



# Draft Design and Monitoring Framework

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Project Number: 36173-01  
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## SRI: Greater Colombo Wastewater Management Project

A design and monitoring framework is an active document, progressively updated and revised as necessary, particularly following any changes in project design and implementation. In accordance with ADB's public communications policy (2005), it is disclosed before appraisal of the project or program. This draft framework may change during processing of the project or program, and the revised version will be disclosed as an appendix to the report and recommendation of the President.

**Asian Development Bank**

## DESIGN AND MONITORING FRAMEWORK

Design Summary	Performance Targets/Indicators	Data Sources/Reporting Mechanisms	Assumptions and Risks
<p><b>Impact</b> Urban environment and public health are improved for urban residents in Greater Colombo.</p>	<p>By 2017:</p> <ul style="list-style-type: none"> <li>• Inland and marine water quality within Colombo improves, complying with CEA quality standards</li> <li>• Incidence of the water borne diseases is reduced by 20% from 2009</li> <li>• Number of underserved low-income settlements reduced by 30% from 1,640 in 2009</li> </ul>	<p>Project baseline,<sup>1</sup> midterm and final surveys</p> <p>Regular quality monitoring results</p> <p>Ministry of Health Annual Bulletin</p> <p>Central Environment Authority (CEA) Reports</p> <p>CMC health bureau data on incidence of infectious diseases</p> <p>UNEP State of the Environment Report</p>	<p><b>Assumptions</b></p> <ul style="list-style-type: none"> <li>• Macroeconomic and political stability</li> <li>• CMC secures funds and implements solid waste management program by 2013</li> </ul>
<p><b>Outcome</b> Urban population in Greater Colombo enjoys enhanced wastewater management services</p>	<p>By 2014:</p> <ul style="list-style-type: none"> <li>• Incidence of flooding due to blockages of pipes reduced by half</li> <li>• Incidence of overflow and collapses in the sewerage system is reduced by half.</li> <li>• Operational performance starts measured in 2012 and improved by 20% in 2014</li> </ul>	<p>Project baseline,<sup>1</sup> midterm and final surveys</p> <p>CMC's financial statements produced for statutory reporting purposes</p> <p>Western Province statistics</p> <p>CEA reports</p> <p>Quality monitoring results</p> <p>Record of operational performance monitoring scheme</p>	<p><b>Assumptions</b></p> <ul style="list-style-type: none"> <li>• CMC adopts increase in revenue sources (property tax), and secures O&amp;M budget to cover the cost, as required by the Project</li> <li>• Trained technical staff retained in CMC</li> <li>• CMC adopts enforcement of discharge quality compliance by CEA/CCD</li> </ul>
<p><b>Outputs</b> 1. Sewerage infrastructure is upgraded</p>	<ul style="list-style-type: none"> <li>• 17 Pumping stations and 4 connection pumping mains are fully refurbished and functional by 2014.</li> <li>• 10 km of gravity sewers are newly constructed by 2014.</li> <li>• 2 sea outfalls are fully rehabilitated and functional by 2014</li> <li>• 15 km of sewers have been cleaned and number of blockages is reduced by half by 2014.</li> </ul>	<p>CMC and NWSDB financial statements produced for statutory reporting purposes</p> <p>PPMS reports</p> <p>Site surveys, contract supervision reports, and scheme completion reports</p> <p>Project baseline, midterm and final surveys</p> <p>Procurement documents submitted to ADB</p>	<p><b>Assumptions</b></p> <ul style="list-style-type: none"> <li>• PMU adequately staffed with qualified personnel</li> <li>• Upgrading works financed by other development agencies completed on time</li> <li>• Continued political support and commitment to Project implementation</li> </ul> <p><b>Risks</b></p> <ul style="list-style-type: none"> <li>• Unexpected price hike in construction material.</li> </ul>

<sup>1</sup> The indicators will be updated reflecting the result of baseline survey envisaged and resourced under the newly processing capacity development technical assistance.

