

**Kerala Urban Water Supply Improvement Project  
Consultation Mission to Thiruvananthapuram (26-27 September 2019)**

**Aide Memoire**

**I. INTRODUCTION**

1 Asian Development Bank (ADB) fielded a consultation mission (the Mission)<sup>1</sup> to Thiruvananthapuram during 26–27 September 2019 for Kerala Urban Water Supply Improvement Project (KUWSIP). The consultations were held with Kerala Water Authority (KWA), which is the implementing agency for the proposed project. The Water Resources Department (WRD) of the Government of Kerala (GOK) is the executing agency. The mission was planned with following main objectives: (i) finalize the project scope and financing plan for first phase of the loan; (ii) assess the project readiness and develop an action plan for the additional activities including environmental and social safeguards compliance; and (iii) workout a schedule for advance contracting activities and loan processing. A debriefing meeting was held with the Department of Economic Affairs (DEA) on 1 October 2019. The list of persons met during the mission is reported in Appendix 1. This Aide Memoire records main understandings reached during the Mission, and is subject to the approval of higher authorities of the Government of India and ADB.

**II. BACKGROUND**

2 DEA approved a request from GOK for a loan of \$250 million from ADB in two tranches on 12 January 2018. GOK requested DEA through a letter dated 11 April 2019 to extend validity of DEA's approval until May 2020, as the project development activities got hampered due to heavy monsoon resulting in severe floods in the year 2018. It is learnt that the GOK has not yet received any formal confirmation from the DEA on the proposed extension of the project validity. It was therefore discussed that GOK would submit a fresh request to DEA with reference to earlier request.

3 KWA has prepared the project with support from national and international consultants engaged by ADB under the technical assistance (TA) grant.<sup>2</sup> The total project prepared by KWA included rehabilitation of water treatment plant, water distribution system, and SCADA system to deliver continuous high-quality water supply to residents of two towns of Kochi and Thiruvananthapuram, with total estimated cost of \$360 million.

4 During a meeting held between GOK and ADB on 15 July 2019, GOK informed that considering budgetary constraints and need for urgent interventions, the Kochi

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1 The Mission comprised of Sanjay Joshi, Principal Urban Development Specialist, SAUW; Pushkar Srivastava, Senior Project Officer (Urban), INRM; and accompanied by Anand Jalakam (ADB Consultant).

2 TA9257-IND: Capacity Development Technical Assistance for Supporting Climate Change-Resilient Smart Cities Mission Projects.

would be of high priority. GOK therefore directed KWA that the first phase of KUWSIP could be restructured accordingly, and the balance scope of the project can be taken up in the second phase of the loan (not exceeding ADB loan amount of \$250 million in total), as per approval of the DEA. GOK further indicated that project preparation activities for certain priority projects that can be included in the second phase of project could be taken up in the first phase of the loan.

### III. MISSION CONSULTATIONS AND FINDINGS

5 **Project Scope.** The Mission held discussion and reached an agreement with KWA on the proposed scope of the project to be taken up in the first phase of the loan, which comprises of the following:

- (a) Water production improvements comprising of rehabilitating of eight existing water treatment plants and 19 pumping stations in Thiruvananthapuram and five existing treatment plants and 18 pumping stations in Kochi,<sup>3</sup> which will be implemented on Design-Build and Maintain contracting framework.<sup>4</sup> During the implementation as well as post commissioning, KWA staff will continue to operate these facilities. The proposed improvements to water treatment plants and water pumping stations comprise of the following key elements:
- Treatment process improvements to ensure product water complying to water quality standards confirming to IS:10500, 2012;
  - Healthy water to ensure public health and inert water to protect downstream assets from corrosion;
  - Optimized and automated process operations;
  - Effective and efficient control of treatment process;
  - Replacement of some of the pumps and ancillary equipment;
  - Improvements in pump working efficiency;
  - Ensuring robust monitoring of water treatment and pumping including quality control capabilities supported by Supervisory Control and Data Acquisition (SCADA);
  - Skill improvements and effective supervision for ensuring water safety;
  - Buildings and housekeeping and stores upgrade and maintenance;
  - Overall workflow and record management improvements; and
  - Health and safety improvements for benefit of KWA operating staff.
- (b) Water distribution system in Kochi with all the assets downstream of the water treatment plant and up to customer meters will be rehabilitated and operated and maintained on a Operate, Design, Build and Maintain contracting framework over ten-year period. The operations of transmission and distribution includes all routine operations, routine maintenance and preventative maintenance but excluding meter reading and delivery of bills and revenue accounting services, which will continue to be managed by KWA staff and their sub-contractors. The Distribution Improvements package comprises of following components:
- Replacement of pipelines of 423,510 meters length with high fault rate (>3 faults per km/year) including shifting of house connections to the new pipelines. Detailed bill of quantities will be provided in the

3 The list of water treatment plants covered under the project scope are in Appendix 2. Vellayambalam water treatment Plant is the oldest plant and minimum improvements are proposed in the project. In addition, a 74 Mld water treatment plant at Aurivikkara, currently being operated by Suez, is not included in the project scope.

