



Technical Assistance Report

Project Number: 47255
Capacity Development Technical Assistance (CDTA)
October 2014

Democratic Socialist Republic of Sri Lanka: Wastewater Management Improvement in Colombo Municipal Council

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Asian Development Bank

CURRENCY EQUIVALENTS

(as of 1 September 2014)

Currency unit	–	Sri Lanka rupee/s (SLRe/SLRs)
SLRe1.00	=	\$0.0076787
\$1.00	=	SLRs130.23

ABBREVIATIONS

ADB	–	Asian Development Bank
CMC	–	Colombo Municipal Council
O&M	–	operation and maintenance
PPP	–	public–private partnership
TA	–	technical assistance
TASF	–	Technical Assistance Special Fund
WTP	–	wastewater treatment plant

NOTES

- (i) The fiscal year (FY) of the Government of Sri Lanka ends on 31 December. “FY” before a calendar year denotes the year in which the fiscal year ends, e.g., FY2013 ends on 31 December 2013.
- (ii) In this report, “\$” refers to US dollars unless otherwise stated.

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CAPACITY DEVELOPMENT TECHNICAL ASSISTANCE AT A GLANCE

1. Basic Data		Project Number: 47255-001	
Project Name	Wastewater Management Improvement in Colombo Municipal Council	Department /Division	SARD/SAUW
Country Borrower	Sri Lanka N/A	Executing Agency	Ministry of Local Govt & Provincial Council (MLGPC)
2. Sector		Subsector(s)	
✓ Water and other urban infrastructure and services	Urban policy, institutional and capacity development	ADB Financing (\$ million)	
	Urban sewerage		0.20
		Total	0.30
			0.50
3. Strategic Agenda		Subcomponents	
Inclusive economic growth (IEG)	Pillar 2: Access to economic opportunities, including jobs, made more inclusive	Climate Change Information	
		Climate Change impact on the Project	Low
4. Drivers of Change		Components	
Partnerships (PAR)	Civil society organizations Implementation	Gender Equity and Mainstreaming	
Private sector development (PSD)	Private Sector Public sector goods and services essential for private sector development	No gender elements (NGE)	✓
5. Poverty Targeting		Location Impact	
Project directly targets poverty	No	Nation-wide	High
6. TA Category:	B		
7. Safeguard Categorization	Not Applicable		
8. Financing			
Modality and Sources		Amount (\$ million)	
ADB		0.50	
Sovereign Capacity development technical assistance: Technical Assistance Special Fund		0.50	
Cofinancing		0.00	
None		0.00	
Counterpart		0.05	
Government		0.05	
Total		0.55	
9. Effective Development Cooperation			
Use of country procurement systems			No
Use of country public financial management systems			No

I. INTRODUCTION

1. Colombo is the capital city and the most important commercial, industrial, and cultural center of Sri Lanka with a population of about 1 million people. It is governed by Colombo Municipal Council (CMC), which is responsible for provision of a wide range of municipal services, including wastewater management services. CMC operates a 320-kilometer wastewater collection network, 18 pumping stations, and two sea outfalls to collect and dispose of untreated wastewater into the sea. The sewer mains, pumping stations, and two sea outfalls are being rehabilitated as part of the Greater Colombo Wastewater Management Project of the Asian Development Bank (ADB).¹ Under the newly approved multitranche financing facility for the Greater Colombo Water and Wastewater Management Improvement Investment Program, ADB will continue support for CMC to improve and expand the sewer network and to build two new wastewater treatment plants—helping CMC achieve full coverage of wastewater collection and discontinue its practice of discharging untreated wastewater into the sea.²

2. To achieve these objectives in an efficient and sustainable manner, the Government of Sri Lanka requested ADB to provide capacity development technical assistance (TA) to help CMC undertake reforms in two areas: (i) to introduce and design a wastewater tariff mechanism to finance operation and maintenance (O&M) of the wastewater collection and treatment system, and (ii) to explore the possibility of involving the private sector in construction and/or operation of the two planned wastewater treatment plants through a public–private partnership (PPP). The TA is included in the ADB country operations business plan for Sri Lanka, 2014–2016.³ An ADB fact-finding mission was conducted from 10 to 15 June 2014. This report is based on the understanding reached with the government and CMC regarding the impact, outcome, outputs, implementation arrangements, costs and financing arrangements, and the outline terms of reference for consulting services to be provided under the TA. The design and monitoring framework of the TA is in Appendix 1.⁴

