

# Project Administration Manual

Project Number: 37378-014  
Loan Numbers: 2710-SRI and 2711-SRI  
November 2017

Proposed Loans for Additional Financing and  
Technical Assistance Grant  
Democratic Socialist Republic of Sri Lanka: Jaffna  
and Kilinochchi Water Supply Project



## **Abbreviations**

ADB	=	Asian Development Bank
ADF	=	Asian Development Fund
BoQ	=	Bill of Quantities
CBO	=	community-based organization
CEA	=	Central Environment Authority
DBO	=	design build operate
EARF	=	environmental assessment review framework
EIA	=	environment impact assessment
EMP	=	Environmental Management Plan
GAP	=	gender action plan
ICB	=	international competitive bidding
ICTAD	=	Institute for Construction, Training and Development
IEE	=	initial environmental examination
JMC	=	Jaffna Municipal Council
MDG	=	Millennium Development Goal
MCPWS	=	Ministry of City Planning and Water Supply
NCB	=	national competitive bidding
NPC	=	National Provincial Council
NPCC	=	national project coordination committee
NGO	=	nongovernment organization
NWSDB	=	National Water Supply and Drainage Board
O&M	=	operation and maintenance
PAM	=	project administration manual
PEIC	=	Project Engineering and Institutional Consulting
PIU	=	project implementation unit
PMCIU	=	project management, coordination, and implementation unit
PMSC	=	Project Management and Supervision Consultant
PPMS	=	project performance monitoring system
QCBS	=	quality- and cost-based selection
ROW	=	right-of-way
SOE	=	statement of expenditure
SPS	=	Safeguard Policy Statement
TOR	=	terms of reference
WRB	=	Water Resources Board



## **CONTENTS**

	<b>Page</b>
I. PROJECT DESCRIPTION	1
II. IMPLEMENTATION PLANS	4
A. Project Readiness Activities	4
B. Overall Project Implementation Plan	5
III. PROJECT MANAGEMENT ARRANGEMENTS	7
A. PROJECT IMPLEMENTATION ORGANIZATIONS – ROLES AND RESPONSIBILITIES	7
B. Key Persons Involved in Implementation	8
C. Project Organization Structure	9
IV. COSTS AND FINANCING	10
A. Cost Estimates Preparation and Revisions	10
B. Key Assumptions	11
C. Detailed Cost Estimates by Expenditure Category	12
D. Allocation and Withdrawal of Loan Proceeds	14
E. Detailed Cost Estimates by Financier	15
F. Detailed Cost Estimates by Outputs and Components	16
G. Detailed Cost Estimates by Year	17
H. Contract and Disbursement S-curve	18
I. Funds Flow Diagram	19
V. FINANCIAL MANAGEMENT ASSESSMENT	20
A. Financial Management Assessment	20
B. Disbursement	24
C. Accounting	26
D. Auditing and Public Disclosure	26
VI. PROCUREMENT AND CONSULTING SERVICES	27
A. Advance Contracting and Retroactive Financing	27
B. Procurement of Goods, Works, and Consulting Services	27
C. Procurement Plan	28
D. Consultant's Terms of Reference	28
VII. SAFEGUARDS	28
VIII. GENDER AND SOCIAL DIMENSIONS	31
IX. PERFORMANCE MONITORING, EVALUATION, REPORTING AND COMMUNICATION	32
A. Project Design and Monitoring Framework	32
B. Monitoring	35
C. Evaluation	37
D. Reporting	37
E. Stakeholder Communication Strategy	38
X. ANTICORRUPTION POLICY	38
XI. ACCOUNTABILITY MECHANISM	38

XII.	RECORD OF PAM CHANGES	39
------	-----------------------	----

Appendixes

1.	Overall project map	39
2.	List of project covered towns	40
3.	Procurement Plan	46
4.	Terms of Reference of Consultancy Assignment	53
5.	Gender Action Plan	81
6	Community Consultation and Participation Action Plan	83

### **Project Administration Manual Purpose and Process**

The project administration manual (PAM) describes the essential administrative and management requirements to implement the project on time, within budget, and in accordance with government and Asian Development Bank (ADB) policies and procedures. The PAM should include references to all available templates and instructions either through linkages to relevant URLs or directly incorporated in the PAM.

The Ministry of City Planning and Water Supply, and the Ministry of Provincial Councils and Local Government are the executing agencies for the water supply component and irrigation component, respectively. The National Water Supply and Drainage Board and Northern Provincial Council-Provincial Irrigation Department are the project management, coordination, and implementing agencies for the respective components. They are wholly responsible for the implementation of ADB financed projects, as agreed jointly between the borrower and ADB, and in accordance with Government and ADB's policies and procedures. ADB staff is responsible to support implementation including compliance by executing and implementing agencies of their obligations and responsibilities for project implementation in accordance with ADB's policies and procedures.

At loan negotiations, the borrower and ADB shall agree to the PAM and ensure consistency with the loan agreement. Such agreement shall be reflected in the minutes of the loan negotiations. In the event of any discrepancy or contradiction between the PAM and the loan agreement, the provisions of the loan agreement shall prevail.

After ADB Board approval of the project's report and recommendations of the President (RRP) changes in implementation arrangements are subject to agreement and approval pursuant to relevant government and ADB administrative procedures (including the Project Administration Instructions) and upon such approval they will be subsequently incorporated in the PAM.





## I. PROJECT DESCRIPTION

1. The project supports the improvement of drinking water supply in urban areas of Jaffna Peninsula, which is the less-developed region of Sri Lanka. The additional financing will finance changes in project scope and meet cost overruns to complete the current project,<sup>1</sup> which is performing on track but requires restructuring to deliver the project outcome as originally approved. The additional finance includes (i) improved water supply service infrastructure; (ii) strengthened water resource protection and management; and (iii) strengthened institutional capacity of the National Water Supply and Drainage Board (NWSDB).

2. **Asian Development Bank support for Jaffna.** The Jaffna Peninsula, which lies in the northernmost part of Sri Lanka, was one of the worst-affected areas from years of conflict and is an economically lagging region.<sup>2</sup> After the conflict ended in 2009, Jaffna has been experiencing rapid urbanization, with population expected to grow from 610,000 in 2016 to 900,000 by 2030, increasing the demand for urban basic services including drinking water. The Asian Development Bank (ADB) approved the Jaffna and Kilinochchi Water Supply and Sanitation Project in November 2010.<sup>3</sup> The project was the first initiative by a development partner to support the region's post conflict development and reconciliation efforts. The project aimed to channel approximately 27,000 cubic meters per day (m<sup>3</sup>/day) of raw water approximately 50 kilometers (km) from Iranamadu irrigation tank in Jaffna peninsula to treat and distribute drinking water to the water scarce Jaffna and nearby towns. It also aimed to improve sanitation infrastructure in Jaffna town and water resource management in the peninsula.

3. **Performance of current project and its importance.** The current project suffered significant startup setbacks resulting in implementation delays and cost overruns.<sup>4</sup> The current project was hampered by local farmers' objection to use of Iranamadu tank's water for drinking water purposes, despite consensus reached on water sharing at the loan appraisal stage.<sup>5</sup> The remote project location in a post-conflict area also aggravated the challenges due to weak implementation capacities. As of 2017, the ADB-financed overhead water tanks and the 51 km water pipes have been constructed. Considering the ongoing and completed works under the current project, and its critical importance to the rehabilitation and reconstruction program of the Northern Province, the benefits of restructuring the current project outweigh those of cancelling it. The government is committed to the current project and has dedicated significant resources to improve project implementation including identifying a new water supply source and meeting the cost overruns. As of October 2017, the cumulative current project contract awards totaled \$62 million (75% of the ADB loan amounts), and disbursements totaled \$35.4 million (43% of ADB

---

<sup>1</sup> ADB. 2010. *Report and Recommendation of the President to the Board of Directors: Proposed Loan to the Democratic Socialist Republic of Sri Lanka Jaffna and Kilinochchi Water Supply and Sanitation Project*. Manila (Loan 2790-SRI). The project title was revised to Jaffna and Kilinochchi Water Supply Project in the project concept paper of additional financing, which was approved by ADB on 11 March 2016.

<sup>2</sup> The region has high income poverty and income inequality. Poverty incidence in the Northern Province is estimated to be 10.9%, compared with 6.7% for the country as a whole. (Household Income and Expenditure Survey 2012/2013, Ministry of Policy Planning Economics Affairs, Child Youth and Cultural Affairs, Sri Lanka).

<sup>3</sup> The Project is financed by an ADB loan of \$90 million, along with €35 million (approximately \$40 million) co-financing from Agence Française de Développement (AFD) and was declared effective in May 2011.

<sup>4</sup> Cost overruns are due to underestimation of quantity and cost of the works during the project feasibility study that was undertaken during the conflict period and as a result of inflation in last 7 years.

<sup>5</sup> A Memorandum of Understanding was signed in 2007 between NWSDB and the Ministry of Agriculture and Irrigation of the North East Provincial Council to share irrigation water for farmers with the Jaffna District.

loan amounts). The project implementation is rated as on track, and safeguards compliance has been met.<sup>6</sup>

4. **Restructuring of the project scope and overall project cost.** The current project needs restructuring primarily to reflect the change of water source from Iranamadu tank to a desalination plant and to strengthen the water supply component. The following changes are proposed: (i) inclusion of a desalination plant using a design build operate (DBO) contract; (ii) cancellation of water treatment plant and bulk water transportation from Iranamadu tank originally cofinanced by the Agence Française de Développement (AFD); (iii) exclusion of the sewerage component;<sup>7</sup> (iv) inclusion of the household water connections; and (v) inclusion of water resource management and outreach activities. Based on the revised cost estimates and the cancellation of the AFD financing, the government has requested additional financing of \$120 million from ADB to meet the change in project scope and cost overruns.<sup>8</sup> The closing date of current loan needs to be extended from 14 August 2017 to 31 December 2020 to complete the revised project scope through the current project and the proposed additional financing.<sup>9</sup>

5. **Additional financing and eligibility criteria.** Taking into account the proposed restructuring, the project meets the eligibility criteria for additional financing.<sup>10</sup> The overall project (i) remains technically feasible, economically viable, and financially sound; (ii) is accorded high priority by the government; (iii) is consistent with the current project's development objectives; and (iv) is consistent with the country partnership strategy, which prioritizes inclusive and sustainable economic growth, including providing drinking water in the post conflict area.<sup>11</sup>

6. **Impact and Outcome.** The impact will be improved health and human development in urban areas of Jaffna Peninsula aligned with the government strategy.<sup>12</sup> The outcome will be improved access to safe drinking water in targeted urban areas in the Jaffna Peninsula. The original and aggregate targets are in the revised design and monitoring framework (DMF, in Chapter IX, Performance Monitoring, Evaluation, Reporting and Communication).

7. **Outputs.** The project supports the restructuring of the current project. It will (i) finance the cost overrun under the current project; and (ii) support the additional activities of the desalination plant and related works under Output 1 and water resource management plan under Output 3 below. The overall project has the following outputs.

8. **Output 1: Water supply infrastructure and service in Jaffna Peninsula improved.** The overall project will (i) install a desalination plant of 24,000 m<sup>3</sup> per day capacity; (ii) install 700 kilometers of water mains and distribution pipes; (iii) install 60,000 metered new water connections; and (iv) operate and maintain the desalination plant for 5 years. The desalination plant will be designed, constructed, operated and maintained by a single contractor using DBO and performance-based contract. The operation and maintenance (O&M) period under the DBO contract will be 7 years, out of which 5 years will be covered by the project and the remaining 2-

<sup>6</sup> Summary of Project Performance accessible from the list of linked documents of Report and Recommendation of the President.

<sup>7</sup> The government is discussing with AFD to fund the sewage management through a separate arrangement. The technical assistance under the additional financing will support development of sanitation plans including septage management.

<sup>8</sup> The additional financing was included in ADB. 2014. *Country Operations Business Plan: Sri Lanka, 2015-2017*. Manila.

<sup>9</sup> The current project is financing the water supply networks and the additional financing will finance the desalination plant. Constructions need to be synchronized to ensure that the pipes are not constructed well ahead of the plant.

<sup>10</sup> ADB. 2010. *Additional Financing: Enhancing Development Effectiveness*. Manila

<sup>11</sup> ADB. 2015. *Interim Country Partnership Strategy: Sri Lanka, 2015-2016*. Manila.

<sup>12</sup> Government of Sri Lanka. 2006. *Vision for a New Sri Lanka*. Colombo.

year period will be financed by the government. The overall project will support the monitoring and independent review of the desalination plant services and the DBO contractor performance. The DBO contractor will ensure (i) proper bulk water metering; (ii) adequate water pressure at the turning point; and (iii) supplied water complies with national quality standards for drinking water. The NWSDB will manage the water transfer and distribution systems, and ensure timely payments of fixed and performance-linked variable fees to the DBO contractor. The DBO contractor will train the NWSDB staff in operating the assets during the O&M period and will turn over the desalination plant to NWSDB at the end of 7 years. The NWSDB has committed to the continuity of O&M of desalination plant beyond the contract period. Overall project map is in Appendix 1, and the list of project covered towns is in Appendix 2.

9. **Output 2: Headworks at Iranamadu Tank improved.** The overall project will support enhancement and strengthening of headworks at the Iranamadu Tank to increase its storage capacity to 148 million m<sup>3</sup>. Iranamadu Tank remains an important drinking water resource for Jaffna, especially when the demand for drinking water is expected to increase significantly in the future. This output is expected to be completed by end of 2017 under the current project, with the Ministry of Local Government and Provincial Council as executing agency, and will not be covered by the additional financing.

10. **Output 3: Water resource management systems and capacity strengthened.** The overall project will support long-term water resource management and capacity building for NWSDB. This will include (i) developing a detailed action plan for groundwater and surface water monitoring and rehabilitation in Jaffna; (ii) conducting awareness campaigns on water sharing from Iranamadu Tank; (iii) completing a water resources management plan for Iranamadu Tank; and (iv) community development in Vadamarachchi village, where the desalination plant will be located. Capacity development will be carried out under the attached technical assistance as described in TA paper in the linked documents.

## II. IMPLEMENTATION PLANS

### A. PROJECT READINESS ACTIVITIES

11. Project readiness activities, responsibilities, and estimated timeframes are indicated in Table 1:

**Table 1: Project Readiness Activities**

Indicative activities	Months and Years																				Responsible Party
	2017										2018										
	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	
Advance Contracting Actions																					Executing agency through implementing agencies
Establish project implementation arrangements																					Executing agency through implementing agencies
ADB Board approval																					ADB
Loan signing																					Government/ADB
Government legal opinion																					Government
Government budget inclusion																					Government
Loan effectiveness																					Government/ADB

ADB = Asian Development Bank

## B. OVERALL PROJECT IMPLEMENTATION PLAN

### Table 2: Project Implementation

[illegible]

Indicative Activities	2017				2018				2019				2020				2021				2022				2023				2024				2025			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
A. Design and Monitoring Framework																																				
Component 3: Building Management and Implementation Capacity																																				
Output 3																																				
Water resource management plan and activities developed and capacity of NWSDB strengthened																																				
3.1 Develop water resource management plan including detailed actions for ground and surface water monitoring and rehabilitation																																				
3.2. Conduct water sharing awareness-raising activities for farmers with women comprising at least 30% of the participants																																				
3.3. Complete detailed design and construction of living infrastructure in Vadamarachchi village																																				
3.4. Establish gender budget cell in the NWSDB																																				
3.5. Conduct water conservation, environmental, and hygiene awareness-raising activities, with women participants from 20% below poverty line households and 15% from households headed by females																																				
3.6. Conduct workshops and trainings on managing and monitoring DBO performance-based contracts with at least 30% participation by women																																				
3.7. Train NWSDB (JRO) on use of financial management methods																																				
3.8. Complete water resource management plan for Iranamadu Irrigation tank																																				

DBO = design-build-operate, JRO = Japan Representative Office, NWSDB = National Water Supply and Drainage Board.

### III. PROJECT MANAGEMENT ARRANGEMENTS

#### A. PROJECT IMPLEMENTATION ORGANIZATIONS – ROLES AND RESPONSIBILITIES

Project Implementation Organizations	Management Roles and Responsibilities
Executing agency	Ministry of City Planning and Water Supply (MCPWS)
Ministry of City Planning and Water Supply (MCPWS)	<ul style="list-style-type: none"> <li>➤ Through the National Water Supply and Drainage Board (NWSDB), particularly its North Regional Support Centre (NRSC), responsible for overall coordination of project execution and implementation of the Water Supply component</li> </ul>
Project specific management, coordination, and implementation unit (PMCIU)	<p>As MCPWS will be the executing agency and NWSDB will be the implementing agency for part of the project, the PMCIU at NWSDB will also function as implementing unit (PMCIU). The PMCIU will assist the MCPWS in: (i) project management; and (ii) function as project implementation unit to assist in day-to-day project implementation and operation of water supply, water resource management, and capacity building components:</p> <ul style="list-style-type: none"> <li>➤ preparing overall project implementation plan and consolidated annual work plan;</li> <li>➤ appointing Project Engineering and Institutional Consulting (PEIC) and individual consultants;</li> <li>➤ helping PIU in implementing respective components;</li> <li>➤ approving design of investment components prepared by PIU;</li> <li>➤ preparing standard bid documents to comply with ADB guidelines;</li> <li>➤ monitoring the bidding process, reviewing the bid's evaluation and preparing bid evaluation reports for approval by ADB;</li> <li>➤ procuring equipment and services for project;</li> <li>➤ reviewing community awareness and participation programs;</li> <li>➤ ensuring project compliance with loan and grant covenants;</li> <li>➤ coordinating with ADB on matters related to disbursements;</li> <li>➤ monitoring the DBO contract all the time;</li> <li>➤ maintaining project documents and submitting timely reports to ADB and the Government including audit reports;</li> <li>➤ organize monitoring and evaluation activities;</li> <li>➤ oversee implementation and monitoring of social and environmental safeguards;</li> <li>➤ supervise the implementation of the gender action plan and other activities under the summary poverty reduction and social strategy; and</li> <li>➤ obtain necessary clearances.</li> </ul>
National Steering Committee (NSC)	<ul style="list-style-type: none"> <li>➤ oversee the Project at national level; and</li> <li>➤ advise and guide the Project on strategic and policy decisions.</li> </ul>
Implementing agency	National Water Supply and Drainage Board (NWSDB)

Project Implementation Organizations	Management Roles and Responsibilities
ADB	<ul style="list-style-type: none"> <li>➤ monitor and review overall implementation in consultation with the executing agencies/implementing agencies including: project implementation schedule; actions required with reference to the summary poverty reduction &amp; social strategy, gender action plan, environment management plan, and resettlement plan if applicable; timeliness of budgetary allocations and counterpart funding; project expenditures progress with procurement and disbursement, statement of expenditures when applicable; compliance with loan covenants; and likelihood of attaining Project development objectives.</li> </ul>

ADB = Asian Development Bank, MCPWS = Ministry of City Planning and Water Supply, NSC = National Steering Committee, NWSDB = National Water Supply and Drainage Board, PEIC = Project Engineering and Institutional Consulting, PMCIU = project management, coordination and implementation unit, RSC (N) = Regional Support Centre (North).  
Source: Asian Development Bank

## B. KEY PERSONS INVOLVED IN IMPLEMENTATION

### Executing Agency

Ministry of City Planning and  
Water Supply

Sarath Chandrasiri Vithana  
Secretary  
+94 11 2177212  
[secretary@mcpws.gov.lk](mailto:secretary@mcpws.gov.lk)  
35 'Lak Diya Medura', New Parliament Road  
Pellawatta, Battramulla  
Sri Lanka

### Implementing Agency

National Water Supply and  
Drainage Board

D.U.Sumanasekara  
General Manager  
+94 11 2636449  
[gm@waterboard.lk](mailto:gm@waterboard.lk)  
Galle Road  
Ratmalana, Sri Lanka

### ADB

Urban Development Division of  
South Asia Regional Department

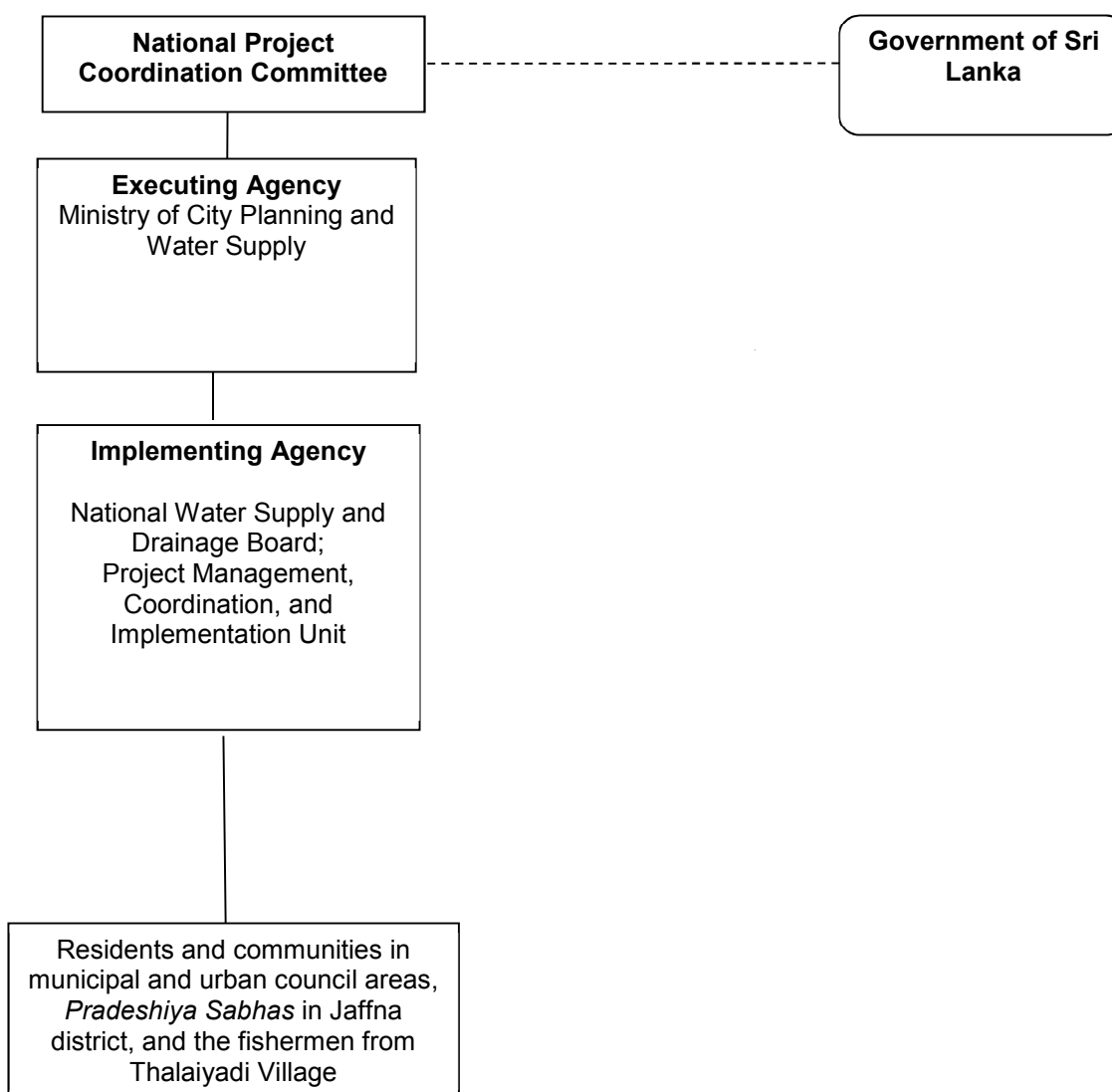
Sekhar Bonu  
Director, SAUW  
+63 2 6325628  
[sbonu@adb.org](mailto:sbonu@adb.org)

Mission Leader

Jingmin Huang  
Principal Urban Development Specialist, SAUW  
+63 2 6326181  
[jhuang@adb.org](mailto:jhuang@adb.org)



### C. PROJECT ORGANIZATION STRUCTURE



Source: Asian Development Bank

## IV. COSTS AND FINANCING

### A. COST ESTIMATES PREPARATION AND REVISIONS

12. The proposed additional financing is estimated to cost \$153 million. The government has requested (i) a regular loan of \$95 million; and (ii) a concessional loan of \$25 million, both from ADB's ordinary capital resources to help finance the project. The regular loan will have a 30-year term, including a grace period of 7 years; an annual interest rate determined in accordance with ADB's London interbank offered rate (LIBOR)-based lending facility; a commitment charge of 0.15% per year; and such other terms and conditions set forth in the loan agreement. Based on the straight-line method, the average maturity is 18.75 years, and the maturity premium payable to ADB is 0.20% per year.<sup>13</sup> The concessional loan will have a 25-year term, including a grace period of 5 years; an interest rate of 2% per year during the grace period and thereafter, and such other terms and conditions set forth in the loan agreement.

13. The ADB loan of \$120 million will finance (i) part of civil works; (ii) equipment; (iii) consulting services; (iii) PMCIU cost; (iv) financial charges; and (iv) part of contingencies on the loan.<sup>14</sup> The government will contribute \$33 million to cover (i) taxes and duties; (ii) land acquisition and resettlement; and (iii) part of civil works and contingencies. The government has assured that it will meet any financing shortfall to ensure that project outputs are fully implemented.

**Table 3: Project Investment Plan (\$ million)**

Item	Current Amount <sup>a</sup>	Additional Financin <sup>b</sup>	Total
<b>A. Base Cost<sup>c</sup></b>			
1. Water supply infrastructure and service in Jaffna area improved	75.1	121.6	196.7
2. Headworks at Iranamadu water tank improved	14.5	-	14.5
3. Water management system and capacity strengthened	11.8	1.5	13.3
<b>Subtotal (A)</b>	<b>101.4</b>	<b>123.1</b>	<b>224.5</b>
<b>B. Contingencies<sup>d</sup></b>	<b>6.3</b>	<b>13.7</b>	<b>20.0</b>
<b>C. Financing Charges During Implementation<sup>e</sup></b>	<b>5.3</b>	<b>16.2</b>	<b>21.5</b>
<b>Total (A+B+C)</b>	<b>113.0</b>	<b>153.0</b>	<b>266.0</b>

<sup>a</sup> Refers to the net amount of the current project as changed without the AFD financing of \$40 million and related taxes and duties. Includes taxes and duties of \$19.5 million financed from government resources.