4 The scope of the works for the proposed rehabilitation of water treatment plants have been clearly identified, which comprises of improvements in chemical dosing system, filter backwash system, replacement of filter beds, replacement of pumps, etc. The scope the contract includes 5-years of maintenance for these systems installed by the contractor.

contract, and the contractor will be paid based on the rates quoted by him for the actual pipe replacement works executed under the contract;

- Replacement of remaining existing Asbestos Cement (AC) pipes of 282,255 meters length to mitigate the risk of safety hazard of repairing and maintaining the AC pipes. All the AC pipes will be left underground and will not be taken out during replacement;
- All related road cutting, road restoration including safeguard requirements;
- Customer meter replacement program to replace all (146,564) customer meters with high quality and reliable customer meters during the project period. This also includes provision of electronic smart meters for identified high revenue customers and a robust meter maintenance program;
- Focused and structured NRW reduction program to ensure Active Leakage Control (ALC) program to reduce the NRW from the current level of approximately 51% to 20% to comply to national service level benchmarks;
- SCADA system to measure (flow, pressure and water losses) and monitor the distribution system performance, customer service levels and contractor's performance; and
- Improved quality of repairs and maintenance and more effective customer contact management.

- (c) IT improvements comprising of: (i) upgrading existing billing and revenue collection system; (ii) GIS based maintenance management system; (iii) upgrading the Laboratory Information Management System; and (iv) upgrading the customer contact management system. This will be implemented at KWA head office level and improvements at the field operations will be limited to Thiruvananthapuram and Kochi only. KWA can extend the same to other towns based on experience in these two cities.
- (d) In addition to the above, the project cost includes incremental administration costs towards Project Management Unit (PMU), Project Management Consultancy (PMC), capacity building, physical and financial contingencies and charges. Capacity building of KWA staff is proposed in the areas of: (i) upgrading KWA laboratory capabilities and accreditation to National Accreditation Board for Testing and Calibration Laboratories (NABL), (ii) Global Water Partnership with any reputed global water utility; (iii) continuous skills upgradation with water design engineering course; and (iv) community consultations and awareness programs.

6 **Project Benefits.** KUWSIP will bring many benefits to the KWA including: (i) customers who will enjoy an equitable, un-interrupted and healthy supply of water; (ii) KWA will have an enhanced image of improved customer service, compliance with water quality standards, reduced operating costs, reduced greenhouse gas (equivalent) emissions, an engaged workforce, improved safety and the long-term sustainability of its operations; and (iii) government for the effective and efficient use of water and financial resources.

7 **Project Readiness.** KWA with ADB's support (footnote 2) has undertaken project preparation (including preparation of detailed project reports) and developed a program comprising of infrastructure improvements, management improvements and capacity building activities to directly address the deficiencies. The draft proposals have been reviewed and evaluated by KWA and the options for implementation were discussed in two sessions with the KWA senior management. The KWA management held discussion with the staff unions on the proposed implementation arrangements. The proposals were introduced in a market sounding workshop with potential bidders in August 2019 and the feedback from the market had been obtained to ensure appropriate contractual framework for successful and timely implementation of the project. The preparation of draft tender documents for works and Request for Proposal document for consultancy contracts is underway.

8 **Project Cost and Financing Plan.** The estimated total cost of first phase of KUWSIP would be about \$178 million including works, goods, services, administration expenses, contingencies, taxes and duties. Indicative financing plan is presented in Table 1 and the details are provided in Appendix 3. The project costs and financing are to be confirmed during ADB's fact finding mission.

**Table 1: Indicative Financing Plan**

<b>Source</b>	<b>Total Amount (\$ million)</b>	<b>Share of Total (%)</b>
Asian Development Bank	125.0	70.00
Government	53.0	30.00
<b>Total</b>	<b>178.0</b>	<b>100.00</b>

9 **Safeguards.** The Mission indicated that ADB will mobilize and deploy consultants for assessment of: (i) social and environmental safeguards, (ii) climate change resilience, and (iii) gender elements. The key issues related to environmental safeguards shall address safe disposal of sludge generated in water treatment plants, safe and secured handling of chlorine and review of AC pipes replacement program.

10 **Procurement Strategy.** The Mission discussed the revised procurement plan based on the revisions in scope and cost estimates (attached in Appendix 4), which was in principle endorsed by the KWA. KWA confirmed that it would be using Government E-Procurement system of NIC for e-Procurement of tenders. The Mission informed that as per ADB's requirement, ADB consultant will conduct procurement capacity assessment, including e-procurement capacity of KWA, and a separate organization will have to be created in the e-portal for ADB financed tenders. The Mission updated the government of the requirements of the procurement readiness for processing of the loan.<sup>5</sup> ADB will review all advanced contracting procurement, consultant recruitment, and safeguard documents. It was also clarified that the approval of advance contracting and retroactive financing will not constitute a commitment by ADB to finance any ensuing project.