II. ISSUES

3. In Sri Lanka, urban wastewater management services are provided by CMC for Colombo city, and by the National Water Supply and Drainage Board for other municipalities and urban councils outside Colombo city. In 2008, the National Water Supply and Drainage Board introduced a wastewater tariff as a funding mechanism for the O&M of wastewater management services in its service areas, including other municipalities and urban councils within Greater Colombo. CMC has continued to rely on budget allocation through general revenue as the funding source for the combined municipal services of flood control, drainage, and wastewater management. Wastewater management services under CMC have suffered from lack of adequate funding support for O&M because of competing needs for budget resources. Since wastewater operation has a lower priority than flood control and drainage, the sewage collection system has been deteriorating. Sewer blockages and overflows are common—posing an increasing public health and environmental hazard. The direct discharge of untreated wastewater into the sea remains unchanged despite a significant increase in wastewater volume as a result of rapid urbanization.

¹ ADB. 2009. *Greater Colombo Wastewater Management Project*. Manila.

² ADB. 2012. *Greater Colombo Water and Wastewater Management Improvement Investment Program*. Manila.

³ ADB. 2013. *Country Operations Business Plan: Sri Lanka, 2014–2016*. Manila.

⁴ The TA first appeared in the business opportunities section of ADB's website on 15 May 2014.

4. While providing support for CMC to upgrade and expand its wastewater collection system and build two new wastewater treatment plants, ADB has agreed with CMC to separate the wastewater management service function from other municipal services like drainage, which may be funded to an extent by the wastewater tariff for its O&M. The proposed wastewater tariff may perform, among others, two basic functions: (i) as a dedicated funding mechanism for O&M of the increasingly sophisticated wastewater collection system and two new wastewater treatment plants in CMC to improve operational sustainability; and (ii) as a policy instrument to strengthen environmental management following the polluter pays principle, through which residents of Colombo city, like people living in other municipalities and urban councils, will pay wastewater service fees in accordance with the wastewater service received.

5. The construction of two planned wastewater treatment plants will have a significant impact on improving wastewater management services in Colombo city. This will present a major operational and management challenge to CMC because of its lack of knowledge, experience, expertise, and institutional capability in this field. Given these constraints, CMC will likely need to explore private sector involvement, through a PPP arrangement, in dealing with the challenges in design, construction, and/or operation and management of the two new wastewater treatment plants. This may also require a wastewater tariff as a dedicated funding source to strengthen operational sustainability and project viability.

6. The proposed TA will help the government and CMC address two major challenges arising from the ADB loan-funded upgrading and expansion of wastewater management services in Colombo city. It will help CMC establish the guiding principles and pricing policy for wastewater management services in Colombo city, and recommend a realistic implementation strategy for the phased introduction of a wastewater tariff in the city, taking into account the pace of service improvement and the affordability concern of disadvantaged groups in underserved areas. The TA will also help CMC assess the options available for PPP in the construction and/or management of the two new wastewater treatment plants to be built in Colombo city, and help CMC address the policy and operational challenges arising from the introduction of new services to the city, including providing capacity development support for specialized staff training and institutional strengthening. The proposed TA will complement the financial support provided by ADB for wastewater management improvement under the ongoing ADB-financed project and investment program (footnotes 1 and 2).

III. THE CAPACITY DEVELOPMENT TECHNICAL ASSISTANCE

A. Impact and Outcome

7. The impact will be improved financial sustainability and operations of wastewater services in Colombo city, demonstrated by (i) cost of O&M recovered through revenues from wastewater services, and (ii) two wastewater treatment plants meet mandatory wastewater discharge standards. The outcome will be improved capacity to operate and maintain wastewater services in Colombo city, through (i) a CMC resolution to implement a wastewater tariff scheme approved and (ii) PPP contracts for the two wastewater treatment plants initiated.