<sup>b</sup> Includes taxes and duties of \$16.8 million to be financed from government resources by cash contribution.

<sup>c</sup> In mid-2017 prices; Exchange rate of \$1 = LKR152 is used.

<sup>d</sup> Physical contingencies computed at 5.0% for civil works and equipment. Price contingencies computed at 1.4%–1.5% on foreign exchange costs and 5.5%–6.7% on local currency costs; includes provision for potential exchange rate fluctuation under the assumption of a purchasing power parity exchange rate.

<sup>e</sup> Includes interest and commitment charges. Interest during construction for a regular ordinary capital resources (OCR) loan has been computed at the 5-year US dollar fixed-swap rate (1.8%) plus a spread of 0.5% and a maturity premium of 0.2%. Commitment charges for a regular OCR loan are 0.15% per year to be charged on the undisbursed loan amount. Interest during construction for a concessional OCR loan has been computed at 2% per annum.

Source: Asian Development Bank estimates.

<sup>13</sup> The maturity-based premium of 0.20% is based on the loan terms and the government's choice of repayment option and dates.

<sup>14</sup> Interest during construction will be capitalized and charged to the ADB loan.

**Table 4: Financing Plan**

<b>Source</b>	<b>Current<sup>a</sup></b>		<b>Additional Financing</b>		<b>Total</b>	
	<b>Amount (\$ million)</b>	<b>Share of Total (%)</b>	<b>Amount (\$ million)</b>	<b>Share of Total (%)</b>	<b>Amount (\$ million)</b>	<b>Share of Total (%)</b>
Asian Development Bank						
- OCR (regular loan)	20.0	17.7	95.0	62.1	115.0	43.2
- OCR (concessional loan)	70.0	61.9	25.0	16.3	95.0	35.7
Government	23.0	20.4	33.0	21.6	56.0	21.1
<b>Total</b>	<b>113.0</b>	<b>100.0</b>	<b>153.0</b>	<b>100.0</b>	<b>266.0</b>	<b>100.0</b>

OCR = ordinary capital resources

Source: Asian Development Bank

**B. KEY ASSUMPTIONS**

14. The following key assumptions underpin the cost estimates and financing plan:

- (i) Exchange rate: Sri Lankan rupees (LKR) 152 = \$1.00 (as of June 2017); and
- (ii) Price contingencies based on expected cumulative inflation over the implementation period (Table 5); and
- (iii) In-kind contributions cannot be easily measured and have not been quantified

**Table 5: Escalation Rates for Price Contingency Calculation (%)**

<b>Item</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>	<b>Average</b>
Foreign rate of price inflation	6.7%	6.0%	5.5%	5.5%	5.5%	5.5%	5.5%	5.5%	5.5%	5.7%
Domestic rate of price inflation	1.4%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%

Source(s): Asian Development Bank estimates.

### C. DETAILED COST ESTIMATES BY EXPENDITURE CATEGORY

**Table 6: Cost Estimates by Expenditure Category (\$ million)**

Item	Local Currency (\$ million)	Foreign Exchange (\$ million)	Total Cost (\$ million)	Total Net Cost (\$ million)	Tax	Share of Total Base Cost (%)
<b>A. Investment Costs</b>						
1. Civil Works						
(i) SWRO desalination component	7.0	63.0	70.0	60.3	9.7	56.9%
(ii) JMC Distribution system	1.8	16.2	18.0	15.5	2.5	14.6%
(iii) Water tower and distribution system	0.4	3.6	4.0	3.5	0.6	3.3%
(iv) Distribution system (2 additional)	2.2	19.8	22.0	19.0	3.0	17.9%
2. Equipment	0.8	0.8	1.6	1.4	0.2	1.3%
3. Resettlement	-	1.0	1.0	1.0	-	0.8%
4. Project management and capacity development	1.0	3.8	4.8	4.1	0.7	3.9%
<b>Subtotal (A)</b>	<b>13.2</b>	<b>108.3</b>	<b>121.4</b>	<b>104.8</b>	<b>16.6</b>	<b>98.6%</b>
<b>B. Recurrent Costs</b>						
1. Incremental administrative costs	-	1.7	1.7	1.4	0.2	1.4%
<b>Subtotal (B)</b>	<b>-</b>	<b>1.7</b>	<b>1.7</b>	<b>1.4</b>	<b>0.2</b>	<b>1.4%</b>
<b>Total Base Cost</b>	<b>13.2</b>	<b>109.9</b>	<b>123.1</b>	<b>106.3</b>	<b>16.8</b>	<b>100.0%</b>
<b>C. Contingencies</b>						
1. Physical contingencies	0.6	5.2	5.8	5.8	-	4.7%
2. Price contingencies	0.9	7.0	7.9	7.9	-	6.4%
<b>Subtotal (C)</b>	<b>1.5</b>	<b>12.2</b>	<b>13.7</b>	<b>13.7</b>	<b>-</b>	<b>11.1%</b>
<b>D. Financing Charges During Implementation</b>						
1. Interest during construction	-	16.0	16.0	16.0	-	13.0%
2. Commitment charges	-	0.3	0.3	0.3	-	0.2%
<b>Subtotal (D)</b>	<b>-</b>	<b>16.2</b>	<b>16.2</b>	<b>16.2</b>	<b>-</b>	<b>13.2%</b>
<b>Total Project Cost (A+B+C+D)</b>	<b>14.7</b>	<b>138.3</b>	<b>153.0</b>	<b>136.2</b>	<b>16.8</b>	<b>124.3%</b>

JMC = Jaffna Municipal Council, SWRO = seawater reverse osmosis.

Note: 1. Numbers may not sum precisely because of rounding.

2. The costs of the actual audits of the project are minor and will be borne by the government.

3. Item A1(iv) on \$22 million will finance the cost overrun of two contracts for the ongoing project.

4. Item A4 on project management and capacity development of \$4.8 million includes: (a) \$2 million for desalination component management consultancy of national firm; (b) \$0.35 million for the cost of independent consultants from the close of the piggyback TA to the end of O&M; (c) \$0.35 million for the cost of independent monitoring and review body for monitoring the operating service for 7 years; (d) \$0.5 million for environment survey budget for a firm; (e) \$0.3 million for independent environmental monitoring consultants; and (f) \$1.3 million (five packages) for Output 3 (i) developing a detailed action plan for ground and surface water monitoring and rehabilitation in Jaffna; (ii) conducting awareness campaign on water sharing from Iranamadu tank; and (iii) completing a water resources management plan for Iranamadu tank. Consultant terms of reference are in Appendix 4.

5. Item B1. Incremental administrative costs include: (a) \$0.1 million for incremental cost resettlement plan; (b) \$0.1 million for proposed resettlement consultant (TOR is in RP report); (c) \$0.1 million for budget of gender action plan (details in Appendix 5); (d) \$0.12 million for budget of participation and community

mobilization (details in Appendix 6); (e) \$0.1million for Grievance Redress Committee training; and e) \$0.05 million for social and gender consultant (TOR is in Appendix 4); and (f) others for PMCIU cost.

Source: Asian Development Bank estimates.

**D. ALLOCATION AND WITHDRAWAL OF LOAN PROCEEDS****Table 7: Allocation and Withdrawal of Loan Proceeds**

<b>No.</b>	<b>Item</b>	<b>Total Amount Allocated for ADB Financing (\$) Category</b>	<b>Basis for Withdrawal from the Loan Account</b>
1	Civil works (component B as described in loan agreement)	68,640,000	78% of total expenditure claimed*
2	Equipment, project management and design supervision, incremental costs (component B as described in loan agreement)	6,949,000	86.2% of total expenditure claimed*
3	Interest during implementation, commitment charges	14,617,000	100% of amount due
4	Unallocated	4,794,000	
<b>Total</b>		<b>95,000,000</b>	

Source: Asian Development Bank

**Table 8: Allocation and Withdrawal of Loan Proceeds**

<b>No.</b>	<b>Item</b>	<b>Total Amount Allocated for ADB Financing (\$) Category</b>	<b>Basis for Withdrawal from the Loan Account</b>
1	Civil works (component A as described in loan agreement)	20,306,000	78% of total expenditure claimed <sup>a</sup>
2	Interest during implementation	1,630,000	100% of amount due
3	Unallocated	3,064,000	
<b>Total</b>		<b>25,000,000</b>	

<sup>a</sup> Subject to the conditions for withdrawal.

Source: Asian Development Bank

## E. DETAILED COST ESTIMATES BY FINANCIER

**Table 9: Detailed Cost Estimates by Financier (\$ million)**

Item	Regular OCR		Concessional OCR		Government of Sri Lanka				Total Cost
	Amount \$	Share %	Amount \$	Share %	Tax	NonTax	Total	Share	
					Amount (\$)			%	
<b>A. Investment Costs</b>									
1. Civil works									
(i) SWRO desalination component <sup>1</sup>	54.6	78.0%	-	-	9.7	5.7	15.4	22.0%	70.0
(ii) JMC Distribution system <sup>1</sup>	14.0	78.0%	-	-	2.5	1.5	4.0	22.0%	18.0
(iii) Water tower and distribution system <sup>2</sup>	-	-	3.1	78.0%	0.6	0.3	0.9	22.0%	4.0
(iv) Distribution system (2 additional) <sup>2</sup>	-	-	17.2	78.0%	3.0	1.8	4.8	22.0%	22.0
2. Equipment <sup>1</sup>	1.4	86.2%	-	-	0.2	-	0.2	13.8%	1.6
3. Land acquisition and resettlement	-	-	-	-	-	1.0	1.0	100.0%	1.0
4. Project management and capacity development <sup>1</sup>	4.1	86.2%	-	-	0.7	-	0.7	13.8%	4.8
<b>Subtotal (A)</b>	<b>74.1</b>	<b>61.1%</b>	<b>20.3</b>	<b>16.7%</b>	<b>16.6</b>	<b>10.4</b>	<b>27.0</b>	<b>22.2%</b>	<b>121.4</b>
<b>B. Recurrent Costs</b>									
1. Incremental administrative costs	1.4	86.2%	-	-	0.2	-	0.2	13.8%	1.7
<b>Subtotal (B)</b>	<b>1.4</b>	<b>86.2%</b>	<b>-</b>	<b>-</b>	<b>0.2</b>	<b>-</b>	<b>0.2</b>	<b>13.8%</b>	<b>1.7</b>
<b>Total Base Cost</b>	<b>75.6</b>	<b>61.4%</b>	<b>20.3</b>	<b>16.5%</b>	<b>16.8</b>	<b>10.4</b>	<b>27.2</b>	<b>22.1%</b>	<b>123.1</b>
<b>C. Contingencies</b>									
1. Physical contingencies	2.7	46.1%	0.7	11.5%	-	2.5	2.5	42.5%	5.8
2. Price contingencies	2.1	27.0%	2.4	30.5%	-	3.3	3.3	42.5%	7.9
<b>Subtotal (C)</b>	<b>4.8</b>	<b>35.1%</b>	<b>3.1</b>	<b>22.4%</b>	<b>-</b>	<b>5.8</b>	<b>5.8</b>	<b>42.5%</b>	<b>13.7</b>
<b>D. Financial Charges During Implementation</b>									
1. Interest during construction	14.3	89.8%	1.6	10.2%	-	-	-	-	16.0
2. Commitment charges	0.3	100.0%	-	-	-	-	-	-	0.3
<b>Subtotal (D)</b>	<b>14.6</b>	<b>90.0%</b>	<b>1.6</b>	<b>10.0%</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>16.2</b>
<b>Total Project Cost (A+B+C+D)</b>	<b>95.0</b>	<b>62.1%</b>	<b>25.0</b>	<b>16.3%</b>	<b>16.8</b>	<b>16.2</b>	<b>33.0</b>	<b>21.6%</b>	<b>153.0</b>

JMC = Jaffna Municipal Council, OCR = ordinary concessional resources, SWRO = seawater reverse osmosis.

- Note:
1. Component B as described in loan agreement.
  2. Component A as described in loan agreement.
  3. Numbers may not sum precisely because of rounding.
  4. The costs of the annual audits of the project are minor and will be borne by the government.

Source: Asian Development Bank estimates.

## F. DETAILED COST ESTIMATES BY OUTPUTS AND COMPONENTS

**Table 10: Detailed Cost Estimates by Outputs and Components (\$ million)**

Item	Total Cost	Output 1		Output 2		Output 3	
		Amount \$	Share %	Amount \$	Share %	Amount \$	Share %
<b>A Investment Costs</b>							
1. Civil works							
(i) SWRO desalination component	70.0	70.0	100.0%	-	-	-	-
(ii) JMC Distribution system	18.0	18.0	100.0%	-	-	-	-
(iii) Water tower and distribution system	4.0	4.0	100.0%	-	-	-	-
(iv) Distribution system (2 additional)	22.0	22.0	100.0%	-	-	-	-
2. Equipment	1.6	1.6	100.0%	-	-	-	-
3. Land acquisition and resettlement	1.0	1.0	100.0%	-	-	-	-
4. Project management and capacity development	4.8	3.3	68.7%	-	-	1.5	31.3%
<b>Subtotal (A)</b>	<b>121.4</b>	<b>119.9</b>	<b>98.8%</b>	<b>-</b>	<b>-</b>	<b>1.5</b>	<b>1.2%</b>
<b>B Recurrent Costs</b>							
1. Incremental administrative costs	1.7	1.7	100.0%	-	-	-	-
<b>Subtotal (B)</b>	<b>1.7</b>	<b>1.7</b>	<b>100.0%</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Total Base Cost</b>	<b>123.1</b>	<b>121.6</b>	<b>98.8%</b>	<b>-</b>	<b>-</b>	<b>1.5</b>	<b>1.2%</b>
<b>C Contingencies</b>							
1. Physical contingencies	5.8	5.7	98.8%	-	-	0.1	1.2%
2. Price contingencies	7.9	7.8	98.8%	-	-	0.1	1.2%
<b>Subtotal (C)</b>	<b>13.7</b>	<b>13.5</b>	<b>98.8%</b>	<b>-</b>	<b>-</b>	<b>0.2</b>	<b>1.2%</b>
<b>D Financial Charges During Implementation</b>							
1. Interest during construction	16.0	15.8	98.8%	-	-	0.2	1.2%
2. Commitment charges	0.3	0.3	98.8%	-	-	0.1	1.2%
<b>Subtotal (D)</b>	<b>16.2</b>	<b>16.0</b>	<b>98.8%</b>	<b>-</b>	<b>-</b>	<b>0.2</b>	<b>1.2%</b>
<b>Total Project Cost (A+B+C+D)</b>	<b>153.0</b>	<b>151.1</b>	<b>98.8%</b>	<b>-</b>	<b>-</b>	<b>1.9</b>	<b>1.2%</b>

JMC = Jaffna Municipal Council, SWRO = seawater reverse osmosis

Note: 1. Numbers may not sum precisely because of rounding.

2. The costs of the annual audits of the project are minor and will be borne by the government.

Source: Asian Development Bank Estimates.



## G. DETAILED COST ESTIMATES BY YEAR

**Table 11: Detailed Cost Estimates by Year (\$ million)**

Item	Total	2018	2019	2020	2021	2022	2023	2024	2025
<b>A. Investment Costs</b>									
1. Civil Works									
(i) SWRO desalination component	70.0	15.0	30.0	8.0	4.0	4.0	4.0	4.0	1.0
(ii) JMC Distribution system	18.0	6.3	5.4	5.4	0.9	-	-	-	-
(iii) Water tower and distribution system	4.0	0.9	1.6	1.3	0.3	-	-	-	-
(iv) Distribution system (2 additional)	22.0	9.6	11.1	1.3	-	-	-	-	-
2. Equipment	1.6	-	0.8	0.8	-	-	-	-	-
3. Resettlement	1.0	-	0.5	0.5	-	-	-	-	-
4. Project management and capacity development	4.8	0.4	1.2	1.2	0.4	0.4	0.4	0.4	0.4
<b>Subtotal (A)</b>	<b>121.4</b>	<b>32.2</b>	<b>50.5</b>	<b>18.4</b>	<b>5.6</b>	<b>4.4</b>	<b>4.4</b>	<b>4.4</b>	<b>1.4</b>
<b>B. Recurrent Costs</b>									
1. Incremental administrative costs	1.7	-	0.6	0.6	0.6	-	-	-	-
<b>Subtotal (B)</b>	<b>1.7</b>	<b>-</b>	<b>0.6</b>	<b>0.6</b>	<b>0.6</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Total Base Cost</b>	<b>123.1</b>	<b>32.2</b>	<b>51.1</b>	<b>19.0</b>	<b>6.2</b>	<b>4.4</b>	<b>4.4</b>	<b>4.4</b>	<b>1.4</b>
<b>C. Contingencies</b>									
1. Physical contingencies	5.8	1.6	2.4	0.8	0.3	0.2	0.2	0.2	0.1
2. Price contingencies	7.9	1.3	2.9	1.4	0.6	0.5	0.5	0.6	0.2
<b>Subtotal (C)</b>	<b>13.7</b>	<b>2.9</b>	<b>5.3</b>	<b>2.2</b>	<b>0.8</b>	<b>0.7</b>	<b>0.7</b>	<b>0.8</b>	<b>0.3</b>
<b>D. Financing Charges</b>									
1. Interest during construction	16.0	0.4	1.4	2.2	2.5	2.6	2.2	2.3	2.4
2. Commitment charges	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
<b>Subtotal (D)</b>	<b>16.2</b>	<b>0.5</b>	<b>1.4</b>	<b>2.2</b>	<b>2.5</b>	<b>2.7</b>	<b>2.2</b>	<b>2.3</b>	<b>2.4</b>
<b>Total Project Cost (A+B+C+D)</b>	<b>153.0</b>	<b>35.6</b>	<b>57.8</b>	<b>23.4</b>	<b>9.5</b>	<b>7.7</b>	<b>7.4</b>	<b>7.6</b>	<b>4.0</b>

JMC = Jaffna Municipal Council, SWRO = seawater reverse osmosis.

Note: 1. Numbers may not sum precisely because of rounding.

2. The costs of the actual audits of the program are minor and will be borne by the government.

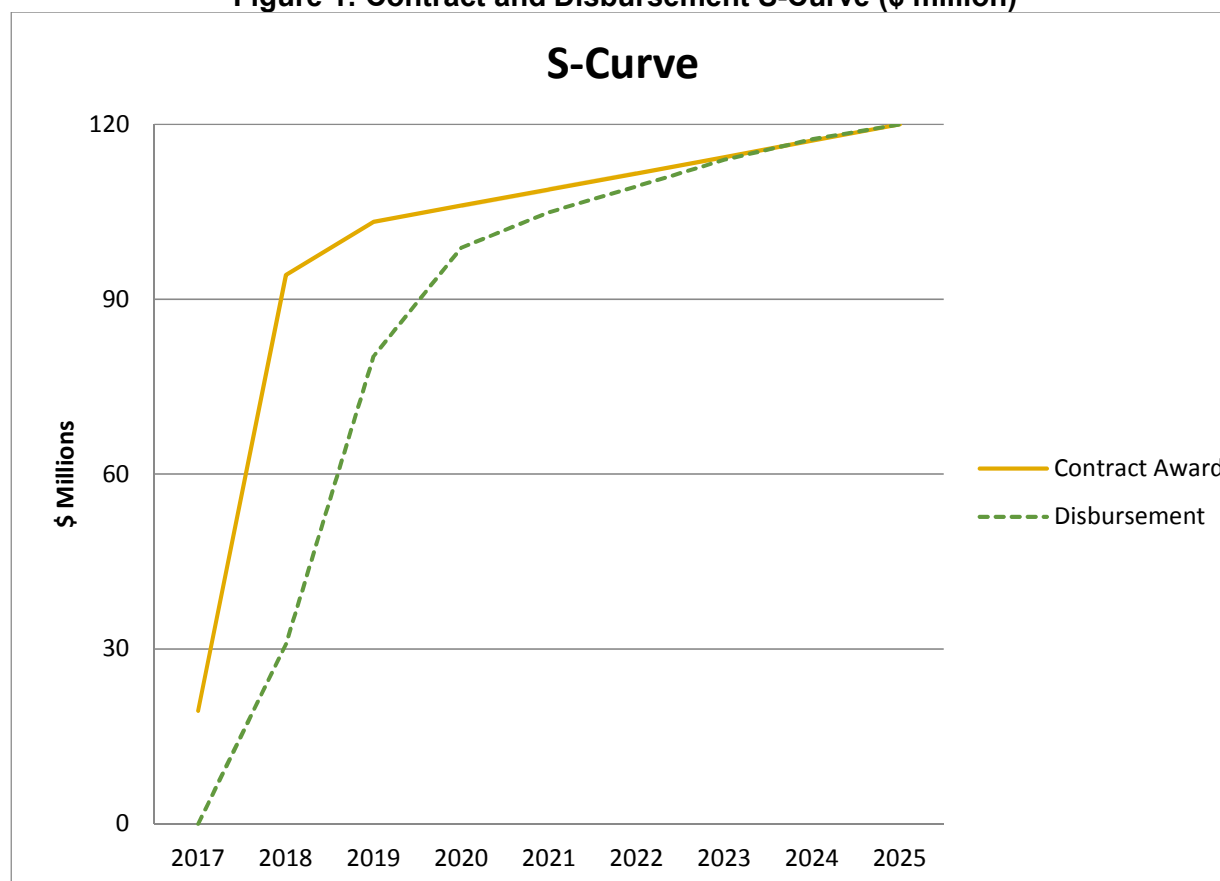
Source: Asian Development Bank estimates.

## H. CONTRACT AND DISBURSEMENT S-CURVE

**Table 12: Contract Awards and Disbursement**

	Up to 2017	2018	2019	2020	2021	2022	2023	2024	2025	Total
Contract Awards	19.4	74.8	9.1	2.8	2.8	2.8	2.8	2.9	2.8	<b>120.0</b>
Disbursement	-	30.8	49.4	18.6	6.1	4.5	4.5	3.5	2.6	<b>120.0</b>

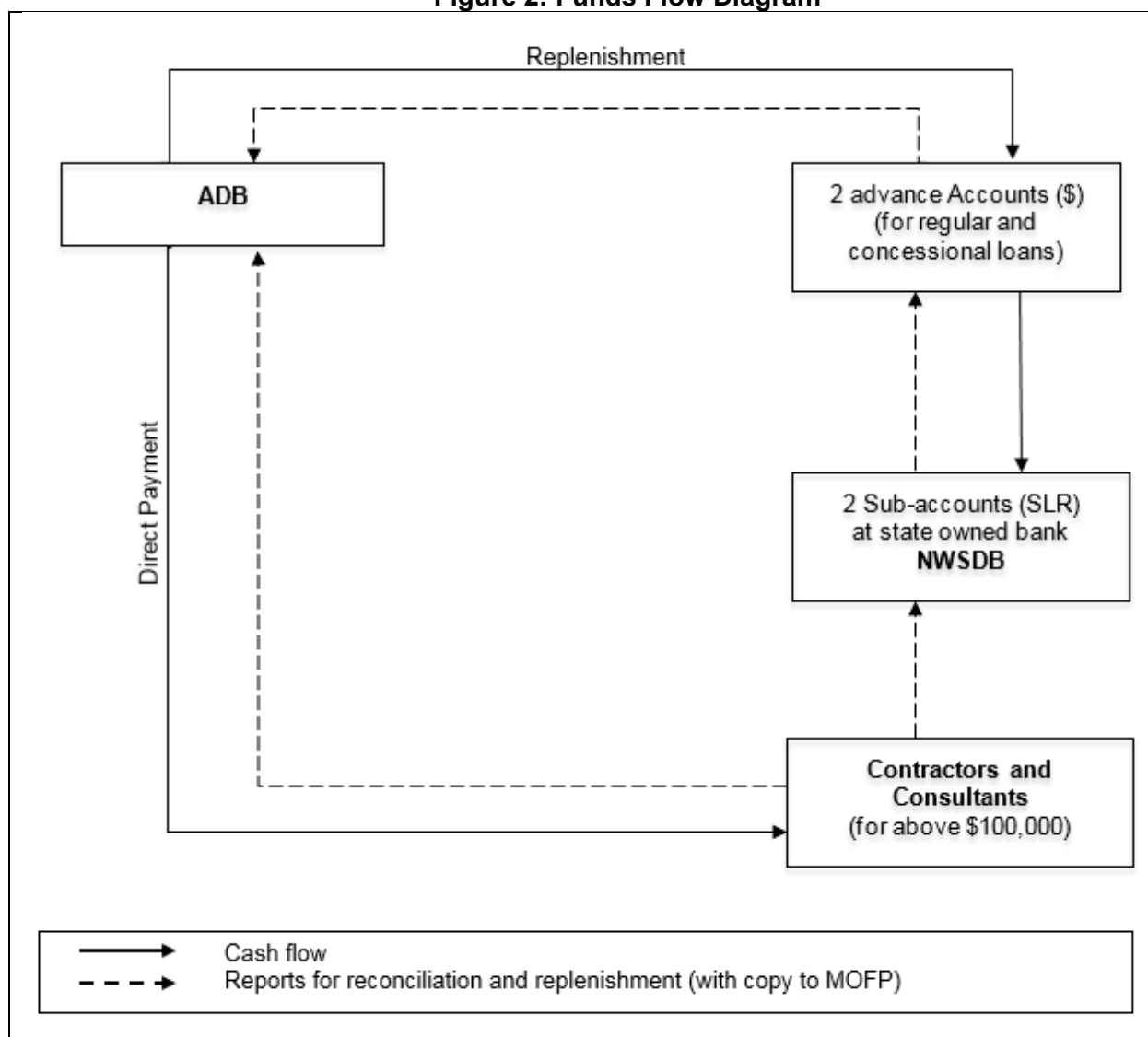
**Figure 1: Contract and Disbursement S-Curve (\$ million)**



Source: Asian Development Bank

## I. FUNDS FLOW DIAGRAM

Figure 2: Funds Flow Diagram



ADB = Asian Development Bank, NWSDB = National Water Supply and Drainage Board, SLR = Sri Lanka rupee.

### Notes on funds flow:

- From ADB to the Advance Accounts.** Loan proceeds will be channeled through the advance accounts opened at the Central Bank of Sri Lanka (two accounts in the name of MCPWS) to the sub accounts (two in the name of NWSDB at a state owned bank). ADB funds will be advanced based on the annual budget estimates prepared by the NWSDB. The NWSDB will process all other disbursement requests to ADB, including direct payment to contractors (generally above \$100,000) and consultant fees. The advance accounts will be replenished according to the ADB's *Loan Disbursement Handbook*. (2017, as amended from time to time).
- The sub accounts will be established at commercial banks acceptable to the Government.
- From ADB to contractors as well as consultants.** Dollar-denominated payments for contractors (generally above \$100,000), and consultant fees contracted by NWSDB, will be paid directly by ADB, which requires PMCIU submission of approved invoices and documentation to ADB in accordance with ADB's *Loan Disbursement Handbook*. (2017, as amended from time to time).

