

Facility Administration Manual

Project Number: 42266
Facility Number: XXXX
Loan Number(s): {LXXXX}
8 August 2013

India: Kolkata Environmental Improvement
Investment Program

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Facility Administration Manual Purpose and Process

The facility administration manual (FAM) describes the essential administrative and management requirements to implement the investment program and each of its tranche projects on time, within budget, and in accordance with Government and Asian Development Bank (ADB) policies and procedures. This FAM will also serve as project administration manual for Project 1 (PAM1). The FAM should include references to all available templates and instructions either through linkages to relevant URLs or directly incorporated in the FAM.

The Kolkata Municipal Corporation is wholly responsible for the implementation of ADB financed investment program and each of its tranche 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 Kolkata Municipal Corporation of its obligations and responsibilities for investment program and project implementation in accordance with ADB's policies and procedures.

At Loan Negotiations the borrower and ADB shall agree to the FAM 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 FAM and the Loan Agreement, the provisions of the Loan Agreement shall prevail.

After ADB Board approval of the investment program'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 Facility Administration Instructions) and upon such approval they will be subsequently incorporated in the FAM.

Abbreviations

ADB	=	Asian Development Bank
DMF	=	design and monitoring framework
DSC	=	design and supervision consultant
GAP	=	gender action plan
IEE	=	Initial environmental examination
NCB	=	national competitive bidding
NGOs	=	nongovernment organizations
O&M	=	operations and maintenance
PMC	=	program management consultant
PMU	=	Program and project management unit
SOE	=	statement of expenditure
TOR	=	terms of reference

I. INVESTMENT PROGRAM DESCRIPTION

A. Summary of Investment Program's Rationale, Location and Beneficiaries

1. The city of Kolkata is the seventh largest metropolis in India, with 4.5 million residents in 2011. It is the largest city in the state of West Bengal, and is the biggest contributor to West Bengal's gross state domestic product. The city's efforts to continue improving the urban environment are necessary to increase labor productivity and better the decreasing population's health. There have been, however, geographical disparities in access to and quality of water supply and sewerage services. Kolkata Municipal Corporation (KMC), the urban local body mandated to provide these services under the KMC Act (1980), has an aging water supply system, and inadequate sewer coverage in the city's peripheral areas. Two Asian Development Bank (ADB) loans¹ have assisted (Appendix 1) KMC expand sewerage coverage since 2000. The investment program² will help KMC not only to continue the expansion of the sewer network at a larger scale, but also gradually improve efficiency in water supply operations, which combined will enable KMC to generate operating surplus for capital investment in water supply and sewerage.

B. Investment Program's Impact and Outcome

2. The impact of the proposed investment program will be improved access to water supply and sanitation in KMC. The outcome will be improved water supply, sewerage and drainage service quality and operational sustainability in selected areas of KMC. The investment program targets 20% of the city

C. Investment Program's Outputs

3. To increase service quality and operational sustainability in water supply and sewerage operations, the investment program will deliver three outputs, adopting priority solutions aligned to ADB's Water Operational Plan 2011-2020:

- (i) **Output 1: Inefficient water supply assets rehabilitated.** The investment program will aim to minimize the operational inefficiencies under Tranche 1. It will restore the production capacities of the two existing water treatment plants, replace the inefficient electromechanical equipment, augment transmission mains, and update the assets database for better monitoring and future planning. The investment program will also reduce water loss³ in distribution, and aim to achieve 24-hour continuous water supply from one hydraulically discrete area to another. It will first support KMC setting up a water loss management unit⁴ and engage a specialized contractor in a pilot area under Tranche 1. The subsequent

¹ ADB. 2000. *Report and Recommendation of the President to the Board of Directors: Proposed Loan to India for the Calcutta Environmental Improvement Project*. Manila (Loan 1813-IND, \$250 million, approved on 15 November 2000). The project completion date is 30 June 2012.

ADB 2006. *Report and Recommendation of the President to the Board of Directors: Proposed Supplementary Loan to India for the Kolkata Environmental Improvement Project*. Manila (Loan 2293-IND: \$80 million, approved on 20 November 2006). The project completion date is 30 June 2013.

² ADB provided project preparatory technical assistance. ADB. 2009. *Technical Assistance to India for Preparing for Kolkata Environmental Improvement Project II*. Manila.

³ The meaning of water loss follows the definition by the International Water Association.

⁴ Following the recent successful case in Manila, the Philippines, the water loss management unit will gradually expand and ultimately comprise five cells: meter management cell, water loss planning cell, water loss analysis cell, leakage detection cell, and engineering and construction cell.

tranches will expand to other areas. KMC's continuous effort⁵ in water loss management will ultimately allow KMC to postpone major capital investment in new water production assets, and enable to acquire skills on-the-job.