B. Methodology and Key Activities

8. The formulation and implementation of a wastewater tariff for CMC will improve the financial position of CMC's wastewater service division—enabling it to provide adequate funds to cover O&M cost, meet debt service obligations, and improve the overall level of wastewater services in Colombo city. The formulation and implementation of a PPP contract will enable

CMC to manage and operate the two new wastewater treatment plants efficiently, and thereby meet stipulated treatment standards and reduce pollution discharge into the sea.

9. The TA will have three key outputs. The first output is the preparation of a wastewater tariff scheme that is expected to be adopted by CMC following full consultation with citizens and stakeholders. The wastewater tariff scheme is expected to recover a high proportion of the costs imposed on the wastewater system by high wastewater volume producers and entities that generate significant pollution, while being sensitive to the needs of low-income families in underserved areas. The level of the wastewater tariff will be set in accordance with information gathered through a willingness-to-pay survey and affordability analysis. The new wastewater tariff scheme is expected to be adopted by CMC and implemented in early 2016.

10. The second output is the identification and preparation of a PPP arrangement for the two new wastewater treatment plants. A broader set of PPP options will be reviewed, and best practice will be followed for effective implementation of a PPP arrangement for wastewater treatment plants. Bidding documents and a draft contractual agreement for the preferred PPP option will also be prepared, so that CMC may seek bids from interested and experienced PPP operators and reach agreement with the successful bidder. The PPP contract is expected to be agreed in 2016, when the two treatment plants are scheduled to be constructed. This PPP arrangement is expected to provide professional management services for two planned wastewater treatment plants for about 10–20 years.

11. The third output is the implementation of an information campaign and training program. The information campaign will be conducted for both implementation of the wastewater tariff scheme and the PPP, and will encompass a range of activities including two workshops that will seek the participation of at least 50 stakeholders including at least 20 women participants. The training program will focus on ensuring that all CMC staff who have a link to implementation of the wastewater tariff scheme and PPP arrangements have a good understanding of their role and responsibilities in this regard.

12. The TA will be implemented to achieve the outcome through (i) improving the capacity of CMC staff to implement and manage Colombo city's wastewater tariff system; (ii) improving the quality of wastewater service operations through enabling greater spending to be undertaken on O&M activities (e.g., reduced sewer blockages, sewage overflows, and pump breakdowns) through increased revenues earned from the introduction of a wastewater tariff; (iii) developing the capacity of staff employed in all relevant divisions of CMC (e.g., finance, procurement, wastewater, etc.) to implement and manage PPP arrangements with respect to the two new wastewater treatment plants; and (iv) helping ensure that the two new wastewater treatment plants are effectively and efficiently managed through the appointment of a qualified PPP contractor.

13. The major risk for PPP is that CMC will default on payments to the PPP operator. However, this can be mitigated with CMC introducing the wastewater tariff. The major risks to the introduction of the wastewater tariff will be opposition from citizens who face a rising cost of living because of inflation. Labor unions may also have concerns over private sector involvement, given the potential risk of job losses. However, these issues are manageable because the wastewater tariff scheme will be designed taking into consideration affordability concerns of low-income families, and will be implemented gradually. The two planned wastewater treatment plants will create new job opportunities. During TA implementation, the consultants will need to conduct workshops for stakeholders (including citizens and labor unions), assist CMC in its public awareness campaign, and help develop consensus among

CMC councilors over the need for the proposed changes by informing them of the benefits that will accrue to the city and its residents. Implementation arrangements for introducing the wastewater tariff will need to take into account the concerns and interests of the poor and marginalized groups, and ensure that an equitable approach is adopted in which a greater share of costs are recovered from those who use more water and generate more wastewater as well as those entities that contribute to significant pollution discharges. There is assumption that CMC will adjust tariffs periodically to meet revenue requirements.

14. A considerable amount of consultation and dissemination through group discussions, workshops, and awareness campaigns will be necessary to obtain the support of all stakeholders. The TA consultants will work closely with CMC and stakeholders in achieving this outcome.

C. Cost and Financing

15. The TA is estimated to cost \$550,000, of which \$500,000 will be financed on a grant basis by ADB's Technical Assistance Special Fund (TASF-V). The government will provide counterpart support in the form of counterpart staff, office accommodation, office supplies, secretarial assistance and other in-kind contributions. The cost estimates and financing plan are in Appendix 2.