Design Summary	Performance Targets/Indicators	Data Sources/Reporting Mechanisms	Assumptions and Risks
	<ul style="list-style-type: none"> <li>Essential Mobile Plant for CMC has been procured by 2011.</li> <li>Sewerage and drainage system has been disconnected by 2014.</li> </ul>		
2. Institutional and Operational Capacity of CMC is strengthened	<ul style="list-style-type: none"> <li>Asset management and Business support systems established within CMC by 2011.</li> <li>Management and operational plans and procedures adopted by CMC by 2011.</li> <li>Operational, technical, and financial trainings delivered to over 500 staff by 2014.</li> <li>Sewer mapping and network modeling completed by 2011.</li> <li>Environmental monitoring mechanism built and operationalized by 2010.</li> <li>Customer charter adopted by 2011.</li> <li>Pro-poor and gender-inclusive sanitation strategy and its implementation plan institutionalized by 2012.</li> </ul>	PPMS of implemented subcomponents MIS system records Procurement documents submitted to ADB Training records Workshop records Multimedia material for awareness and education program CEA reports Customer relations log book	<b>Assumptions</b> <ul style="list-style-type: none"> <li>CMC actively embrace proposed institutional strengthening measures and capacity building program</li> <li>Intergovernmental coordination is strong and committed to environmental protection</li> </ul>
3. Project Management and Implementation capacity of CMC is improved	<ul style="list-style-type: none"> <li>Fully-fledged PMU set up by Oct. 2009.</li> <li>Tendering process is completed and all contracts are awarded by Mar. 2012.</li> <li>All construction works have been completed and commissioned by 2014.</li> </ul>	Consultancy contracts Procurement documents submitted to ADB	<b>Assumptions</b> <ul style="list-style-type: none"> <li>Approval process for procurement and consultant recruitment not delayed in CMC.</li> </ul>
<b>Activities with Milestones</b>			<b>Inputs</b>
<b>Output 1: Upgrading sewerage infrastructure</b> 1.1 Advance action requested, consultants recruitment process initiated by Aug. 2009 1.2 Design-Build-and-Operate bidding documents (except technical specification) completed by May 2010 1.3 Design and supervision consultant and institutional development consultant are mobilized by Aug. 2010 1.4 Necessary environmental clearances from CEA obtained by Dec. 2010 1.5 Topographical, field surveys and investigations undertaken by Dec. 2010 1.6 Bidding documents for main works (technical proposal) evaluated by Mar. 2011 1.7 Main contracts awarded by Mar. 2012			<ul style="list-style-type: none"> <li>ADB (\$100,000,000)</li> <li>GoSL (\$16,100,000)</li> <li>1,007 person-months (77 international, 930 national) of consulting services</li> </ul>

- 1.8 Short resettlement plan updated reflecting detailed design by Jun. 2012
- 1.9 Detailed engineering design for main rehabilitation works completed by Sep. 2012
- 1.10 Sewer cleaning, isolated repairs and replacement of valves and removal of cross connections completed by Dec. 2013
- 1.11 Gravity sewer construction completed by Jun. 2014
- 1.12 Rehabilitation of sea outfalls completed by Sep. 2014
- 1.13 Rehabilitation of pumping station completed and commissioned by Dec. 2014

**Output 2: Strengthening Institutional and Operational Capacity**

- 2.1 Advance action requested, consultants recruitment process initiated by Aug. 2009
- 2.2 Asset registrar and inventory investigation completed by Jun. 2010
- 2.3 Customer database is completed by Jun. 2010 (by CDTA)
- 2.4 Plan for performance budgeting and accounting system adopted by CMC by Jun. 2010 (by CDTA)
- 2.5 Baseline survey for operational and financial condition completed by Jun. 2010 (by CDTA)
- 2.6 Institutional development consultants are mobilized by Aug. 2010
- 2.7 Asset management program completed by Dec. 2010
- 2.8 Environmental compliance monitoring program completed by Dec. 2010
- 2.9 Organizational performance monitoring and reporting system developed by Dec. 2010
- 2.10 CMC pro-poor sanitation stocktaking exercise completed by Dec. 2010
- 2.11 Business support system equipment and software are purchased by Mar. 2011
- 2.12 Operational efficiency and performance indicators adopted by CMC by Mar. 2011
- 2.13 Customer Charter and customer services manual developed by Mar. 2011
- 2.14 Detailed 4-year training program for PMU and CMC developed by Mar. 2011
- 2.15 Annual training programs prepared and submitted by Apr. 2011 and every year thereafter
- 2.16 Sewer network modeling completed by Apr. 2011
- 2.17 Environmental monitoring and compliance reports (discharge to sewers, discharge to outfall and inland waters quality), by Apr 2011 and every year thereafter
- 2.18 Trade effluent register developed by Jun. 2011
- 2.19 Energy and environmental audits reported by Jun. 2011 and every year thereafter
- 2.20 Business plan and operational procedures and manuals completed by Aug. 2011
- 2.21 Pro-poor sanitation practice sharing training completed by Jun. 2011
- 2.22 Asset register, inventory, operational performance database encoded into business support system and operational by Sep. 2011
- 2.23 Operational management plan, preventive maintenance plan and emergency plan adopted by CMC by Nov. 2011 (to be verified later by O&M contractor)
- 2.24 Health and Safety Manual introduced by Nov. 2011
- 2.25 CMC poverty reduction strategy finalized incorporating pro-poor and gender-inclusive sanitation services lessons by Dec. 2012

**Output 3: Project Management and Implementation Support**

- 3.1 PMU formed and key technical staff deputed/ recruited by Jul. 2009
- 3.2 Fully-fledged PMU set up by Oct. 2009
- 3.3 Loan consultants are mobilized by the time of Loan effectiveness.
- 3.4 Design and Supervision consultants mobilized by Aug. 2010
- 3.5 Technical specification for all components completed within 6 months of Loan effectiveness
- 3.6 Contractor for design-build-operate mobilized by Apr. 2012
- 3.7 All construction works have been completed and commissioned by 2014.

ADB=Asian Development Bank; CDTA = capacity development technical assistance; CCD = coastal conservation department; CEA=Central Environmental Agency, CMC=Colombo Municipal Council; DMMC = Dehiwela-Mt Lavinia Wastewater Unit; GoSL = government of Sri Lanka; NWSDB=National Water Supply and Drainage Board, O&M=operation and maintenance, PMU=project management unit, PIU = project implementation unit, PPMS = project performance monitoring system, UNEP = United Nations Environment Program.