- (ii) **Output 2: Sewerage extension to peripheral areas continued.** The investment program will minimize the geographical disparity of the sewerage service availability and improve run-off⁶ in KMC's peripheral area. It will install about 170 kilometer of pipes and 27,000 direct connections, and construct three sewage treatment plants⁷ in phases under Tranches 1, 2 and 3.
- (iii) **Output 3: Financial and project management capacity further developed.** Continuous reduction in water loss will allow KMC to increase the number hydraulic areas with 24-hour continuous water supply, and expansion of the sewerage network will increase the service coverage. This will give KMC greater confidence in building up consensus towards introduction of user charges. The investment program will help KMC establish a utility finance improvement unit under Tranche 1. The unit will first formulate a long-term subsidy policy. It will then draft water user charges⁸ and sewerage surcharges for both volumetric and non-volumetric domestic connections,⁹ aiming to sustain full operation and maintenance (O&M) cost recovery, and move towards accumulation of retained surplus in the dedicated account. Three teams of consultants will support the project management unit (PMU) in subproject and reform preparation, monitoring, engineering design, site supervision, and public communications. Following the endeavor in Karnataka and Tamil Nadu, the investment program will support KMC to evolve the PMU to an autonomous entity, which can accumulate the institutional knowledge and skills, and has flexibility in human resource management. This will pave a way for KMC to further increase its loan absorptive capacity, and for ADB to plan larger assistance in the future. Infrastructure support to PMU will also be provided.

D. Tranche 1 Project's Outcome and Outputs

4. The outcome of Tranche 1 project is improved operational efficiency and coverage of water supply, sewerage, and drainage services in selected areas of KMC.¹⁰ Delivery of three outputs is proposed for financing under Tranche 1.

5. **Output 1: Inefficient water supply assets rehabilitated.** The project will aim to bring efficiency in use of the assets. It will restore the production capacities of the two existing water treatment plants in Palta and Garden Reach from 1,201 million liter per day to 1,305 million liter per day, replace the inefficient electromechanical equipment in the water treatment plants,

⁵ The water loss management unit staff will participate in international conferences to showcase the results and efforts, when it successfully outperforms the annual water loss reduction targets in the previous year.

⁶ The sewerage system is combined with drainage. It will alleviate waterlogging and reduce the resulting damage to assets, economic activities, and human health. Future increases in rainfall intensity will be addressed during the detailed design to strengthen urban resilience to climate change.

⁷ Technology for reducing greenhouse gas emissions will be adopted during the detailed design to mitigate the impact on climate change.

⁸ ADB will also support KMC's new utility finance improvement unit in developing and introducing water tariff through the ongoing TA 8036-REG on Promoting Financially Sustainable Regulatory Framework for Water Tariff in South Asia as one of the pilot cities.

⁹ KMC will then plan volumetric water charges in hydraulic zones achieving 24-hour water supply as a result of the water loss management activities. For the rest of areas, KMC will plan a flat rate user charge until such areas achieve 24-hour water supply.

¹⁰ 5% of KMC areas broadly include Borough I, XII, XIII, and XIV.

augment transmission mains, and update the spatial and attribute database on the assets for better monitoring and future planning.

6. The project will also address water loss in distribution, and aim to achieve 24-hour continuous water supply from one hydraulic area to another. It will support KMC setting up a water loss management unit and engage a water loss management contractor¹¹ in a pilot area. The operator will first divide a hydraulically segregated pipe network in the area into district metered areas. In each district metered area, the contractor will install meters for all connections, supply water around-the-clock with pressure management, and actively detect and repair from larger to smaller leakages. Repeated human intensive process interventions will ultimately bring water loss down to less than 20% of the amount of water supplied to the area, and help the unit institutionalize water loss management skills on-the-job.

7. **Output 2: Sewerage extension to peripheral areas continued.** The project will minimize the geographical disparity of the sewerage service availability and improve run-off¹² in the Southern part of the KMC. It will install 11.5 kilometers of pipes in the Southern part of the KMC area, and construct two pumping stations, which will be connected to the networks developed under the ongoing loans (footnote 1). The sewer network will also serve as drainage, resulting in additional drainage coverage of 8.8 square kilometer. The sewerage assets created under the project will not result in additional sewage flow to the East Kolkata Wetlands.