D. Implementation Arrangements

16. The executing agency will be the Ministry of Local Government and Provincial Councils, which will provide overall policy guidance and oversight for the TA. The implementing agency will be CMC, with implementation carried out through the existing project management unit of CMC, which is also responsible for preparing the third and fourth projects of the Investment Program. CMC also manages implementation of the ongoing Greater Colombo Wastewater Management Project. The project management unit is comprised of a project director (sanitary engineer), deputy project director (technical and institution), environmental engineers, procurement staff, and an accountant, supported by international and national design supervision consultants and institutional development consultants. CMC has adequate capacity to manage activities related to the TA.

17. The TA will be implemented over 2 years from October 2014 to September 2016. Consulting services totaling 30 person-months (15 person-months international and 15 person-months national) will be required. The international consultants will provide expertise in the fields of water sector utility finances, wastewater tariff, and PPP. The national consultants will provide support on technical issues, public communications, and legal aspects. In addition to consulting services, resource persons may be invited to speak at workshops to provide the latest knowledge on wastewater tariffs and PPP to key stakeholders and the consultants. Five experts will be engaged: two international consultants (a team leader and a PPP expert) and three national consultants (a wastewater technical specialist, a legal expert, and a public communications expert) under the TA.

18. The consultants will be engaged by ADB in accordance with its Guidelines on the Use of Consultants (2013, as amended from time to time) on an individual basis. Outline terms of reference for consultants are in Appendix 3. The resource persons will be recruited in accordance with the Guidelines on the Use of Consultants (2013, as amended from time to time). Disbursements under the TA will be made in accordance with ADB's *Technical Assistance Disbursement Handbook* (2010, as amended from time to time).

19. The consultants will submit four major reports: (i) an inception report within 2 months after TA commencement, (ii) an interim report within 1 year from the commencement date of their contract, (iii) a draft final report after the 20 months from the commencement date of their contract, and (iv) a final report after the receipt of comments from the government and ADB on the draft report.

IV. THE PRESIDENT'S DECISION

20. The President, acting under the authority delegated by the Board, has approved the provision of technical assistance not exceeding the equivalent of \$500,000 on a grant basis to the Democratic Socialist Republic of Sri Lanka for Wastewater Management Improvement in Colombo Municipal Council, and hereby reports this action to the Board.

DESIGN AND MONITORING FRAMEWORK

Design Summary	Performance Targets and Indicators with Baselines	Data Sources and Reporting Mechanisms	Assumptions and Risks
<p>Impact Improved financial sustainability and operations of wastewater services in Colombo city</p>	<p>By 2020 (for all indicators) At least 50% of O&M recovered through revenues from wastewater services (Baseline: zero in September 2014)</p> <p>Two wastewater treatment plants meet mandatory wastewater discharge standards (Baseline: zero in September 2014)</p>	<p>CMC annual report</p> <p>CMC annual report</p>	<p>Risk CMC will default on payments to the PPP operator.</p>
<p>Outcome Improved capacity to operate and maintain wastewater services in Colombo city</p>	<p>By 2016 (for all indicators) A CMC resolution to implement a wastewater tariff scheme approved (Baseline: zero in September 2014)</p> <p>PPP contracts for the two wastewater treatment plants initiated (Baseline: zero treatment plants in September 2014)</p>	<p>CMC annual report</p> <p>CMC annual report</p>	<p>Assumption CMC will adjust tariffs periodically to meet revenue requirements.</p> <p>Risks Citizens will oppose introduction of wastewater charges. Labor unions will oppose PPP because of job security issues.</p>
<p>Outputs</p> <p>1. Wastewater tariff scheme prepared</p> <p>2. Public-private partnership (PPP) modality identified and prepared</p> <p>3. Information campaign and training program implemented</p>	<p>By 2016 (for all indicators) Wastewater tariff scheme finalized for approval</p> <p>PPP bidding document and contracts for two water treatment plants finalized for bidding (Baseline: zero)</p> <p>Two workshops organized, with the participation of more than 50 stakeholders (including 20 women participants)</p> <p>About 10 key staff of the executing and implementing agencies trained on wastewater tariff and PPP (including four women staff)</p>	<p>CMC wastewater tariff structure</p> <p>CMC wastewater operations reports</p> <p>Workshops summary</p> <p>CMC wastewater operations reports</p>	

