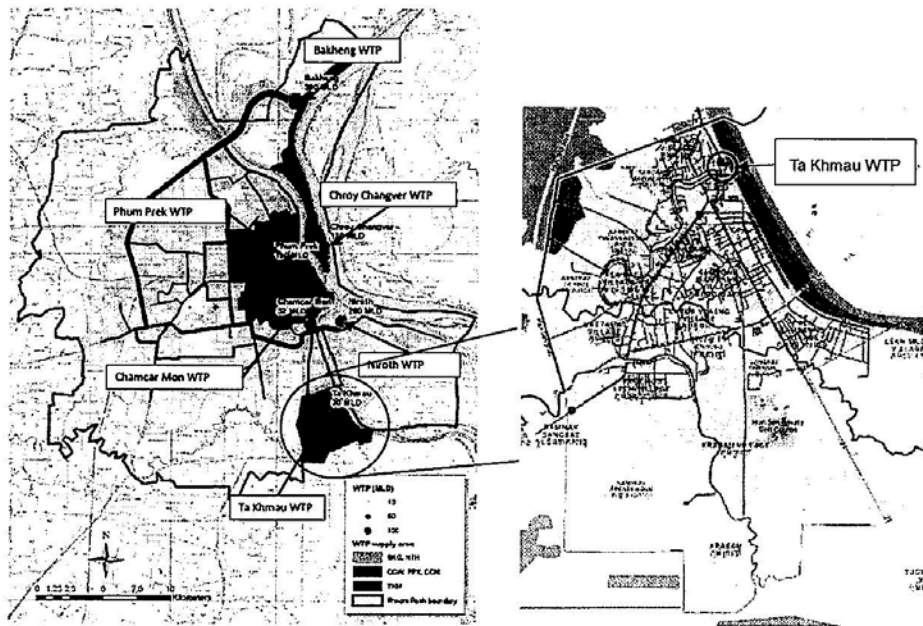
Annex 5 Major Undertakings to be taken by the Government of Cambodia

Annex 6 M/M between PPWSA and JICA Cambodia

Annex1 Project Site Map



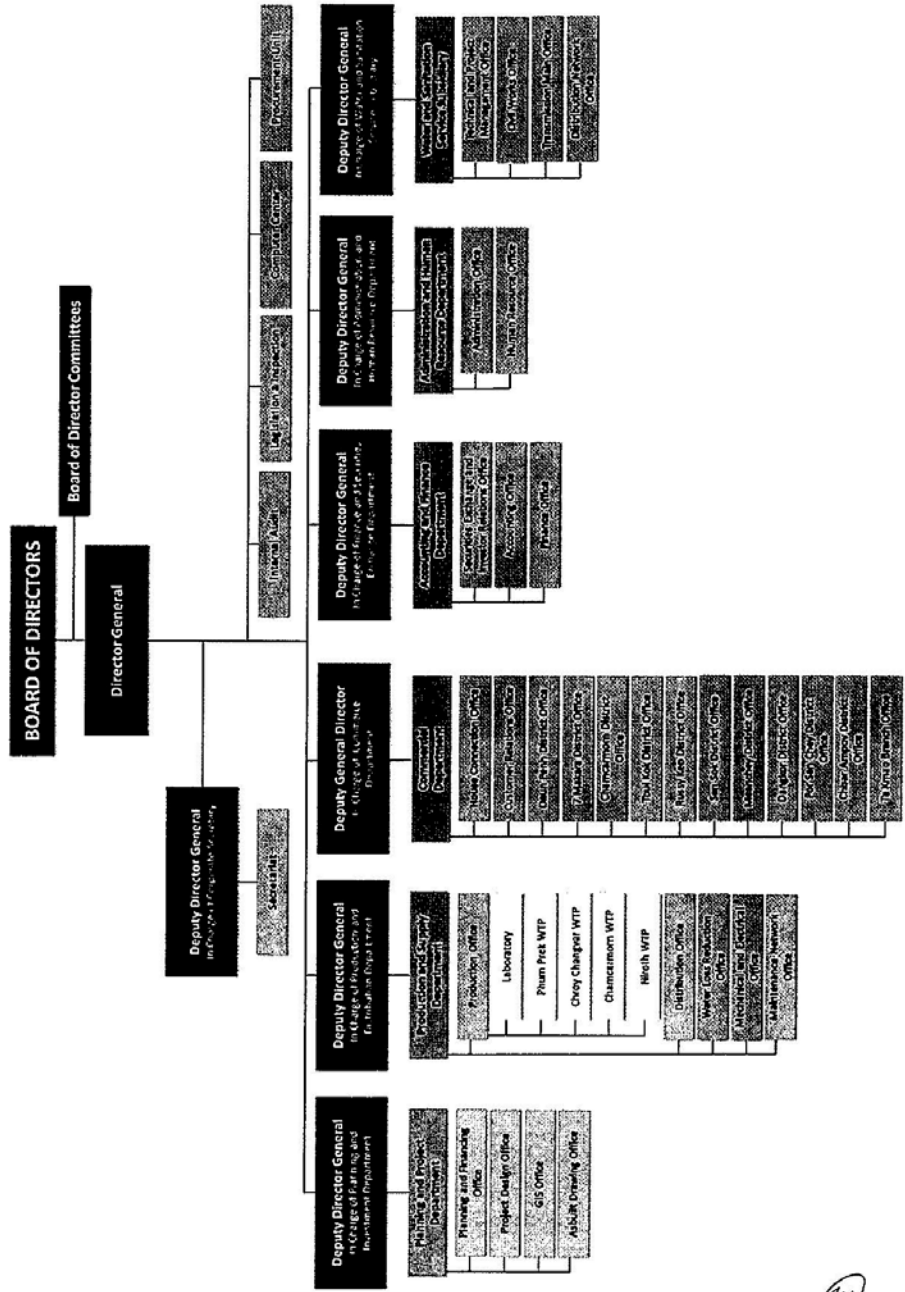
Cambodian Map



Site location Map

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Annex2 Organization Chart of PPWSA



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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 this project grants operated by JICA (hereinafter referred to as “the Project Grant”). The Project Grant means a public project which is implemented by (a) private company (ies) with the technologies and experience of Japanese nationals. The private company(ies) will be comprehensively engaged in construction of facilities, procurement of equipment, and operation and management as well.

1. Procedures of the Project Grant

The Project Grant is 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 Japanese Grant
 - Construction works/procurement
 - Implementation of the project (hereinafter referred to as “the Project”, the term “the Project” means that the Recipient concludes contract(s) to construct facilities and/or procure equipment by using the Japanese Grant.) on the basis of the G/A
- (4) Operation and Management (without using the Japanese Grant)
 - Operation and management of the facilities and equipment
- (5) Ex-post Monitoring and Evaluation
 - Monitoring and evaluation of the Project 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 Project Grant made by the GOJ and JICA. The contents of the Survey are as follows:

- Confirmation of the background, objectives, and benefits of the Project Grant and also institutional capacity of relevant agencies of the Recipient necessary for the implementation of the Project.
- Evaluation of the feasibility of the Project Grant 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 Grant.
- Preparation of an outline design of the Project.
- Estimation of costs of the Project Grant.
- 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 Grant 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 Grant.

3. Basic Principles of the Project Grant

(1) Implementation Stage



1) The E/N and the G/A

After the Project Grant 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 in the Bank. 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.

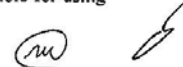
5) Eligible source country

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 provided 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 contractor(s), namely, constructing and procurement firms, and the prime consulting firm, which enter into contracts with the Recipient, are limited to "Japanese nationals".

6) Contracts and Concurrence by JICA

1) Contracts consist of (a) a comprehensive contract which consolidates both contracts for the purchase of the products and/or services and for the operation and maintenance, (b) contract(s) for the purchase of products and/or services and (c) contract(s) for the operation and maintenance.

2) The Recipient will conclude (b) contract(s) for the purchase of products and/or services 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) Operation and Management Stage

The Contractor operates and manages the facilities and equipment based on the contract(s) for operation and maintenance with the Recipient.

(3) Ex-post Monitoring and Evaluation Stage

1) After the project completion of all construction and procurement works by using the Japanese Grant, 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 of all construction and procurement works by using the Japanese Grant. It is required for the Recipient to furnish any necessary information as JICA may reasonably request.

(4) 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 Japanese Grant and its accrued interest.

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 country.