## V. FINANCIAL MANAGEMENT ASSESSMENT

### A. FINANCIAL MANAGEMENT ASSESSMENT

15. The financial management assessment (FMA) was conducted in accordance with the Guidelines of the Asian Development Bank (ADB) in the *Financial Management and Analysis of Projects (2005)*, the *Financial Due diligence: A Methodology Note (2009)*, and the *Financial Management Technical Guidance Note (2015)*. The FMA considered the financial management capacity of the NWSDB in its role as the implementing agency for the proposed additional financing of the Jaffna Kilinochchi Water Supply Project (JKWSP), including funds-flow arrangements, staffing, accounting and financial reporting systems, financial information systems, and internal and external auditing arrangements.

16. The NWSDB will be responsible for overall management, supervision, and execution of the proposed additional financing as implementing agency through the PMCIU. The existing PMCIU, which is implementing the current project, will implement the proposed additional financing as well. The same arrangements will help the smooth implementation of the proposed additional financing by utilizing the experience of implementation of the current project including financial management. The NWSDB has considerable experience in implementing donors assisted projects funded by ADB, World Bank and JICA.

17. The dedicated project director is and will be assisted by a team of technical and non-technical officials to manage both the current project and the additional financing on full time basis. The existing PMCIU of JKWSP will be responsible for all day-to-day management of the additional financing, including but not limited to: (i) preparing an overall project implementation plan and detail work program; (ii) providing overall monitoring and guidance on the implementation; (iii) monitoring and supervising all management activities; (iv) preparing project progress and project completion reports; (v) financial planning and budgeting including contract awards and disbursements; (vi) approving under the additional financing; and (vii) ensuring full compliance with ADB's resettlement, environmental and other safeguard policies. The existing PMCIU will be staffed with qualified accountants with a project accountant and an account assistant to manage the additional financing as well as the overall fund management.

18. The existing PMCIU, which acts as a coordinating agency of the implementing agency in representing the current project, faced some key issues related to the financial management. These included the use of inefficient manual accounting systems, insufficient experience and qualifications of the accounting staff and inadequate financial accounting processes. While it is not an issue directly impacting NWSDB, planned tariff increases have not taken place and would adversely impact on the financial sustainability of NWSDB and the project viability.

19. The major risk factors identified during the assessment that need to be addressed include the following:

- (i) inadequate staff in the internal audit division of NWSDB which will affect the quality and delay in submission of auditing reports;
- (ii) inadequate revisions<sup>15</sup> in water tariffs which will hamper the medium and long-term financial sustainability of NWSDB;

---

<sup>15</sup> The tariff increase of 30% in 2016 was not approved by the government. NWSDB submitted the tariff increase proposal again to the government in 2017.

- (iii) lack of experience and qualifications of the accounting staff which will affect the quality and delay in submission of financial reports; and
- (iv) inadequate needs identification at the early stage of the design of accounting system leading to continuous modifications and improvements to the system.

20. Despite the highlighted risks, the financial management arrangements are satisfactory taking the ongoing actions of NWSDB into consideration. In addition, the project management consultants (PMCs) will support NWSDB in enhancing its financial management capacity. The overall risk assessment for the proposed additional financing is “Moderate”. The action plan under process to reduce the above risks is listed in Table 13.

**Table 13: Financial Management Action Plan**

Area	Current Scenario	Mitigation Measures	Target Date
Internal audit	About 15% vacancies in the internal audit division of NWSDB which will affect the quality and delay in submission of auditing reports.	Strengthening the internal audit division of NWSDB by appointing and recruiting qualified staff to fill the existing vacancies.	Jun.e2018
Tariff revision	Inadequate revisions in water tariffs which will hamper the medium and long-term financial sustainability of NWSDB.	Continuing policy dialogue with the government and NWSDB for approval of regular tariff adjustment and establishment of independent regulatory on water tariffs.	December 2020
Accounting staff	Lack of experience and qualifications of the accounting staff which will affect the quality and delay in submission of accounting and financial reports.	Extending full training and capacity building support for strengthening the accounting staff of NWSDB.	June 2018
Accounting system	No link between the financial reporting system and the financial information systems of individual project progress which will cause the delays in submission of accounting and financial reports.	Updating and modifying the current accounting system with the support of PMCs.	June 2018

NWSDB = National Water Supply and Drainage Board, PMC = project management consultants.  
Source: Asian Development Bank

21. A summary of the financial management internal control risk assessment is given in Table 14.

**Table 14: Financial Management Inherent and Control Risk Assessment**

Risk Type	Risk Assessment	Proposed Mitigation Measures
<b>A. Inherent Risk</b>		
1. Country – Specific Risks (Sri Lanka)	<p><b>Moderate</b></p> <ul style="list-style-type: none"> <li>• Low institutional capacity for effective financial management.</li> <li>• Lack of complete information for accurate budgeting and manual process in public financial management.</li> </ul>	<ul style="list-style-type: none"> <li>• Ongoing efforts are underway by government and ADB. Provision of support (both loan and TA) focused on capacity development.</li> <li>• Provision of loan support for IT systems and ensure that the systems are up and running smoothly.</li> </ul>
2. Entity –	<b>Substantial</b>	

Risk Type	Risk Assessment	Proposed Mitigation Measures
Specific Risks (NWSDB)	<ul style="list-style-type: none"><li>Planned tariff increases of 30% in 2016 have not been endorsed by the government so far. If the proposed tariff increase does not take place, the medium and long-term financial sustainability of NWSDB may be hampered.</li></ul>	<ul style="list-style-type: none"><li>Continued policy dialogue with NWSDB and the government for approval of regular tariff adjustment and establishment of independent regulatory body on water tariffs, together with the sharing of examples of good practice from other countries.</li><li>In addition, the preparation of financial projections to identify realistic and appropriate tariff increase recommendations.</li></ul>
3. Project – Specific Risks	<p style="text-align: center;"><b>Moderate</b></p> <ul style="list-style-type: none"><li>The NWSDB does not have adequate financial and technical capacity for the O&amp;M of the desalination plant.</li></ul>	<ul style="list-style-type: none"><li>Commitment of the O&amp;M budget allocation needs to be confirmed upfront. Capacity development and training programs will be implemented under the current and proposed project.</li></ul>
<b>Overall Inherent Risk</b>	<p style="text-align: center;"><b>Moderate</b></p> <p>While entity specific risks exist, these risks might be mitigated through cordial efforts of NWSDB and the government with support of ADB. In the case of tariff revisions, the government needs to support NWSDB in achieving increase by 30% every three years, as proposed, for improving its financial sustainability.</p>	
<b>B. Control Risk</b>		
<ul style="list-style-type: none"><li>Implementing Entity</li></ul>	<p style="text-align: center;"><b>Low</b></p> <ul style="list-style-type: none"><li>The PMCIU will be responsible for the implementation of the additional financing.</li><li>The NWSDB has handled several projects through a PMCIU. PMCIU (JKWSP) is under the entity and due to centralized control; decisions may take time for implementation.</li></ul>	<ul style="list-style-type: none"><li>Not applicable.</li></ul>
<ul style="list-style-type: none"><li>Flow of funds and Budget Allocation</li></ul>	<p style="text-align: center;"><b>Moderate</b></p> <ul style="list-style-type: none"><li>Due to non-availability of allocation in the national budget for the project, it may affect the withdrawal / payments of PMCIU from their advance fund.</li></ul>	<ul style="list-style-type: none"><li>Action must be taken to obtain fresh allocation for 2017 for the project from MOF.</li><li>A committee should be appointed which meets once every quarter to transfer amounts from unutilized items to other items which will give more flexibility in using funds.</li></ul>
<ul style="list-style-type: none"><li>Staffing</li></ul>	<p style="text-align: center;"><b>Moderate (entity)</b></p> <ul style="list-style-type: none"><li>While all the officers are transferable after serving 5 years at any one office, there is no formal procedure in place for regular rotation of duties of staff</li></ul>	<ul style="list-style-type: none"><li>Rotation of staff to be implemented to the extent feasible. As staff will gain knowledge on all subjects which can increase the efficiency while</li></ul>

Risk Type	Risk Assessment	Proposed Mitigation Measures
	<p>within the accounts division of the entity.</p> <p><b>Low (PMCIU)</b></p> <ul style="list-style-type: none"> <li>No staff vacancies in the PMCIU.</li> </ul>	<p>improving monitoring and financial control.</p> <ul style="list-style-type: none"> <li>Not applicable.</li> </ul>
<ul style="list-style-type: none"> <li>Accounting Policies and Procedures</li> </ul>	<p><b>Low</b></p> <ul style="list-style-type: none"> <li>The NWSDB and its PMCIU follow the Sri Lanka Accounting Standards which are consistent with the International Standards.</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable.</li> </ul>
<ul style="list-style-type: none"> <li>Internal Audit</li> </ul>	<p><b>Moderate</b></p> <ul style="list-style-type: none"> <li>The entity-level internal audit division carries out the internal audit functions of PMCIU.</li> <li>Due to vacancies in the audit division, there have been delays in issuing audited reports.</li> </ul>	<ul style="list-style-type: none"> <li>Strengthening the internal audit division of NWSDB by appointing and recruiting qualified staff to fill the existing vacancies.</li> </ul>
<ul style="list-style-type: none"> <li>External Audit</li> </ul>	<p><b>Moderate (entity)</b></p> <ul style="list-style-type: none"> <li>Accounting deficiencies pointed out in audit reports 2011 to 2013 have an impact on accuracy of the future accounts. The deficiencies include: (i) items of completed works not capitalized; (ii) update and reconciliation after the verification of inventory items; (iii) non-reconciliation with the control accounts; and (iv) amounts allocated in the budgets should be more realistic.</li> </ul> <p><b>Low (PMCIU)</b></p> <ul style="list-style-type: none"> <li>Accounts submitted on due dates and received audit reports on due dates.</li> </ul>	<ul style="list-style-type: none"> <li>Responsibility of the audit committee should be expanded to include follow up action on audit queries.</li> <li>The actions to be taken include: (i) system to be developed to issue a completion certificate by the respective project to finance division to transfer the items from work in progress account to asset account; (ii) officer should be assigned to each RSC to deal with the follow up action on the outcome of the verification to update the inventory records and inform the accounts division to update its records; (iii) appoint a team of officers to carry out activities of reconciliation of individual accounts with the control accounts; and (iv) Put in place a budgeting process that employs more robust cost estimation procedures.</li> <li>Not Applicable.</li> </ul>
<ul style="list-style-type: none"> <li>Reporting and Monitoring</li> </ul>	<p><b>Low (entity)</b></p> <ul style="list-style-type: none"> <li>Information produced by the automated system of NWSDB may not fulfill the needs of the ADB. But the outputs can be used to fulfill the needs of the ADB by use of excel. At the</li> </ul>	<ul style="list-style-type: none"> <li>The information available from reports generated by the system can be used to build up various reports which can easily be used for monitoring.</li> </ul>

Risk Type	Risk Assessment	Proposed Mitigation Measures
	<p>same time, it does not show any physical progress which is essential for monitoring.</p> <p><b>Low (PMCIU)</b></p> <ul style="list-style-type: none"> <li>System developed produces the reporting.</li> </ul>	<ul style="list-style-type: none"> <li>The system development for PMCIU includes the requirements of the government and ADB and avoids the delays. .</li> </ul>
<ul style="list-style-type: none"> <li>Information systems</li> </ul>	<p><b>Low (entity)</b></p> <ul style="list-style-type: none"> <li>System in operation suits the entity requirement. Back up procedure is in operation but no protection cover obtained on the back-ups.</li> </ul> <p><b>Moderate (PMCIU)</b></p> <ul style="list-style-type: none"> <li>System itself produces the back-ups.</li> <li>The financial reporting system has no link with the financial information systems of individual project progress.</li> </ul>	<ul style="list-style-type: none"> <li>Suitable procedure needs to be developed to obtain protection cover for the back-ups.</li> <li>Not applicable.</li> <li>Strengthen accounting unit on system modification process with the support of PMC.</li> </ul>
<b>Overall Control Risk</b>	<p><b>Moderate</b></p> <p>Some financial management risks are recognized but all of them are not high. Inadequate staff in the accounts division and the internal audit division are found with substantial risks, but this can be tackled with adequate experienced additional staff.</p>	

ADB = Asian Development Bank, JKWSP = Jaffna and Kilinochchi Water Supply Project, MOF =, Ministry of Finance, NWSDB = National Water Supply and Drainage Board, O&M = operation and maintenance, PMC = project management consultants, PMCIU = project management, coordination and implementation unit.  
Source: Asian Development Bank

## B. DISBURSEMENT

22. The loan proceeds will be disbursed in accordance with ADB's *Loan Disbursement Handbook* (2017, as amended from time to time),<sup>16</sup> and detailed arrangements agreed upon between the Government and ADB. Online training for project staff on disbursement policies and procedures is available.<sup>17</sup> Project staff are encouraged to avail of this training to help ensure efficient disbursement and fiduciary control.

23. **Advance accounts and statement of expenditure.** Direct payment procedure by ADB will generally be utilized for payments to contractors, suppliers and consultant's fees above \$100,000. Reimbursement and advance account procedures will generally be utilized for payments of civil works, procurement of goods, procurement of equipment, and for recurrent costs (project management) below \$100,000. Two separate advance accounts and two sub accounts (one for each funding source) will be established and maintained by the MCPWS and NWSDB respectively as follows:

<sup>16</sup> Available at: [http://www.adb.org/Documents/Handbooks/Loan\\_Disbursement/loan-disbursement-final.pdf](http://www.adb.org/Documents/Handbooks/Loan_Disbursement/loan-disbursement-final.pdf)

<sup>17</sup> Disbursement eLearning. [http://wpqr4.adb.org/disbursement\\_elearning](http://wpqr4.adb.org/disbursement_elearning)



	Funding Source	
	OCR Regular	OCR Concessional
Advance Accounts	(1) account (\$) established at the Central Bank of Sri Lanka in the name of MCPWS	(1) account (\$) established at the Central Bank of Sri Lanka, respectively, in the name of MCPWS
Sub-Accounts	(1) account (SLRs) established at the state owned bank in the name of NWSDB Project Management and Implementation Unit	(1) account (SLRs) established at the state owned bank in the name of NWSDB Project Management and Implementation Unit

MCPWS = Ministry of City Planning and Water Supply, NWSDB = National Water Supply and Drainage Board, OCR = ordinary capital resources, SLR = Sri Lankan rupee.

Source: Asian Development Bank

24. Separate advance accounts should be established and maintained by the MCPWS for each funding source. The currency of the advance accounts is in US dollar. The advance accounts are to be used exclusively for ADB's share of eligible expenditures. The MCPWS which administers the advance account is accountable and responsible for the proper use of advances to the advance account, including advances to any sub-accounts.

25. The advance accounts and sub-accounts will be established, managed, replenished and liquidated in accordance with ADB's *Loan Disbursement Handbook* (2017, as amended from time to time). The total outstanding advance to the advance accounts should not exceed the estimate of ADB's share of expenditures to be paid through the advance accounts for the forthcoming 6 months. The MCPWS may request for initial and additional advances to the advance accounts based on an Estimate of Expenditure Sheet<sup>18</sup> setting out the estimated expenditures to be financed through the accounts for the forthcoming 6 months. Supporting documents should be submitted to ADB or retained by the MCPWS in accordance with ADB's *Loan Disbursement Handbook* (2017, as amended from time to time) when liquidating or replenishing the advance accounts.

26. Separate sub-accounts should be established and maintained by the NWSDB for each funding source. The sub-accounts are to be used exclusively for ADB's share of eligible expenditures. The NWSDB should ensure that every liquidation and replenishment of each sub-account is supported by sufficient documentation in accordance with ADB's *Loan Disbursement Handbook* (2017, as amended from time to time).

27. Although NWSDB has sufficient experience in donor funded projects including the on-going JKWSP funded by ADB, its capacity in the financial management is estimated not to be strong due to the lack of experience and qualifications of the accounting staff. Accordingly, ADB's statement of expenditure (SOE) procedure<sup>19</sup> will be utilized for reimbursement and liquidation and replenishment of the advance accounts for any individual payments not exceeding the equivalent of \$100,000. The SOE records should be maintained and made readily available for review by ADB's disbursement and review mission or upon ADB's request for submission of supporting documents on a sampling basis, and for independent audit.

<sup>18</sup> Estimate of Expenditure sheet is available in Appendix 8A of ADB's *Loan Disbursement Handbook* (2017, as amended from time to time),

<sup>19</sup> The SOE forms are available in Appendix 7B of ADB's *Loan Disbursement Handbook* (2017, as amended from time to time).

28. Before the submission of the first withdrawal application, the borrower should submit to ADB sufficient evidence of the authority of the person(s) who will sign the withdrawal applications on behalf of the borrower, together with the authenticated specimen signatures of each authorized person. The minimum value per withdrawal application is stipulated in the *Loan Disbursement Handbook* (2017, as amended from time to time). Individual payments below such amount should be paid (i) by MCPWS and subsequently claimed to ADB through reimbursement; or (ii) through the advance fund procedure, unless otherwise accepted by ADB. The MCPWS should ensure sufficient category and contract balances before requesting disbursements.

29. The NWSDB will be responsible for: (i) preparing disbursement projections; (ii) requesting budgetary allocations for counterpart funds; (iii) collecting supporting documents; (iv) preparing and sending withdrawal applications to ADB; and (v) processing funds for sub-accounts to ensure adequate cash flow for NWSDB with respect to recurrent costs and payments to contractors and suppliers.

### **C. ACCOUNTING**

30. The MCPWS will maintain separate project accounts and records by funding sources for all expenditures incurred on the project. Project accounts will follow international accounting principles and practices.

### **D. AUDITING AND PUBLIC DISCLOSURE**

31. The MCPWS and NWSDB will cause the detailed consolidated project financial statements to be audited in accordance with International Standards on Auditing and/or in accordance with the government's audit regulations by an independent auditor acceptable to ADB. The audited project financial statements together with the auditor's opinion will be presented in the English language to ADB within 6 months from the end of the fiscal year by the MCPWS.

32. The audit report for the project financial statements will include a management letter and auditor's opinions, which will cover (i) whether the project financial statements present an accurate and fair view or are presented fairly, in all material respects, in accordance with the applicable financial reporting standards; and (ii) whether the proceeds of the loan were used only for the purposes of the project.

33. In addition to annual audited financial statements of the project, the NWSDB shall (i) provide its annual financial statements prepared in accordance with financing reporting standards acceptable to ADB; (ii) have its financial statements audited annually by independent auditors whose qualifications, experience and terms of reference are acceptable to ADB, in accordance with auditing standards acceptable to ADB; (iii) as part of each such audit, have the auditors prepare the auditors' opinion(s) on the financial statements and compliance with the financial covenants of the Ordinary Operations Loan Agreement; and (iv) furnish to ADB, no later than 1 month after approval by the relevant authority, copies of such audited financial statements and auditors' opinion(s), all in the English language, and such other information concerning these documents and the audit thereof as ADB shall from time to time reasonably request.

34. Compliance with financial reporting and auditing requirements will be monitored by review missions and during normal program supervision, and followed up regularly with all concerned, including the external auditor.

35. The government, MCPWS, and NWSDB have been made aware of ADB's approach to delayed submission, and the requirements for satisfactory and acceptable quality of the audited project financial statements. ADB reserves the right to require a change in the auditor (in a manner consistent with the constitution of the borrower), or for additional support to be provided to the auditor, if the audits required are not conducted in a manner satisfactory to ADB, or if the audits are substantially delayed. ADB reserves the right to verify the project's financial accounts to confirm that the share of ADB's financing is used in accordance with ADB's policies and procedures.

36. Public disclosure of the audited project financial statements, including the auditor's opinion on the project financial statements, will be guided by ADB's Public Communications Policy 2011.<sup>20</sup> After the review, ADB will disclose the audited project financial statements and the opinion of the auditors on the project financial statements no later than 14 days of ADB's confirmation of their acceptability by posting them on ADB's website. The management letter, additional auditor's opinions, and audited entity financial statements will not be disclosed.<sup>21</sup>

## VI. PROCUREMENT AND CONSULTING SERVICES

### A. ADVANCE CONTRACTING AND RETROACTIVE FINANCING

37. All advance contracting will be undertaken in conformity with ADB's Procurement Guidelines (2015, as amended from time to time)<sup>22</sup> and ADB's Guidelines on the Use of Consultants (2013, as amended from time to time).<sup>23</sup> The issuance of invitations to bid under advance contracting will be subject to ADB approval. The government, executing and implementing agencies have been advised that approval of advance contracting does not commit ADB to finance the project.

38. **Advance contracting.** Advance contracting may be entered into for (i) civil works; (ii) equipment and materials; and (iii) recruitment of consultants. Advance contracting that may be concluded in advance include: (i) pre-qualification (if applicable) of contractors, preparation of procurement documents, tendering, bid evaluation and award for civil works packages; (ii) preparation of procurement documents to procure materials and equipment, procurement and bid evaluation and award; and (iii) recruitment of consultants.

### B. PROCUREMENT OF GOODS, WORKS, AND CONSULTING SERVICES

39. The additional financing will finance the cost overrun of the current project including: (i) civil works package of water distribution system 2; (ii) O&M equipment and vehicles; and (iii) incremental cost of the PMCIU. It will also cover the cost in the procurement plan as attached. All ADB-financed procurement of goods and works will be undertaken in accordance with Procurement Guidelines (2015, as amended from time to time).

40. Before the start of any procurement, ADB and the government will review the public procurement laws of the government to ensure consistency with ADB's Procurement Guidelines.

41. An 18-month procurement plan indicating threshold and review procedures, goods, works,

<sup>20</sup> ADB. Public Communications Policy: <http://www.adb.org/documents/pcp-2011?ref=site/disclosure/publications>

<sup>21</sup> This type of information would generally fall under public communications policy exceptions to disclosure. ADB. 2011. *Public Communications Policy*. Paragraph 97(iv) and/or 97(v).

<sup>22</sup> ADB. Available at: <http://www.adb.org/Documents/Guidelines/Procurement/Guidelines-Procurement.pdf>

<sup>23</sup> ADB. Available at: <http://www.adb.org/Documents/Guidelines/Consulting/Guidelines-Consultants.pdf>

and consulting service contract packages and national competitive bidding guidelines is in Appendix 3.

42. All ADB-financed consultants and nongovernment organizations (NGOs) if appropriate will be recruited according to ADB's Guidelines on the Use of Consultants (2013, as amended from time to time).<sup>24</sup>

### C. PROCUREMENT PLAN

43. The procurement plan is in Appendix 3.

### D. CONSULTANT'S TERMS OF REFERENCE

44. The terms of reference are in Appendix 4. It includes (i) the project unit and the training list; (ii) the desalination DBO component project management and supervision consultancy (a national firm and two individual consultants); (iii) operation monitoring(audit) body (two individual international consultants); (iv) environment consultancy (including one individual environmental monitoring consultant and one environment survey firm) and (v) social development and gender specialist (national consultant).

## VII. SAFEGUARDS

45. Safeguards documents, specifically an environmental impact assessment of desalination subproject (EIA), a resettlement plan (due diligence report) have been prepared for the Project.

46. **Environment.** The project is classified as environmental category A because it involves construction and operation of a large desalination plant at a coastal site which may have potential significant adverse impacts. A full EIA including an environment management plan (EMP), was prepared and disclosed on ADB's website on 17 July 2017. Any update in the EIA report resulting from any further change in project scope will be disclosed. Mitigation measures are proposed in the EIA and EMP to minimize habitat and species disturbance because of construction and operation of the desalination plant and associated facilities. Implementation of a biodiversity management plan in the EMP will ensure no net loss of biodiversity. Public consultations were conducted with local communities, government authorities and nongovernment organizations and their feedback was considered during project design. Environmental clearance from the Central Environment Authority (CEA) has been obtained and conditions in the clearance have been incorporated in the EMP and environmental monitoring program. Public concerns were identified in the EIA, and mitigation measures were incorporated into the EMP. Public consultations and stakeholders involvement will continue throughout the project implementation as specified in the EIA. A grievance redress mechanism (GRM) has been established and the project will ensure the members of the Grievance Redress Committee, the PMCIU and contractors are provided with trainings to address project-related grievances. The PMCIU has dedicated staff for monitoring environmental issues and implementing the EMP. The PMCIU will retain independent advisory experts to monitor the implementation of the project's EMP related to the approved EIA in compliance with ADB SPS (2009) and the CEA, the experts will also be responsible for reviewing the environmental monitoring reports before submission to ADB. The PMCIU will submit environmental monitoring report to ADB for review and disclosure on a quarterly basis during construction and semi-annual during operation.

<sup>24</sup> Checklists for actions required to contract consultants by method are available in e-Handbook on Project Implementation at: <http://www.adb.org/documents/handbooks/project-implementation/>

47. The NWSDB has implemented several ADB projects and has adequate institutional capacity and experience to manage environmental risks during pre-construction, construction, and operation. The EMP will be incorporated into civil works contracts, giving contractors the primary responsibility for implementation. The NWSDB will retain qualified and experienced external experts to verify monitoring information, and will supervise construction and EMP implementation. The NWSDB will provide environmental monitoring reports to ADB quarterly while construction works are on-going and semi-annually thereafter. A corrective action plan will be prepared and implemented for any non-compliance issues. The contractors and NWSDB will adhere to the SPS and national environmental regulations. In the event of any unanticipated environmental impacts during project implementation, NWSDB will update the EIA and revise the EMP, which will be disclosed on the ADB website.

48. The MCPWS through NWSDB as the executing agency is responsible to obtain all government clearances including the approvals from the Coast Conservation Department, Central Environmental Authority and respective local authorities as applicable prior to initiation of any construction, and any required approvals for the operation of the facilities. The MCPWS through NWSDB will finance any further studies required to address government requirements.