8. **Output 3: Financial management and project management capacity further developed.** Continuous reduction in water loss will allow KMC to achieve 24-hour continuous water supply, and postpone the investment in new water production assets. Improved water supply will give KMC greater confidence to start building up consensus towards introduction of user charges. The project will help KMC establish a utility finance improvement unit, which will draft water user charges (footnote 9) and sewerage surcharges for both volumetric and non-volumetric domestic connections in line with KMC's sustainability plan, aiming to sustain full O&M cost recovery, and move towards accumulation of retained surplus in the water supply and sewerage account to pay for asset expansion. The unit will also revise the unit price of bulk water under the existing supply contracts between KMC and adjacent urban local bodies to sell at prices more than the production cost.

9. The project will also support the PMU in project preparation, monitoring, engineering design, site supervision activities and public communications by engaging three teams of consultants. Following the endeavor in Karnataka and Tamil Nadu, the project will help KMC develop a plan to evolve the PMU to an independent entity, which will allow retaining institutional knowledge and skills, and have flexibility in staff recruitment. This will pave a way for KMC to increase its loan absorptive capacity, and for ADB to plan larger assistance. Infrastructure support to PMU will also be provided.

¹¹ ADB will support the water loss management unit in preparing a performance-based water loss management contract under the ongoing TA 7327-IND on Preparing Second Kolkata Environmental Improvement Project.

¹² The sewer will also serve as drainage, which helps the residents in service areas to cope with the risk of flooding.

II. IMPLEMENTATION PLANS

A. Investment Program's and Tranche 1 Project's Readiness Activities

Project Readiness Checklist Items		Feb 2013	Mar 2013	Apr 2013	May 2013	Jun 2013	Jul 2013	Aug 2013	Sep 2013	Oct 2013...
1. Before loan fact-finding										
• Substantially complete PPTA (completed).	ADB and KMC									
• Complete feasibility study report and preliminary design (completed).	KMC									
• Obtain concurrence of the competent authority.	KMC									
• Obtain approval under FRBM Act from Department of Expenditure.	State									
• Obtain KMC's commitment to provide its own financing share (completed).	KMC									
• Budget 30% of land acquisition and resettlement requirements. (NR)	KMC									
• Complete designation of PMU and PIU staff (completed)	KMC									
• Finalize procurement plan, procedures, and structure.	ADB and KMC									
• Finalize consultant TOR.	ADB and KMC									
• Seek ADB approval for consultant shortlist.	ADB, KMC									
• Finalize IEE and EIA with EMP for first 2 years of implementation.	ADB, KMC									
• Finalize resettlement plan for the first 2 years of implementation.	ADB, KMC									
2. Before loan negotiations										
• Issue all bidding documents (for those to be awarded within 12 months).	KMC									Others
• Complete draft FAM (completed).	ADB, KMC									
• Finalize FAM.	ADB, KMC									

Project Readiness Checklist Items		Feb 2013	Mar 2013	Apr 2013	May 2013	Jun 2013	Jul 2013	Aug 2013	Sep 2013	Oct 2013...
• 50% of land secured.	KMC									
• Complete arrangements for FMS, auditing, fund flow and oversight.	KMC									
• Obtain all statutory clearance for environment, forest, and wide life.	KMC									
• Obtain administrative clearances for temporary use of land (continuous).	KMC									
• Obtain administrative clearances for shifting utilities (continuous).	KMC	For Tranche 1, no requirements to shift utilities are expected based on design								
• Complete 30% of tendering flow (for those to be awarded in 12 months).	KMC									
• Allocate budget for first financial year project implementation (completed)	KMC									
• Loan negotiations.	All									
3. Before loan signing										
• Award 30% of contracts (for those to be awarded within 12 months).	KMC									
• Loan signing.	All									
4. Before loan effectiveness										
• Establish dedicated PIU (completed).	KMC									
• Obtain legal opinions.	GOI and KMC									

ADB = Asian Development Bank, EIA = environmental impact assessment, EMP = environmental management plan, FAM = facility administration manual, FMS = financial management system, FRBM = Fiscal Responsibility and Budget Management, GOI = Government of India, IEE = initial environmental examination, KMC = Kolkata Municipal Corporation, NR = not required, PIU = project implementation unit, PMU = program and project management unit, PPTA = project preparatory technical assistance, TOR = terms of reference.