Activities with Milestones	Inputs
<p>1. Wastewater tariff scheme prepared</p> <p>1.1 Complete campaign to inform citizens about the need for a wastewater tariff, by Q1 2015.</p> <p>1.2 Conduct willingness-to-pay survey and affordability analysis in Q1 2015.</p> <p>1.3 Provide international best practice in wastewater tariff structure in Q1 2015.</p> <p>1.4 Develop draft wastewater tariff structure, and brief mayor and councilors in Q2 2015.</p> <p>2. Public-private partnership modality identified and prepared</p> <p>2.1 Identify current best international practices in PPP, build-operate-transfer, transfer-operate-transfer, design-build, design-build-own, and similar forms of infrastructure concession contracting in Q1 2015.</p> <p>2.2 Develop options for PPP within 9 months of commencement of the TA contract for consideration by CMC in Q2 2015.</p> <p>2.3 Prepare a plan to address the problem in consultation with labor union by Q2 2015.</p> <p>2.4 Reach agreement with mayor and councilors on acceptable PPP option by Q3 2015.</p> <p>2.5 Prepare draft bidding document and draft agreement for PPP for wastewater treatment plants, ready for bid invitation by Q2 2016.</p> <p>2.6 Prepare one ADB knowledge product concerning wastewater sector tariff and PPP implementation in the region as well as the specific actions planned for Sri Lanka by Q3 2016.</p> <p>3. Information campaign and training program implemented</p> <p>3.1 Prepare materials for the training programs; identify participants by Q1 2015.</p> <p>3.2 Plan and conduct training programs and workshop for awareness and developing skills to better implement wastewater tariff and PPP from time to time Q2 2016.</p> <p>3.3 Conduct workshops to inform all stakeholders of the PPP options during months 7 to 12, from commencement of the TA consultants in Q3 2015.</p> <p>3.4 Extract lessons from TA implementation and provide recommendations for scaling up and replication in other areas in Sri Lanka and possibly other countries by Q2 2016.</p>	<p>ADB: \$500,000</p> <p>Note: The government will provide counterpart support in the form of counterpart staff, office accommodation, office supplies, secretarial assistance and other in-kind contributions.</p>

ADB = Asian Development Bank, CMC = Colombo Municipal Council, O&M = operation and maintenance, PPP = public-private partnership, Q = quarter, TA = technical assistance.
Source: Asian Development Bank.

COST ESTIMATES AND FINANCING PLAN
(\$'000)

Item	Amount
Asian Development Bank^a	
1. Consultants	
a. Remuneration and per diem	
i. International consultants	296.5
ii. National consultants	60.0
b. International and local travel	30.0
c. Reports and communications	10.0
2. Training, seminars, and conferences	
a. Facilitators	10.0
b. Training program	60.0
3. Surveys	10.0
4. Contingency	23.5
Total	500.0

Note: The technical assistance (TA) is estimated to cost \$550,000, of which contributions from the Asian Development Bank are presented in the table above. The government will provide counterpart support in the form of counterpart staff, office accommodation, office supplies, secretarial assistance, and other in-kind contributions. The value of government contribution is estimated to account for 10% of the total TA cost.

^a Financed by the Asian Development Bank's Technical Assistance Special Fund (TASF-V).

Source: Asian Development Bank estimates.

OUTLINE TERMS OF REFERENCE FOR CONSULTANTS

A. Scope of Work

1. The scope of work under the technical assistance (TA) comprises three tasks: (i) developing a wastewater tariff for Colombo city; (ii) assisting Colombo Municipal Council (CMC) with a public–private partnership (PPP) to manage the two new wastewater treatment plants; and (iii) capacity building and training of the CMC staff.

B. Expert Inputs and Assignment Duration

2. The team leader is proposed to be an international utility financial and wastewater tariff expert, supported by one international PPP expert, one national wastewater technical expert, one national legal expert, and one national communications expert. The duration is expected to be about 2 years.