49. The Project Management and Supervision Consultant (PMSC) team shall also include an environmental specialist and the PMSC team shall update the EIA and EMP once detailed engineering design is completed and submit for ADB's approval and disclosure. No civil works can start without ADB's clearance of the final EIA. The bidding documents for the construction works shall include the requirement by the contractor to adhere to the EMP and Environmental Monitoring Plan. The NWSDB, project management, coordination and implementation unit (PMCIU) with the assistance from the PMSC shall be responsible to ensure that the contractor adheres to the EMP during construction. During operations, the NWSDB, as the operator of the schemes will be responsible to implement the required long term environmental monitoring. NWSDB will provide semi-annual EMP implementation progress reports to ADB.

50. **Social.** Although the project does not involve any land acquisition, physical or economic displacement, or loss of assets for private individuals, the project is classified as category B for involuntary resettlement to provide the flexibility to undertake continuous monitoring and course correction in case of any unanticipated livelihood impacts, particularly on local fishermen, during the laying of the intake and outfall pipes in the sea. Currently, the project is not expected to have any significant impacts on the livelihood of fishermen in the area. An area of 50 m width by 1 km length in the sea, adjoining the beach in front of the SWRO site will be used for laying of the intake and outfall pipes. The project implementing is not currently being used for beach seine fishing or other fishing activities.<sup>25</sup> Through an agreement letter, the current permit owner of the beach siene lot (through which the pipes will be laid) has agreed not to undertake any fishing operations in his lot and has extended whole hearted support to the project. The EMP contains provisions to ensure that the contractor provides requisite clear passage for the fishermen's boats during the pipe laying works, to avoid any negative impacts on fishermen using this area as a transit route to other parts of the sea. During the operation period, a 50m diameter area and a 15m diameter area in the sea will be marked with buoys<sup>26</sup> to clearly demarcate the intake and outfall structures respectively to enable fishermen to avoid these locations. The areas being demarcated by buoys are small enough to ensure that fishermen can continue their daily operations without having to

---

<sup>25</sup> This stretch if beach is designated for beach seine fishing or madal fishing. There are five madal padu lots in this area- two of which are common padus.

<sup>26</sup> These buoys will be lit up during night time to clearly indicate intake and outfall locations.

undertake substantial diversions, which may impact their livelihoods by increasing the consumption of fuel for their boats. The SWRO plant is to be located on government land, which is free of encroachments and encumbrances. The 8 km transmission pipeline will be laid in the existing road right-of-ways (ROWs) which are free of encumbrances and informal economic activities. Works will be undertaken in sections to minimize impacts on access to homes, institutions and businesses. One resettlement plan is prepared in accordance with ADB's SPS (2009), and government laws. The project is category C for indigenous peoples. The population in the project area is largely homogenous (Tamil) and the socioeconomic survey and consultations show that no distinctive and separate indigenous peoples live in the project area.

51. The PMCIU is the responsible body to ensure smooth implementation of the resettlement plan and ensuring that affected persons are compensated prior to economic or physical displacement. The PMCIU will be supported by their sociologist in implementing the following social safeguard activities: (i) updating the resettlement plan with the assistance of project engineering and institutional consultant (PEIC) during the detailed design stage, if necessary; (ii) providing timely payments of compensation at replacement value as per the resettlement plan (entitlement matrix) to affected persons before physical or economic displacement occurs; (iii) ensuring that other entitlements (e.g., income rehabilitation measures, livelihood losses etc.) as per the resettlement plan are delivered to affected persons; (iv) engaging in ongoing and meaningful consultations and disclosure activities with communities, stakeholders, and affected persons; (v) implementing the resettlement plan with support from PEIC; (vi) ensuring all grievances are addressed and when necessary activating the Grievance Redress Committee;<sup>27</sup> (vii) taking corrective actions where necessary; (viii) conducting monitoring of the resettlement process to ensure smooth implementation; and (ix) preparing and submitting semi-annual social safeguard monitoring reports to ADB that describe the progress of the implementation of resettlement activities and any compliance issues and corrective actions.

52. The PMCIU sociologist will also undertake additional tasks such as (i) support in the preparation of mini-projects for the local community's benefit and implementation of livelihood supporting activities in the project implementing area; and (ii) provide monthly reports to the Project Director regarding the progress of resettlement issues. If the resettlement and social issues become too complex, the PMCIU sociologist may be supported by a consultant, the TOR for which has been in Appendix 16 of the resettlement plan.

53. A provisional budget of \$100,000, has been allocated for any resettlement or social safeguards related issues, including any livelihood compensations that may be required during project construction phase. Another \$12,000 has been allocated for the implementation of outreach and participation activities to be conducted by the PMCIU under the consultation and participation plan.

54. **Civil works contracts.** Contractors cannot begin civil works for project components or sections that are ready to be constructed until full compensation entitlements (at replacement cost) are paid to those being physically or economically displaced. Moreover, the government will ensure that civil works contracts and bidding documents under the Project include specific provisions requiring contractors to comply with all: (i) applicable labor laws and core labor standards on (a) prohibition of child labor as defined in national legislation for construction and maintenance activities, on; (b) equal pay for equal work of equal value regardless of gender, ethnicity or caste, and on; (c) elimination of forced labor; and (ii) the requirement to disseminate

---

<sup>27</sup> Provide a briefing to the Grievance Redress Committee and monitor grievance redress mechanism including dealing with complaints and grievances.

information on sexually transmitted diseases including HIV/AIDS to employees and local communities surrounding the project sites.

55. **Prohibited investment activities.** Pursuant to ADB's Safeguard Policy Statement (2009), ADB funds may not be applied to the activities described on the ADB Prohibited Investment Activities List set forth at Appendix 5 of the Safeguard Policy Statement (2009).

56. **Project Grievance Redress Mechanism.** Grievances of concerned persons or affected persons will first be brought to the attention of contractor on-site. If the issue is not resolved within 3 days, the issue will be brought to the attention of the PMCIU sociologist who shall address these grievances within 7 days of receiving the complaint. The PMCIU sociologist will maintain a grievance log. Grievances not redressed by the PMIU sociologist within 7 days of receipt will be brought to the attention of the project director who will attempt to redress the grievances within 5 days. Grievances not addressed within this timeframe will be brought to the GRC constituted in Vadamarachchi Divisional Secretariat division, with the aim of being resolved within 1 weeks' time. There is a long history of grievance redress at the Divisional Secretary level services through the Divisional Secretary. This is a well-established procedure. The community members in Divisional Secretary area present their grievances to the Divisional Secretary offices where arrangements have been made to inspect the problems of the community members and help to solve the problems in the field itself, if possible or otherwise take actions to forward the grievances of the communities that cannot be solved to the higher authorities of the district. The GRC will comprise of the Divisional Secretary of the Vadamarachchi as chair, a representative from the NWSDB, the PMIU sociologist and a resident from the Maruthankerny Grama Niladhari division. The PMIU Sociologist will observe and take minutes. Affected persons may seek legal recourse if grievances remain unresolved at this state. This however, does not prohibit them from seeking legal recourse of action during any stage of the process.

## VIII. GENDER AND SOCIAL DIMENSIONS

57. **Gender action plan.** A gender action plan (GAP) was prepared under the project (Appendix 5). Key activities include: (i) conducting gender related training and awareness programs; (ii) conducting stakeholder consultations; (iii) providing gender guidance during planning and implementation; (iv) supporting affected families and women with livelihood assistance; (v) incorporating gender needs in policies and programs; (vi) building capacity of project staff; and (vii) preparing, maintaining, and documenting gender disaggregated data bases at central, regional, and community levels. Key target groups for gender related activities include government agencies, project related steering committees, community based organizations, and local authorities.

58. **Participation and Community Mobilization Plan.** A Participation and Community Mobilization Plan (PCMP) was prepared under the project (Appendix 6). The overall participation strategy will be implemented by the PMCIU with assistant from an implementing consultant (Appendix 6) or an NGO. Key activities include: (i) promoting shared decision making and responsibility through meetings, seminars, and workshops; and (ii) conduct ongoing consultations for continued needs assessments. The consultant/NGO will be primarily responsible for the mobilization and orientation of (i) government officers; (ii) steering committee; (iii) community members; (iv) affected persons; and (v) school children. A budget of \$12,000 has been allocated for the implementation of outreach and participation activities to be conducted by the PMCIU under the consultation and participation plan.

## IX. PERFORMANCE MONITORING, EVALUATION, REPORTING AND COMMUNICATION

### A. PROJECT DESIGN AND MONITORING FRAMEWORK

<b>Impacts the Project is Aligned with</b> <b>Current project</b> Improved health and human development in urban areas of Jaffna Peninsula (Vision for a New Sri Lanka) <sup>a</sup> <b>Overall project</b> Unchanged			
<b>Results Chain</b>	<b>Performance Indicators with Targets and Baselines</b>	<b>Data Sources and Reporting</b>	<b>Risks</b>
<b>Outcome</b> <b>Current project</b>  Improved water supply and sanitation infrastructure for residents and returning internally displaced persons in targeted urban areas, and protection and management of Jaffna Peninsula's water resources.  <b>Overall project</b> Access to safe drinking water in targeted urban areas of the Jaffna Peninsula improved.	<b>Current project</b> <b>By 2017</b>  a. Residents and returning internally displaced persons lacking access to safe drinking water and sanitation in target areas reduced by 50% (baseline: 2010).  b. Institutional framework, skills, and awareness for water protection and management built.  c. Access ratio to urban services and poverty ratio regularly monitored, with sex-disaggregated data.  <b>By 2025</b> a. 300,000 people, including 20% below poverty line and 50% female, provided with continuous standard water service (2017 baseline: 18,000 people).  b. 90% of the water quality tests meet the country standards (2017 baseline: 0%).	<b>(Overall Project)</b>  Statistical data such as provincial and local government and agency annual reports; NWSDB annual report; government reports; and Sri Lanka Millennium Development Goal country report.  a–b. Statistical data such as provincial and NWSDB reports	National, provincial, and local governments do not undertake actions to improve service delivery  Lack of sustained support from local fishing communities for on the desalination plant will cause the implementation delays and cost overruns
<b>Outputs</b>  <b>Current project</b>  1. Improved water supply infrastructure	<b>Current project</b> <b>By 2017</b>  1a. Construction of one water treatment plant and production of 35,000 m <sup>3</sup> per day potable water.  1b. Installation of 584 km of water mains and supply pipes.  1c. 60,000 new water connections.  1d. At least 33% representation of women in committees established for community water supply and sanitation programs.		Water demand grows at a slower or more rapid pace than planned  Lack of qualified contractors  Lack of funds for O&M



Results Chain	Performance Indicators with Targets and Baselines	Data Sources and Reporting	Risks
<p><b>Overall project</b></p> <p>1. Water supply infrastructure and service in the Jaffna Peninsula improved.</p>	<p><b>Overall project By 2022</b></p> <p>1a. Desalination plant of 24,000 m<sup>3</sup> per day using DBO model installed (2017 baseline: not applicable).</p> <p>1b. 700 km of water mains and distribution pipes installed (2017 baseline: 51 km).</p> <p>1c. 60,000 metered new water connections installed, with at least 15% of the households headed by women (2017 baseline: 2,400 households).</p> <p>1d. O&amp;M part of the desalination plant contract implemented for 5 years (2017 baseline: 0).</p>	1a-d. Quarterly project progress reports and NWSDB annual report	Inadequate cost recovery and financial sustainability due to the low tariff
<p><b>Current project</b></p> <p>2. Improved sanitation infrastructure<sup>b</sup></p>	<p><b>Current project By 2017</b></p> <p>2a. Construction of one sewage treatment plant with 12,500 m<sup>3</sup>/day capacity;</p> <p>2b. Installation of 331 km sewer mains and networks;</p> <p>2c. 20,000 households connected to the sewer network;</p> <p>2d. Households with access to properly maintained on-site sanitation;</p> <p>2e. Pro-poor sanitation infrastructure is built (target: 35% are war widows and households headed by women); and</p> <p>2f. Communal sanitary facilities built for both men and women.</p>		
<p><b>Overall project</b></p> <p>2. Headworks at the Iranamadu Tank improved</p>	<p><b>Overall project By 2017</b></p> <p>2a. Capacity of Iranamadu Tank increased to 148.0 million m<sup>3</sup> (2010 baseline: 131.4 million m<sup>3</sup>).</p>	2a. Quarterly project progress reports	
<p><b>Current project</b></p> <p>3. Strengthened water resource protection and management</p>	<p><b>Current Project By 2017</b></p> <p>3a. Training of NWSDB and WRB staff for capacity building (target: 50% women participation); and</p> <p>3b. Monitoring and data systems for groundwater institutionalized.</p>	<p><b>For all indicators</b></p> <p>3a-h. Quarterly project progress reports and PPMS</p>	

Results Chain	Performance Indicators with Targets and Baselines	Data Sources and Reporting	Risks
<p><b>Overall project</b></p> <p>3. Water resource management systems and capacity strengthened</p>	<p>3c. Monitored bacteriological groundwater pollution reduced by 25% in Jaffna town;</p> <p>3d. Water conservation, environmental, and hygiene awareness-raising activities conducted.</p> <p>3e. Public communication documents published and disseminated to target audience.</p> <p><b>Overall project By 2021</b></p> <p>3a. Detailed plan and actions for groundwater and surface water monitoring and rehabilitation in Jaffna developed (2010 baseline: 0);</p> <p>3b. Monitoring and data systems for groundwater in Jaffna peninsula institutionalized and quarterly report produced (2017 baseline: 0);</p> <p>3c. At least 10,000 farming households have increased awareness in water sharing from Iranamadu tank (2017 baseline: 0);</p> <p>3d. Water resource management plan for Iranamadu irrigation tank completed (2010 baseline: 0);</p> <p>3e. 7.5 km roads in Vadamarachchi fisherman's village improved (2017 baseline: 0);</p> <p>3f. At least 50 NWSDB staff reporting improved skills in managing and monitoring DBO performance-based contract (at least 30% are women) (2010 baseline: 0);</p> <p>3g. At least 60,000 households, of which 20% are below poverty line and 15% are households headed by females, have increased awareness in water conservation, environmental protection and hygiene (2017 baseline: 0); and</p> <p>3h. Sanitation safety plans developed for Jaffna (2017 baseline: 0).</p>	<p>3a–h. Quarterly project progress reports and surveys.</p>	
<p><b>Current project</b></p> <p>4. Project management and implementation system is operational</p>	<p><b>Current project</b></p> <p>4a. Capacity building training of NWSDB</p>		

Results Chain	Performance Indicators with Targets and Baselines	Data Sources and Reporting	Risks
Overall project Combined with output 3	Overall project Combined with output 3		
Key Activities with Milestones			
<div>1. Water supply infrastructure and service in the Jaffna Peninsula improved</div> <div>1.1. Complete detailed designs for water towers and distribution pipes (completed)</div> <div>1.2. Complete bidding of DBO for 24,000 m³ per day reverse osmosis desalination plant (Q4 2017, changed)</div> <div>1.3. Complete construction of the water towers and distribution pipes (Q2 2020, changed)</div> <div>1.4. Complete construction and commissioning of the desalination plant (Q4 2020, added)</div> <div>1.5. Install metered connections for water supply (Q3 2021, changed)</div> <div>1.6. Contractor successfully continues to operate and maintain desalination plant (Q3 2025, added)</div> <div>2. Headworks at Iranamadu Tank improved</div> <div>2.1. Complete the detailed design of the works (completed)</div> <div>2.2. Complete the dam construction (completed)</div> <div>3. Water resource management systems and capacity strengthened</div> <div>3.1 Develop water resource management plan including detailed actions for ground and surface water monitoring and rehabilitation (Q4 2020, added)</div> <div>3.2. Conduct water sharing awareness-raising activities for farmers, with women comprising at least 30% of the participants (Q4 2022, added)</div> <div>3.3. Complete detailed design and construction of infrastructure in Vadamarachchi village (Q1 2019, added)</div> <div>3.4. Establish gender budget cell in the NWSDB (Q3 2018, changed)</div> <div>3.5. Conduct water conservation, environmental, and hygiene awareness-raising activities, including 20% below poverty line households and 15% households headed by women (Q4 2022, changed)</div> <div>3.6. Conduct workshops and trainings on managing and monitoring DBO performance-based contract, including at least 30% women participants (Q4 2022, added)</div> <div>3.7. Complete water resource management plan for Iranamadu Tank (Q4 2022, added)</div> <div>3.8. Complete and implement detailed sanitation safety plan in urban areas of Jaffna (Q4 2022, added).</div>			
Inputs			
ADB			
Ordinary capital resources (regular loan) \$20 million (current) \$95 million (additional) \$115 million (overall)	Ordinary capital resources (concessional loan) \$70 million (current) \$25 million (additional) \$95 million (overall)	Technical Assistance Grant \$0.6 million (current) \$0.5 million (additional) \$1.1 million (overall)	
Government			
\$23 million (current) \$33 million (additional) \$56 million (overall)			
Partner Financing			
Not applicable			

ADB = Asian Development Bank, DBO = design–build–operate, km = kilometer, m<sup>3</sup> = cubic meter, NWSDB = National Water Supply and Drainage Board, O&M = operation and maintenance, PPMS = project performance monitoring system, Q = quarter, WRB = Water Resources Board.

<sup>a</sup> Government of Sri Lanka. 2006. *Vision for a New Sri Lanka*. Colombo.

<sup>b</sup> The sewage management component that was to be cofinanced by the Agence Française de Développement has been canceled from ADB financing.

Source: Asian Development Bank.

## B. MONITORING

59. **Project performance monitoring.** The project will establish a project performance monitoring system (PPMS) which will show cause-and-effect relationships between the project and its impact, will be updated, and may include critical path method diagrams. Project performance monitoring and evaluation will be based on the design and monitoring framework and the baseline surveys specified. Beneficiaries will be involved in project monitoring evaluation, through direct reporting to PMCIU. The indicators to be monitored will be formulated by and agreed upon with the executing agency, including indicators pertaining to physical progress and institutional reform activities. The PMCIU will gather disaggregated baseline physical and

socioeconomic data, submit a detail implementation plan for monitoring performance, and prepare benchmark information for ADB's review and concurrence within 9 months of loan and grant effectiveness. This will be reported quarterly through the executing agency's quarterly progress reports and after each ADB review mission. These quarterly reports will provide information necessary to update ADB's project performance reporting system.<sup>28</sup>

60. **Compliance monitoring.** The NWSDB through the PMCIU, will monitor compliance with the covenants. Compliance with covenants will be monitored through ADB's Project Administration Missions—including project inception mission to discuss and confirm the timetable for compliance with the loan covenants; project review missions to review the borrower's compliance with particular loan covenants and, where there is any noncompliance or delay, discuss proposed remedial measures with the Government; and mid-term review missions if necessary to review covenants to assess whether they are still relevant or need to be changed, or waived due to changing circumstances.

61. **Safeguards monitoring.** Monitoring of the resettlement plan will be undertaken throughout the project period by the PMCIU. This will begin during the pre-construction period to comply with ADB's policy that full compensation for resettlement impacts must be provided before physical or economic displacement occurs. During the project period, the PMCIU will track indicators such as: (i) the number of persons affected; (ii) assistance extended; (iii) community resources affected; (iv) restoration undertaken; and (v) financial aspects such as compensation paid (as relevant). Monthly targets will be provided by the PEIC to the PMCIU Sociologist. Monthly progress reports will be prepared by the PMCIU, reporting actual achievements against the targets and reasons for shortfalls, if any. The PMCIU will submit semi-annual social safeguards monitoring reports and environmental monitoring reports to ADB quarterly during construction and semi-annual during operation. The PMCIU will be responsible for managing and maintaining affected person databases, documenting results of the affected person census, and verifying asset and socio-economic survey data that will be used as the baseline for assessing resettlement plan implementation impacts. Updates on resettlement plan implementation will be included in the overall project implementation reporting to ADB.

62. The environmental officer attached to the PMCIU will: (i) ensure that the environmental/technical requirements and administrative policies and recommendations are properly integrated in the designing and planning as well as during construction and operation of the project; (ii) review the updated and revised EMP prepared during detailed design; (iii) ensure that the respective bid documents and contract have adequately covered the requirements to comply with respective environmental safeguard documents such as initial environmental examination (IEE) and EMP; (iv) ensure that applicable guidelines and criteria on environment are complied with; (v) oversee the regular monitoring activities during construction and operation phases of the project conducted by others; (vi) ensure that mitigating measures and preventative activities are properly implemented and adequate measures are taken in cases where unexpected impacts arise; and (vii) prepare environmental monitoring reports for submission to appropriate authorities: NPCC, ADB and Central Environmental Authority (CEA).

63. In addition, an environmental monitoring committee will be formed consisting of representatives based in the locations of proposed activities, authorities/agencies that have legal jurisdiction over concerned activities or premises and communities to be affected by construction or operation of the subprojects. These committees will monitor local implementation of the project

<sup>28</sup> ADB's project performance reporting system is available at:  
<http://www.adb.org/Documents/Slideshows/PPMS/default.asp?p=evaltool>

during the construction and O&M phases, in addition to the more structured monitoring activities of the Design and Supervision Consultants Environmental Specialist and PMCIU Environmental Monitoring Officers. This will ensure a cross check of monitoring by PMCIU.

64. **Labor Standards, Health and Safety.** The government, NWSDB and PMCIU will ensure that the core labor standards and the applicable laws and regulations are complied with during Project implementation. The executing agency shall include specific provisions in the bidding documents and contracts financed by ADB under the Project requiring that the contractors, among other things: (i) comply with the applicable labor law and regulations and incorporate applicable workplace occupational safety norms; (ii) do not use child labor; (iii) do not discriminate workers in respect of employment and occupation; (iv) do not use forced labor; and (v) disseminate, or engage appropriate service providers to disseminate, information on the risks of sexually transmitted diseases, including HIV/AIDS, to the employees of contractors engaged under the Project and to members of the local communities surrounding the Project area, particularly women. The PMCIU shall strictly monitor compliance with the requirements and submit monitoring report to ADB for review on a quarterly basis during construction and semi-annual during operation.

65. **Gender and social dimensions monitoring.** The gender action plan (GAP) and Participation and Community Mobilization Plan will be implemented, monitored and reported<sup>29</sup> by the PMCIU, as detailed under Section VIII. Implementation of the GAP will be reported as part of the progress reports; and monitoring of the participation and community mobilization plan will be done through quarterly GAP update reports submitted in parallel with the project's progress reports.

## C. EVALUATION

66. The government and ADB will jointly assess project implementation semiannually. The government, PMCIU, and ADB will conduct a comprehensive midterm review 3 years after the project starts or after construction of the SWRO and treated water mains has been initiated, whichever is sooner. The reviews will: (i) examine the appropriateness of scope, design, implementation arrangements and schedules of activities; (ii) identify changes needed since project appraisal; (iii) assess implementation performance against project indicators; (iv) establish compliance with loan covenants; (v) identify problems, constraints, and, if necessary, recommend changes in the design or implementation arrangements; and (vi) monitor the effectiveness of safeguard procedures. Within 6 months of physical completion of the project the executing agency will submit a project completion report to ADB.<sup>30</sup>

## D. REPORTING

67. The executing agency will provide ADB with: (i) quarterly progress reports in a format consistent with ADB's project performance reporting system; (ii) semi-annual social safeguards monitoring report and quarterly environmental monitoring report; (iii) consolidated annual reports including (a) progress achieved per output as measured through the indicator's performance targets; (b) key implementation issues and solutions; (c) updated procurement plan; and (d) updated implementation plan for next 12 months; and (iii) a project completion report within 6

<sup>29</sup> ADB Staff Guide to Consultation and Participation: <http://www.adb.org/participation/toolkit-staff-guide.asp> and ADB CSO Sourcebook: A Staff Guide to Cooperation with Civil Society Organizations: <http://www.adb.org/Documents/Books/CSO-Staff-Guide/default.asp>

<sup>30</sup> Project completion report format is available at: <http://www.adb.org/Consulting/consultants-toolkits/PCR-Public-Sector-Landscape.rar>

months of physical completion of the project. To ensure that projects continue to be both viable and sustainable, project accounts and the executing agency's audited financial statements, together with the associated auditor's report, should be adequately reviewed.

## **E. STAKEHOLDER COMMUNICATION STRATEGY**

68. The project intends to maximize transparency by communicating relevant project information to stakeholders through various media. The NWSDB will disclose all key project-related information, including the scope, cost, and financial and institutional arrangements of the project, project safeguard reports such as the IEE and resettlement plan, and project progress such as procurement, contract award and disbursement through the project website (see para 55). The PMCIU will also fully disclose relevant project-related information—such as subproject cost, cost-sharing arrangement, contractor's name, contract price, progress of construction, financial status of municipalities—through local information centers and public briefings, bulletin boards, municipal annual reports etc.

69. Participation is an important aspect of the project. Public awareness programs for water conservation, health and hygiene education will be implemented by local NGOs engaged in parallel with the physical investment activities. The community consultation and participation action plan (Appendix 6), communication and awareness program (resettlement plan), and GAP (Appendix 5) will ensure sufficient consultation and participation with beneficiaries, including women, the poor and vulnerable groups.

## **X. ANTICORRUPTION POLICY**

70. ADB reserves the right to investigate, directly or through its agents, any violations of the Anticorruption Policy relating to the project.<sup>31</sup> All contracts financed by ADB shall include provisions specifying the right of ADB to audit and examine the records and accounts of the executing agency and all project contractors, suppliers, consultants and other service providers. Individuals or entities on ADB's anticorruption debarment list are ineligible to participate in ADB-financed activities and may not be awarded any contracts under the project.<sup>32</sup> To support these efforts, relevant provisions are included in the loan agreement, regulations, and bidding documents for the project.

71. The project incorporates other measures, in addition to the standard ADB requirements to deter corruption and increase transparency. The project will: (i) build the executing agency's capacity to comply with ADB and government procedures; and (ii) establish a project website to disclose information and project implementation. The project website will provide updated, detailed information on project implementation. For example, it will include procurement-related information such as the list of participating bidders, name of the winning bidder, basic details on bidding procedures adopted, amount of contract awarded, and the list of goods and/or services procured. It will also include updated procurement plans. The project website will be established by the project management coordination and implementation unit (PMCIU) within 3 months of loan effectiveness, with the assistance of PEIC consultants.