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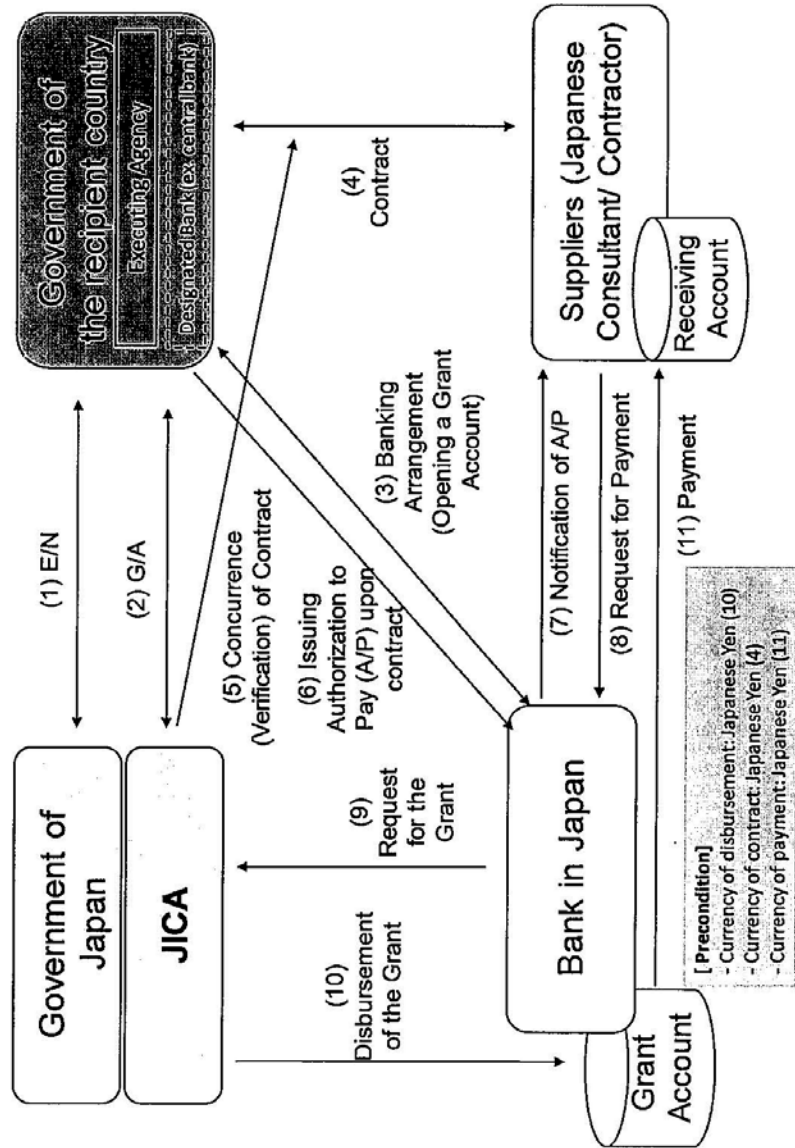
PROCEDURES OF JAPANESE GRANT

Stage	Procedures	Remarks	Recipient Government	Japanese Government	JICA	Consultants	Contractors	Agent Bank
Official Request	Request for grants through diplomatic channel	Request shall be submitted before appraisal stage.	x	x				
1. Preparation	(1) Preparatory Survey Preparation of outline design and cost estimate		x		x	x		
2. Appraisal	(2) Preparatory Survey Explanation of draft outline design, including cost estimate, undertakings, etc.		x		x	x		
	(3) Agreement on conditions for implementation	Conditions will be explained with the draft notes (E/N) and Grant Agreement (G/A) which will be signed before approval by Japanese government.	x	x (E/N)	x (G/A)			
	(4) Approval by the Japanese cabinet			x				
3. Implementation	(5) Exchange of Notes (E/N)		x	x				
	(6) Signing of Grant Agreement (G/A)		x		x			
	(7) Banking Arrangement (B/A)	Need to be informed to JICA.	x					x
	(8) Contracting with consultant and issuance of Authorization to Pay (A/P)	Concurrence by JICA is required	x			x		x
	(9) Preparation of bidding documents	Concurrence by JICA is required	x			x		
	(10) Bidding	Concurrence by JICA is required	x			x	x	
	(11) Contracting with contractor/supplier and issuance of A/P	Concurrence by JICA is required	x				x	x
	(12) Design/Construction works/procurement	Concurrence by JICA is required for amendment of contracts.	x			x	x	
	(13) Completion certificate		x			x	x	
4. Operation & Management	(14) Operation and management of the facilities and equipment		x			x	x	
5. Ex-post monitoring & evaluation	(15) Ex-post monitoring	To be implemented generally after 1, 3, 10 years of completion, subject to change	x		x			
	(16) Ex-post evaluation	To be implemented basically after 3 years of completion	x		x			

notes:

1. Project Monitoring Report and Report for Project Completion shall be submitted to JICA as agreed in the G/A.
2. Concurrence by JICA is required for allocation of grant for remaining amount and/or contingencies as agreed in the G/A.

Financial Flow of Japanese Grant (A/P Type)



Project Monitoring Report
on
Project Name
Grant Agreement No. XXXXXXXX
 20XX, Month

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 (): _____

(Signature)

1: Project Description

1-1 Project Objective

--

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

--

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).

(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	Original <i>(proposed in the outline design)</i>	Actual <i>(in case of any modification)</i>	Cost (Million Yen)	
			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	Original <i>(proposed in the outline design)</i>	Actual <i>(in case of any modification)</i>	Cost (1,000 Taka)	
			Original ^{1),2)} <i>(proposed in the outline design)</i>	Actual
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)

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:
	Contingency Plan (if applicable):
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:
	Contingency Plan (if applicable):
3. (Description of Risk)	Probability: High/Moderate/Low
	Impact: High/Moderate/Low
	Analysis of Probability and Impact:
	Mitigation Measures:
	Action required during the implementation stage:
	Contingency Plan (if applicable):

	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.

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eu ✓

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	% of Contract Price D	Condition of Payment Price (Decreased) E=C-D	Condition of Payment Price (Increased) F=C+D
1 Item 1	●●●	●	●	●	●	●
2 Item 2	●●●	●	●	●		
3 Item 3						
4 Item 4						
5 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, 2016	2nd Month, 2016	3rd Month, 2016	4th	5th	6th
1 Item 1						
2 Item 2						
3 Item 3						
4 Item 4						
5 Item 5						

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

①

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%)	

(Handwritten signature)

Major Undertakings to be taken by the Royal Government of Cambodia

1. Specific obligations of the Royal Government of Cambodia which will not be funded with the Grant**(1) Before the Bidding**

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	PPWSA		
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(s)	PPWSA		
3	To approve IEIA/EIA(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	PPWSA		
4	To notice the construction of the intake facility in the Bassac River to local authorities	before notice of the bidding document(s)	PPWSA		
5	To secure, clear, level and reclaim the following lands/sites * 1) Site for Ta Khmau WTP *The details will be confirmed by the Preparatory Survey	before notice of the bidding document(s)	PPWSA		
6	To explore landmines and UXO at construction site	before notice of the bidding document(s)	PPWSA		
7	To obtain water right from the Bassac River from MOWRAM	before notice of the bidding document(s)	PPWSA		
8	To demolish and transfer the existing tariff collection office	before notice of the bidding document(s)	PPWSA		
9	To submit Project Monitoring Report	before preparation of bidding document(s)	PPWSA		

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

(2) During the Project Implementation (during construction)

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)	PPWSA		
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)	PPWSA/ NBC		
	2) Payment commission for A/P	every payment	PPWSA/ NBC		
3	To ensure prompt customs clearance and to assist the Supplier(s) with internal transportation in the country of the Recipient	during the Project	PPWSA		
4	To accord Japanese physical persons 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 Cambodia and stay therein for the performance of their work	during the Project	PPWSA		
5	To ensure that customs duties, VAT, internal taxes and other fiscal levies which may be imposed in Cambodia with respect to the purchase of the products and/or the services be exempted by its designated authority without using the Grant;	during the Project	MEF		
6	To bear all the expenses, other than those covered by the Grant, necessary for the implementation of the Project	during the Project	PPWSA		
7	1) To submit Project Monitoring Report	every month	PPWSA		
	2) To submit Project Monitoring Report (final)	within one month after signing of Certificate of Completion for the works under the contract(s)	PPWSA		
8	To submit a report concerning completion of the Project	within six months after completion of the Project	PPWSA		
9	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)		PPWSA		
	1) Electricity The distributing line to the site *To be confirmed by the Preparatory Survey	before start of the construction			
	2) Drainage The city drainage main (for storm, sewer and others) to the site *To be confirmed by the Preparatory Survey	before start of the construction			
10	To take necessary measure for safety of construction - Coordination with the police for traffic control - Coordination with relevant authority to ensure the safety of boats and ships in relation to the construction of intake facility *To be confirmed by the Preparatory Survey	during the construction	PPWSA		
11	To implement EMP and EMoP	during the construction	PPWSA		
12	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	PPWSA		

NBC: National Bank of Cambodia

(Handwritten mark)

(3) During the Project Implementation (during O&M)

NO	Items	Deadline	In charge	Estimated Cost	Ref.
1	To implement EMP and EMoP	for a period based on EMP and EMoP	PPWSA		
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 PPWSA and JICA.	for three years after the commissioning	PPWSA		
3	To extend distribution network and facilitate the service connections.	for the O&M period	PPWSA		
4	To submit reports to JICA regarding the situation of O&M* *The details will be confirmed by the Preparatory Survey	for the O&M period	PPWSA		
5	To comply strictly with the O&M contract	for the O&M period	PPWSA		

mw ✓

Annex 6

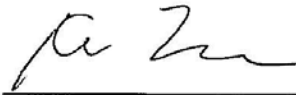
**THE MINUTES OF MEETINGS
ON
THE PROJECT FOR CONSTRUCTION OF WATER TREATMENT
SYSTEM IN TA KHMAU
AGREED UPON BETWEEN
PHNOM PENH WATER SUPPLY AUTHORITY
AND
JAPAN INTERNATIONAL COOPERATION AGENCY
CAMBODIA OFFICE**

Phnom Penh, March 22, 2019

Based on a series of discussions between Phnom Penh Water Supply Authority (hereinafter referred to as "PPWSA") and Japan International Cooperation Agency (hereinafter referred to as "JICA") Cambodia Office concerning the project formulation for water treatment plant in Ta Khmau, both sides discussed pre-condition to conduct the Preparatory Survey of the Project for Construction of Water Treatment System in Ta Khmau (hereinafter referred to as "the Project").