11 **Implementation Arrangements.** The project implementation period would be 7 years (tentatively September 2020–August 2027) and since operation and maintenance (O&M) of water distribution system in Kochi will be carried out by the contractor, the O&M cost would also

5 The project readiness criteria for loan negotiations is minimum 30% of contracts in award stage, including mobilization of consultants, if any, however the same could even be set at higher level for complex projects and for the new implementing agencies.

be included under ADB financing during project implementation period. The Mission discussed the proposed implementation arrangements, wherein the WRD as the executing agency will be responsible for overall strategic guidance and for ensuring compliance with ADB's loan covenants, and the KWA as Implementing Agency will set up a Project Management Unit (PMU) headed by Project Director in Thiruvananthapuram, which will be responsible for overall project implementation, monitoring and supervision. The PMU team will comprise of Deputy Project Director in the rank of Chief Engineer with resources in contract management, safeguards and accounts including support staff. A Project Implementation Unit (PIU) will be established in Kochi, headed by a project manager of the rank of a superintending engineer. The PMU and the PIUs will establish and maintain separate accounts and records adequate to identify the incomes and expenditures related to the project. The PMU and the PIUs will be assisted by number of suitably qualified staff in technical, procurement, contract management, accounting, information technology, environmental and social safeguards, etc.

12 A state-level empowered committee (SLEC), will be established with full powers to decide on matters related to the Project. The SLEC will take policy decisions, give administrative clearances, expedite clearances of project matters and provide guidance to the WRD. A steering committee will be established in the project town of Kochi to provide overall monitoring and guidance to the PIU. The steering committee will also function as the grievance redress committees, chaired by district collectors.

13 The PMU and PIUs will be supported by: (i) a project management consultant (PMC) for vetting design documents, contracts management, supervising construction works, implementing resettlement, environmental management plans, managing project performance monitoring systems and reporting; (ii) an independent project evaluation consultant for evaluation of benefits, outcomes and impact; and (iii) a community action and participation program, and information, education, and communication consultants for training and community awareness works.

14 The roles and responsibilities of various project implementation organizations are presented in Appendix 4.

15 **Financial Management and Sustainability.** The Mission informed that as a part of due diligence process, ADB will carry out financial management assessment (FMA) of KWA as the project implementing agency. Based on the findings of the FMA, the Mission would recommend: (i) KWA to open a separate bank account for all project related expenses, (ii) ensure separate books of accounts are maintained for the ADB funded project, (iii) establish internal control systems in KWA, and (iv) establish financial mechanisms and processes for PMU and PIU. As a part of financial due diligence process, ADB would also review the KWA to the extent of their own source revenues, collection efficiency, and dependence on government subsidy. This analysis should take into consideration the financial resources required to operate and maintain the assets and deliver the services at pre-defined benchmark levels and fiscal assessment of the state government to support KWA with gap funding during initial years. An action plan would be developed with measurable and progressive milestones to help monitor improving fiscal performance of the KWA. The Mission sought cooperation from the GOK and KWA in this exercise.

#### IV. NEXT STEPS

16 **Processing Schedule.** The Mission proposed a loan processing schedule with some broad milestones and key actions required are indicated in Table 2 below. The overall schedule is subject to the government meeting the project readiness requirements. The Mission informed that the government can initiate procurement of the contracts only after ADB's approval to the tender documents and satisfactory safeguards compliance requirements.

**Table 2. Processing Schedule**

<b>Milestone</b>	<b>Date</b>	<b>Key Actions to be completed</b>
1. Operationalize PMU and PIUs	October 2019	<ul style="list-style-type: none"> <li>• KWA to create a core team at PMU and PIU level</li> <li>• KWA to nominate / appoint staff at PMU / PIUs</li> </ul>
2. Project Concept Paper clearance by ADB	December 2019	<ul style="list-style-type: none"> <li>• ADB to appoint safeguards consultants for initial environmental and social safeguards due diligence</li> <li>• ADB consultant to complete sector assessment report</li> <li>• Draft ToR for PMC consultants and draft tender documents to be prepared by KWA</li> </ul>
3. Release of EOI for PMC	January 2020	<ul style="list-style-type: none"> <li>• KWA to advertise and use the ADB CMS website to this purpose</li> </ul>
4. Invitation of bids for contract packages.	March 2020	<ul style="list-style-type: none"> <li>• KWA to ensure that all ADB procurement guidelines and safeguards requirements are met</li> <li>• KWA has received all statutory clearances</li> </ul>
5. ADB to field a fact-finding (FF) mission	April 2020	<ul style="list-style-type: none"> <li>• KWA / GOK to confirm Aide Memoire of FF mission</li> </ul>
6. ADB's Management Review Meeting	July 2020	<ul style="list-style-type: none"> <li>• Submission of safeguards documentation by KWA</li> <li>• ADB to prepare loan processing documentation</li> </ul>
7. Loan Negotiations	August 2020	<ul style="list-style-type: none"> <li>• Minimum 30% contracts ready for award</li> <li>• All statutory clearances received by KWA</li> <li>• GOK to provide authorization for loan negotiations</li> </ul>
8. ADB Board consideration	September 2020	<ul style="list-style-type: none"> <li>• Finalize documents for ADB's Board approval</li> </ul>
9. Loan Signing	October 2020	<ul style="list-style-type: none"> <li>• Fulfillment of loan signing conditions</li> </ul>
10. Loan Effectiveness	November 2020	<ul style="list-style-type: none"> <li>• Legal opinions obtained and fulfillment of loan effectiveness conditions</li> </ul>