## **XI. ACCOUNTABILITY MECHANISM**

72. People who are, or may in the future be, adversely affected by the project may address

<sup>31</sup> Available at: <http://www.adb.org/Documents/Policies/Anticorruption-Integrity/Policies-Strategies.pdf>

<sup>32</sup> ADB's Integrity Office web site is available at: <http://www.adb.org/integrity/unit.asp>

complaints to ADB, or request the review of ADB's compliance under the Accountability Mechanism.<sup>33</sup>

73. The project will establish a grievance redress mechanism to ensure greater accountability. With the assistance of the PEIC consultants, the executing agency will set up the grievance redress mechanism within 6 months of loan effectiveness to receive and resolve complaints, as well as act upon stakeholders' reports of irregularities on project related matters, including grievances concerning safeguards.<sup>34</sup> The executing agency will widely publicize the existence of this mechanism to ensure that stakeholders are aware that a venue is available to address concerns or grievances relating to fraud, corruption, abuse, and any other aspects of project implementation.

## **XII.RECORD OF PAM CHANGES**

74. All revisions and/or updates during implementation should be retained in this Section to provide a chronological history of changes to implemented arrangements recorded in the PAM.

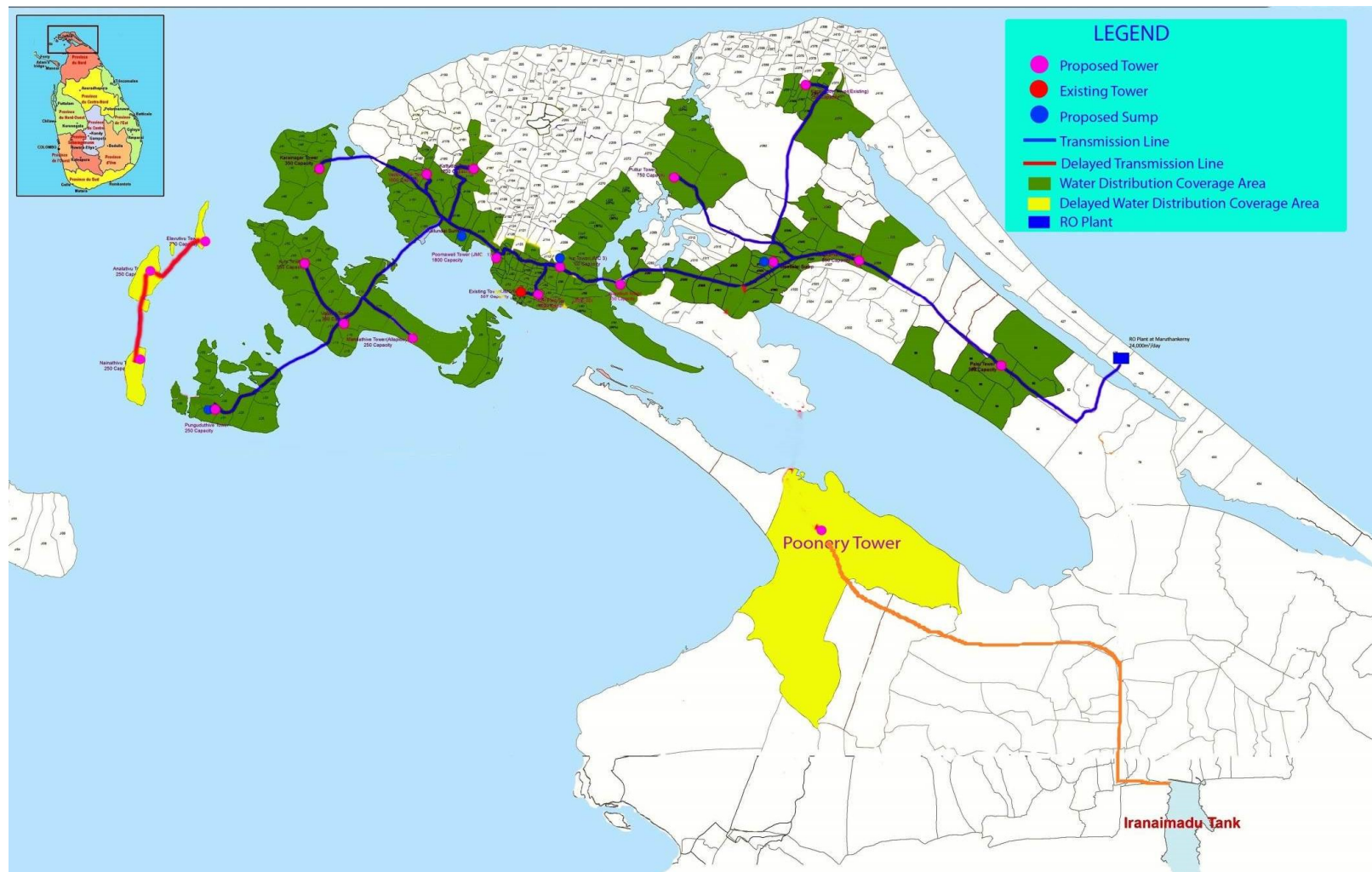
---

<sup>33</sup> For further information see: <http://compliance.adb.org/>.

<sup>34</sup> See relevant safeguard documents (e.g., IEE and RP) for further explanation of the grievance redress mechanism.



## OVERALL PROJECT AREA





**LIST OF PROJECT COVERED TOWNS**

LIST OF PROJECT COVERED TOWNS						
No	Township	No	Tower Name	Tower Capacity(m3)	Population in 2016	Population in 2020
1	Mandaitivu East	J/7	Mandaithivu Tower	250	645	769
	Mandaitivu West	J/8			369	440
	Mandaitivu South	J/9			970	1,156
2	Velanai North	J/12	Velanai Tower	350	407	485
	Velanai North East	J/13			521	621
	Velanai East	J/14			1,035	1,233
	Velanai South East	J/15			375	447
	Velanai East Centre	J/16			505	602
	Velanai South	J/17			1,099	1,309
	Velanai West Centre	J/18			370	441
	Velanai West	J/19			910	1,084
	Saravanai East	J/20			306	365
	Saravanai West	J/21			515	614
3	Pungudutivu North East	J/22	Punguduthivu Tower	250	349	416
	Pungudutivu East	J/23			275	328
	Pungudutivu South East	J/24			86	102
	Pungudutivu	J/25			285	340
	Pungudutivu South	J/26			1,028	1,225
	Pungudutivu North	J/27			263	313
	Pungudutivu Centre North	J/28			588	701
	Pungudutivu South West	J/29			203	242
	Pungudutivu Centre West	J/30			194	231
	Pungudutivu Centre East	J/31			255	304
	Pungudutivu North West	J/32			183	218
	Pungudutivu West	J/33			408	486
4	Kayts	J/49	Kayts Tower	350	430	512
	Paruthiyadaippu	J/50			698	832
	Karampon	J/51			861	1,026
	Karampon East	J/52			467	556
	Karampon South East	J/53			164	195

No	Township	No	Tower Name	Tower Capacity(m3)	Population in 2016	Population in 2020
	Karampon West	J/54			884	1,053
	Naranthanai North	J/55			385	459
	Naranthanai North West	J/56			1,089	1,298
	Naranthanai	J/57			577	688
	Naranthanai South	J/58			690	822
	Suruvil	J/59			282	336
	Puliyankoodal	J/60			1,187	1,414
5	Karainagar West	J/40	Karainagar Tower	350	1,264	1,506
	Karainagar North West	J/41			349	416
	Karainagar East	J/42			1,491	1,777
	Karainagar South East	J/43			475	566
	Karainagar South	J/44			1,577	1,879
	Karainagar South West	J/45			1,454	1,732
	Karainagar North	J/46			671	800
	Karainagar North East	J/47			1,846	2,200
	Karainagar Centre	J/48			1,454	1,732
6	Nedunkulam	J/61	Old Park Tower	1800	2,064	2,459
	Columbuthurai East	J/62			2,394	2,852
	Columbuthurai West	J/63			1,222	1,456
	Passaiyoor East	J/64			1,885	2,246
	Passaiyoor West	J/65			1,179	1,405
	Eachchamoddai	J/66			3,075	3,664
	Thirunagar	J/67			1,691	2,015
	Small Bazaar	J/72			799	952
	Jaffna Town West	J/73			1,806	2,152
	Jaffna Town East	J/74			2,295	2,735
	Chundikuli South	J/75			1,946	2,319
	Chundikuli North	J/76			1,428	1,701
	Maruthady	J/77			1,569	1,869
	Attiaddy	J/78			2,152	2,564
	Sirambiady	J/79			1,223	1,457
	Grand Bazaar	J/80			1,557	1,855

No	Township	No	Tower Name	Tower Capacity(m3)	Population in 2016	Population in 2020
	Ariyalai South West	J/89			2,231	2,658
	Ariyalai West	J/92			1,390	1,656
	Ariyalai S. W. (East)	J/93			1,001	1,193
7	Reclamation East	J/68	JMC Tower	547	4,356	5,190
	Reclamation West	J/69			3,545	4,224
	Gurunagar East	J/70			1,820	2,169
	Gurunagar West	J/71			1,428	1,701
8	Fort	J/81	Pommaveli Tower	1800	1,988	2,369
	Vannarpannai	J/82			1,511	1,800
	Koddady	J/83			2,020	2,407
	Navanthurai	J/84			2,780	3,312
	Navanthurai North	J/85			2,439	2,906
	Moor Street South	J/86			3,506	4,177
	Moor Street North	J/87			4,860	5,791
	New Moor Street	J/88			1,660	1,978
	Iyanar Kovilady	J/97			1,243	1,481
	Vannarponnai N.W. (North)	J/98			1,876	2,235
	Vannarponnai N.W. (West)	J/99			2,576	3,069
	Vannarponnai N.W. (North)	J/100			2,566	3,057
	Vannarponnai N.E. (South)	J/101			1,958	2,333
9	Ariyalai South East	J/90	Nallur Tower	1200	1,534	1,828
	(Ariyalai North West	J/91			1,737	2,070
	Ariyalai Centre North	J/94			839	1,000
	Ariyalai Centre	J/95			1,626	1,937
	Ariyalai Centre South	J/96			1,015	1,209
	Kantharmadam North West	J/102			1,632	1,945
	Kantharmadam North East	J/103			2,149	2,561
	Kantharmadam South West	J/104			1,207	1,438
	Kantharmadam South East	J/105			983	1,171
	Nallur North	J/106			1,674	1,995

No	Township	No	Tower Name	Tower Capacity(m3)	Population in 2016	Population in 2020
	Nallur Centre	J/107			587	699
	Nallur South	J/108			1,509	1,798
	Thirunelvely West	J/110			2,763	3,292
	Irupalai South	J/257			2,466	2,938
	Irupalai East	J/258			2,041	2,432
	Kopay South	J/260			3,630	4,325
	Kopay Centre	J/261			3,314	3,949
10	Anaikoddai	J/131	Kaddudai Tower	1200	3,032	3,613
	Uyarappuam	J/132			2,348	2,798
	Savatkadu	J/133			3,877	4,619
	Navali North	J/134			2,545	3,032
	Navali East	J/135			1,487	1,772
	Navali South	J/136			1,654	1,971
	Manipay West	J/140			2,207	2,630
	Sandilipay North	J/141			2,136	2,545
	Sandilipay Centre	J/142			2,046	2,438
	Sandilipay West	J/143			1,345	1,603
	Vadaliyadaippu	J/145			1,824	2,173
11	Vaddukkoddai East	J/157	Vaddukkodai Tower	1000	1,543	1,839
	Vaddukkoddai North	J/158			1,324	1,578
	Sangarathai	J/159			1,985	2,365
	Arali West	J/160			1,412	1,682
	Arali Centre	J/161			2,672	3,184
	Arali South	J/162			2,257	2,689
	Arali East	J/163			2,265	2,699
	Arali North	J/164			1,900	2,264
	Vedducoddai South	J/165			3,070	3,658
	Vedducoddai South West	J/166			1,133	1,350
12	Neervely South	J/268	Puttur Tower	750	2,375	2,825
	Neervely North	J/269			2,288	2,726
	Siripiddi East	J/271			1,783	2,124
	Avarangal East	J/276			1,414	1,685
	Puttur East	J/278			3,682	4,387

No	Township	No	Tower Name	Tower Capacity(m3)	Population in 2016	Population in 2020
	Vatharavattai	J/280			1,118	1,332
	Atchuvely North	J/285			2,036	2,426
	Kopay North	J/262			2,453	2,923
	Atchuvely South	J/286			2,928	3,489
13	Kaithady Centre	J/290	Nawatkuli Tower	350	1,232	1,468
	Kaithady South	J/291			1,455	1,734
	Kaithady West	J/293			1,316	1,568
	Navatkuli West	J/294			2,704	3,222
	Navatkuli East	J295			1,335	1,591
	Kaithady Nunavil	J/309			827	985
14	Chavakachcheri Town	J/300	Meesalai Tower	1200	1,025	1,221
	Kovilkudiyiruppu	J/301			2,666	3,175
	Sangathanai	J/302			1,817	2,165
	Chavakachcheri North	J/303			770	917
	Manduvil	J/304			1,194	1,423
	Kalvayal	J/305			2,022	2,409
	Nunavil East	J/306			1,189	1,417
	Nunavil Centre	J/307			658	784
	Nunavil West	J/308			1,816	2,164
	Meesalai North	J/318			1,985	2,365
	Meesalai West	J/319			1,990	2,371
	Ramavil	J/320			1,239	1,476
	Meesalai South	J/321			1,452	1,730
	Manthuvil East	J/345			1,234	1,470
	Manthuvil West	J/346			841	1,002
15	Kodikamam North	J/326	Kodikamam Tower	350	1,434	1,709
	Mirusuvil North	J/335			1,300	1,549
	Mirusuvil South	J/336			667	795
	Varani-Iyattalai	J/343			1,253	1,493
	Thavalai- Iyattalai	J/344			1,141	1,360
16	Karaveddy South	J/365	Karaveddi Tower	350	733	873
	Maththoni	J/366			845	1,007

No	Township	No	Tower Name	Tower Capacity(m3)	Population in 2016	Population in 2020
	Karaveddy Centre	J/367			1,288	1,535
	Karaveddy East	J/368			1,248	1,487
	Kaddaively	J/369			1,174	1,399
	Thunnalai South	J/370			1,727	2,058
	Thunnalai East	J/371			1,206	1,437
	Thunnalai Centre	J/373			648	772
	Thunnalai West	J/374			1,044	1,244
17	Pulopallai	KN/84	Palai Tower	350	756	901
	Mullaiyady	KN/85			876	1,044
	Thampakamam	KN/86			1,234	1,470
	Pallai Town	KN/87			657	783
	Pulopallai West	KN/88			435	518
	Allipallai	KN/89			234	279
	Kachcharvely	KN/90			245	292
	Kilaly	KN/95			546	651
Total					251,781	299,994

## PROCUREMENT PLAN

### Basic Data

<b>Project Name:</b> Jaffna and Kilinochchi Water Supply Project- Additional Financing	
<b>Project Number:</b> 37378-014	<b>Approval Number:</b> To be determined
<b>Country:</b> Sri Lanka	<b>Executing Agency:</b> Ministry of City Planning and Water Supply.
<b>Project Procurement Classification:</b> B	<b>Implementing Agency:</b> National Water Supply and Drainage Board
<b>Procurement Risk:</b> Moderate	
<b>Project Financing Amount:</b> \$ 153 million <b>ADB Financing:</b> \$120 million <b>Cofinancing (ADB Administered):</b> 0 <b>Non-ADB Financing:</b> \$33 million	<b>Project Closing Date:</b> 31 December 2025
<b>Date of First Procurement Plan</b> 18 June 2016	<b>Date of this Procurement Plan:</b> 5 October 2017

### A. Methods, Thresholds, Review and 18-Month Procurement Plan

#### 1. Procurement and Consulting Methods and Thresholds

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

Procurement of Goods and Works		
Method	Threshold	Comments
International Competitive Bidding for Goods	\$2,000,000 and Above	Prior Review
National Competitive Bidding for Goods	Between \$100,000 and \$1,999,999	The first NCB is subject to prior review, thereafter post review.
Shopping for Goods	Up to \$99,999	Post Review
International Competitive Bidding for Works	\$15,000,000 and Above	Prior Review
National Competitive Bidding for Works	Between \$100,000 and \$14,999,999	The first NCB is subject to prior review, thereafter post review.
Shopping for Works	Up to \$99,999	Post Review
Shopping for Goods	Up to \$ 9,999	Post Review
Direct Contracting for Goods	Up to 10,000	Post Review
Direct Contracting for Works	Up to 10,000	Post Review
Force Account for Works	Up to \$300,000	Prior Review

#### 2. Goods and Works Contracts Estimated to Cost More Than \$1 Million

The following table lists goods and works contracts for which procurement activity is either ongoing or expected to commence within the next 18 months.

Package number	General Description	Estimated Value (\$ million)	Estimated Number of Contracts	Procurement Method	Review (Prior/ Post)	Bidding Procedure	Advertisement Date
	Civil works						

W1-JMC	1.JMC Distribution system (output 1)	18.0	1	ICB	Prior	1S2E	Q4/2017
W2-SWRO	2. SWRO Desalination component (output 1)	70	1	ICB (DBO)	Prior	1S2E	Q4/2016
W3-WTDS	3. Water tower and distribution system 4 (output 1)	4.03	1	NCB	Post	1S2E	Q1/2019
W4-WRM	4. Water Resource Management (Jaffna) (output 3)	1.3	5	NCB	Prior	1S2E	Q3/2018-2020

### 3. Consulting Service Contracts Estimated to Cost \$100,000 or More

The following table lists consulting services contracts for which procurement activity is either ongoing or expected to commence within the next 18 months.

Package number	General Description	Estimated Value (\$ million)	Estimated Number of Contracts	Procurement/ Recruitment Method	Review (Prior/ Post)	Advertisement Date	Type of Proposal
C1-SWRO	1. Desalination component consultancy (National)	2.0	1	QCBS (90:10)	Prior	Q4/2017	FTP (to be recruited by ADB; national assignment; procurement advance procurement)
C2-ENC	2.Environment consultancy	0.5	1	CQS	Prior	Q1/2018	BTP
C3-IC	3.Individual consultants	1.0	10	ICS	Prior	2018-2020	Not Applicable

### 4. Goods and Works Contracts Estimated to Cost Less than \$1 Million and Consulting Services Contracts Less than \$100,000

The following table groups smaller-value goods, works and consulting services contracts for which procurement activity is either ongoing or expected to commence within the next 18 months.

General Description	Value of Contracts (cumulative)	Number of Contracts	Procurement / Recruitment Method	Review (post/prior)	Advertisement Date
None					



## B Indicative List of Packages Required Under the Project

1. The following table provides an indicative list of all procurement (goods, works, and consulting services) over the life of the project. Contracts financed by the Borrower and others should also be indicated, with an appropriate notation in the comments section.

Package number	General Description	Estimated Value (\$ million)	Estimated Number of Contracts	Procurement/ Recruitment Method	Review (Prior/ Post)	Advertisement Date	Type of Proposal
	Civil works						
	None						
	Consulting Services						
	None						

CQS = consultants' qualification selection, FTP = full technical proposal, ICB = international competitive bidding, NCB = national competitive bidding, QCBS = quality- and cost-based selection, SS2E = single stage two envelopes. ICS= Individual consultant selection method.

## C. NATIONAL COMPETITIVE BIDDING

### 1. Regulation and Reference Documents

2. The procedures to be followed for national competitive bidding shall conform to the provisions prescribed in the *Procurement Guidelines 2006 for Goods and Works* issued in January 2006 by the National Procurement Agency, and the specific procedures prescribed by the *Procurement Manual* issued in March 2006, with the clarifications and modifications described in the following paragraphs required for compliance with the provisions of the ADB Procurement Guidelines.

### 2. Procurement Procedures

### 3. Eligibility

3. The eligibility of bidders shall be as defined under Section I of ADB's Procurement Guidelines (2015, as amended from time to time) (the "Guidelines"); accordingly, no bidder or potential bidder should be declared ineligible for reasons other than those provided in Section I of the Guidelines.

### 4. Registration and Sanctioning

4. Registration is acceptable under the following conditions:

- (i) foreign bidders shall not be required to pre-registered under the national registration system of the Construction Industry Development Authority (CIDA) or under the Public Contracts Act No. 3 of 1987 of Sri Lanka and such registration shall not be a condition for the submission of bids in the bidding process;
- (ii) where registration is required prior to award of contract, bidders: (i) shall be allowed a reasonable time to complete the above registration process; and (ii) shall not be denied registration for reasons unrelated to their capability and resources to successfully perform the contract, which shall be verified through post-qualification; and
- (iii) national sanction lists or blacklists may be applied only with prior approval of ADB.

## **5. Prequalification**

5. Post qualification shall be used unless prequalification is explicitly provided for in the loan agreement/procurement plan. When used for large or complex works contracts, i.e., turnkey, design and build, or management contracts; or custom-designed equipment, industrial plants, and specialized services, prequalification evaluation shall not include the evaluation of equipment and personnel. This assessment shall be undertaken at the bid evaluation stage. Irrespective of the procedure applied (whether prequalification or post qualification), no domestic or foreign contractor shall be precluded from participation.

## **6. Advertising**

6. Bidding of national competitive bidding (NCB) contracts estimated at \$500,000 or more for goods and related services or \$1,000,000 or more for civil works shall be advertised on ADB's website via the posting of the procurement plan.

## **7. Preferences**

7. The following shall be observed:

- (i) no preference of any kind shall be given to domestic bidders or for domestically manufactured goods; and
- (ii) foreign suppliers and contractors from ADB member countries shall be allowed to bid, without registration, licensing, and other government authorizations, leaving compliance with these requirements for after award and before signing of contract.

## **8. Participation by Government-Owned Enterprises**

8. Government-owned enterprises in Sri Lanka shall be eligible to participate only if they can establish that they are legally and financially autonomous, operate under commercial law, and are not a dependent agency of the procuring entity, or the Project Executing Agency or Implementing Agency.

## **9. Rejection of Bids and Rebidding**

9. Bids shall not be subjected to a test for unrealistic rates. No lowest evaluated and substantially responsive bid shall be rejected on the basis of comparison to rates, including but not limited to market, historical, or agency established rates, without prior approval of ADB.

10. Bids shall not be rejected and new bids solicited without the ADB's prior concurrence.

## **10. Price Negotiations**

11. Price negotiation shall be allowed only where the price offered by the lowest evaluated and substantially responsive bidder substantially exceeds costs estimates. Approval of ADB is required prior to any negotiation of prices.

## **11. Bidding Documents**

### **12. Acceptable Bidding Documents**

12. Procuring entities shall use standard bidding documents acceptable to ADB for the procurement of goods, works, and consulting services, based ideally on the standard bidding documents issued by ADB.

### **13. Bid Security**

13. Where required, bid security shall be in the form of a certified check, a letter of credit or a bank guarantee from a reputable bank.

### **14. ADB Policy Clauses**

14. A provision shall be included in all NCB works and goods contracts financed by ADB requiring suppliers and contractors to permit ADB to inspect their accounts and records and other documents relating to the bid submission and the performance of the contract, and to have them audited by auditors appointed by ADB.

15. A provision shall be included in all bidding documents for NCB works and goods contracts financed by ADB stating that the Borrower shall reject a proposal for award if it determines that the bidder recommended for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive or obstructive practices in competing for the contract in question.

16. A provision shall be included in all bidding documents for NCB works and goods contracts financed by ADB stating that ADB will declare a firm or individual ineligible, either indefinitely or for a stated period, to be awarded a contract financed by ADB, if it at any time determines that the firm or individual has, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive or obstructive practices or any integrity violation in competing for, or in executing, ADB-financed contract.

### 4.1: Terms of Reference for Project Unit

#### A. INTRODUCTION

1. The Government of Sri Lanka will undertake the Jaffna and Kilinochchi Water Supply Project with financial assistance from the Asian Development Bank (ADB) and a co-financier. The components of the project are: Water Supply Infrastructure; Strengthening Jaffna Water Resource Management; and Building Implementation Capacity.

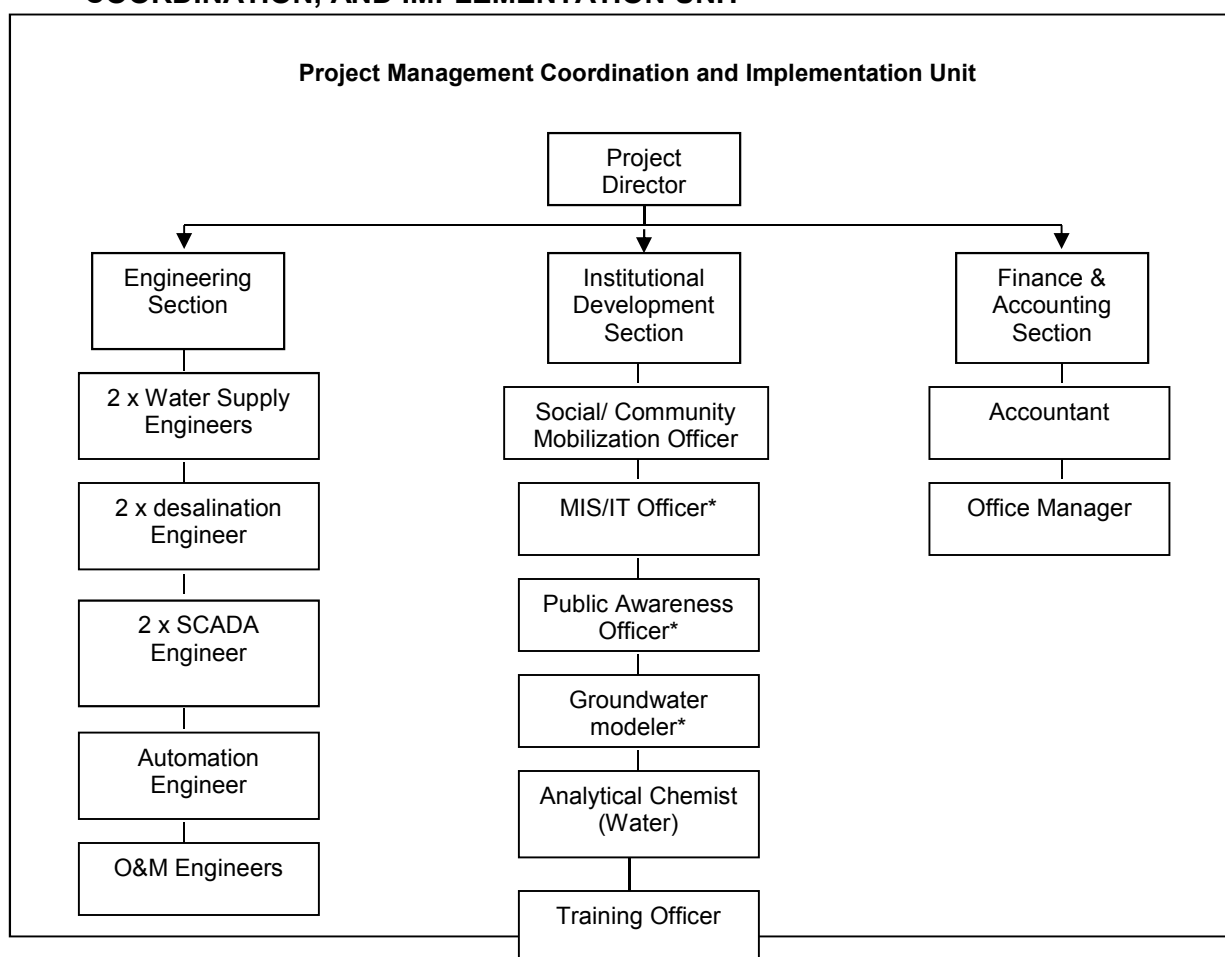
#### B. IMPLEMENTATION ARRANGEMENT.