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

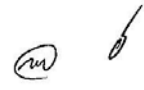
Annex 1: Main Points Discussed



Mr. Kotaro TANAKA
Deputy Chief Representative
Japan International Cooperation Agency
Cambodia Office



Dr. Sim Sitha
Director General
Phnom Penh Water Supply Authority



MAIN POINTS DISCUSSED

1. Water Source

PPWSA confirmed that raw water source should be the Bassac River for the water treatment plant (WTP) in Ta Khmau, and there was no other reservation and option. PPWSA also provided JICA Cambodia Office with the feasibility study report for rehabilitation and extension of Chamcar Mon WTP which contained flow rate, water level and water quality data of the Bassac River. JICA Cambodia Office requested PPWSA to obtain latest data from 2015 to 2018 from MOWRAM and provide them to JICA, because the feasibility study report contained data up to 2014. JICA provides the list of general and specific data of the Bassac River that would assist PPWSA to obtaining the required data from MOWRAM.

2. Water Rights

PPWSA explained that the project is to replace the existing facilities, which a permit to withdraw raw water from the Bassac River in amount of 33,000m³/day is not required. PPWSA additionally explained that since the written document did not remain, PPWSA could apply a permit to MOWRAM if JICA requested. The related official documents are required in case of application of the permit, and the approval from MOWRAM may take at least three (3) months. JICA Cambodia Office requested PPWSA to obtain a written permit from MOWRAM in the course of the Preparatory Survey.

With this respect, PPWSA would request JICA to provide some supporting documents such as initial design of WTP, intake facility, river bank protection, the related data and information like volume of raw water intake, location of intake facility and WTP. JICA Cambodia Office took note of it.

3. Population and water demand

PPWSA confirmed that population increase and water demand in Ta Khmau is based on the report of Third Master Plan. PPWSA explained that the area of Ta Khmau had recently added 4 communes to the original 6 communes, but those communes were supplied water by private operators and PPWSA were still not authorized to cover the new area. Considering this situation, both sides agreed to target original 6 communes in the Preparatory Survey as a planning basis.

4. Quality of raw water and intake facility

PPWSA explained that the raw water quality from the Bassac River was not good, but a pre-treatment facility would not be necessary, since the space of the construction was limited. PPWSA explained that ammonium could be treated using chlorine, and the intake tower was recommended to be constructed off the river bank to take raw water of better quality especially during the dry season. JICA Cambodia Office took note of it. Odor substance in raw water will be also examined in the Preparatory Survey since PPWSA explained the number of complaints about odor was increasing. Optimal treatment process would be considered based on the water quality examination in the course of the Preparatory Survey.

5. Capacity of WTP and Distribution Plan

PPWSA explained that it had a plan to distribute surplus water to Phnom Penh when water demand would not reach up to 30,000m³/day in Ta Khmau. PPWSA also confirmed that it was technically possible to transmit water from the new WTP to Phnom Penh using the existing pipe DN 500mm.

JICA Cambodia Office took note of it, and explained that the JICA Preparatory Survey Team would confirm technical justification during the Preparatory Survey.

PPWSA also explained that handing over point of bulk water (the place of water meter) should be installed inside of the WTP, and the exact location would be determined during the Preparatory Survey.

6. Ownership of the WTP

PPWSA confirmed that PPWSA would own the WTP to be constructed in the Project after the completion of the construction.

7. Off-take price

PPWSA and JICA Cambodia Office discussed and exchanged opinions about off-take price. PPWSA explained that it may be expensive to set up off-take price in the amount of 800 KHR/m³, which is indicated in the Data Collection Survey on Water Supply Sector in Phnom Penh Capital City (hereinafter referred to as the Survey), considering the pre-conditions shown below.

- The cost calculation for electricity is estimated too high (300 KHR/m³) comparing the current cost of electricity (200 KHR/m³).
- The estimated cost for salary is also high, which should be 17-18% from the

rw

total production cost.

- o Operation and maintenance cost should be also estimated around 6%.

In this context, PPWSA roughly estimates off-take price in amounting 400-500 KHR/m³. PPWSA additionally explained that the production cost and distribution cost are 400 KHR/m³ and 500 KHR/m³ respectively. Off-take price can be adjustable based on inflation and possibly either fixed or variable. It is also subject for further discussion and approval by Ministry of Economy and Finance (MEF) as PPWSA is a public listing company, which MEF holds 85% of stock share from PPWSA.

PPWSA also explained that private water operators may receive the right to be exempted from VAT tax, withholding tax, profit tax, and corporate tax for their investment, though it is still on-going discussion in the government. It can be applied during the construction and operation period.

8. Proposed type of contracts

JICA Cambodia Office explained that the facilities should be handed over to PPWSA after the completion of construction due to the rule of Japan's ODA grant aid. In this regard, JICA explained that the following composition of the contract documents were currently considered.

- i. EPC Contract
- ii. Lease Contract to let SPC to use the constructed facilities (can be integrated into the Bulk Water Supply Contract below if the facility belongs to PPWSA)
- iii. Bulk Water Supply Contract
- iv. Overarching document to stipulate the relationship of these contract documents

JICA explained that the contents of each contract would be considered further during the Preparatory Survey, and PPWSA took note of it.

9. Multi-level WTP

PPWSA confirmed that there was no other alternative site. JICA Cambodia Office explained that multi-level WTP could be required since the existing site may not be enough for the horizontal treatment plant. JICA Cambodia Office also explained that there are key points to note that multi-level WTPs have some considerations as follows.

- Pumping cost becomes more expensive compared to the normal horizontal process.
- Also, additional waterproofing work and periodic rehabilitation are necessary.

- Future expansion is difficult due to space limitation.
- Facility layout needs to be carefully designed taking future improvement and rehabilitation work into consideration, and management would be complicated during renewal and rehabilitation.

If it is difficult to acquire new site and if PPWSA would not request vertical WTP, creation of extra space such as reclamation of the area outside of the fence near the river where banana plants are growing and demolition of existing water tower (elevated tank) will be necessary to construct a horizontal WTP. PPWSA explained that the existing water tower had been built in 2008 by the support of the World Bank, and depreciation period is 50 years so that it was difficult to demolish it. PPWSA preferred to construct horizontal type WTP though detailed study would be necessary to assess the extra space. If it is not large enough for a horizontal WTP, both sides confirmed that there was possibility to conduct reclamation for the site with the banana plants to avoid flooding by the Bassac River to enlarge the site for WTP.

PPWSA confirmed that there is no regulation for building construction such as building ratio. Foundation of old facilities may still remain under the ground so that the study should be conducted.

10. Replacement of the equipment after the completion of operation (lease contract)

PPWSA and JICA Cambodia Office discussed the condition of replacement for the equipment after the lease contract. PPWSA requested that the equipment should be handed over with the condition that the WTP can be operated at least 2 years without repair and/or replacement for budget approval and procurement procedure, depending on product lifecycle of the equipment, and JICA Cambodia Office took note of it.

11. Case of damages due to disaster occurred

PPWSA and JICA Cambodia Office discussed the obligation of rehabilitation/repair if there would be any cause of damage due to disaster such as flooding. PPWSA explained that Force Majeure clause under the agreement/contract for SPC might be applied.