ADB= Asian Development Bank, CMS= consultant management system, EOI= expression of interest, GOK= Government of Kerala, KWA= Kerala Water Authority, PMC= project management consultant, PMU= project management unit, PIU= project implementing unit, TOR= terms of reference.

## V. ACKNOWLEDGEMENT

17 The Mission expresses its appreciation to the officials of the Government of India and Kerala for their support, assistance, and hospitality during the mission.

Submitted by:

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South Asia Department  
27 September 2019



**List of Persons Met by the Mission**

1. Dr. A Kowsigan, IAS, Managing Director, KWA
2. Ms. Leena Kumari, Chief Engineer, KWA
3. Mr. Anil Kumar, Deputy Chief Engineer, ADB PMU, KWA
4. Mr. Prabhu, Assistant Executive Engineer, ADB PMU, KWA

### List of Water Treatment Plants & Pumping Stations to be Rehabilitated

#### Thiruvananthapuram – Water Treatment Plants

Location	Capacity (MLD)	Capacity (GL/Y)	Year	Source Water
Vellayambalam (minor improvements)	36.0	13.1	1932	Karamana River
PTP Nagar	16.0	5.8	2005	Karamana River
PTP Nagar	13.5	4.9	1992	Karamana River
Adimadakkukayam	5.0	1.8	2006	Karamana River
Vellayani	21.9	8.0	2016	Vellayani Lake
Aruvikkara	48.0	17.5	1973	Karamana River
Aruvikkara	24.0	8.8	1997	Karamana River
Aruvikkara	86.0	31.4	1999	Karamana River

#### Thiruvananthapuram – Water Pumping Stations

PS No	Pump Station Location	Pump Station Type	Inlet to/Outlet from/Booster to	Type of Pump
TPS01	Aruvikkara	Inlet	Aruvikkara 86 MLD WTP	HSC
TPS02	Aruvikkara	Outlet	Aruvikkara 86 MLD WTP	HSC
TPS03	Aruvikkara	Inlet	Aruvikkara 74 MLD WTP	HSC
TPS04	Aruvikkara	Outlet	Aruvikkara 74 MLD WTP	HSC
TPS05	Aruvikkara	Inlet	Aruvikkara 72 MLD WTP	HSC
TPS06	Aruvikkara	Outlet	Aruvikkara 72 MLD WTP	HSC
TPS07	Adimadakkukayam	Inlet	Adimadakkukayam 5 MLD WTP	Vert Turbine
TPS08	Kundamankadavu	Inlet	PTP Nagar 16 MLD WTP	Vert Turbine
TPS09	Kundamankadavu	Inlet	PTP Nagar 13.5 MLD WTP	Vert Turbine
TPS10	Vellayani	Inlet	Vellayani 21.9 MLD WTP	Vert Turbine
TPS11	Vellayani	Outlet	Vellayani 21.9 MLD WTP	HSC
TPS12	Aruvikkara	Inlet	Vellayambalam 36 MLD WTP	NA
TPS13	Vellayambalam	Outlet	Vellayambalam 36 MLD WTP	HSC
TPS14	Kudappannakunnu	Booster	Kudappannakunnu GLSR	HSC
TPS15	Peroorkada	Booster	Peroorkada ESR	HSC
TPS16	Powdikonam	Booster	Powdikonam GLSR	HSC
TPS17	Powdikonam	Booster	Powdikonam ESR	Submersible
TPS18	Nettayam	Booster	Malamugal GLSR	HSC
TPS19	Iranimuttom (Attukal)	Booster	Nelliyode GLSR	HSC

HSC = horizontal split case

**Kochi – Water Treatment Plants**

Location	Capacity (MLD)	Capacity (GL/Y)	Year	Source Water
Maradu	100	36.5	2016	Muvattupuzha River
Aluva I	48	17.5	1965	Periyar River
Aluva II	72	26.3	1975	Periyar River
Aluva III	70	25.6	1992	Periyar River
Aluva IV	35	12.8	2002	Periyar River