2. The Ministry of City Planning and Water Supply (MCPWS) will be the Executive Agency and National Water Supply and Drainage Board will be the implementation agency.

#### C. OBJECTIVES

3. The project management, coordination, and implementation unit is aimed at strengthening the managerial and institutional capabilities of the executing agency to efficiently and effectively manage, coordinate, and monitor the proposed water and sanitation infrastructure development in the Jaffna peninsula. The project implementation unit is expected to improve project implementation capacity of PID.

#### D. DUTIES AND RESPONSIBILITIES OF THE PROJECT MANAGEMENT, COORDINATION, AND IMPLEMENTATION UNIT



Note: For the organization structure details and man-months, please refer to page 89 of Appendix 4.



			Computer Based Systems			
Intake and Outfall Structures design and construction	To ensure all team members have a common understanding of intake and outfall structures	1	Intakes Pipelines Pump Stations Outfalls Diffusers Hydraulics Construction Techniques Shortcuts and Pitfalls	PMSC	NWSDB PMCIU	ADB Specialist (Matthew Gieseemann) February 2018
Desalination Plant design and construction	To ensure all team members have a common understanding of this desalination plant	1	Pre-Treatment Reverse Osmosis Post-Treatment Waste Disposal Instrumentation and Control Systems Shortcuts and Pitfalls	PMSC	NWSDB PMCIU	ADB Specialist (Matthew Gieseemann) February 2018
Pipeline design and construction	To ensure all team members have a common understanding of this pipeline	0.5	Pump Stations Tanks Pipelines Downstream Interface Instrumentation and Control Systems Interface Trenching Safeguards Shortcuts and Pitfalls	PMSC	NWSDB PMCIU	ADB Specialist (Matthew Gieseemann) February 2018
Project Induction – External	To ensure team members understand the project, their responsibilities and the client's expectations (Client-Contractor Interface)	2	Overview Organisation Documents Reporting Expectations Behaviour Access Meetings Quality	PMCIU PMSC Contract or	NWSDB Safeguards	ADB Specialist (Matthew Gieseemann) March 2018
Managing Stakeholders – DB Period	To understand the requirements of stakeholders and jointly development	0.5	Types of Stakeholders Stakeholder Engagement Stakeholder Communications Plan	PMCIU PMSC Contract or	NWSDB	ADB Specialist (Matthew Gieseemann) March 2018



Health and Safety	To ensure all team members understand the project health and safety requirements	1	Legislation, regulations and guides Responsibilities and Expectations Definitions and Hierarchy Hazop Studies Workplace Hazards and Inspections Workplace Access and Induction Incident Management and Reporting Incident Follow-up Performance Monitoring	PMCIU PMSC Contract or	NWSDB	PMSC H&S Officer
						May 2018
Project Commissioning	To ensure the complete commissioning of the plant and associated infrastructure within project timelines	2	Planning for Commissioning Checking Construction Checking Control Systems Testing Equipment Testing Instrumentation Handing Over Documentation Handing Over Plant	PMCIU PMSC Contract or	NWSDB	ADB Specialist (Matthew Gieseman n)
						February 2020
Network Commissioning	To understand the operation of the downstream network and the implications for the Plant	1	Network Demands – Daily, Weekly, Monthly, Annually Network Control Systems (SCADA) Network Operations	NWSDB PMCIU PMSC Contract or		ADB Specialist (Matthew Gieseman n)
						April 2020
O&M First Four Weeks	To ensure the smooth transition to supply	1	Workshop to develop a plan for the four weeks of delivering water.	NWSDB PMCIU PMSC Contract or		PMSC Lead
						March 2021
Refreshers	To keep the material delivered up to date and maintain the competency of staff	0.25	Short refresher courses in any of the above. Delivered as required.	As above	As above	As above
<b>Operation Service Period</b>						
Managing Stakeholders – OS Period	To understand the requirements of stakeholders and jointly	0.5	Types of Stakeholders Stakeholder Engagement Stakeholder Communications Plan	PMCIU PMSC Contract or	NWSDB	PMCIU Lead
						March 2021



	development management protocols		Feedback and Improvement			
Monitoring and Reporting – OS Period	To understand the monitoring requirements and jointly development management and reporting systems	0.5	Project Monitoring Requirements - Social - Environmental - Financial Reporting Requirements Use of cloud-based systems	PMCIU PMSC Contractor	NWSDB	ADB Specialist
						March 2021
Performance Measurement – OS Period	To understand the performance measurement requirements and jointly development management and reporting systems	1	Key Performance Indicators Contract Performance Indicators Definitions and data collection Reporting and Auditing Continuous Improvement	PMCIU PMSC Contractor	NWSDB	ADB Specialist
						April 2021
Incident and Emergency Management	To understand the incident and emergency management requirements and develop plans and practice events	1	IMS systems Types of Incidents Types of Emergencies Roles and Responsibilities Escalation Roles of Emergency Services Practice Events 24/7 Response	PMCIU PMSC Contractor	NWSDB	ADB Specialist
						April 2021
Total		23.5				
Other training may be added if needed as the project progresses.						

Note: NWSDB = National Water Supply and Drainage Board; PMCIU = Project Management Consultant Implementation Unit; PMSC= Project Management and Supervision Consultant (includes International Experts); Contractor = DBO Contractor; Safeguards = ADB Safeguards Team (Social and Environmental).

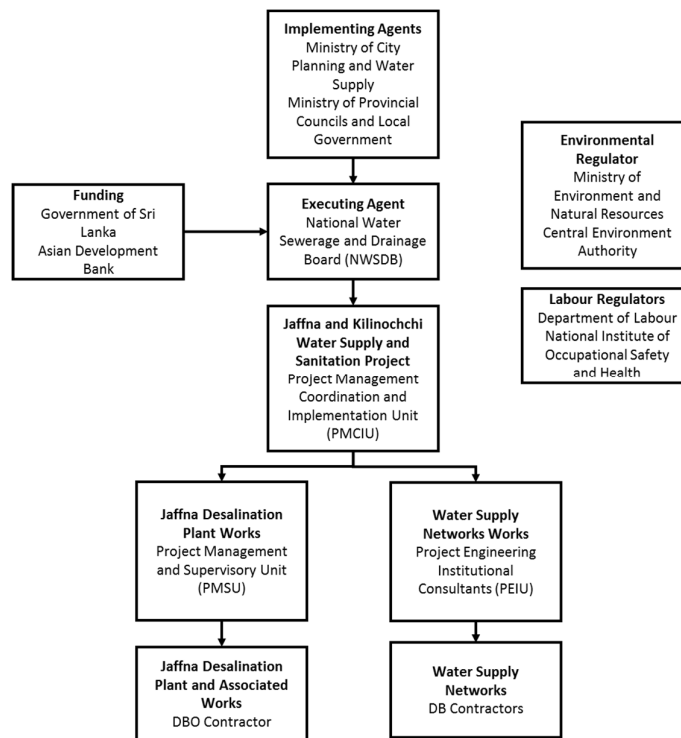
## 4.2: Outline Terms of Reference for Seawater Reverse Osmosis Desalination Plant Project Management and Supervision Consultant (PMSC) (one national firm, \$2.0 million)

### A. INTRODUCTION

1. A national consulting firm will be recruited to assist the Government of Sri Lanka in the implementation of additional financing of the Jaffna and Kilinochchi Water Supply Project (JKWSP). The NWSDB is the statutory authority responsible for the Project and it has established a Project Management Consultant Implementation Unit (PMCIU) to manage and guide the Project. The Project includes water supply and sewerage works, and capacity building.

2. For the water supply works, the PMCIU has established two sub-units. The Project Engineering Institutional Consultants (PEIU) is responsible for the project management of design and construction of the water supply network infrastructure. The Project Management and Supervision Consultant (PMSC) (this consultancy) is responsible for the project management of the design and construction and the operations and maintenance of the SWRO Desalination Plant which feeds this newly constructed network. The project management arrangements and accountability structure is depicted in Figure A4.1.

**Figure A4.1: Project Management Structure**



3. A Feasibility Study in 2014-15 recommended construction of a 24 MLD seawater reverse osmosis desalination plant (SWRO) on the northern coast of the Jaffna Peninsula. This will supply drinking water to 300,000 people, providing a partial solution, and promoting natural regeneration of the aquifers. The SWRO plant and its associated works are referred to as the 'Sub-Project', and the assets created within this Sub-Project are referred to as the 'Works'.

4. The SWRO plant will be developed using a design-build-operate (DBO) contract, in which the chosen DBO Contractor will be responsible for the scheme design, construction, and commissioning, and will operate and maintain the plant for the first seven years. The DBO Contract utilises the Conditions of Contract for Design, Build and Operate Projects (Gold Book) prepared by the Fédération Internationale des Ingénieurs-Conseil, (FIDIC) First Edition 2008. The SWRO project is financed by an ADB loan. Table A4.1 contains the various Sub-Project Works while Table A4.2 contains the Sub-Project Implementation Timetable.

**Table A4.1: The Sub-Project Works (design-build-operate contract)**

Design and Construct (2.5 years) and Operate and Maintain (7 years)			Design and Construct (2.5 years)	
Intake and Outfall Works	Treatment Plant Works	Site Buildings, Services and Amenities Works	Product Water Storage and Transfer Works	Site Access Road Works
Intake Structure	Pre-Treatment System	Site and Building Access and Security	Storage Tank	New Access Road
Intake Pipeline	Reverse Osmosis System	Electricity Supply and HV Room	Pump Station	Upgrade Existing Access Road
Intake Screens	Post-Treatment System	Water Supply	Transmission Pipeline	Waterway Crossings - Lagoon
Intake Pump Station	Disinfection System	Sewage and Waste Disposal	Connection to Existing Transmission Main	Waterway Crossings - Culverts
Intake Dosing System	Neutralisation Pit	Telecommunications		
Outfall Pipeline	Retention Tank	Roads, Parking and Pathways		
Outfall Diffuser	Chemical Storage Area	Landscaping		
	Chemical Unloading Area	Buildings <ul style="list-style-type: none"> <li>• Administration</li> <li>• Store</li> <li>• Store (Membrane)</li> <li>• Laboratory</li> <li>• Workshop</li> <li>• Computer Room</li> <li>• Accommodation</li> </ul>		

**Table A4.2 Sub-Project Timetable**

From	To	Name	Estimated Duration	Running Total (Months)	Running Total (Years)
1-Oct-17	30-Oct-17	PMSC Mobilise	1		
1-Nov-17	28-Feb-18	Design - Normal	4	4	0.33
1-Mar-18	30-Apr-18	Design - Review	2	6	0.50
1-May-18	31-Jan-20	Build - Normal	21	27	2.25
1-Feb-20	30-Apr-20	Build - Commission	3	30	2.50

From	To	Name	Estimated Duration	Running Total (Months)	Running Total (Years)
1-May-20	31-Oct-21	Operate - Proving	12	42	3.50
1-Nov-21	30-Apr-24	Operate - Normal	48	90	7.50
1-May-24	28-Feb-27	Operate - Skills Transfer	22	112	9.33
1-Mar-27	30-Apr-27	Operate - Handback	2	114	9.50

5. The total duration of the PMSC Contract will be 115 months comprising the following three periods:

- (i) PMSC Mobilisation Period: 1 month;
- (ii) Design-Build Period: 30 months; and
- (iii) Operation Service Period: 84 months

6. The PMSC will be responsible for overseeing the successful and timely implementation of the Project and will be resident in Jaffna.

## **B. PROJECT MANAGEMENT**

1. Undertake team mobilisation, set up project office and establish transport arrangements:

- (i) Develop a Project Master Schedule and cash flow and prepare a Project Implementation Plan (PIP) which identify the resources (financial, human and infrastructure) and timelines;
- (ii) Develop a project administration manual (PAM) with clear demarcation of roles, responsibilities, delegated authority and chain of command for all relevant stakeholders in ensuring effective and efficient implementation of the Project and agreed communication protocols;
- (iii) Develop and implement a Management Information System (MIS) and a Project Performance Management System (PPMS) which includes performance indicators based upon the SMART principle, and targets and goals. Design suitable report formats with emphases on the use of dashboards. Selected indicators should provide practical and meaningful measures of key project impacts and achievements;
- (iv) Attend all project meetings at PMCIU and keep the executing agency, PMCIU and ADB informed on all Project matters;
- (v) Prepare and submit the Inception Report;
- (vi) Develop a Project Quality Plan, a Compliance Management Plan and a Risk Management Plan;
- (vii) Advise on the timely achievement of the project outcomes and outputs and additional interventions in case of anticipated / encountered delays;
- (viii) Use the information in the MIS to prepare the Project Reports; and
- (ix) Assist the NWSDB and PMCIU during ADB review missions as required.

## **C. RISK MANAGEMENT**

1. Undertake a Project risk analysis and identify all potential risks related to financial, construction, operations, maintenance, safeguards and develop and maintain a Risk Mitigation Plan (RMP); and
2. Review and monitor the Contractor's Incident Response Plan (IRP) and Emergency Management Plan (EMP) and approve these Plans when satisfactory.

## **D. COMPLIANCE MANAGEMENT**

1. Involuntary Resettlement and Indigenous People Safeguards:
  - (i) There is no resettlement as part of this project; and
  - (ii) Monitor the customer and stakeholder complaints and inform the PMCIU and executing agency of corrective actions in times of persistent issues by the DBO Contractor; Assist the PMCIU and executing agency in implementing the Program's grievance redressal mechanism and provide advice on any correction/improvement when required.
2. Environmental Safeguards:
  - (i) Discuss the Environmental Safeguards with the DBO Contractor when appointed and agree on the implementation of the Environmental Safeguards recommendations and monitoring programs and the reporting of progress and outcomes;
  - (ii) Develop a compliance checklist for the Environmental Safeguards;
  - (iii) Develop and distribute information on the implementation of the Environmental Safeguards;
  - (iv) Include the Environmental Safeguards as an agenda item in the Monthly Project Meetings;
  - (v) Review and monitor the Contractor's Environmental Management Plan; and
  - (vi) Update the EIA as the Sub-Project progresses and new information on the Environmental Safeguards comes to light or Stakeholder requirements develop.
3. Project Gender and Social Inclusion Activities:
  - (i) Monitor the purchase of materials and equipment by the DBO Contractor; and
  - (ii) Maintain records on the extent of use of local products, extent of engagement of local people; and extent of employment of local contractors and include these statistics in the quarterly project report.

## **E. FINANCIAL MANAGEMENT**

1. Record Keeping:
  - (i) Establish a Project Financial Management System (FMS) including budgeting, accounting, reporting, auditing, and internal controls;
  - (ii) Maintain the books and accounts for the project such that: all project costs are identified; all project costs are assigned to a project activity; all project costs incurred during the Operate Service period are associated with an operations or maintenance activity; the process includes an invoicing, receipting and

- payment process; and payments are endorsed, authorised and made using contemporary accounting practices including the separation of accountabilities;
  - (iii) Maintain all project financial-related supporting documents for audit purposes; and
  - (iv) Assist in the preparation, update, and monitoring of project budget including the quarterly comparison of actual versus budgeted expenditure along with an analysis of variances.
- 2. Use of Provisional Amounts and Management of Variations:
  - (i) Review applications for the use of provisional amounts and decline, amend or approve as appropriate;
  - (ii) Monitor the use of and report on the application of provisional amounts;
  - (iii) Receive, review and negotiate applications for variations;
  - (iv) Recommend the approval of variations to the PMCIU where appropriate; and
  - (v) Monitor the use of and report on variations and balance variations with the approved contingency amount.
- 3. Controls over Cash, Bank Balances Payments and Flow of Funds:
  - (i) All these are to be managed by the PMCIU with advice from the PMSC.
- 4. Annual Project Financial Statements and Periodic External Audit:
  - (i) Prepare and include financial statements in the monthly, quarterly and annual reports (These should include at a minimum: Statement of Receipts and Payments; Statement of Budgeted Expenditure Vs Actual; and Statement of Expenditure by Project Component);
  - (ii) Facilitate and coordinate the audit of the project financial statements, including resolution of audit queries and provision of full and complete access of all records and project documents to the auditors; and
  - (iii) Submit final audited project financial statements to the EA, PMCIU and ADB as required.
- 5. Control Over Fixed Assets and Advances:
  - (i) Maintain adequate control over the Project's fixed assets including the maintenance of a fixed assets register, tagging of all physical assets, and periodic reconciliation of physically verified assets with the books and records; and
  - (ii) Maintain oversight and accounting record of advances and follow up to ensure that advances do not remain un-cleared for unreasonable periods of time. Adjust advances against approved bills received.

**F. QUALITY MANAGEMENT**

1. Develop a defects and non-conformance identification and management system:
  - (i) Undertake quality monitoring of construction, onsite and offsite quality control services, and field measurements and witnessing the performance tests;
  - (ii) Witness the quality sampling by the Contractor during operating service as part of the water quality testing program;
  - (iii) Supervise the preparation of a condition audit towards the end of the Operation Service Period and gain agreement with the DBO Contractor on respective handback liabilities;
  - (iv) Support the periodic external audit of the Operation Service;
  - (v) Utilise the two clerks of works and site engineers to inspect work as it proceeds and prepare inspection reports;
  - (vi) If necessary issue non-conformances to the Contractor's site supervisor and ensure non-conformances are closed out before completion certificates are issued;
  - (vii) Where necessary measure the volume of work undertaken;
  - (viii) Inspect equipment imported to site to ensure its quality;
  - (ix) Monitor the Contractor's site health and safety procedures; and
  - (x) Draw on the expertise of independent external service providers where necessary.

**G. CONTRACT MANAGEMENT**

1. Act as the Employer's Representative in the DBO Contract:
  - (i) Undertake the proof checking of the Contractor's detailed engineering designs;
  - (ii) Scrutinise the Contractor's detailed work program and guide the Contractor in the preparation of a supervision schedule / work plan for each component of the project;
  - (iii) Scrutinise construction methods proposed by the Contractor including environmental, safety and health, personnel and public issues;
  - (iv) Monitor the construction methods by assessing the adequacy of the Contractor's input materials, labour, equipment and construction methods;
  - (v) Assist with third party inspections, if necessary, as decided by the Employer;
  - (vi) Review and endorse the as-built drawings submitted by the Contractor;
  - (vii) Assist the Employer in issuing of progress and completion certificates;
  - (viii) Assist in resolution of all contractual issues including examining the Contractor's claims for variations or extensions or additional compensations, etc. and prepare recommendations for approval by the Employer;
  - (ix) Verify and measure the performance of the works and service delivery at appropriate periodical intervals during defect liability period;
  - (x) Monitor the use of third party service providers including the off-site quality control and localised Sub-Project safeguard implementation;
  - (xi) Record the work measurement and certify the Contractor's interim and final bills of payment; and
  - (xii) Verify the Contractor's invoices and assist the executing agency with the release of payments.

## H. TRAINING AND CAPACITY BUILDING

1. The PMSC Team Members (applies throughout the DB and OS Periods);
2. Draw on the knowledge and experience of the assisting international consultants in undertaking this task;
3. Assess the commercial and technical requirements of the PMSC and prepare a competency enhancement program and conduct internal training programs;
4. Source the external delivery of the development programs (including vocational training);
5. Report annually on the development of PMSC team members; and
6. The NWSDB Engineers and Operators (mostly applies towards the end of the OS):
  - (i) Draw on the knowledge and experience of the assisting international consultants in undertaking this task;
  - (ii) Two years from the handback of the works and as part of the preparation of the Handback Plan develop a Transition Plan that sees the successful transfer of the knowledge and experience required to operate and maintain the Works from the Contractor to the NWSDB;
  - (iii) Determine the technical competencies and the resources required to operate and maintain the Works and include these in the Transition Plan;
  - (iv) Participate in the development of position descriptions and the recruitment of staff for the operations and maintenance positions;
  - (v) Foster the integration of the recruited staff with the Contractor's staff using a mentoring approach;
  - (vi) A 6 months from the Handback of the Works arrange an independent readiness audit including the readiness of the NWSDB staff to assume full responsibility;
  - (vii) Identify any needs for ongoing advice and support following the Handback and contract accordingly; and
  - (viii) Develop a Succession Plan for the ongoing operations and maintenance of the works.

## I. PROJECT DELIVERABLES

1. The deliverables and target times for the Sub-Project are listed in Table A4.3. Many of these documents, systems and reports will be updated from time to time throughout the Sub-Project. As part of the Sub-Project's Quality System strict control over release of document upgrades including version control is to be exercised; and

**Table A4.3 PMSC Reports and Report Timelines**

<b>Deliverable</b>	<b>Delivery (calendar days unless specified)</b>
Safeguards Plan	Within 30 days of Letter of Acceptance
Procurement Plan	Within 30 days of Letter of Acceptance
Quality Assurance Plan - Design	Within 60 days of Letter of Acceptance
Quality Assurance Plan - Construction	Within 60 days of Design Acceptance
Quality Assurance Plan - Operations	Within 60 days of Commissioning Certificate
Project Master Program	Within 30 days of Letter of Acceptance
Budget and Cash Flow Plan	Within 45 days of Letter of Acceptance
Project Master Program	Within 30 days of Letter of Acceptance



Project Implementation Plan	Within 30 days of Letter of Acceptance
Project Organisational Structure and Contracts List	Within 60 days of Letter of Acceptance
Delegations of Authority	Within 30 days of Letter of Acceptance
Financial Operating Plan	Within 30 days of Letter of Acceptance
Financial Management System	Within 30 days of Letter of Acceptance
Project Administration Manual	Within 60 days of Letter of Acceptance
Project Information Management System	Within 60 days of Letter of Acceptance
Project Performance Management System	Within 60 days of Letter of Acceptance
Monthly Report	Within 5 business days from end of month
Quarterly Progress Report	Within 10 business days from the end of the quarter
Annual Report	Within 20 business days from the end of the year
Incident Report	Within 5 business days of incident event
Mobilisation Report	Within 60 days of Commencement Date
Design Report	Within 60 days of Design Approval
Commissioning Report	Within 60 days of Commissioning Certificate
Project Completion Report – DB	Within 90 days of Commissioning Certificate
Operations Proving Report	Within 60 days of Retention Money DB Final Release
Handback Report	Within 60 days of Contract Completion Certificate
Project Completion Report – OS	Within 60 days of Contract Completion Certificate
Risk Management Plan	Within 60 days of Letter of Acceptance
Risk Management Plan Update Report	Within 30 days of the 12-monthly anniversary of the Letter of Acceptance
Compliance Register	Within 60 days of Letter of Acceptance
Compliance Register Signoff	Within 30 days of the six-monthly anniversary of the Letter of Acceptance
Minutes of Monthly Meetings	Within 3 business days of meeting being held
Minutes of Health, Safety and Welfare Meetings	Within 3 business days of meeting being held

2. All programs and reports must be produced in draft form for reviewing by the PMSC before finalising. Draft reports must be submitted in soft copy only. Reports must be authorised by the PMSC Project Manager and will be sent to the Project Director, PMCIU.

## **J. TEAM COMPOSITION AND QUALIFICATION REQUIREMENTS**

1. The Jaffna Desalination Plant and Associated Works encompass a broad range of work types and skill sets and as such it is unlikely that a single project management consulting company would have the experience in all these work types. This has been allowed for in this

ToR by placing a priority on the experience and skill sets required, and by augmenting the PMSC with international specialists;

2. The PMSC must have experience in project management and supervisory work on projects within Sri Lanka which have a significant civil, mechanical and electrical works content. The nature of the work involved is contained in the following list. Focused project management experience of projects involving one or more of these areas is essential;

3. Project management of complex projects involving multiple work types and requiring considerable project coordination;

4. Project management of projects involving international and national contractors and with complex technical requirements;

5. Mechanical and electrical installations including pump stations;

6. The SCADA and instrumentation and control systems;

7. Treatment plant works (any type);

8. High voltage installations;

9. Offshore construction works;

10. Trenching and pipelaying;

11. Industrial buildings and concrete structures;

12. Road construction;

13. It is the intention of the executing agency to augment any shortcomings in the skill sets of the successful bidder to this ToR with international experts. These will be recruited separately and added to the team. All international experts will report to the PMSC Project Manager. Additional international experts may be added depending upon the responses to this ToR; and

14. A summary of the PMSC inputs is contained in Table A4.4 while a more detailed breakdown and timeline is contained in Table A4.5.