(END)

**Preparatory Survey for the Project for Expansion of Water Supply Systems in
Ta Khmau in the Kingdom of Cambodia**

1. Purpose of the Mission

- to confirm the requests from Cambodian side
- to explain New Grant Aid with SPC Projects scheme and tentative schedule of the project
- to explain schedule and key points of the preparatory survey

2. Schedule of Meetings

Date and time		Contents	Venue
26 March 2019	8:30-12:00	Meeting with PPWSA	PPWSA
	14:00-15:30	Meeting with MIH	MIH
	15:30-	Site Visit at Proposed site at Ta Khumau	Ta Khumau WTP
27 March 2019	8:30-12:00	Meeting with PPWSA	PPWSA
	14:30-16:00	Meeting with MEF/GDICDB	MEF
28 March 2019	8:30-12:00	Meeting with PPWSA	PPWSA
	14:00-15:30	Site visit to Chamcar Mon WTP	CM WTP
29 March 2019	AM	Sign Minute of Meeting (PPWSA, MEF and JICA)	TBC
	14:00-15:00	Report to JICA Office	JICA
	15:30-16:30	Report to Embassy of Japan	EOJ

3. Member list:

JICA Members

No	Name	Title	Affiliation
1	Dr. Shigeyuki MATSUMOTO	Leader	Deputy Director General, Water Resources Group, Global Environment Department, JICA
2	Mr. Kazunori NAKAI	Cooperation Planning	Water Resources Team 1, Water Resources Group, Global Environment Department, JICA

Consultant Team

Name	Title	Period
Mr. Koichi OKAZAKI	Chief Consultant / Water Supply Facility Planning & Design Nihon Suido Consultants Co., Ltd.	From 18 March 2019
Mr. Takahiro NAKATA	Deputy Chief Consultant / Construction Planning & Cost Estimate Nihon Suido Consultants Co., Ltd.	
Mr. Hiroshi KUMAGAE	PPP Project Development Crown Agents Japan Ltd.	
Mr. Makoto KANEDA	Electrical Plant Process Planning & Design Nihon Suido Consultants Co., Ltd.	
Mr. Ryunan MATSUE	Environmental and Social Consideration / UXO Survey Nihon Suido Consultants Co., Ltd.	
Mr. Umi TOGASAWA	Business Modeling / Bidding & Contractual Development Crown Agents Japan Ltd.	
Mr. Takehiko OGA	Water Supply Planning Advisor Nihon Suido Consultants Co., Ltd.	

1. Domestic Law and regulations in Cambodia

- Operation and Maintenance for Ta Khmau WTP will be implemented by SPC, which conducts civil works. Please confirm if it is possible to contract out to only Japanese companies for the construction works and O&M since the project is grant aid of Japanese ODA. Please confirm if article 3 of law on public procurement shall apply for this project.
- Please confirm if VAT and other taxation can be exempted for the Project portion which is covered by Japanese grant, namely design and construction.
- Please confirm the possibility for VAT exemption during the period of operation.
- If the construction cost is partially covered by private investment, is it possible to contract out to only Japanese companies based on the procurement guidelines of grant aid? (application for article 3 of concession law)

2. Proposed type of contracts

JICA explained PPWSA that the facilities should be handed over to PPWSA after the completion of construction due to the rule of Japan's ODA grant aid. In this regard, the following composition of the contract documents were currently considered.

- i. EPC Contract
- ii. Lease Contract to let SPC to use the constructed facilities (can be integrated into the Bulk Water Supply Contract below if the facility belongs to PPWSA)
- iii. Bulk Water Supply Contract
- iv. Overarching document to stipulate the relationship of these contract documents

JICA also explained that the contents of each contract would be considered further during the Preparatory Survey. Are there any comments regarding proposed type of contracts from the position of MEF?

3. Government Guarantee

- In case of failure to abide by conditions of contract from PPWSA, Is there any possibility to have government guarantee to reduce risk of SPC? In order for the government to provide the guarantee, what is the process for the approval? Are there any projects that the government provides guarantee? If not, what is idea for MEF in case of contractual default?

4. Off-take price

- JICA and PPWSA discussed off-take price as attached M/M, which requires further approval from MEF.
- What will be the process for the approval for off-take price within MEF. Does PPWSA need to go through approval process for bulk water supply contract?
- Is there any case of PPP contract which stipulates payment by foreign currency?

TECHNICAL NOTES
ON
THE PREPARATORY SURVEY
FOR
THE PROJECT FOR EXPANSION OF
WATER SUPPLY SYSTEM
IN TA KHMAU
IN THE KINGDOM OF CAMBODIA

Based on the Minutes of Discussions (hereinafter referred to as "M/D") on the Preparatory Survey for the Project for Expansion of Water Supply System in Ta Khmau (hereinafter referred to as "the Project") signed on 29th March, 2019 between Japan International Cooperation Agency (hereinafter referred to as "JICA") and Phnom Penh Water Supply Authority (hereinafter referred to as "PPWSA"), the consultant members of the Preparatory Survey Team for the Outline Design (hereinafter referred to as "the Team") had a series of discussions and conducted field surveys from 1st April to 5th April, 2019.

As a result of the discussions and the surveys, both sides confirmed the technical and financial conditions described as per the attached.

It should be noted that this technical note does not mean the commitment of the project scope, project implementation, design and method to be implemented. The final project scope, project implementation, designs, etc. will be decided by the Government of Japan.

Phnom Penh, 5th April, 2019



Koichi OKAZAKI
Chief Consultant /
Water Supply Facility Planning and Design,
JICA Preparatory Survey Team



SAMRETH Sovithiea
Deputy Director General, in charge of Plan
and Project, Phnom Penh Water Supply
Authority

ATTACHMENT

Both parties agreed upon and confirmed the following items.

1 Layout Plan for Water Treatment Facility

The team explained the layout of WTP and treatment process, O&M cost structure, and distribution plan is shown in Annex-1. Cambodian side has no objection to the layout of WTP with intake tower and the capacity of service reservoir for cost estimation.

2 Contract Terms and Payment Mechanism

The team explained the basic principles of project structure, payment mechanism, risk allocation, contract terms, and bid evaluation methodologies and Cambodian side has no objection to the contents. (Annex-2)