C. Individual Consultant Terms of Reference

1. Team Leader and Wastewater Tariff Expert (international, 9 person-months)

3. The team leader and wastewater tariff and financial expert will take overall responsibility for TA implementation. The expert will be responsible for (i) ensuring the quality and timely submission of all deliverables; (ii) leading negotiations with key project counterparts such as the mayor, commissioner, and other senior officials connected with wastewater services on CMC; (iii) liaising with team members on the Greater Colombo Wastewater Management Improvement Project (as well as consultants from other projects) and reviewing all pertinent project outputs to help ensure effective project coordination;¹ (iv) providing regular updates to the Asian Development Bank (ADB) project manager; and (v) acting as the principal liaison for the TA.

4. The team leader will lead the wastewater tariff component, taking responsibility for component activities and directing the work of other team members. The responsibilities include:

- (i) Reviewing alternative sewerage tariff structures and mechanisms (and their pros and cons) to ascertain the best approach for CMC to adopt in light of local conditions for full or partial cost recovery. This should consider international best practice and lessons from sewerage tariff implementation experience.
- (ii) Ensuring the proposed sewerage tariff approach and implementation arrangements consider the needs of the poor and other vulnerable groups.
- (iii) Working with CMC counterpart staff and the national communications expert to design and implement a willingness-to-pay survey. The output from this will be used to set the sewerage tariff level.
- (iv) Working with CMC counterpart staff and the national wastewater technical expert to review and analyze the financial position of CMC in relation to its sewerage activities. The objective will ascertain the revenue (potential income from sewerage and sanitation services as well as other sources) and cost (capital, operations, and debt service) position of CMC with respect to sewerage and sanitation service delivery to be used as the basis for setting a sewerage tariff. This financial assessment will also consider the quality and comprehensiveness of existing financial reporting, and making recommendations on any improvements or amendments.

¹ ADB. 2012. *Greater Colombo Water and Wastewater Management Improvement Investment Program*. Manila.

- (v) Working with the national legal expert on reviewing the legal position of CMC with respect to introducing a sewerage tariff, and developing proposals to address problems or impediments.
- (vi) Working with CMC counterpart staff and the national wastewater technical expert to help design and implement a billing and collection system for CMC in relation to the sewerage tariff.
- (vii) Working with CMC counterpart staff to carry out any additional activities required to implement the wastewater tariff (e.g., memorandum of understanding with the National Water Supply and Drainage Board for obtaining water volume data).
- (viii) Assessing the extent to which the cost of the PPP component can be covered by the proposed revised tariff structure, and how a potential gap will be covered.
- (ix) Working with CMC counterpart staff and the national communications expert to develop and implement an awareness campaign, including workshops and media briefings, to inform and educate citizens on the need for a wastewater tariff and its implications on their cost of living.

5. The team leader will be responsible for the output of the PPP options component, and will work in close cooperation with the international PPP expert (and other team members as needed) to carry out the following tasks:

- (i) Working with the international PPP expert to review international examples and best practice in the implementation of different forms of PPP arrangements for wastewater treatment plants (WTPs). Sri Lankan experience in implementing PPP arrangements in other business sectors will also be considered.
- (ii) Working with the international PPP expert and national wastewater technical expert to produce a short list of PPP options for the operation and management of the WTPs for presentation to CMC and other project counterparts. Each option will be described in detail (i.e., obligations of different parties, time frames, outcomes expected) and will include a list of pros and cons. The analysis will identify potential impediments to the successful realization of the PPP options, as well as potential solutions to problems such as (a) management capacity and technical skills of CMC staff, (b) resistance on the part of unions and other labor-related issues, (c) financial capacity of CMC to support the PPP, (d) legal concerns regarding foreign management of a key utility, (e) technical considerations, and (f) sociopolitical conditions.
- (iii) Working with the international PPP expert to facilitate discussion and negotiations on the PPP options under consideration, resulting in a refinement of PPP options and agreement on the best option to implement.
- (iv) Working with the national communications expert to develop and implement an awareness campaign, including workshops and media briefings, to inform and educate citizens regarding the proposals for introducing PPP arrangements for the operation and management of the new WTPs.
- (v) Supporting the international PPP expert to produce draft bidding documents and other materials for implementation of the selected PPP approach.
- (vi) Supporting the international PPP expert to provide capacity building support to CMC staff with respect to implementation of the PPP.
- (vii) Supporting the international PPP expert to produce one ADB knowledge product on wastewater sector tariffs and PPP implementation in the region as well as specific actions planned for Sri Lanka.