**Kochi – Water Pumping Stations**

PS No	Pump Station Location	Pump Station Type	Inlet to/Outlet from/Booster to	Type of Pump
KPS01	Aluva	Inlet	Aluva 48 MLD WTP	Vert Turbine
KPS02	Aluva	Inlet	Aluva 72 MLD WTP	Vert Turbine
KPS03	Aluva	Inlet	Aluva 70 & 35 MLD WTP	Vert Turbine
KPS04	Aluva	Outlet	Aluva 48 MLD WTP (dysfunctional)	HSC Vert Turbine
KPS05	Aluva	Outlet	Aluva 48 MLD WTP	Vert Turbine
KPS06	Aluva	Outlet	Aluva 72 MLD WTP	Vert Turbine
KPS07	Aluva	Outlet	Aluva 70 & 35 WTP MLD	Vert Turbine
KPS08	Pazhoor	Inlet	Maradu 100 MLD WTP Raw Water	Vert Turbine
KPS09	Maradu	Outlet	Maradu 100 MLD WTP Clear Water	HSC
KPS10	Karuvelipady	Booster	Karuvelipady Service Area	HSC
KPS11	Thoppumpady	Booster	Thoppumpady Service Area	HSC
KPS12	Palluruthy	Booster	Palluruthy Service Area	HSC
KPS13	Thammanam	Booster	Thammanam Service Area – 1	HSC
KPS14	Thammanam	Booster	Thammanam Service Area - 2	HSC
KPS15	Pallimukku	Booster	Pallimukku Service Area - 1	HSC
KPS16	Pallimukku	Booster	Pallimukku Service Area – 2	HSC
KPS17	Pallimukku	Booster	Pallimukku Service Area– 3	HSC
KPS18	Elamkulam	Booster	Elamkulam Service Area	HSC

### Details of the Project Cost

(INR Crores)				
Package	Y1-Y7	Y8-Y10	Subtotal	Y1-Y7
TW1 – Production Capex	95.93	0	96	14
TW1 - Production Maintenance	12.95	7.77	21	2
CW1 – Production Capex	78.23	0	78	11
CW1 – Production Maintenance	10.55	6	17	2
CW2 – Distribution Capex	508	0	508	73
CW2 – Distribution Maintenance	64	35	99	9
CW2 - Distribution Operator Fee <sup>6</sup>	171	65	236	24
KWA1 - IT improvements	10		10	1
<b>Subtotal - Contract Value</b>	<b>951</b>	<b>114</b>	<b>1,065</b>	<b>136</b>
PMC Consultancy	30		30	4
PMU Admin	25	22	47	4
Capacity Building	20		20	3
<b>Subtotal Overheads</b>	<b>75</b>	<b>22</b>	<b>97</b>	<b>11</b>
Physical Contingencies at 8%	76	9	85	11
Price Contingencies at 15%	143	17	160	20
<b>Subtotal Contingencies</b>	<b>219</b>	<b>26</b>	<b>245</b>	<b>31</b>
<b>Total Project Cost</b>	<b>1,245</b>	<b>162</b>	<b>1,407</b>	<b>178</b>

Description	ADB		GOK	
	Y1-Y7	Y8-Y10	Y1-Y7	Y8-Y10
Capex	70%	0%	30%	0%
Maintenance	70%	0%	30%	100%
Operator Fee	70%	0%	30%	100%
PMC Consultancy	70%	0%	30%	100%
PMU Admin	70%	0%	30%	100%
Capacity Building	100%	0%	0%	0%
Physical Contingencies	70%	0%	30%	100%
Price Contingencies	70%	0%	30%	100%

Financing Pattern		
ADB Financing INR Crores	GOK Financing INR Crores	Total Financing INR Crores

Components	Y1-Y7	Y8-Y10	Subtotal	Y1-Y7	Y8-Y10	Subtotal	Y1-Y7	Y8-Y10
Production Capex	67.15	0.00	67.15	28.78	0.00	28.78	95.93	0.00

<sup>6</sup> The Operator Fee includes all salaries for expat and local staff, transport, communications, furnishing, office rent, office maintenance, insurance and contingencies.

Production Maintenance	9.07	0.00	9.07	3.89	7.77	11.66	12.95	7.00
Production Capex	54.76	0.00	54.76	23.47	0.00	23.47	78.23	0.00
Production Maintenance	7.39	0.00	7.39	3.17	6.00	9.17	10.55	6.00
Distribution Capex	355.91	0.00	355.91	152.53	0.00	152.53	508.44	0.00
Distribution Maintenance	44.96	0.00	44.96	19.27	35.00	54.27	64.23	35.00
Distribution Operator Fee	119.50	0.00	119.50	51.21	65.00	116.21	170.71	65.00
IT improvements	7	0	7.00	3	0	3.00	10.00	0.00
<b>Subtotal - Contract Value</b>	<b>665.7</b>	<b>0</b>	<b>665.7</b>	<b>285.3</b>	<b>113.77</b>	<b>399.08</b>	<b>951.04</b>	<b>113.00</b>
PMC Consultancy	21	0	21.00	9	0	9.00	30.00	0.00
PMU Admin	17.5	0	17.50	7.5	22	29.50	25.00	22.00
Capacity Building	20	0	20.00	0	0	0.00	20.00	0.00
<b>Subtotal Overheads</b>	<b>58.5</b>	<b>0</b>	<b>58.5</b>	<b>16.5</b>	<b>22</b>	<b>38.50</b>	<b>75.00</b>	<b>22.00</b>
Physical Contingencies	53.2	0	53.20	22.8	9	31.80	76.00	9.00
Price Contingencies	100.1	0	100.10	42.9	17	59.90	143.00	17.00
<b>Subtotal Contingencies</b>	<b>153.3</b>	<b>0</b>	<b>153.3</b>	<b>65.7</b>	<b>26</b>	<b>91.7</b>	<b>219</b>	<b>0.00</b>
<b>Total Project Cost</b>	<b>878</b>	<b>0</b>	<b>878</b>	<b>368</b>	<b>162</b>	<b>529</b>	<b>1245</b>	<b>113.00</b>