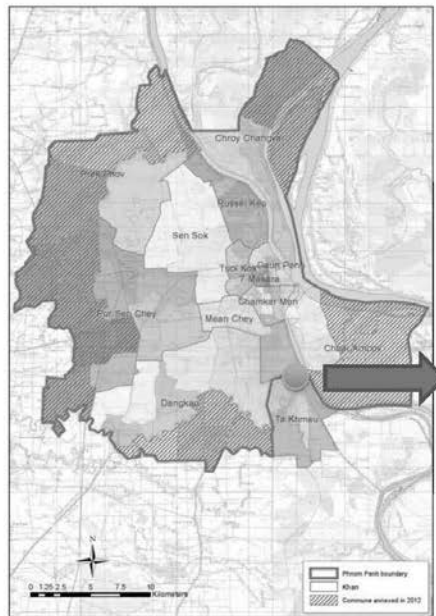
ANNEX - 2-1



Annex-1

Draft Outline Design of Ta Khmau WTP

Location



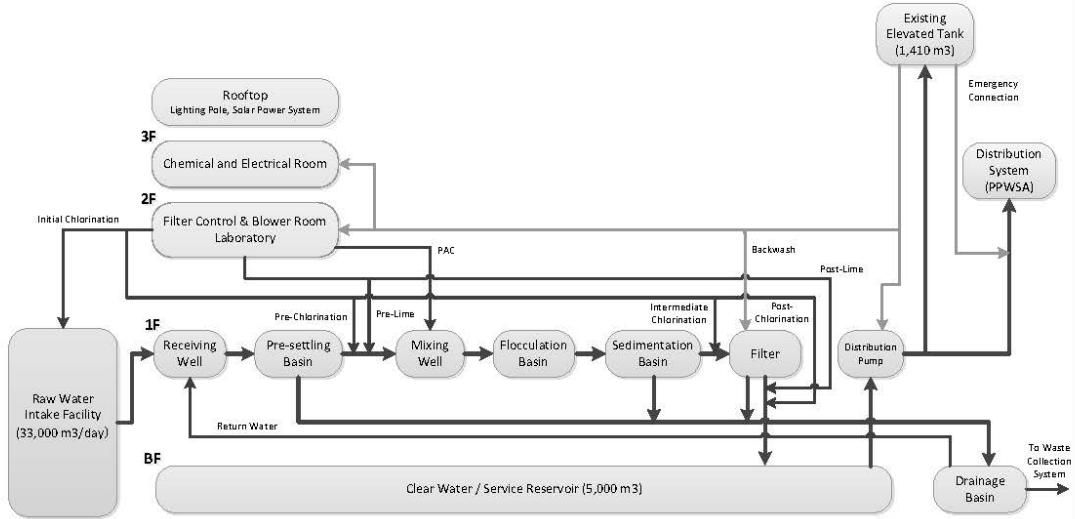
Ta Khmau WTP Site



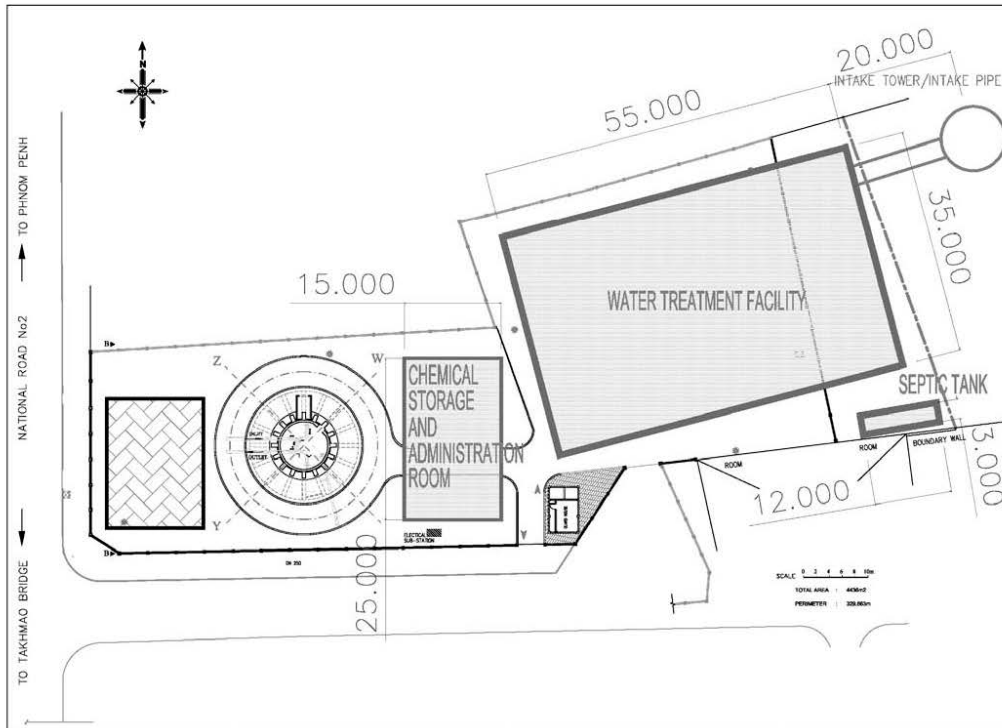
Treatment Process(Draft)

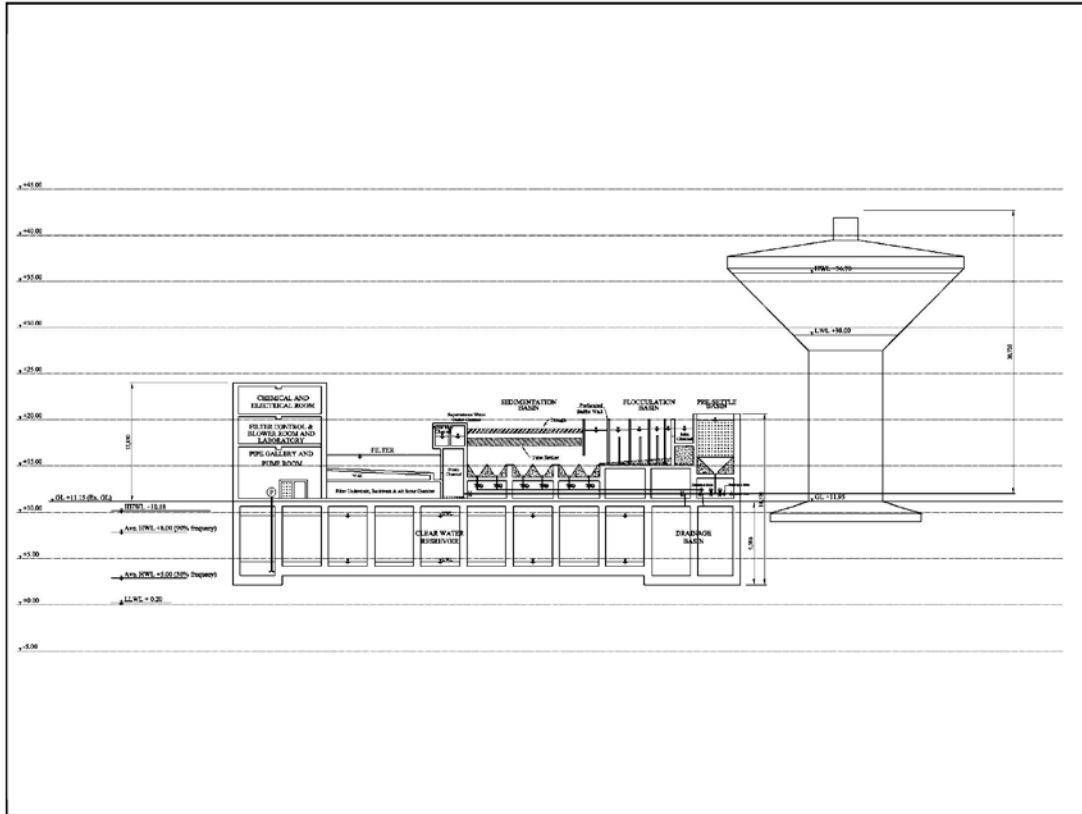
Ta Khmau WTP
Treatment Process

Water Treatment Facility (30,000 m³/day)



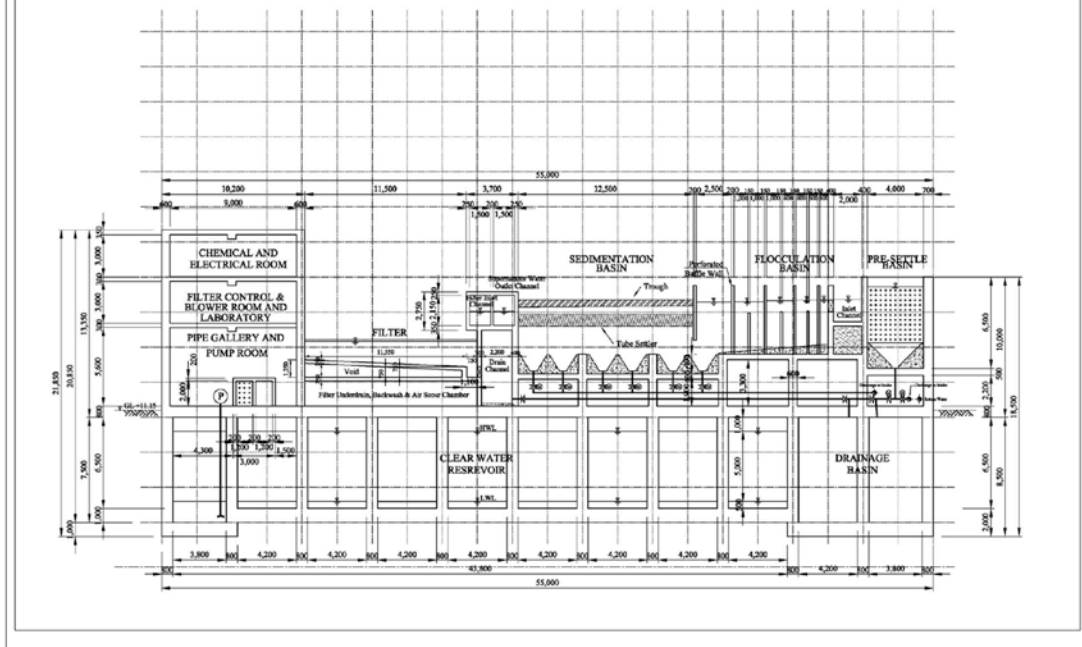
Draft Outline Design





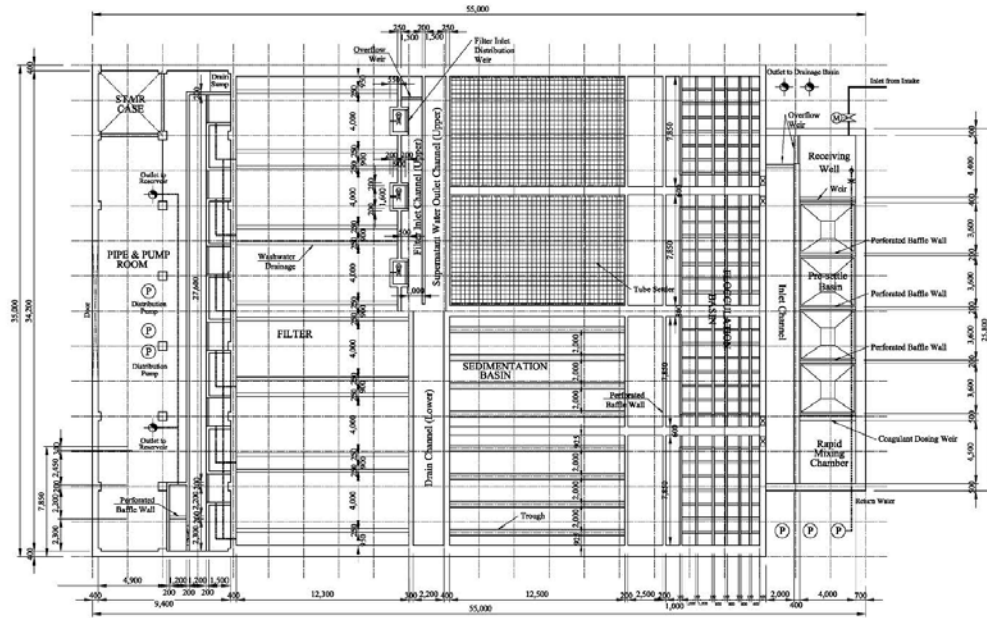
CLEAR WATER RESERVOIR AND DRAINAGE BASIN
 Water Treatment Building
 General Section
 S=1:200