B. Implementation Plan¹³

Implementation and Financing	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Tranche 1 project period	[Gantt bar: 2013-2019]										
Loan under tranche 1	[Gantt bar: 2014-2020]										
Tranche 2 project period	[Gantt bar: 2014-2020]										
Loan under tranche 2	[Gantt bar: 2015-2021]										
Tranche 3 project period	[Gantt bar: 2015-2021]										
Loan under tranche 3	[Gantt bar: 2016-2021]										
Outputs (paraphrased) and Activities											
1. Inefficient and outdated water supply assets rehabilitated											
Rehabilitate the existing water treatment plants. (T1)	[Gantt bar: 2013-2018]										
Augment transmission main in Garden Reach zone. (T1)	[Gantt bar: 2013-2018]										
Establish a WLM unit in KMC with dedicated staff. (T1)	[Gantt bar: 2013-2014]										
Identify and repair the leakages in pilot area. (T1)	[Gantt bar: 2014-2019]										
Identify and repair the leakages in pilot areas. (T2,T3)	[Gantt bar: 2015-2021]										
Train WLM unit on OJT. (T1-T3)	[Gantt bar: 2015-2021]										
Establish database on water assets. (T1)	[Gantt bar: 2013-2015]										
Make official arrangement for sharing database. (T1)	[Gantt bar: 2015-2016]										
2. Sewerage extension to newly developed areas continued.											
Construct new sewage treatment plant. (T2)	[Gantt bar: 2014-2019]										
Construct sewage network in borough XIV. (T1)	[Gantt bar: 2013-2019]										
Construct sewage network in borough XII, XIV, and XV. (T2)	[Gantt bar: 2014-2021]										

¹³ Gantt chart available in e-Handbook on Project Implementation at: <http://www.adb.org/documents/handbooks/project-implementation/>

Implementation and Financing	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Construct sewage network in borough XI, XII, XIV, and XV. (T3)											
Provide direct connections to sewer. (T1-T3)											
3. Financial and project management capacity further developed.											
Establish a UFIU with dedicated staff. (T1)											
Revise and renegotiate existing bulk water contract. (T1-T2)											
Integrate energy cost in water accounts. (T1)											
Establish cost recovery and subsidy policy. (T1)											
Develop domestic water tariff and sewer surcharge. (T1)											
Arrange billing and collection for domestic users. (T1)											
Submit tariff proposal to Corporation. (T1)											
Establish PPMS. (T1-T3)											
Send PMU staff to ADB's training programs. (T1-T3)											
Procure goods and works for all activities. (T1-T3)											
Submit proposal for autonomous entity to Corporation. (T1)											
Prepare legal documents for autonomous entity. (T1)											
Issue notification on establishment of autonomous entity. (T1)											
Disclose project information to public. (T1-T3)											

■ = preparatory activities and procurement of works, goods and services, ■ = activities, ■ = period for financially closing the contracts and the loan.
 ADB = Asian Development Bank, KMC = Kolkata Municipal Corporation, OJT = on-the-job training, PMU = program and project management unit, PPMS = program and subproject performance monitoring system, T = tranche, UFIU = utility finance improvement unit, WLM = water loss management.

III. INVESTMENT PROGRAM MANAGEMENT ARRANGEMENTS

A. Implementation Organizations – Roles and Responsibilities

Investment Program implementation organizations	Key Management Roles and Responsibilities
<p>KMC</p> <p>Steering Committee, comprising:</p> <ul style="list-style-type: none"> (i) Minister-in-Charge, Municipal Affair and Urban Development Department as the Chair; (ii) Mayor, KMC as member; (iii) Principal Secretary, Municipal Affairs Department as member; (iv) Joint Secretary, Urban Development, Government of India as member; (v) Director, Department of Economic Affairs (ADB), Government of India as member; (vi) Chief Executive Officer, Kolkata Metropolitan Development Authority as member; (vii) Municipal Commissioner, KMC as member; and (viii) Project Director, PMU as member-secretary. 	<p>Executing agency</p> <p>Steering Committee will</p> <ul style="list-style-type: none"> (i) Provide strategic guidance, and oversee the implementation of the investment program. (ii) Appoint auditors and fix their remuneration, and ensure auditing of each project account. (iii) Review and provide policy direction on: <ul style="list-style-type: none"> (a) Implementation of the urban and institutional reform agenda; (b) Compliance with loan covenants under the ADB loans; (c) Compliance with environment and social safeguards; and (d) Critical implementation issues and in inter-departmental coordination. (iv) Approve: <ul style="list-style-type: none"> (a) Balance sheets, audit report, and other annual reports of the investment program and each project, if necessary; (b) Evaluation reports prepared by tender evaluation and consultant selection committees; and (c) Contract award and variation proposals. (v) Consider and take decision on: <ul style="list-style-type: none"> (a) Annual budget; and (b) Annual action plan. (vi) Establish PMU. (vii) Delegate powers, other than those of making rules, to the project director or other authorities. (viii) Ensure timely release of funds to each project.
<p>Program and PMU, comprising:</p> <ul style="list-style-type: none"> (i) Project Director; (ii) Contract management unit (40 staff comprising sewerage wing and water supply wing); (iii) Project accounts unit (12 staff); (iv) Social development unit (9 staff); (v) Project coordinating cell (23 staff); (vi) WLM unit (9 staff); and (vii) Utility finance improvement unit (6 staff). 	<p>Program and PMU will:</p> <ul style="list-style-type: none"> (i) Liaise and correspond with ADB on all issues related to the investment program and each project. (ii) Coordinate with: <ul style="list-style-type: none"> (a) National and state agencies to resolve any inter-departmental issues; and (b) Other aide agencies for implementation of non-physical investment activities. (iii) Establish a sub-account of an imprest account with a commercial bank. (iv) Prepare and submit: <ul style="list-style-type: none"> (a) Reports to the Steering Committees for consideration and approval; (b) Periodic progress reports on each investment activities; (c) Internal audit report; and (d) Reports mandated under the loan and project agreements. (v) Approve: <ul style="list-style-type: none"> (a) Detailed engineering design; and (b) Training and capacity building program. (vi) Facilitate collection of data for detailed engineering design. (vii) Procure works, goods, and consultancy services for implementation of each project.