**Table A4.4 Summary of PMSC Inputs**

<b>Position</b>	<b>Input (Months)</b>
Team Leader / Project Manager	85
Engineer – Civil Works	35
Engineer – Mechanical and Electrical Works	25
Professional – SCADA and ICS	15
Financial Management and Reporting Officer	85
Environmental and Social Compliance Officer	23
Clerk of Works	26
Clerk of Works	26
Health and Safety Officer	47

Position	Input (Months)
Administration Officer	115
<b>Total</b>	<b>482</b>

Table A4.5 Detail of PMSC Inputs and Timelines

From	To	Phase	Duration	Team Leader / Project Manager	Engineer – Civil Works	Engineer – Mech and Elect Works	Prof – SCADA and ICS	Financial M'ment and Report Officer	Enviro and Social Comp Officer	Clerk of Works	Clerk of Works	Health and Safety Officer	Admin Officer	Total Input
			Months	Months	Months	Months	Months	Months	Months	Months	Months	Months	Months	Months
01-Oct-17	30-Oct-17	PMSC Mobilise	1	1	0	0	0	0	0	0	0	0	1	2
01-Nov-17	28-Feb-18	Design - Normal	4	4	4	2	2	4	1	0	0	2	4	23
01-Mar-18	30-Apr-18	Design - Review	2	2	2	2	2	2	2	2	2	2	2	20
01-May-18	31-Jan-20	Build - Normal	21	21	21	6	2	21	9	21	21	21	21	164
01-Feb-20	30-Apr-20	Build Commission	3	3	3	3	3	3	3	3	3	3	3	30
01-May-20	31-Oct-21	Operate - Proving	12	12	5	6	2	12	2	0	0	4	12	55
01-Nov-21	30-Apr-24	Operate - Normal	48	18	0	0	0	19	2	0	0	5	48	92
01-May-24	28-Feb-27	Operate - Skills Transfer	22	22	0	4	2	22	2	0	0	8	22	82
01-Mar-27	30-Apr-27	Operate Handback	2	2	0	2	2	2	2	0	0	2	2	14
		<b>Total</b>	<b>115</b>	<b>85</b>	<b>35</b>	<b>25</b>	<b>15</b>	<b>85</b>	<b>23</b>	<b>26</b>	<b>26</b>	<b>47</b>	<b>115</b>	<b>482</b>

15. The minimum qualifications and experience for each of the positions are listed in Table A4.6.

**Table A4.6: Minimum Qualification Requirements**

Position	Qualifications	Experience
Team Leader / Project Manager	<i>Essential</i> Degree in Engineering (Civil, Chemical, Environmental, Mechanical or Electrical) <i>Preferable</i> Masters in an Engineering discipline Project Management qualification	<i>Essential</i> 20 years managing projects 10 years managing complex multidisciplinary projects 5 years working with FIDIC contracts <i>Preferable</i> 5 years managing water projects 5 years constructing similar works
Engineer – Civil Works	<i>Essential</i> Degree in Engineering (Civil or Environmental) <i>Preferable</i> One of the following: <ul style="list-style-type: none"> <li>Construction Management qualification</li> <li>Project Management qualification</li> <li>Post graduate qualification</li> </ul>	<i>Essential</i> 15 years designing and constructing civil installations 5 years designing or constructing pipelines <i>Preferable</i> Several years working in the water utility industry
Engineer – Mechanical and Electrical Works	<i>Essential</i> Degree in Engineering (Mechanical or Electrical) <i>Preferable</i> Masters in Engineering (Mechanical or Electrical)	<i>Essential</i> 12 years designing and constructing mechanical and electrical installations 3 years designing or constructing pump stations <i>Preferable</i> Several years working in the water utility industry Several years working with high pressure pumps
Professional – SCADA and ICS	<i>Essential</i> Degree in Engineering (Chemical, Mechanical or Electrical) or Degree in Science (Applied or Computer) or equivalent <i>Preferable</i> Masters in Science (Applied or Computer) or equivalent	<i>Essential</i> 5 years working on plant instrumentation and control systems 5 years working on the design, development or operations of SCADA systems <i>Preferable</i> 10 years working on plant instrumentation and control systems 5 years working in the water industry
Financial Management and Reporting Officer	<i>Essential</i> Degree in Accounting (Accounting, Business or Commerce) <i>Preferable</i> Post graduate qualification	<i>Essential</i> 5 years working on the financial management of a major project 5 years practicing management accounting and financial reporting <i>Preferable</i> 5 years managing accounts in a construction company

Environmental and Social Compliance Officer	Essential Degree in Science (environment related) or Engineering (Environmental) <i>Preferable</i> Post graduate qualification	<i>Essential</i> 10 years conducting environmental assessments 5 years auditing environmental impacts <i>Preferable</i> Experience with ADB safeguards Preparation of several environmental management plans
Clerk of Works 1	<i>Essential</i> Nil <i>Preferable</i> Technical or trade certificate.	<i>Essential</i> 20 years constructing works of a similar type 5 years supervising the construction of works <i>Preferable</i> 7 years as employer's site representative
Clerk of Works 2	<i>Essential</i> Nil <i>Preferable</i> Technical or trade certificate.	<i>Essential</i> 8 years constructing works of a similar type <i>Preferable</i> 4 years supervising the construction of works 2 years as employer's site representative
Health and Safety Officer	<i>Essential</i> Certificate in Occupational Safety and Health <i>Preferable</i> Degree with significant Occupational Safety and Health component	<i>Essential</i> 10 years practicing occupational safety and health 7 years preparing safety plans, safety procedures and other safety documentation <i>Preferable</i> Nil
Administration Officer	<i>Essential</i> Nil <i>Preferable</i> Qualification in Business Management, Business Administration or similar	<i>Essential</i> 10 years' experience in administration preferably in a project related area High level of proficiency in MS Word and MS Excel <i>Preferable</i> Experience with ADB projects and reporting

## K. EMPLOYER INPUT AND COUNTERPART PERSONNEL

### Services, Facilities and Property

#### Project Support

1. The Employer will assist the PMSC in:

- (i) Gaining access to all workplaces for the Contract Period;
- (ii) Gaining access to the treatment plant site for the Contract Period;
- (iii) The making of Sub-Project payments in accordance with the Terms and Conditions of the Contract;
- (iv) Promptly responding to request for assistance with the obtaining of permits;
- (v) The import of equipment;
- (vi) The procurement of goods and services;
- (vii) The provision of work permits for international consultants;
- (viii) The management of the Sub-Project impacts on the local community;
- (ix) The connection of the works to the downstream infrastructure; and

- (x) The return of retention sums, securities, guarantees and funds in accordance with the Contract.

### **Accommodation and Amenities**

2. The PMSC is expected to be fully self-sufficient for the undertaking of its work. As such the PMSC is expected to provide its own amenities and supporting equipment and materials including the following:
  - (i) Offsite office space: sufficient office space for the full complement of international and local consultants, a good-sized room for holding meetings, national and international telephone lines, electricity and air conditioning/heating, internet connections, secure document storage, fitted out and supplied kitchen, clean toilets, washrooms and minor first aid facilities;
  - (ii) Office furniture: desks, office chairs, and bookshelves/cabinets adequate to accommodate the full complement of international and local consultants;
  - (iii) Organisational support: assistance in all arrangements for workshops, meetings, and field visits; printing of materials; secure storage of confidential reports; and access to required data, maps and other relevant information;
  - (iv) Personal computers, printers, scanners and stationary and other facilities for producing reports; and
  - (v) Transport: cars and/or vans and drivers for international and local consultants.
3. Fully equipped and secure onsite office space for four PMSC staff will be made available by the DBO Contractor.

### **Professional and Support Personnel from the Employer**

4. There are no assigned counterparts as part of this project.
5. An international expert with experience in desalination plants will be assigned to the PMSC for the Contract Period. The person will be available to the PMSC throughout the contract period to answer questions, review reports, provide advice and prepare documents. The person will also frequently attend the site to assist the PMSC. Other international experts may also be assigned for short term inputs if the need arises. A total of 91 person weeks have been set aside for the inputs from international experts.

### **Access to Documents and Information**

6. The PMSC will be provided with copies of the documents it needs to fulfil its responsibilities.

### **L. SAFETY, HEALTH AND WELLBEING**

1. The creation of a safe workplace, both during the design-build and operate service periods, is considered an essential component of this project. The PMSC is required to pay close attention to this aspect of the Project and to enforce through the Contract

compliance with the national safety and health standards and Project safety and health plans and processes.

2. The PMSC is expected to provide leadership in safety and health matters and its commitment to safe work practice will be one of the selection criteria.

#### **Personal Protective Equipment**

The PMSC is required to provide and ensure its staff set an example by wearing designated Personal Protective Equipment (PPE) at all workplaces and at a standard at least equal to that required by the DBO Contractor. Disciplinary action is to be taken where this does not occur. As a minimum, all staff employed by the PMSC are to be issued with a current hard hat; a high visibility vest; a pair of safety boots; and a pair of safety glasses.

All PMSC visitors attending a Project workplace<sup>1</sup> must to be issued with and wear the same.

---

<sup>1</sup> A Project workplace is any site where a construction, operation or maintenance activity is being carried out or any site accommodating Project personnel.



**4.3: Outline Terms of Reference for Deputy Team Leader and Works Technical Specialist during Operation Service Period  
(one international, 9 person-months, \$0.25 million)**

1. An international consultant will be recruited as Deputy Team Leader and Works Technical Specialist) to bring expert knowledge in the operation and maintenance of desalination plants to the Project and will provide expert technical advice to the Project Management and Supervision Consultant (PMSC) which administers the DBO Contract. The role will also significantly contribute to the management of the social and environmental impacts of the operation of the plant and the monitoring and performance management of the Contractor. Finally, the role will participate in the resolution of Employer-Contractor differences as they arise. The first 3 years' work is covered by the TA. The loan will cover the O&M period.

**A. SCOPE OF WORK**

2. The Scope of Work of the Deputy Team Leader and Works Technical Specialist is to:
- (i) Gain a full understanding of the JKWSP and the role of the Works within this Project;
  - (ii) Provide expert advice on the selection and application of the technologies utilised by the Project;
  - (iii) Assist the executing agency and Team Leader in forming the PMSC and establishing its project management and supervision business systems, and the PMSC's ongoing management;
  - (iv) Provide specialist advice on the operations and maintenance of the Works and provide technical leadership to the executing agency and the PMSC;
  - (v) Provide specialist advice on risk management and social and environmental compliance management;
  - (vi) Assist with the monitoring of the financial, quality, social, environmental, operational, asset management, safety and incident and emergency management compliances of the Contractor and recommended corrective actions and follow up required corrective actions where necessary;
  - (vii) Provide expert advice on the evaluation of all claims from the Contractor and make recommendations on time, quality and scope issues;
  - (viii) Provide advice to the resolution of any dispute process that arises;
  - (ix) Attend and contribute to the monthly progress meetings with the Contractor;
  - (x) Contribute to and review the monthly, quarterly and annual reports;
  - (xi) Prepare the Works Completion Report for the Operation Service Period;
  - (xii) Make expert presentations on the technical aspects of the Works to the JKSWP's various stakeholders and interested parties;
  - (xiii) Provide ongoing vocational training to members of the PMSC;
  - (xiv) Lead the development of the skills transfer plan ahead of the handback period;
  - (xv) Provide expert advice on workplace health and safety; and
  - (xvi) Assist with the negotiation of the Works handback.

**B. QUALIFICATIONS AND EXPERIENCE**

**Qualifications**

*Essential*

- (i) Degree in Engineering (Civil, Chemical, Mechanical or Electrical);
- (ii) Masters in an Engineering discipline; and

*Preferable*

- (iii) Qualification in Training.

**Experience***Essential*

- (i) 20 years leading the design and construction of works;
- (ii) Design and construction of at least two desalination plants;
- (iii) Operations and maintenance of at least one desalination plant;
- (iv) 10 years' experience in health and safety;
- (v) 15 years' experience in environmental management and compliance; and

*Preferable*

- (vi) Held leadership roles in large water companies or consulting practices.

**C. INPUTS**

3. The following table summarises the inputs of the Deputy Team Leader and Works Technical Specialist.

From	To	Phase	Duration (Months)	Input (Weeks)	Home (Weeks)	Site (Weeks)
01-May-20	31-Oct-21	Operate - Proving	18	6	2	4
01-Nov-21	30-Apr-24	Operate - Normal	42	16	6	10
01-May-24	28-Feb-27	Operate - Skills Transfer	22	8	3	5
01-Mar-27	30-Apr-27	Operate - Handback	2	6	2	4
<b>01-May-20</b>	<b>30-Apr-27</b>	<b>Total</b>	<b>84</b>	<b>36</b>	<b>5</b>	<b>31</b>

**D. DELIVERABLES**

4. The deliverables of the Deputy Team Leader and Works Technical Specialist are as follows:

- (i) Annual maintenance plans approved;
- (ii) Annual operations plans approved;
- (iii) Differences and disputes resolved;
- (iv) Social and environmental compliance achieved;
- (v) Monthly, quarterly and annual reports accurate and complete;
- (vi) Operational optimisation with downstream network achieved;
- (vii) Skills transfer plan developed and in place;
- (viii) Readiness check list prepared and agreed;
- (ix) Skills transfer monitoring program in place;
- (x) Skills transfer plan implemented and transition readiness report prepared;
- (xi) Readiness check list satisfied and included in transition readiness report;
- (xii) Asset condition report completed and agreed;
- (xiii) Draft final cost report completed and agreed in principle;
- (xiv) Final Works cost reported signed off;
- (xv) Contract completion certificate issued; and
- (xvi) Works Completion Report (OS period) submitted

**4.4: Outline Terms of Reference for Membrane and Process Specialist  
During Operation Service Period  
(one international, 2 person-months, \$0.05 million)**

1. The Membrane and Process Specialist (international) will bring a high degree of expertise to the PMSC and assist the PMSC in managing membrane and process issues that occur or are raised by the Contractor. The role will consider requested changes to the treatment plant control philosophy, and the changes to the operating regimes that will occur as the treatment plant output progressively increases. The role will also provide backup support to the Works Technical Specialist.

**A. SCOPE OF WORK**

2. The Scope of Work of the Membrane and Process Specialist is to:
- (i) Gain a full understanding of the JKSWP and the role of the Treatment Plant Works within the full scope of works;
  - (ii) While engaged on the TPW fully participate in the implementation of the Works as a team member of the PMSC;
  - (iii) Respond in a timely manner to requests for information from other members of the PMSC;
  - (iv) Review the design of the Treatment Plant Works and recommend improvements;
  - (v) Assist in trouble shooting Treatment Plant Works operational issues as they arise;
  - (vi) Assist in processing requested variations relating to the Treatment Plant Works;
  - (vii) As requested by the Works Technical Specialist review the operations of and operational performance of the Treatment Plant Works;
  - (viii) Inspect and provide a written report on the condition of the Treatment Plant Works as part of the Handback asset condition assessment;
  - (ix) Assist in providing vocational training to the NWSDB treatment Works operators as part of the Handback; and
  - (x) Contribute to the preparation of the Works Completion Report (DB period) and Works Completion Report (OS period).

**B. QUALIFICATIONS AND EXPERIENCE**

**3. Qualifications**

*Essential*

- (i) Degree in Engineering (Chemical);
- (ii) Doctor of Philosophy in Desalination Specialty; and

**Experience**

*Essential*

- (i) 15 years designing desalination plants;
- (ii) 10 years designing membrane systems;
- (iii) 5 years designing process control systems; and

*Preferable*

- (iv) Held advisory roles on desalination plants.

**C. INPUTS**

4. The following table summarises the inputs of the Membrane and Process Specialist.

From	To	Phase	Duration (Months)	Input (Weeks)	Home (Weeks)	Site (Weeks)
01-May-20	31-Oct-21	Operate - Proving	18	3	1	2
01-Nov-21	30-Apr-24	Operate - Normal	42	1	1	0
01-May-24	28-Feb-27	Operate - Skills Transfer	22	2	0	2
01-Mar-27	30-Apr-27	Operate - Handback	2	1	0	1
01-May-20	30-Apr-27	Total	84	7	2	5

#### D. DELIVERABLES

5. The deliverables of the Membrane and Process Specialist are as follows:
- (i) Advice on Treatment Works annual maintenance plan to PMSC provided on time and as required;
  - (ii) Ad hoc comments on Treatment Works performance comprehensive and provided on time;
  - (iii) On line participation in Treatment Works problem 'trouble shooting' and written advice provided on time;
  - (iv) Written responses to Contractor or PMSC queries on Treatment Plant Works comprehensive and provided on time;
  - (v) Ad hoc advice on Treatment Works issues provided to PMSC on time and as required;
  - (vi) Skills transfer plan for Treatment Works operations developed and in place;
  - (vii) Readiness check list for Treatment Works operations prepared and agreed;
  - (viii) Treatment Works skills transfer plan implemented and transition readiness report prepared;
  - (ix) Treatment Works readiness check list satisfied and included in transition readiness report; and
  - (x) Treatment Works asset condition report completed and agreed.

#### **4.5: Outline Terms of Reference for Audit Body in Operation Service Period (two international, 2X4 person month, \$0.35 million)**

##### **A. PURPOSE**

1. These terms of reference relate to the appointment of an Audit Body for the following Project and Contract:

- (i) Project: Design, Build and Operation of a 24 MLD Sea Water Reverse Osmosis Desalination Plant at Thalaiyadi, Jaffna District, Sri Lanka; and
- (ii) Contract: PEIC/JKSWP/Sea Water Reverse Osmosis Plant/2015/01.

2. The contract being used for this Project is the Conditions of Contract for the Design, Build and Operate Projects published by Federation International des Ingenieurs-Conseils (FIDIC) First Edition 2008 ('Gold Book').

Clause 10.3 Independent Compliance Audit of the Gold Book describes the purpose of the Audit Body as:

*'to monitor the performance of both the Employer and the Contractor during the Operation Service in compliance with the Operation Management Requirements'.*

3. The Employer is the National Water Supply and Drainage Board which is a Statutory Authority within the Sri Lankan Ministry of City Planning and Water Supply.

##### **B. APPROACH**

4. Two international consultants will be recruited to conduct the Operation Service audit on intermittent basis during the O&M period. It is part of a continuous improvement approach to the Contract, and the Employer and the Contractor must approach the audit in this manner. Both the Employer and the Contractor are to cooperate fully and openly with the Audit Body to maximize the benefit from an audit.

5. The Audit Body is to be jointly appointed by the Employer and Contractor. The Audit Body's fees and disbursements are to be paid by the Contractor and reimbursed at cost by the Employer.

##### **C. TIMETABLE**

6. The Operation Service Period is expected to cover the following periods.

From	To	Phase	Duration (months)	Audit Body's input
1-May-20	31-Oct-21	Operate - Proving	18	Twice in first year, and once a year in the following years. Each time will be 7 working days plus two travel days for one person. Total input: 56X2 persons working days plus 16X2 travel days in seven years.
1-Nov-21	30-Apr-24	Operate - Normal	42	
1-May-24	28-Feb-27	Operate - Skills Transfer	22	
1-Mar-27	30-Apr-27	Operate - Handback	2	
1-May-20	30-Apr-27	Total	84	

#### **D. OPERATION MANAGEMENT REQUIREMENTS**

7. The Operation Management Requirements are contained in the following documents:
  - (i) The Bidding Document as revised and updated;
  - (ii) The Consolidated Answers to Bidders Questions;
  - (iii) The Successful Bidders Submission;
  - (iv) The Environment Impact Assessment (includes the Environment Management Plan);
  - (v) Resettlement Plan;
  - (vi) The Contract;
  - (vii) Any Variations approved during Design-Build Period which impact on the Operate Service; and
  - (viii) Any Plans, Protocols, Programs or Agreements approved during the Contract Period.
8. The Audit Body is to use these documents as the baseline for its audits and to reference these documents in its audit reports. In addition, the Audit Body is to recommend improvements to these documents, and the processes within the documents, as it sees fit. Included in the documents are the processes for ordering and paying for work, and for achieving social and environmental compliance. Although not exclusively, the Auditing Body is to make these two items a priority for audits.

#### **E. SCOPE OF SERVICES**

9. The Audit Body is to provide the following services:
  - (i) In consultation with the Employer and Contractor successively develop an annual audit plan for each year of the seven years comprising a schedule of two to four audits based upon requests for audits received from the Employer and Contractor;
  - (ii) Provide audit personnel with the knowledge and experience to professionally undertake each audit in the annual audit plan – two auditors must be assigned to each audit;
  - (iii) Direct and undertake the annual audit plan including up to four business days on site;
  - (iv) Prepare draft and final reports for each audit which are to include recommended resourcing, process or reporting improvements;
  - (v) Maintain a log of all recommended improvements and when requested investigate and prepare a progress report on the implementation of recommended improvements; and
  - (vi) Where it sees fit separately report on the audit process including any matters that are inhibiting an audit to be undertaken, or where improvements to the auditing process itself can be made.

#### **F. PROCESS FOR AUDITING**

10. At the start of each year of the Operation Service the Auditing Body is to seek suggestions from the Employer and the Contractor on what items should be included in the annual audit plan. The Auditing Body may also put forward its own suggestions based upon its experience with similar contracts or the past performance of this contract.
11. Using this information, the Auditing Body is to finalise the annual audit plan and forward it to the Employer and Contractor for approval. No more than four separate audit items may be included in the annual audit plan, unless otherwise jointly directed by the Employer and Contractor. An annual audit plan must comprise at least two items which the Audit Body may

select where agreement on items to be audited cannot be reached between the Employer and Contractor.

12. The annual audit plan should comprise a schedule of proposed audits and a draft brief for each audit. When the annual audit plan is approved these briefs become final. The average time for each audit is expected to be 2 days preparation, 3 days on site, one day for the draft audit report, a further day for the final audit report, and 2 days of travel time where the Audit Body is from another country.

13. A draft audit report is to be submitted concurrently to the Employer and the Contractor. Each of these shall have up to five working days to provide comments. If requested by the Auditing Body, the Employer or the Contractor a teleconference may be held to explain the draft report and its findings and recommendations.

14. The Auditing Body may receive comments from the Employer and/or the Contractor. The Auditing Body is not obliged to include these comments, but in not doing so must explain the reasons for not doing so.

15. The Auditing Body is to provide its final report in PDF format, and retain a copy of the report for up to 5 years after the completion of the Operation Service Period.

16. The Audit Body is to maintain a log of recommended improvements and provide a copy of this log to the Employer and the Contractor at the end of each Contract year. When requested to do so the Audit Body shall investigate and report on the progress of implementing the recommended improvements.

## **G. INFORMATION**

17. The Employer and Contractor will make all information relevant to an audit available to the Audit Body at least 10 days prior to the commencement of an audit and promptly respond to Audit Body's questions.

18. The Audit Body may also request any information it sees fit. The Audit Body is to maintain the confidentiality of any information it receives and may not disclose this information to any other entity including the Employer and Contractor respectively.

19. Where relevant the Audit Body may also request information from other Government departments or companies affiliated with the Contractor. However, such a request must be channeled through either the Employer or the Contractor as relevant.

20. The Audit Body may request raw data, or summaries of data where the summarizing is to be carried out by the Employer or Contractor as relevant.

## **H. EXCLUSIONS**

21. The Audit Body may not audit any matter that relates to the appointment of the Contractor.

22. The Audit Body may not audit any matter relating to the funding or financing of the Project.

23. The Audit Body may not audit matters relating to any decisions made in regard to the Project by any regulating entities.



#### **4.6: Outline Terms of Reference for the Individual Environment Monitoring Consultant (one international, 10 person-months, \$0.25 million)**

##### **A. OBJECTIVE OF THE CONSULTANCY**

1. The objective of the consultancy is to monitor the implementation of the project's environmental management plan (EMP) related to the approved Environmental Impact Assessment (EIA) in compliance with ADB SPS (2009) and the CEA. The specialist will report to the project management, coordination and implementation unit (PMCIU) and ADB. The consultant is listed in procurement plan individual consultant. Independent Environmental Monitoring Expert; Individual (international, 10 person-months, intermittent over project duration).

##### **B. SCOPE OF WORK**

2. The main tasks and responsibilities will be to review the Environmental Impact Assessment (EIA) and Project Environmental Management Plan (EMP) as well as the contractors' environmental management plan (CEMP) to understand the environmental issues associated with the project area. Consult with loan implementation consultants to identify if there are any changes in the project sites of baseline environmental condition, if changes are made review and assess the outcome and advise updating the EMP:

- (i) Review the semi-annual monitoring reports and undertake spot checks if necessary to verify data and reporting;
- (ii) Prepare and submit annual independent environmental audit reports to PMCIU for submission to ADB. These will include status of project implementation, monitoring results, challenges and measures to be proposed or taken, observations on any non-compliances and suggest corrective actions to be taken prior to next monitoring;
- (iii) Supervise the fisheries/ biodiversity monitoring studies as well as water quality studies and make an independent assessment of impact on marine biodiversity. This role will involve coordination with local data collection team. Make sure that the EMP of contractor is in line with Project EMP;
- (iv) Verify that the public awareness campaign on EMP implementation is carried out among residents near construction sites, and that all complaints are promptly resolved in accordance with EMP policy;
- (v) Advise PMCIU and consultants in coordinating the GRM and coordination consultation with local stakeholders, define corrective actions for updating the environmental monitoring report as needed;
- (vi) Review bidding documents and contractor materials to make sure that all environmental obligations are implemented in accordance with the EMP;
- (vii) Provide support to PIU in assessing and documenting EMP on monthly basis and preparing environment audit list;
- (viii) Review monthly EMP implementation report of contractor and its compliance with reality;
- (ix) Conduct and implement environmental auditing, and include measures to be taken; and
- (x) Assist PMCIU before expiry of the initial environmental permit, to review and revise (if necessary) to obtain CEA continued approval.

**C. QUALIFICATIONS**

3. The expert shall preferably have a university degree in environmental engineering or similar field. He/she will have 10 years of work experience with state, public or private organizations in environmental safeguards and public consultations. It would be advantageous if he/she is familiar with Sri Lankan regulations and procedures and ADB policies on environmental impact assessment, environmental management and public consultation.

4. The Advisor would work intermittently from Q1 2018 to Q4 2025.

#### **4.7: Outline Terms of Reference for Environmental Monitoring(Survey) Team (EMT) (one national firm with budget of \$0.5 million)**

##### **A. Composition (a national firm will be recruited)**

**Team Leader:** Environmental engineer

##### **Team members:**

- (i) Marine biology expert;
- (ii) Terrestrial ecology expert;
- (iii) Water Quality expert;
- (iv) Safeguard specialist; and
- (v) Environmental engineers/ environmental scientist with experience in marine civil works.