SECTION 1-1



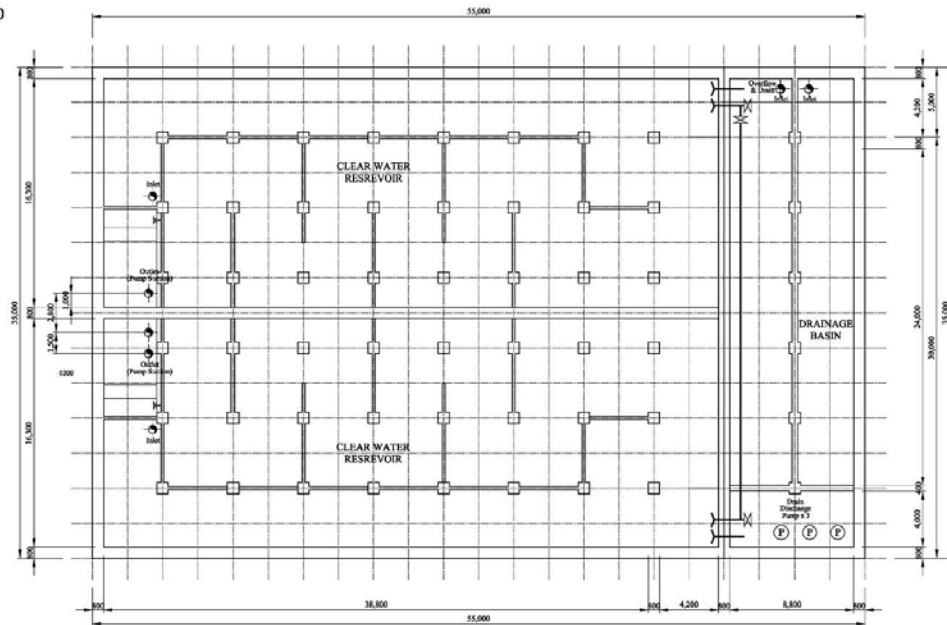
WATER TREATMENT FACILITY
 Filter Control & Blower Room and Laboratory
 2F
 S=1:200

PLAN



CLEAR WATER RESERVOIR AND DRAINAGE BASIN
 Water Treatment Building
 BF
 S=1:200

PLAN

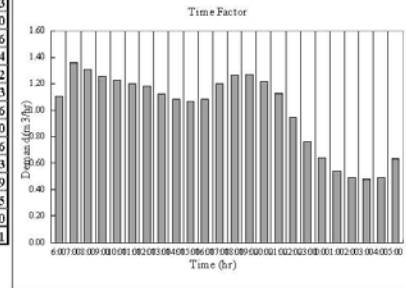
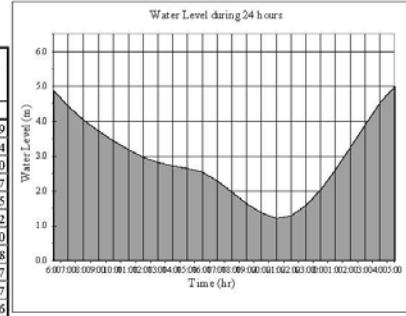


Ta Khman Reservoir

Day max = 30000 m³/day Res. Cap. = 5000 m³
 = 1250.00 m³/hr Effic. Dpt. = 5 m³
 Day ave. = 30000.0 m³/day Effic. Area = 1000 m²
 1250.0 m³/hr 4.0 hours

Time (hr)	Peak Factor	% of Daily Demand (%)	Water Demand (m ³ /hr)	Fire Demand (m ³ /hr)	Total Outlet	Inlet (m ³ /hr)	Volume (m ³)	Water Level (m)
0								
6:00	1.10	4.6%	1,375		1,375	1,250	4,875	4.9
7:00	1.36	5.7%	1,700		1,700	1,250	4,425	4.4
8:00	1.31	5.5%	1,638		1,638	1,250	4,038	4.0
9:00	1.25	5.2%	1,563		1,563	1,250	3,725	3.7
10:00	1.22	5.1%	1,525		1,525	1,250	3,450	3.5
11:00	1.20	5.0%	1,500		1,500	1,250	3,200	3.2
12:00	1.18	4.9%	1,475		1,475	1,250	2,975	3.0
13:00	1.12	4.7%	1,400		1,400	1,250	2,825	2.8
14:00	1.08	4.5%	1,350		1,350	1,250	2,725	2.7
15:00	1.06	4.4%	1,325		1,325	1,250	2,650	2.7
16:00	1.08	4.5%	1,350		1,350	1,250	2,550	2.6
17:00	1.20	5.0%	1,500		1,500	1,250	2,300	2.3
18:00	1.26	5.3%	1,575		1,575	1,250	1,975	2.0
19:00	1.27	5.3%	1,588		1,588	1,250	1,638	1.6
20:00	1.21	5.0%	1,513		1,513	1,250	1,375	1.4
21:00	1.13	4.7%	1,413		1,413	1,250	1,213	1.2
22:00	0.94	3.9%	1,175		1,175	1,250	1,288	1.3
23:00	0.76	3.2%	950		950	1,250	1,588	1.6
0:00	0.64	2.7%	800		800	1,250	2,038	2.0
1:00	0.54	2.3%	675		675	1,250	2,613	2.6
2:00	0.49	2.0%	613		613	1,250	3,250	3.3
3:00	0.48	2.0%	600		600	1,250	3,900	3.9
4:00	0.49	2.0%	613		613	1,250	4,538	4.5
5:00	0.63	2.6%	788		788	1,250	5,000	5.0
Total	24	100%	30000	0		Min.	1212.50	1.21
			Total	30000				

Max 1.36 Required Min. Cap. of Res. (hour) 3.03 hr
 Min. 0.48

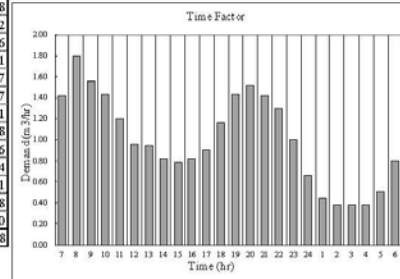
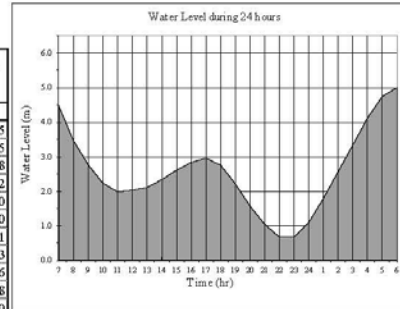