## Initial Procurement Plan

## Basic Data

<b>Project Name:</b> Kerala Urban Water Supply Improvement Project (KUWSIP)		
<b>Project Number:</b> 49106-006	<b>Approval Number:</b>	
<b>Country:</b> India	<b>Executing Agency:</b> Water Resources Department (WRD), Government of Kerala	
<b>Project Procurement Classification:</b> Category A (TBC)	<b>Implementing Agency:</b> Kerala Water Authority (KWA)	
<b>Procurement Risk:</b> Medium (TBC)		
<b>Project Financing Amount:</b> US\$ 178,000,000 <b>ADB Financing:</b> \$125,000,000 <b>Cofinancing (ADB Administered):</b> Nil <b>Non-ADB Financing:</b> \$53,000,000	<b>Project Closing Date:</b> 30 June 2027	
<b>Date of First Procurement Plan:</b> 27 March 2019	<b>Date of this Procurement Plan:</b> 27 September 2019	
<b>Procurement Plan Duration (in months):</b> 18	<b>Advance Contracting:</b> Yes	<b>e-GP:</b> Yes

**A. Methods, Review and Procurement Plan**

Except as the Asian Development Bank (ADB) may otherwise agree, the following methods shall apply to procurement of goods, works, and consulting services.

Procurement of Goods and Works	
Method	Comments
Open Competitive Bidding (OCB) for Goods	OCB (International), Prior review. OCB (National), Prior review
Request for Quotation for Goods	The first package is subject to prior review
Community Participation in Procurement for Goods	Prior review
Open Competitive Bidding (OCB) for Works	OCB (International), Prior review. OCB (National), Prior review
Request for Quotation for Works	Prior review
Community Participation in Procurement for Works	Prior review

Consulting Services	
Method	Comments
Consultant's Qualification Selection for Consulting Firm	Prior review
Fixed Budget Selection for Consulting Firm	Prior review
Least-Cost Selection for Consulting Firm	Prior review
Quality- and Cost-Based Selection for Consulting Firm	Prior review (FTP/STP 80:20)
Quality-Based Selection for Consulting Firm	Prior review
Competitive for Individual Consultant	Prior review

**B. Lists of Active Procurement Packages (Contracts)**

The following table lists goods, works, and consulting services contracts for which the procurement activity is either ongoing or expected to commence within the procurement plan duration.

Package Number	General Description	Estimated Value (in US\$)	Procurement Method	Review	Bidding Procedure	Advertisement Date (quarter/year)	Comments
TP	Water Production Improvements in	15,560,000.00	OCB	Prior	1S2E	Q2 / 2020	Advertising: National  No. Of Contracts: 1

	Thiruvananthapuram						Prequalification of Bidders: No  Domestic Preference Applicable: No  Advance Contracting: Yes  Bidding Document: Large Works
KP	Water Production Improvements in Kochi	12,680,000.00	OCB	Prior	1S2E	Q2 / 2020	Advertising: National  No. Of Contracts: 1  Prequalification of Bidders: No  Domestic Preference Applicable: No  Advance Contracting: Yes  Bidding Document: Large Works
KD	Water Supply distribution Improvements and NRW reduction in Kochi.	106,190,000.00	OCB	Prior	1S2E	Q2 / 2020	Advertising: International  No. Of Contracts: 1  Prequalification of Bidders: No  Domestic Preference Applicable: No  Advance Contracting: Yes  Bidding Document: Large Works
KWAIT	Improving IT management systems in billing and customer management	1,450,000.00	OCB	Prior	1S2E	Q2 / 2020	Advertising: National  No. Of Contracts: 1  Prequalification of Bidders: No  Domestic Preference Applicable: No  Advance Contracting: Yes  Bidding Document: Small Works