6. The team leader will support the national communications expert (and other team members as needed) to carry out the following tasks: (i) informing and educating the public and

key stakeholders on the introduction of a sewerage tariff, (ii) carrying out a willingness-to-pay survey in relation to implementation of a sewerage tariff, and (iii) informing and educating the public and key stakeholders on the adoption of a PPP arrangement with respect to the operation and management of the two new WTPs.

7. The team leader should have a master's degree in a relevant field such as business, economics, finance, or international development; and at least 15 years' experience working with water and/or wastewater utilities in tariff development, financial analysis, and PPP option analysis and implementation. The expert should also be able to show good understanding of the water and sanitation sector in Sri Lanka. The team leader should have considerable experience leading and managing multi-skilled project teams, particularly in development projects. Experience with development partners (and ADB) is preferred.

2. Public–Private Partnership Expert (international, 6 person-months)

8. The PPP expert will contribute to the wastewater tariff work by (i) working with the team leader and national wastewater technical expert to review and analyze the financial position of CMC in relation to its sewerage activities, and ascertain how this will affect the PPP process in relation to the two new WTPs; (ii) reviewing the quality and comprehensiveness of existing data collection and financial reporting undertaken by CMC, and making recommendations for improvements or amendments that may be made to facilitate the WTP PPP process; (iii) ensuring the proposed sewerage tariff approach, tariff level, and implementation arrangements fully support and complement the WTP PPP process; and (iv) developing the plan to address the problem in consultation with labor unions.

9. The PPP expert will lead the PPP options component, which will involve working with the team leader and other team members to carry out the following tasks:

- (i) Reviewing international examples and best practice of effective implementation of PPP arrangements for WTPs. Sri Lankan experience in implementing PPP arrangements in other business sectors will also be considered.
- (ii) Producing a short list of potential PPP options for the operation and management of the WTPs for presentation to CMC and other project counterparts. Each option will be described in detail (i.e., obligations of different parties, time frames, outcomes expected) and will include a list of the pros and cons. The analysis will identify potential impediments to the successful realization of the PPP options, as well as potential solutions to problems such as (a) management capacity and technical skills of CMC staff, (b) resistance on the part of unions and other labor-related issues, (c) financial capacity of CMC to support the PPP, (d) legal concerns regarding foreign management of a key utility, (e) technical considerations, and (f) sociopolitical conditions.
- (iii) Facilitating discussion and negotiations on the PPP options under consideration, resulting in a refinement of PPP options and agreement on the best option to implement.
- (iv) Working with the national communications expert to develop and implement an awareness campaign, including workshops and media briefings, to inform and educate citizens on proposals for introducing PPP arrangements for the operation and management of the new WTPs.
- (v) Producing draft bidding documents and any other relevant materials for implementation of the selected PPP approach.
- (vi) Providing capacity building support to CMC staff for implementation of the PPP.

- (vii) Assessing commercial aspects and potential private sector interest through market sounding during options analysis to prepare for the bidding process.
- (viii) Producing one or two ADB knowledge products on wastewater sector PPP implementation in the region as well as specific actions planned for Sri Lanka.

10. The PPP expert should have a master's degree in a relevant discipline such as business, finance, or economics; and at least 12 years' experience working with water and wastewater utilities in PPP option development and implementation. A demonstrated record in the successful implementation of multiple PPPs in utilities is also necessary. The expert should have some understanding of the water and sanitation sector in Sri Lanka as well as broader experience of the wastewater industry. The expert should have experience working on development projects, and previous work experience with ADB is preferred.