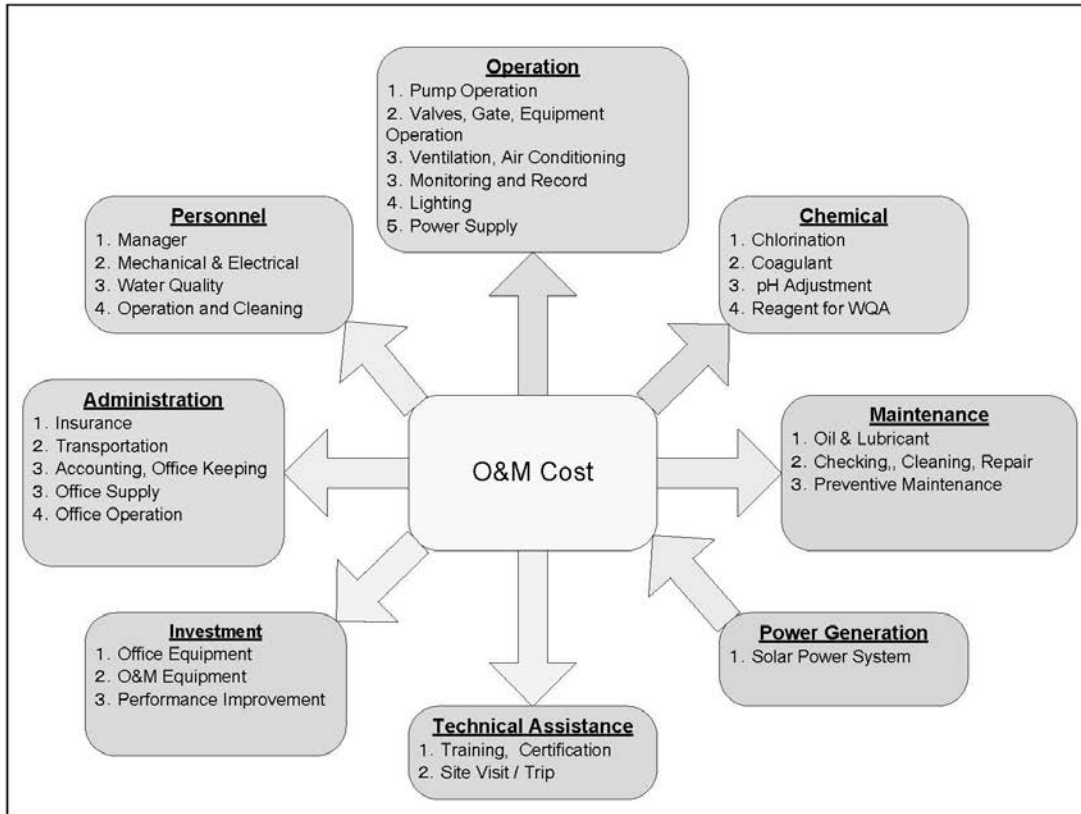
Ta Khman Reservoir

Day max = 30000 m³/day Res. Cap. = 5000 m³
 = 1250.00 m³/hr Effic. Dpt. = 5 m³
 Day ave. = 30000.0 m³/day Effic. Area = 1000 m²
 1250.0 m³/hr 4.0 hours

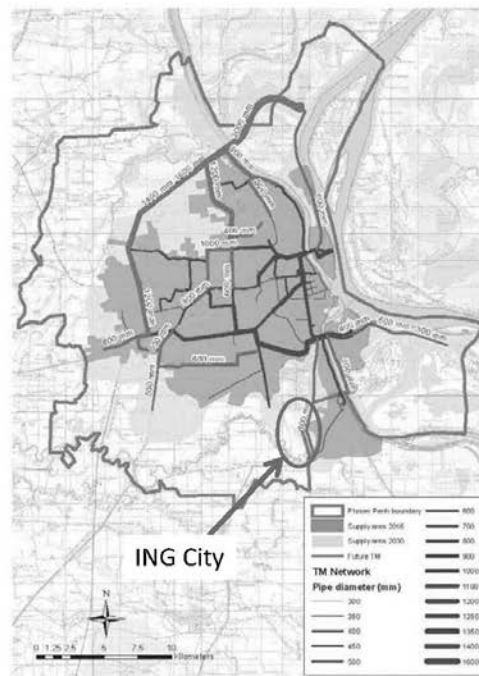
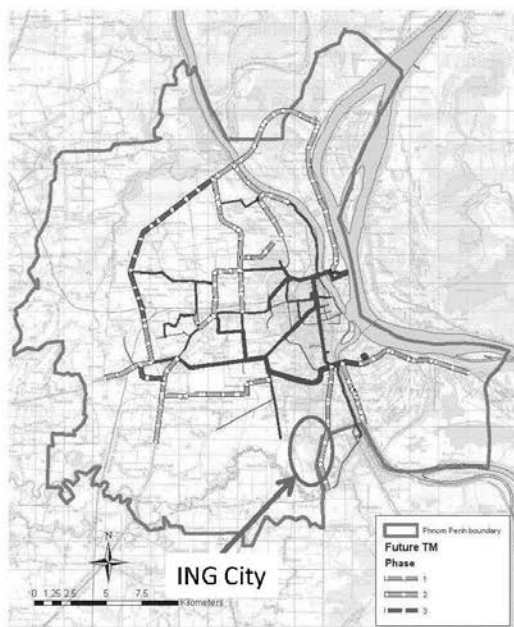
Time (hr)	Peak Factor	% of Daily Demand (%)	Water Demand (m ³ /hr)	Fire Demand (m ³ /hr)	Total Outlet	Inlet (m ³ /hr)	Volume (m ³)	Water Level (m)
0								
7	1.42	5.9%	1,775		1,775	1,250	4,475	4.5
8	1.80	7.5%	2,250		2,250	1,250	3,475	3.5
9	1.56	6.5%	1,950		1,950	1,250	2,775	2.8
10	1.43	6.0%	1,788		1,788	1,250	2,238	2.2
11	1.20	5.0%	1,500		1,500	1,250	1,988	2.0
12	0.96	4.0%	1,200		1,200	1,250	2,038	2.0
13	0.94	3.9%	1,175		1,175	1,250	2,113	2.1
14	0.82	3.4%	1,025		1,025	1,250	2,338	2.3
15	0.78	3.3%	975		975	1,250	2,613	2.6
16	0.82	3.4%	1,025		1,025	1,250	2,838	2.8
17	0.90	3.8%	1,125		1,125	1,250	2,963	3.0
18	1.16	4.8%	1,450		1,450	1,250	2,763	2.8
19	1.43	6.0%	1,788		1,788	1,250	2,225	2.2
20	1.52	6.3%	1,900		1,900	1,250	1,575	1.6
21	1.42	5.9%	1,775		1,775	1,250	1,050	1.1
22	1.30	5.4%	1,625		1,625	1,250	675	0.7
23	1.00	4.2%	1,250		1,250	1,250	675	0.7
24	0.66	2.8%	825		825	1,250	1,100	1.1
1	0.44	1.8%	550		550	1,250	1,800	1.8
2	0.38	1.6%	475		475	1,250	2,575	2.6
3	0.38	1.6%	475		475	1,250	3,350	3.4
4	0.38	1.6%	475		475	1,250	4,125	4.1
5	0.50	2.1%	625		625	1,250	4,750	4.8
6	0.80	3.3%	1,000		1,000	1,250	5,000	5.0
Total	24	100%	30000	0		Min.	675.00	0.68
			Total	30000				

Max 1.80 Required Min. Cap. of Res. (hour) 3.46 hr
 Min. 0.38





Distribution Plan



THE PROJECT FOR EXPANSION OF WATER SUPPLY SYSTEM IN TA KHMAU

Annex-2

CONFIDENTIAL / DRAFT / DISCUSSION PURPOSE ONLY

Abbreviations:

1. Project Outline

1.1 Project Background

- The water demand in the area supplied by PPWSA is projected to be double in 2030 and capacity of existing WTP in Phnom Penh will be insufficient to meet the demand in 2020.
- New WTP shall be developed to supply the water mainly in Ta Khmau area in which many low-income households need access to clean water at affordable water tariff and neighbor Phnom Penh areas where PPWSA develops water distribution system.
- The Government of Cambodia requested to the Government of Japan for the funds to implement the project for expansion of water supply system in Ta Khmau.

1.2 Project Objectives

The objective of the Project is to improve the access to safe water in Ta Khmau District through the expansion of water supply system including construction and operation and maintenance (hereinafter referred to as "O&M") of the new water treatment plant (hereinafter referred to as "WTP").

1.3 Project Structure

The Project would be implemented by applying the Japanese Grant Aid with O&M, whose outline is explained in Annex 3 of Minutes of Discussions on the Preparatory Survey for the Project for Expansion of Water Supply System in Ta Khmau dated 29th March 2019 in particular;

- The Japanese Grant Aid shall be used for construction of the facilities and procurement of equipment necessary for the Project, and the consulting service for, procurement, evaluation and approval of detail design prepared by SPC and supervision of the above-mentioned facilities and equipment,
- The SPC shall be responsible for the design, construction, procurement and O&M consistently,
- Contracts consist (a) comprehensive contract which consolidates both contracts for the purchase of the products and/or services and for the operation and maintenance, (b) contract(s) for the purchase of products and/or services and (c) contract(s) for the operation and maintenance, and
- 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

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using the Grant and its accrued interest, since the grant fund comes from the Japanese taxpayers.