<b>Consulting Services</b>
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Package Number	General Description	Estimated Value (in US\$)	Selection Method	Review	Type of Proposal	Advertisement Date (quarter/year)	Comments
KUWSIP – PMC	Loan Implementation Support Unit Consultancy	3,000,000.00	QCBS	Prior	FTP	Q1 / 2020	Type: Firm Assignment: National Quality-Cost Ratio: 80:20 Advance Contracting: Yes
KUWSIP/IC 1/01-05	Institutional capacity development and urban reform support consultants	200,000.00	Competitive	Prior		Q2 / 2021	Type: Individual Assignment: National Expertise: Institutional capacity development and urban reform support Advance Contracting: Yes Comments: 5 individual consultants
KUWSIP /CF/02	Stakeholder consultation and management support	200,000.00	QCBS	Prior	BTP	Q2 / 2021	Type: Firm Assignment: National Quality-Cost Ratio: 80:20 Advance Contracting: Yes Comments: Either NGO or Social Consultant to be qualified

### C. List of Indicative Packages (Contracts) Required Under the Project

The following table lists goods, works, and consulting services contracts for which procurement activity is expected to commence beyond the procurement plan duration and over the life of the project (i.e., those expected beyond the current procurement plan duration).

#### Goods and Works

Package Number	General Description	Estimated Value (in US\$)	Procurement Method	Review	Bidding Procedure	Comments

#### Consulting Services

Package Number	General Description	Estimated Value (in US\$)	Selection Method	Review	Type of Proposal	Comments



## Project Implementation Organization

Project Implementation Organizations	Management Roles and Responsibilities
<p><b>Executing Agency (EA)</b> Government of Kerala (GOK) <i>acting through</i> Water Resources Department (WRD)</p>	<ul style="list-style-type: none"> <li>• Assume overall responsibility for execution of the project;</li> <li>• <b>Negotiate, sign and execute the project agreement with Asian Development Bank (ADB);</b></li> <li>• Allocate and release government counterpart funds on time;</li> <li>• Facilitate obtaining administrative sanction from the GOK for overall project;</li> <li>• Ensure that KWA sets up a Project Management Unit (PMU), led by a Project Director and Project Implementation Unit (PIU) in Kochi, led by a Superintending Engineer, and assign adequate permanent or fixed-term staff to the PMU and PIUs to implement the project</li> <li>• Facilitate obtaining timely government-level approvals for the smooth implementation of the project;</li> <li>• Monitor project implementation progress and ensure timely actions for completion of the project;</li> <li>• Ensure submission of annual independent audits of the project accounts;</li> <li>• <b>Ensure compliance with ADB policies (procurement, safeguards, etc.);</b></li> <li>• Review and ensure compliance with loan covenants, contract specifications, work plans and quality control;</li> <li>• Overall strategic guidance and supervision for execution of the projects; and</li> <li>• Reporting to Government of India, as necessary</li> </ul>
<p><b>Empowered Committee (EC)</b> (headed by Chief Secretary, as Chairman) Members</p> <ul style="list-style-type: none"> <li>• Additional Chief Secretary (WRD) – Co-Chair</li> <li>• Secretary (WRD), Member Secretary,</li> <li>• Additional Chief Secretary / Principal Secretary / Secretary, Finance Department, Member</li> <li>• Additional Chief Secretary / Principal Secretary / Secretary, Roads and Public Works Department*, Member</li> <li>• Additional Chief Secretary / Principal Secretary / Secretary, LSGD, Member</li> <li>• Managing Director, KWA,</li> </ul>	<ul style="list-style-type: none"> <li>• Provide administrative clearances to the subprojects including facilitating ministerial / cabinet level approvals;</li> <li>• Provide policy decisions to support smooth project implementation;</li> <li>• Facilitate interdepartmental coordination and cooperation within government; and</li> <li>• Provide overall strategic guidance</li> </ul>

<p>Member</p> <ul style="list-style-type: none"> <li>• Project Director, KUWSIP, KWA – Member Convener</li> <li>• Secretary, Kochi City Corporation, Member</li> <li>• CEO, Cochin Smart City Mission Limited, Member</li> <li>• District Police Chief, Kochi - Invitee</li> <li>• Chairman, KSCBL - Invitee</li> </ul>	
<p><b>Implementing Agency (IA)</b> Kerala Water Authority (KWA)</p> <ul style="list-style-type: none"> <li>• Managing Director - Project Director</li> <li>• Deputy Project Director</li> </ul> <p><u>PMU Staff</u></p> <ul style="list-style-type: none"> <li>• Technical Expert(s)</li> <li>• Accounts &amp; Finance Officer(s)</li> <li>• Safeguards Officers</li> <li>• Procurement and Contract Management Officer</li> <li>• Administrative Officer</li> </ul>	<p>KWA will house a Project Management Unit (PMU) for overall management of all activities of the project, such as project planning, budgeting, bidding, bid evaluation, award of contracts, monitoring implementation of projects through Project Implementation Units (PIUs). The roles &amp; responsibilities would include:</p> <p><b>Project and Financial Management</b></p> <ul style="list-style-type: none"> <li>• Overall responsibility of financial management and project administering project procedures and guidelines;</li> <li>• Monitor all the project implementation activities with a focus on performance and achievement of results;</li> <li>• Exercises supervision over the consultants and Project Implementation Unit (PIUs);</li> <li>• Develop annual work plans, work schedules and budgets;</li> <li>• Submits periodic reports to the ADB and obtain necessary approvals from the ADB;</li> <li>• Manage overall fund flow and pay claims to contractors and consultants;</li> <li>• Timely submit withdrawal applications;</li> <li>• Ensure compliance with loan covenants, ADB's guidelines, procedures and policies;</li> <li>• Establish financial accounting and control systems and ensuring accurate and timely report submissions and funds flow from ADB;</li> <li>• Ensuring auditing of loan proceeds;</li> <li>• Consolidate and submit progress reports, finance and accounting/ audit reports;</li> <li>• Act as focal point for communication with ADB;</li> <li>• Facilitate ADB Project review and other missions;</li> <li>• Represent the project at Tripartite Portfolio Review Meetings;</li> <li>• Provide overall technical and implementation guidance to the PIUs as required;</li> <li>• Facilitate approval of various implementation related requests from the PIUs; and</li> <li>• Report to and put up matters for decision to the UDHD.</li> </ul> <p><b>Reporting</b></p> <ul style="list-style-type: none"> <li>• Report Project progress to GOK and ADB (quarterly); and</li> <li>• Submit audited project financial statements and KWA's audited statements to GOK and ADB (annually)</li> </ul> <p><b>Safeguards Compliances</b></p>