##### **B. Tasks:**

- (i) immediately on mobilization, apprise the DBO contractor (DBOC) on EIA and EMP, project sensitivity and compliance requirements;
- (ii) monitor the update of EIA study, EIA Report and EMP by DBOC; ensure compliance with ADB and Government of Sri Lanka policies;
- (iii) ensure that there are no deviations from the original project proposals of feasibility stage, except in items where a flexible approach is allowed by the bid; closely monitor the design; ensure that DBOC do not deviate from the provisions, especially related to sites and locations;
- (iv) ensure that no mitigation or monitoring measures are relaxed from the base scenario (as in approved EIA of bidding stage) in the EIA and EMP updated during the detailed design by DBOC; all measures shall be reviewed and, if required, may be further strengthened, but cannot be relaxed;
- (v) review and approve the project implementation plan in coordination with technical supervision / project management team; ensure that project activities are scheduled in compliance with EMP provision; ensure that all EMP tasks are duly considered in implementation schedule;
- (vi) ensure timely mobilization of staff, resources, agencies, etc., by DBOC as per the EMP;
- (vii) ensure preparation of EIA update and EMP implementation as a compendium to the overall implementation plan; review and approve the plan;
- (viii) ensure that all permissions and clearances as required are obtained; coordinate with DBOC and assist PCIMU in obtaining the same advice PCMIU on regulatory requirements and standards and ADB compliance requirements;
- (ix) coordinate with IUCN on translocation of coral species; oversee and report on translocation process;
- (x) review and approve terms of reference for proposed confirmatory surveys to be conducted by DBO contractor; monitor conduct of surveys, review and approve outputs;
- (xi) review the measures suggested for protected species, and check the suitability based on the confirmatory surveys; strengthen measures where required;
- (xii) closely monitor numerical modeling for brine effluent exercise, review and approve; ensure that outfall design is consistent with modeling;
- (xiii) ensure that various Plans, Method Statement etc., as suggested in the EIA and EMP, are prepared by DBOC; review and approve; supervise the implementation of plans, and ensure compliance;

- (xiv) day-to-day supervision of implementation of mitigation and monitoring measures in compliance with EMP and EMoP;
- (xv) ensure that all mitigation measures, recommendations of EIA are implemented as intended;
- (xvi) ensure that all monitoring measures are implemented as per EMoP;
- (xvii) identify non-compliance issues, notify the DBO contractor, report and implement corrective actions;
- (xviii) Immediately notify PCMIU and ADB if any new or unanticipated impacts encountered during implementation; suggest mitigation and monitoring measures;
- (xix) ensure work stoppage as per the EMP provisions in case of non-compliance (for example turbidity above pre-set limit); ensure that DBOC staff are aware of these provisions prior to start of the construction work;
- (xx) prepare and implement a training and capacity development plan for project and contractor staff on environmental safeguards, EMP implementation;
- (xxi) ensure DBOC compliance with IFC EHS guidelines for all project activities; also ensure compliance with GoSL regulations;
- (xxii) ensure conduct of safety training by DBOC to staff;
- (xxiii) ensure that monthly progress report submitted by DBOC include a separate section on Environmental safeguards; review monthly progress reports submitted by contractor, and notify non-compliance items, take appropriate action to ensure compliance;
- (xxiv) submit quarterly environmental monitoring reports to PCMIU; report to capture progress, compliance, corrective actions, etc., related to environmental safeguards; besides quarterly reports, EMT should immediately notify PCMIU on any non-compliance, unexpected issues that needs immediate intervention;
- (xxv) prepare semi-annual EMRs for ADB submission;
- (xxvi) assist PCMIU in public consultation and disclosure activities;
- (xxvii) assist in grievance redress process; advise DBOC and PCMIU; and
- (xxviii) considering the site sensitivity, establish code of conduct at the site for staff and workers to follow; suggest penal provisions for violations in coordination with PCMIU and agreed with DBOC.

### C. Detailed Schedule:

No	EMT Team	Person-Months	Remarks
	<b><u>Design &amp; Build Period</u></b>		
1	Team Leader / Environmentalist	7.5	5 working days monthly for design & build period (2.5 years)
2	Marine Biology Expert	7.5	
3	Terrestrial Ecology Expert	7.5	
4	Water Quality Expert	7.5	
5	Environmental Engineer (Marine)	7.5	
6	Safety Specialist	7.5	
7	Resident Environmental Officer	30.0	Full time
	<b><u>Operation Period</u></b>		

1	Team Leader / Environmentalist	5.0	5 working days quarterly for operation period (for 5.0 years)
2	Marine Biology Expert	5.0	
3	Terrestrial Ecology Expert	5.0	
4	Water Quality Expert	5.0	
5	Environmental Engineer (Marine)	5.0	
6	Safety Specialist	5.0	

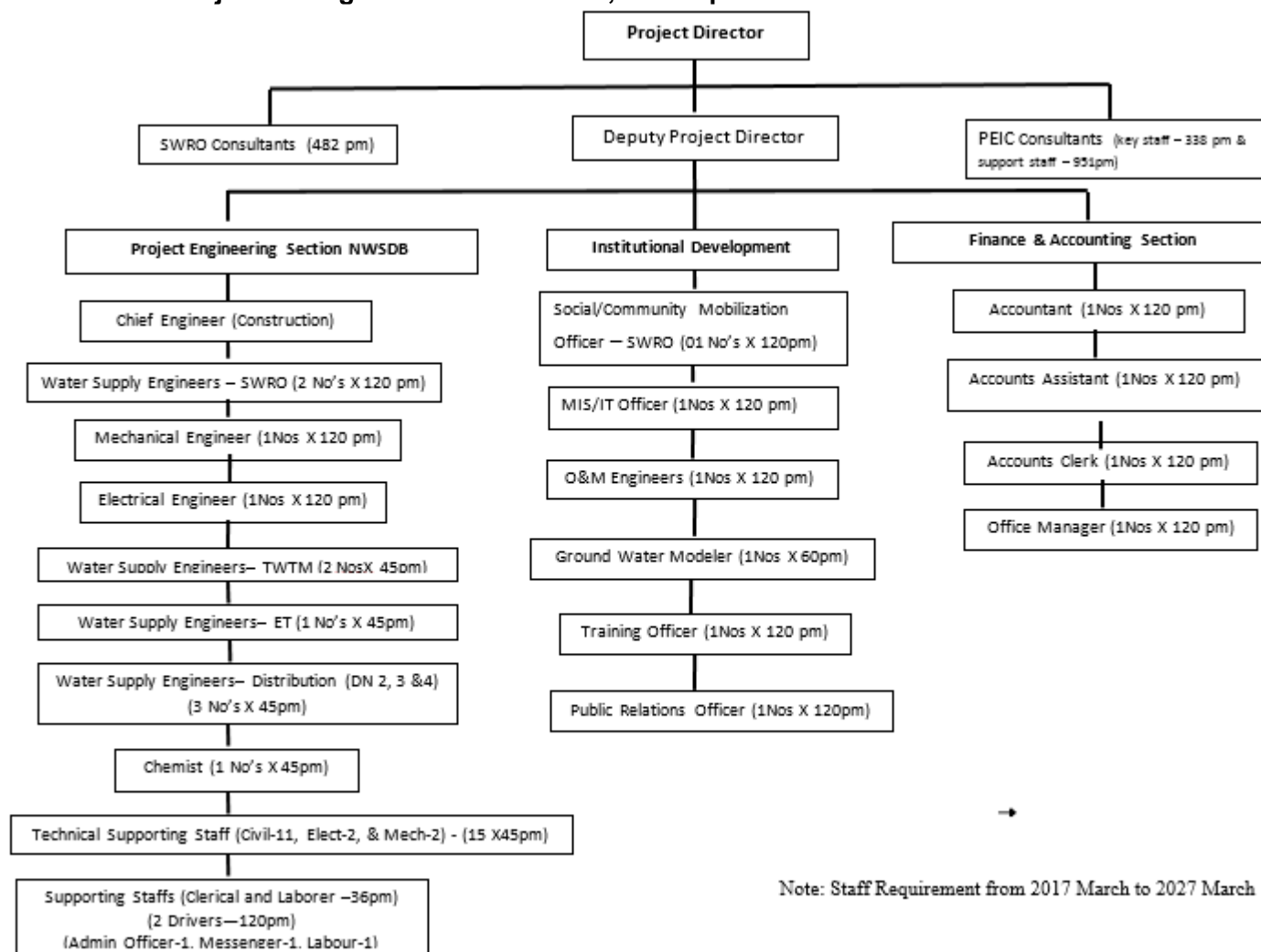
#### **4.8: Outline Terms of Reference for the Social Development, and Gender Specialist (One National, 12 person-months, \$50,000)**

9. The Social Development and Gender Specialist is included in the Gender Action Plan in Appendix 5 and Community Consultation and Participation Action Plan in Appendix 6. The consultant will preferably have a degree in sociology or social sciences or equivalent with 10 years' experience in the development and/or implementation of social and gender component of water resource management or urban infrastructure projects funded by international donors. The candidate should possess good communication (oral and written), interpersonal and teamwork skills and be fluent in Tamil and English.

10. The duties and tasks of the Social Development, and Gender Specialist include, but not limited to:

- (i) ensure that all ADB and/or Government of Sri Lanka social regulations/statutory requirements and related issues are properly incorporated into the design and implementation phases of the project;
- (ii) establish a system for monitoring the implementation of gender action plan, livelihood development plan and community and participation plan and prepare monitoring indicators for the same (for inclusion in the PPMS);
- (iii) lead in organizing an orientation workshop for the PMCIU staff involved in project implementation, on social and gender aspects of the project. Provide input and sensitize important stakeholders (including contractors) to project objectives related to poverty, gender, and social inclusion, ensuring the inclusion of the poor, women, indigenous people, and other marginalized and vulnerable groups in subprojects;
- (iv) provide support in implementing, reviewing and updating Gender Action Plan and Communications/Participations Plan;
- (v) monitor and assess implementation of the gender action plan for the active involvement of women as equal partners in all decision-making processes in the project and as prime beneficiaries of the project activities, and for the benefit of the poor and weaker sections on priority, with additional assistance, support and efforts;
- (vi) coordinate with and support the PMCIU Sociologist for conducting the public information campaign;
- (vii) ensure timely preparation and submission of compliance reports related gender monitoring during the implementation phase which maybe (but not necessarily limited to) quarterly gender monitoring reports and such details related to the project completion reports etc;
- (viii) support PMCIU Sociologist in conducting ongoing consultations with the representation of local women for continued needs assessments and implementation of Participation and Community Mobilization Plan;
- (ix) promoting shared decision making and responsibility through meetings, seminars, and workshops; and
- (x) supporting in mobilization and orientation of (a) government officers; (b) steering committee; (c) community members; (d) affected persons; and (e) school children through school activities like painting competitions.

### Project Management Coordination, and Implementation Unit and Consultants



Note: Staff Requirement from 2017 March to 2027 March

IC = international consultant, IT = information technology, MIS = management information services, NC = national consultant, NGO = nongovernment organization, NWSDB = National Water Supply and Drainage Board, PEIC = Project Engineering Institutional Consulting, O&M = operation and maintenance, pm = person-months.

\* These positions, to be later transferred to government agent office, are created in support of Jaffna Water Resources Management Committee Secretariat.

\*\* Consultants for this position will be funded under the TA.

## GENDER ACTION PLAN

The objectives of the gender action plan (GAP)<sup>1</sup> are to promote and enable the equal participation of men and women stakeholders as agents and beneficiaries of the Jaffna and Kilinochchi Water Supply Project. The GAP is based on the analysis that demonstrates that women are disadvantaged and discriminated against in the socio-cultural, economic and political spheres of life and are denied equal access to resources, services and opportunities that would enable them to participate in, contribute to and benefit fully from the development processes in the country.<sup>2</sup> The project will encourage and support women's increased participation in the consultative processes involved in the planning and in the implementation of activities to be carried out through the loan project and ensure that they benefit equally from project outcomes. The budget is included in the incremental administrative cost.

Activities	Targets and Indicators	Responsible Agency	Time
<b>Output 1: Water supply service infrastructure in Jaffna Peninsula improved.</b>			
Conduct stakeholder consultations, including women, on water transfers and the design, construction, O&M of water supply schemes	40% of women in community/stakeholder consultation (and consultations with women's organizations)	PMCIU	2017 - 2021
Include design features that address the privacy and safety needs of the ECWD, in construction of desalinization plant and transmission	Households led by women and elderly, and households with people with disability are prioritized when subsidizing household connections	PMCIU; NWSDB; PS; DS.	2020 - 2021
Women headed households and most vulnerable households included in livelihood development activities	At least 80% of households led by women and most vulnerable are assisted with livelihood development	PMCIU; NWSDB; PS; DS.	2017 - 2021
<b>Output 3: Water resource management systems and capacity strengthened</b>			
Ensure that existing laws on water supply implemented in a gender responsive manner	Gender responsive implementation of existing laws on water supply and sanitation is assessed and enhanced	ADB Gender Specialist, PMCIU Sociologist, Consultant	2017 - 2021
Conduct gender awareness-raising programs for relevant stakeholders <sup>a</sup>	At least two training session (minimum 4 hours) is conducted for mid and upper level stakeholder representatives	ADB Gender Specialist, PMCIU Sociologist, Consultant	2017 - 2021
Develop by-laws and implementing rules and regulations for groundwater monitoring for	Women's organizations and 20% women are in water resource management committee.	PMCIU Sociologist,	2017 - 2021

<sup>1</sup> Baseline data will be collected by the Project at the onset and gender-related targets confirmed. Current targets are based on discussion with the relevant government, NGOs, development partners, and ADB project staff in the project area.

<sup>2</sup> Country Gender Assessment – Sri Lanka, ADB, Manila, 2008.

<sup>a</sup> MLGPC, NWSDB, WRB, JWRMC, JMC, relevant municipal councils, urban councils, and *Pradeshiya Sabhas* (see Participation and Community Mobilization Plan in Annex E of Project Administration Manual)



Activities	Targets and Indicators	Responsible Agency	Time
municipal councils, urban councils, and <i>Pradeshiya Sabhas</i> which formulate community based water quality monitoring programs.			
Develop a Gender Strategy for NWSDB-JRO as a pilot initiative	Gender Strategy developed and piloted	ADB Gender Specialist, PMCIU Sociologist, Consultant	2017 - 2021
Develop training toolkits for gender mainstreaming training	A training manual is developed and used for training of staff and stakeholders	ADB Gender Specialist, PMCIU Sociologist, Consultant	2017 - 2011
Conduct gender mainstreaming training for NWSDB-JRO staff	At least three training sessions (minimum 6 hours) is conducted for all project staff	ADB Gender Specialist, PMCIU Sociologist, Consultant	2017 - 2021
Develop and maintain sex-disaggregated data base at NWSDB-JRO, Provincial, District and local levels	Sex-disaggregated data is readily accessible	ADB Gender Specialist, PMCIU Sociologist, Consultant	2017 - 2021
Conduct gender mainstreaming training of statistical officers in collecting sex disaggregated data and maintaining the database	One training conducted (minimum 4 hours) and statistical officers recognize the needs and ways to collect sex-disaggregated data	ADB Gender Specialist, PMCIU Sociologist, Consultant	2017 - 2021
Include social and gender-related indicators and targets in the Project Monitoring system and develop project-specific progress report forms with specific sections on gender; and ensure timely and effective incorporation of all progress in the achievement of the social- and gender-related targets	Project monitoring system provides sex-disaggregated data	PMCIU Sociologist	2017 - 2021

CBO = community-based organization, ECWD = elderly, children, women and disabled, JMC = Jaffna Municipal Council, MCPWS = Jaffna Water Resources Management Committee, NGO = nongovernment organization, NPCC = National Project Coordination Committee, NWSDB = National Water Supply and Drainage Board, O&M = operations and maintenance, PMCIU = Project management, coordination and implementation unit, WRB = Water Resources Board

**APPENDIX 6: COMMUNITY CONSULTATION AND PARTICIPATION ACTION PLAN**

<b>Consultation and Participation (C&amp;P) Activity</b>	<b>Target Stakeholders</b>	<b>Type of Participation</b>	<b>Objectives of the Consultation and Participation Activity</b>	<b>Responsible Unit/Persons</b>	<b>Time Frame</b>	<b>Cost Estimate in Rs.</b>
Orientation Workshops for government officials, officers, and staff on JKSWP	50-100 Government officials and staff consisting of representatives from, District Secretary Office, Nwasdb, Fisheries Department, CEA, MEPA, PMCIU, PEIC and members from community based organizations and Contractor(s).	<ul style="list-style-type: none"> <li>• Information sharing</li> <li>• Consultation</li> <li>• Shared responsibility</li> <li>• Shared decision-making</li> </ul>	<ul style="list-style-type: none"> <li>• Introduction about the desalination plant, water demand, its processes, environmental and social aspects of the plant etc.</li> <li>• Present safeguards disclosure, issues related to environmental and social risks and their mitigation, monitoring and reporting requirements</li> <li>• Discuss roles of stakeholders</li> <li>• Gather suggestions and agree on recommendations</li> </ul>	Safeguard Specialist/ ADB Project Director/JKSWP Sociologist/PMCIU	Year 1: 1 Program orientation workshop	100X120X7 = 84000.00
<ul style="list-style-type: none"> <li>• Community consultations meeting</li> <li>• Stakeholder's Steering Committee Meetings</li> </ul>	50 – 75 members of the rural development society/ women rural development society and the public who has the interest to know about the desalination plant Steering Committee, PPCC, DCC meetings	<ul style="list-style-type: none"> <li>• Information sharing</li> <li>• Shared responsibility</li> <li>• Shared decision-making</li> </ul>	<ul style="list-style-type: none"> <li>• Share information on proposed desalination plant and its activities</li> <li>• Review compliance with gender, social safeguards, environment, awareness campaign, gender frameworks and plans</li> <li>• Discuss progress in implementation, including problems encountered and means to mitigate/address them</li> </ul>	Safeguard Specialist/ ADB PD/JKSWP- Sociologist/ PMCIU GA/Jaffna	Conducting every month  Stakeholders meetings and workshops quarterly	12X7X120X75= 756000.00  4X7X120X50= 168000.00  Total: 924000.00

Consultation and Participation (C&P) Activity	Target Stakeholders	Type of Participation	Objectives of the Consultation and Participation Activity	Responsible Unit/Persons	Time Frame	Cost Estimate in Rs.
			<ul style="list-style-type: none"> <li>Regularly report on the progress of implementation</li> </ul>			
Orientation workshop for contractors/ laborers	All program-related staff and laborers in contractors' teams (25 – 50)	<ul style="list-style-type: none"> <li>Information sharing</li> </ul>	<ul style="list-style-type: none"> <li>Construction management</li> <li>Quality assurance</li> <li>Core labor standards: HIV/AIDS, no child labor policy, equal pay for equal work for men and women etc.</li> <li>Employment opportunities for local poor men and women</li> <li>Environmental and social safeguards and mitigation measures</li> <li>Assistance to be provided to APs during construction</li> <li>Gender sensitization</li> </ul>	Project Manager/ Contractor Team Project Director/ JKSWP Engineer /PMCIU Sociologist/ PMCIU	one program for per year	1X7X50X120 = 42000.00
Orientation workshops in each village in the first year of implementation for community members (end users and APs) (half day)	<ul style="list-style-type: none"> <li>100 community members, with at least 30% women and vulnerable persons participating per program orientation seminar</li> </ul>	<ul style="list-style-type: none"> <li>Information sharing</li> <li>Consultation</li> <li>Shared decision-making</li> </ul>	<ul style="list-style-type: none"> <li>Introduce desalination project, highlighting its importance and benefits to the community</li> <li>Demonstrate the link between improved water supply and good health, women's empowerment, and environmental conservation</li> </ul>	Project Director, Engineer, Sociologist of PMCIU	4 programs in three villages (Quarterly)	4X3X1X120X100 = 144000.00

Consultation and Participation (C&P) Activity	Target Stakeholders	Type of Participation	Objectives of the Consultation and Participation Activity	Responsible Unit/Persons	Time Frame	Cost Estimate in Rs.
			<ul style="list-style-type: none"> <li>• Present safeguards and social frameworks and plans; discuss water tariff and affordability, proposed benefits for poor and vulnerable (subsidies etc.)</li> <li>• Gather views related to present level of service and recommendations</li> </ul>			
Consultations with affected persons (APs) on resettlement, entitlement, compensation issues, special protection measures for vulnerable people (1-2 hours each)	<ul style="list-style-type: none"> <li>• Affected Persons (APs) including women</li> </ul>	<ul style="list-style-type: none"> <li>• Information sharing</li> <li>• Consultation</li> </ul>	<ul style="list-style-type: none"> <li>• Identify the views of APs including all women APs on resettlement and compensation; job opportunities, and mitigate potential conflict</li> <li>• Discuss potential disruptions and assistance available, and gather recommendations</li> <li>• Inform about grievance redress mechanism and contacts, discuss issues and grievances of APs, if any</li> <li>• Agree on mitigation measures</li> </ul>	Contractors, District Secretary/ Vadamarachchi East Project Director, Engineer, Sociologist/ PMCIU	During resettlement plan updating (2 meetings in each village) Year 2-7 (semi-annual meetings in each village including operation stage):	200X2X3X120 = 144000.00 5X2X3X100X120 = 360000.00 <b>TOTAL: 504000.00</b>

Consultation and Participation (C&P) Activity	Target Stakeholders	Type of Participation	Objectives of the Consultation and Participation Activity	Responsible Unit/Persons	Time Frame	Cost Estimate in Rs.
Workshops and competitions for School students	<ul style="list-style-type: none"> <li>School students from Vadamarachchi East schools</li> </ul>	<ul style="list-style-type: none"> <li>drawings</li> <li>information sharing</li> <li>exhibitions</li> </ul>	<ul style="list-style-type: none"> <li>identify the basic information about the structure, processes and benefits of the desalination plant</li> <li>Enhance creativity and improve innovation skills, for example by conducting painting competitions.</li> <li>Students easily understand and share the information with others</li> <li>Publishing of booklet containing paintings made by school students,</li> </ul>	Project Director, Engineer, Sociologist/P MCIU  ZD/ Vadamarachchi Zone  Principal/Schools	one session for 1 year	10000x1x7 = 70000.00
<b>TOTAL COST OF CONSULTATION AND PARTICIPATION (included in the incremental administrative cost)</b>						<b>1,768,000.00 (\$12,000)</b>

RDS=rural development society, WRDS=women rural development society

## A. COMMUNITY MOBILIZATION

1. Activities are required to ensure that communities are mobilized as participants in the Project. These activities are to be undertaken by NWSDB (municipal and urban areas) and *Pradeshiya Sabhas* through and nongovernment organization and are to encourage participation of women (see Gender Action Plan). The timeline is provided in Table 2.

2. **Activity 1: Understanding the Community.** Information on the following will be collected: dwelling settlement patterns, sex-disaggregated socio-economic information of residents, areas where the poor and marginalized concentrate, existing status of the Water Supply facilities, and available social capital in the area. The information collected will identify the specific water and sanitation needs of women.

3. **Activity 2: Beneficiary Awareness.** The activity will focus on: discussion with community leaders, existing community groups and the general public on the Project; awareness programs on the importance of safe water and sanitation and existing situation based on information gathered in Activity 1 (and also from information from project documents and other secondary sources); understand the attitude of the public on safe Water Supply; and discussions on the willingness to participate in the Project and affordability to meet the cost and modes of

contribution. The activity will pro-actively target the needs of women and develop catered awareness programs for female headed and widowed households. The awareness campaign will be gender-sensitive and focus on public water conservation, environmental, and hygiene awareness campaigns with a target of 50% women participation.

4. **Activity 3: Preparation of the Community Profile.** The profile will include, but will not be limited to: list of households based on street/lane/cluster according to the dwelling pattern of the area; street/lane/cluster households profile including the status of existing water and sanitation facilities using Participatory Rapid Appraisal; listing choices of preferred modes of Water Supply facilities; categorization of households according to the willingness and affordability to have a domestic connection (to indicate the percentage of households that opted for domestic connections); and identification of reasons for those who cannot afford connections.

5. **Activity 4: Formation of Community Groups.** Formation of community groups is a crucial stage in the mobilization process. Households in a street/lane/cluster will be mobilized as community groups that will work with the NGO selected for community mobilization. The NGO's target is 100% membership of households in a particular location. In urban areas of Jaffna, almost all persons are members of community groups such as Community Centers, religious groups, etc. in their respective area—such groups could also be considered as the community-based organization (CBO) for water and sanitation. Any water consumer groups already formed (active or non-active), need to be taken into consideration in the formation of CBOs to prevent conflicts. The formed CBOs will have an executive committee with 33% representation of women and a constitution based on commonly agreed rules and regulations.

6. **Activity 5: Functions of the Community Groups.** The water related agenda of these community groups will be determined by the percentage of households that opt for domestic connections from the public water supply system. If majority of households opt for domestic connections, the few households that cannot afford to meet the cost will be provided with flexible financial assistance to enable them to have a domestic connection where it is not viable to introduce a different system to a few household that might be scattered in location. Community-based metered public water facilities will be provided for those who cannot afford to have domestic connections, in place of public stand posts, which is found to be ineffective in terms of revenue collection, as well as operation and maintenance. The formation and functions of the community groups in-charge of the community-based metered public water facility are:

- (i) establishing a CBO which could be either an existing one or a newly formed one;
- (ii) the physical location of the facility can be in the premises of Community Centers, Temples or other public institutions, which is acceptable and easily accessible to members. This will, unlike the public stand posts, ensure its safety and care;
- (iii) distribution of water could be based on a standard container with a fixed price that the community agrees on;
- (iv) distribution of time and duration should be decided, taking into consideration convenience, especially the convenience of women;
- (v) the mode of payment will consider various options such as daily, weekly, or monthly using tokens or cash depending on what is convenient to the community; and
- (vi) the community will decide on flexible options for members for those who cannot afford to pay for the water.

7. **Activity 6: Formation of Community Based Organization.** A water and sanitation CBO at the ward level will be formed with the representatives of community groups formed at the

street/lane/cluster level and will consist of at least 33% women members. The number of CBOs will depend on the size of community. In the project area, the number of wards of a GSD ranges from two to five.

8. **Activity 7: Registration of Community Based Organization** . The CBOs will register with the appropriate institution to get legal status, and will also register with the NWSDB.

9. **Activity 8: Functions of the Community Based Organization**. The CBO will:

- (i) be linked at DSD and district level and represent the interests of the community in the decision making process;
- (ii) participate in the planning and implementation of the Project in their locality;
- (iii) organize and regularize the people's contribution through labor or cash as agreed at the decision making stage;
- (iv) monitor the water use and wastage, sanitation status, operations and maintenance issues, and regular payment for services;
- (v) undertake contract works in the locality; and
- (vi) interact with NGOs/donors.

**Table 2: Time Line for Community Mobilization**

Activities	Months														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Selection of NGO	x														
Training NGO		x	x												
Understanding the community				x											
Beneficiary Awareness					x										
Preparation of Community Profile					x	x									
Formation of the community groups							x	x	x	x	x				
Formation of CBO												x	x	x	
Registration of CBO															x

CBO = community-based organization, NGO = nongovernment organization.

## 10. Consultant's Terms of Reference

One national Social Development and Gender Specialist will be recruited to work for both plans. The TOR is included in Appendix 4.