1.4 Project Site

The construction site of the new WTP is located in Ta Khmau District, which is shown in Annex 1 of Minutes of Discussions on the Preparatory Survey for the Project for Expansion of Water Supply System in Ta Khmau dated 29th March 2019

1.5 Risk Allocations

Risks	PPWSA	SPC	Remarks/Examples
EPC risk		○	Any additional costs shall be borne by SPC (e.g. inflation during construction period, design deficiency, change in natural conditions (e.g. unforeseen ground conditions)). Acts of PPWSA such as variation orders from PPWSA to SPC and UXO related costs will be paid by PPWSA.
Demand risk	○		PPWSA shall pay for treated water from SPC up to 30,000m ³ /day if SPC satisfies the required water pressure, regardless of any reason on PPWSA side (e.g. demand stays low or distribution pipes get damaged).
Operation risk		○	No payment shall be made if quality water is not delivered due to poor operation by SPC (e.g. facility malfunction, inappropriate usage of water treatment chemicals etc.). Penalty is applicable in case the water delivered by SPC does not comply with the drinking water standards of the WHO and national drinking water standards.
Electricity price risk	○		If the electricity price shall be covered by PPWSA according to the price formula.
Electricity availability risk	○	○	In case the electricity is not supplied to the facility due to blackout, SPC has no obligation to supply water and no payment shall be made for the period.
Inflation risk (during O&M period)	○		Increase in production costs caused by inflation (e.g. wages or raw materials) shall be paid by PPWSA calculated with the formula for the PPWSA payment to SPC.
Intake water quality risk	○		Additional cost of production due to change in quality of intake water shall be compensated to the SPC according to the methodology agreed in the contract.
Licensing risk	○		IEIA/EIA or any other permit/authorization necessary for

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Risks	PPWSA	SPC	Remarks/Examples
			the SPC to operate the facility shall be obtained by PPWSA.
Legal risk (change of project specific law)	○		Additional cost caused by a change in law that specifically affects the project (e.g. upgrade of national quality standard for drinking water) shall be covered by PPWSA. SPC shall be compensated according to the methodology agreed between PPWSA and the SPC.
Legal risk (change of general law)		○	Additional cost caused by a change in general law that would affect the whole economy (e.g. VAT) shall be covered by the SPC.
Force Majeure risk	○	○	A Force Majeure is an event that is external, unpredictable, and irresistible and has a significant impact on the project. Both parties may terminate the contract if the impact of a Force Majeure lasts for a certain period (based on practice of water utilities). Neither party has any obligation to each other for the cost of mitigation measures to prevent increasing loss caused by Force Majeure. PPWSA shall have the option to require SPC to transfer to PPWSA all of its right, title and interest in and to the Assets. The Value of the Assets shall be net book value of the assets.

1.6 Tender Evaluation

- The prime contractor(s), namely, special purpose company (hereinafter referred to as “SPC”), and the prime consulting firm, which enter into contracts with the Recipient, are limited to "Japanese nationals", in principle.
- Quality and Cost Based Selection (QCBS) that includes technical, commercial, financial and legal evaluation will be applied for the bidding of SPC.

Bidding evaluation (example)

Note: This shall be reviewed and approved by JICA.

Comprehensive Evaluation Score = Technical Score * X + Price Score * (1-X)

where X is a weight factor 1>X>0 supposedly 0.5-0.8

Technical Score (Example)

	Category	Score
1	Tenderers experience with respect to comparable projects;	TBA
2	Proposed Organization	TBA
3	Experience of key staff in relation to the scope of work;	TBA
4	Outline Design	TBA
5	Construction Work Plan	TBA
6	Operation and Maintenance and Monitoring Plan	TBA
	Maximum possible score	100

Price Score (Example)

The tenderer bids on 10-year Life Cycle Cost (LCC) where

(proposed) 10-year LCC = EPC price + Net present value of O&M costs + risk adjustments caused by proposals (Discount rate applicable for PPWSA project is 4.5%)

Price score = 100 * (1 - ((10-year LCC proposed + risk adjustment) / LCC of comparator)) * Y

where Y is an adjustment factor defining price competition range and maximum price score is 100 required that

- (1) EPC price is below the Grant budget, and
- (2) O&M will be reflected in the contract price of bulk water

2. Contract Terms

Draft contracts for EPC and O&M will be prepared in accordance with JICA's standard form of contract and international best practices including items below;

	Contract Terms	Conditions
1	O&M period	10 years at the longest after commencement (definition is to be agreed) of O&M
2	Equity structure of SPC	100% owned by Japanese companies (likely be a Joint Venture by EPC and O&M companies)
3	Engineering, Procurement, and Construction (EPC)	The WTP shall be designed and constructed based on the EPC contract with the SPC. EPC contract shall be prepared by JICA. (Application of Global Standard EPC Contract is requested by PPWSA)
4	Production of bulk water	Production of bulk water is fundamentally a responsibility of the SPC. PPWSA however shall cover agreed risks in production costs that are out of SPC's control.
5	Purchase of bulk water	On a separate sheet
6	Price of bulk water and risk allocation	On a separate sheet
7	Licensing risk	IEIA/EIA shall be obtained by PPWSA before E/N and G/A.
8	Land acquisition risk	The land has already been acquired by PPWSA.
9	Repairment	While using the WTP free of charge, the SPC shall be responsible for any repairment of the facilities at its own cost. SPC shall keep good conditions of the facility and equipment, and SOP for operation to reduce the risk of breakdown soon after the hand-back.
10	Conditions for the hand-back	The WTP shall be handed back to PPWSA by the SPC under certain requirements.
11	Invoice settlement	SPC shall report and charge to PPWSA by 10 th of each month for the bulk water produced in the previous month. PPWSA shall in return review the invoice and make payment within two months after the invoice receiving date. Currency to be used for the invoice settlement shall be agreed between PPWSA and SPC, either US Dollars or Cambodian Riel.
12	Private investment	The SPC may invest in some additional facilities, software, or any other equipment necessary for the operations. PPWSA has the right to purchase the private investments from the SPC at their residual value (net book value) at the end of O&M period.

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13	Operation data and financial information	The SPC shall record and report all the operation data and financial information in a required format. PPWSA may utilize the data to continue operation of the WTP after hand-back.
14	Staff Employment	1) PPWSA shall take over the employment contracts from the SPC at the end of O&M period. 2) If PPWSA wishes to send its employee to the SPC, conditions shall be discussed (role, responsibility, payment, reporting line, etc.)
15	Monitoring	Monitoring SPC operations is important not only for PPWSA but also for Japanese government as the project is financed by Japanese Grant. Cost for third party monitoring shall be covered within the project cash flow in a way that PPWSA and SPC establish a monitoring fund in SPC.
16	Early termination / compensation events	<p>Termination for convenience (Unilateral termination) PPWSA has the right to terminate the contract early for public interest. In this case the SPC shall be compensated in full, for all the private investments, additional costs incurred by the termination of the contract, and opportunity costs for the equity.</p> <p>Termination for default by PPWSA The termination condition shall be in line with the case of the termination for convenience.</p> <p>Termination for default by SPC PPWSA shall have the option to require SPC to transfer to PPWSA all of its right, title and interest in and to the Assets. The Value of the Asset shall be net book value of the assets minus cost of damages and losses suffered by PPWSA due to the termination of the contract.</p> <p>Termination for Force Majeure A Force Majeure is an event that is external, unpredictable, and irresistible and has a significant impact on the project. Both parties may terminate the contract if the impact of a Force Majeure lasts for a certain period. Neither party has any obligation to each other for the cost of mitigation measures to prevent increasing loss caused by Force Majeure. PPWSA shall have the option to require SPC to transfer to PPWSA all of its right, title and interest in and to the Assets. The Value of the Asset shall be net book value of the assets.</p>

Formula of SPC Invoice / PPWSA's payment to SPC

SPC Invoice (PPWSA payment to SPC) = (1) sales of bulk water + (2) additional services - (9) penalties

(1) Sales of bulk water = (3) volume of water delivered * (4) unit price of bulk water

(4) Unit price of bulk water =

α * (5) inflation index
+ β * (6) electricity price
+ (7) required margin for SPC
+ (8) additional production costs

if and only if caused by quality deterioration of intake water or change in water quality standard (Measures to compensate against raw water quality deterioration or upgrade of water quality standard shall be agreed in the contract)

where

α is a fixed (agreed) basis for O&M costs excluding electricity and

β is a fixed (agreed) volume of electricity usage per m3 and

(2) Additional services include deeper analysis of water quality or site visit tour or any other services that are not included in the ordinary O&M activities defined in the contract

Example for the month of June 2025 (all figures are assumptions)

(1)	Sales of bulk water	= (3) * (4)	KHR559,800,000
(3)	Volume of water delivered	as delivered by SPC	900,000m ³ per month
(4)	Unit price of bulk water	= α * (5) + β * (6) + (7) + (8)	KHR622/m ³
α	Basis for O&M costs excluding electricity	as defined in the contract	KHR300/m ³
(5)	Inflation index	= 200.05 for June 2025 / 176.02 for Jan 2021 at the time of contract (All item CPI from monthly report by the Bank of Cambodia)	1.13
β	Volume of electricity usage per m ³	as defined in the contract	270Wh/m ³
(6)	Electricity price	Electricity price for June 2025	KHR750/kWh
(7)	Required margin	= (α * (5) + β * (6) + (8)) * 15% 15% as defined in the contract	KHR81/m ³
(8)	Additional production costs	Not applicable	0
(2)	Additional services	Work shop program requested by PPWSA	KHR4,000,000
(9)	Penalties	Not applicable	0
	SPC Invoice	= (1) + (2) + (9)	KHR563,800,000

Methodologies to determine volume of water delivered

- Water Pressure meter must be installed at the location near bulk meter according to the relevant regulations
- Guaranteed volume-based payment is applicable in case water pressure is more than 50m and the water delivered volume is less than 30,000m3.
- Penalty is applicable if the water distribution pressure does not satisfy the agreed minimum level (30 m is recommendable).

Water Delivered Volume and Water Pressure and Their Applicable Payment Methods