	<ul style="list-style-type: none"> <li>• Monitor safeguards compliance of the projects through PIUs and support corrective actions as necessary;</li> <li>• Submit semi-annual safeguards monitoring reports to ADB; and</li> <li>• Guide PIUs as and when necessary on safeguards compliances and arrange capacity building for PIUs.</li> </ul> <p><b>Recruitment of consultants</b></p> <ul style="list-style-type: none"> <li>• Recruit consultants in accordance with ADB guidelines; and</li> <li>• Obtain ADB's concurrence for consultants' recruitment.</li> </ul> <p><b>Procurement of Works/Goods Contracts</b></p> <ul style="list-style-type: none"> <li>• Preparation of bid documents</li> <li>• Manage procurement process including issues of the bid documents, bid evaluation and contracts signing;</li> <li>• Obtain ADB concurrence for bid documents, bid evaluation reports and contract awards; and</li> <li>• Ensure compliance with ADB procurement policies and procedures.</li> </ul>
<p><b>Project Implementation Units</b></p> <ul style="list-style-type: none"> <li>• Kochi</li> </ul> <p>PIU is headed by Project Manager (Superintending Engineer)</p> <ul style="list-style-type: none"> <li>• Technical Officer(s)</li> <li>• Safeguards officer(s)</li> <li>• ULB staff/Engineer</li> <li>• Accounts &amp; Admin Officer</li> </ul>	<p>KWA will also setup one PIU for construction supervision of the subprojects. Roles &amp; Responsibilities would include:</p> <ul style="list-style-type: none"> <li>• Oversee, coordinate and monitor works (civil, electrical and mechanical) and supply of equipment and materials ensuring sound works supervision and high-quality control and any other technical matters and issue certificates for acceptance;</li> <li>• Measure and records acceptable works, checks contractor's /suppliers' invoices and recommend payments to the contractors;</li> <li>• Manage contracts, prepare variation orders and submit variation requests to PMU/approving authority;</li> <li>• Coordinate preparation of final measurement and 'as built drawings';</li> <li>• Ensure compliance with safeguard plans and policies and procedures;</li> <li>• Responsible for updating safeguard documents per detailed engineering design and in consultation with PMU;</li> <li>• Address Grievances through Grievance Redressal Mechanism (GRM);</li> <li>• Ensure implementation of Gender Action Plan (GAP); and</li> <li>• Submit quarterly safeguard monitoring reports to PMU.</li> </ul>
<p>Asian Development Bank</p>	<ul style="list-style-type: none"> <li>• Monitoring overall project and subproject performance;</li> <li>• Communicate with WRD on project implementation;</li> <li>• Attend tripartite review meetings;</li> <li>• Review and approve procurement activities as per agreed Procurement plan;</li> <li>• Process withdrawal applications for disbursement;</li> <li>• Disclose project information as per ADB policy;</li> <li>• Approve and monitor safeguards documents and implementation compliance including GAP and CAPP implementation;</li> </ul>

	<ul style="list-style-type: none"><li>• Monitor annual audits of the project accounts;</li><li>• Field project administration reviews and missions;</li><li>• Facilitate knowledge sharing;</li><li>• Provide training in project management to PMU and PIU staff;</li><li>• Reviewing compliance with loan covenants;</li><li>• Change in project scope or implementation arrangements; and</li><li>• Re-allocation of loan proceeds if required</li></ul>
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ADB = Asian Development Bank, CAPP= Community Awareness & Participation Program, EA = Executing Agency; EC = Empowered Committee; IA = Implementing Agency, GAP = gender action plan, GOK = Government of Kerala, GRM= Grievance Redressal Mechanism, KWA – Kerala Water Authority, PIU= Project Implementation Unit, PMU = Project Management Unit, WRD = Water Resources Department.