3. Wastewater Engineer (national, 3 person-months)

11. The wastewater engineer will contribute to the wastewater tariff work through the following tasks:

- (i) Working with the team leader to review and analyze the financial position of CMC in relation to its sewerage activities, with a focus on CMC's existing and future cost position. The objective will be to ascertain the revenue (i.e., potential income from sewerage and sanitation services as well as other sources) and cost (capital, operations, and debt service) status of CMC with respect to sewerage and sanitation service delivery to be used as the basis for setting a sewerage tariff.
- (ii) Working with the team leader to help design and implement a billing and collection system for CMC in relation to the sewerage tariff.
- (iii) Working with the national communications expert to develop and implement an awareness campaign, including workshops and media briefings, to inform and educate citizens on the need for a wastewater tariff and its implications on their cost of living.

12. The wastewater engineer will contribute to the PPP options component by (i) assisting with the review of international examples and identified best practice with respect to effective implementation of different forms of PPP arrangements for WTPs; (ii) assisting the team leader to produce the prefeasibility study, with a focus on the technical conditions affecting the investment; (iii) assisting with the analysis of potential PPP options and the identification of potential impediments to PPP implementation, with a focus on engineering and capital or operations cost elements; (iv) assisting in refining the PPP options being considered, and helping reach agreement on the best option to implement; (v) assisting with the production of draft bidding documents and other materials for implementation of the selected PPP approach; and (vi) assisting CMC in running the PPP tender, and negotiating a contract with the preferred bidder for the operation and management of the two WTPs.

13. The wastewater engineer will work with the national communications expert (and other team members as needed) to inform and educate the public and key stakeholders on the introduction of a sewerage tariff, and inform and educate the public and key stakeholders on the adoption of a PPP arrangement for the operation and management of the two new WTPs.

14. The wastewater engineer should have a master's degree in engineering and at least 12 years' experience in the construction and operation of wastewater systems. Any additional experience in sewerage tariff development and/or PPP implementation in the wastewater sector will be highly valued.

4. Legal Expert (national, 4 person-months)

15. The legal expert will contribute to the wastewater tariff component by working with the team leader to review the legal aspects and bylaw change needed by CMC to introduce a sewerage tariff, and develop proposals (including any necessary legal drafting) to address problems or impediments.
16. The legal expert will contribute to the PPP options work through the following tasks:
- (i) Assisting the team leader to produce the prefeasibility study, with a focus on the legal and political conditions affecting the investment. Reviewing the legal aspect concerning PPP implementation in Sri Lanka to ascertain what conditions must be met to achieve a successful PPP, and produce solutions to impediments.
 - (ii) Contributing to the discussion and negotiations regarding the PPP options under consideration, which will result in agreement on the best option to implement.
 - (iii) Assisting with the production of draft bidding documents and other relevant materials for implementation of the selected PPP approach.
 - (iv) Providing assistance as necessary to help CMC run the PPP tender, and negotiate a contract with the preferred bidder for the operation and management of the two WTPs.
17. The legal expert should be a qualified lawyer with at least 12 years' business experience. The expert should have development project experience in the utilities sector. Any additional exposure to (sewerage) tariff development and/or PPP experience, particularly in the wastewater sector, will be highly valued.

5. Communications Expert (national, 8 person-months)

18. The communications expert will contribute to the wastewater tariff work by working with the team leader to design and implement a willingness-to-pay survey, the output from which will be used to set the sewerage tariff level, and to design and implement an awareness campaign, including workshops and media briefings, to inform and educate citizens on the need for a wastewater tariff and its implications on their cost of living.
19. The communications expert will contribute to the PPP options work by working with the team leader to design and implement an awareness campaign, including workshops and media briefings, to inform and educate citizens on proposals for introducing PPP arrangements for the operation and management of the new WTPs.
20. The communications expert should have at least a bachelor's degree (ideally a master's degree) in a relevant discipline such as communications or marketing. The expert must be able to demonstrate a successful record of designing and implementing communication campaigns and customer research studies in support of national or regional policy initiatives. The expert should have development project experience in the utilities sector, and any additional exposure to (sewerage) tariff development and/or PPP experience will be highly valued.

6. Resource Persons

21. Two resource persons (one international wastewater expert and one international PPP expert) are needed for the project. Each expert will contribute 0.5 person-months.