Investment Program implementation organizations	Key Management Roles and Responsibilities
	<ul style="list-style-type: none"> (viii) Manage PMCs, DSCs, contractors, and suppliers as an employer. (ix) Implement: <ul style="list-style-type: none"> (a) Resettlement plans; and (b) Environment management plan. (x) Obtain right of way clearances. (xi) Plan, implement, and monitor: <ul style="list-style-type: none"> (a) Public relations activities; (b) Gender mainstreaming initiatives; (c) Community participation activities; and (d) Safeguard compliance activities. (xii) Maintain each project account and submit consolidated monthly reports. (xiii) Obtain statutory clearances. (xiv) Coordinate for obtaining right of way clearances with related state and national agencies. (xv) Make payments. (xvi) Disbursement application to ADB. (xvii) Safeguards plans and corrective action plans consistent with safeguard frameworks. (xviii) Submit reports of external auditor to the Steering Committee. (xix) Obtain necessary data for maintaining and updating the PPMS. (xx) Monitor physical and non-physical investment activities under each project. (xxi) Monitor implementation of safeguards plans, guide PIU, as and when necessary, and prepare reports. (xxii) Disseminate information related to the investment program and each project to the public and media. (xxiii) Establish and maintain PPMS at each subproject level, as well as a project and investment program levels.
<p>Special Committee for WLM, comprising:</p> <ul style="list-style-type: none"> (i) Project Director, PMU as chair (ii) Director General (Water Supply), KMC as member; (iii) Director General (Project), PMU as member; (iv) Team leader, DSC as member; (v) Team leader, PMC as member; (vi) WLM consultants under PPTA as member; and (vii) Deputy Chief Engineer/Executive Engineer as convener. 	<ul style="list-style-type: none"> (i) Seek Mayor's policy decisions related to 24x7-pressured water supply in pilot areas. (ii) Implement the Mayor's policy decisions on 24x7-pressured water supply in pilot areas in collaboration with KMC departments. (iii) Endorse annual program on repair works proposed by WLM contractor. (iv) Endorse technical solutions proposed by WLM contractor. (v) Endorses the measured performance of WLM contractor for performance-based payment. (vi) Assess contract extension in the final year of water loss management contract.

ADB = Asian Development Bank, DSC = design and supervision consultants, KMC = Kolkata Municipal Corporation, PIU = project implementation unit, PMC = program management consultants, PMU = program and project management unit, PPMS = project performance monitoring system, PPTA = project preparatory technical assistance, WLM = water loss management.

B. Implementation Committees – Roles and Responsibilities

Investment program implementation Committees	Key Management Roles and Responsibilities
<p>Consultant Selection Committee currently comprising of:</p> <ul style="list-style-type: none"> (i) Municipal Commissioner, KMC as Chair; (ii) Project director, KEIIP PMU; (iii) Deputy Municipal Commissioner (Finance), KMC; (iv) Director General (Water Supply), KMC 	<ul style="list-style-type: none"> (i) Open EOIs and proposals. (ii) Evaluate EOIs and proposals. (iii) Prepare evaluation reports. (iv) Submit recommendation to the Steering Committee through PMU.

Investment program implementation Committees	Key Management Roles and Responsibilities
(v) Controller of Municipal Finance and Accounts, KMC; (vi) Director General (Project), KEIP PMU; and (vii) Chief Municipal Auditor, KMC.	
Tender Evaluation Committee comprising of: (i) Project Director, KEIP PMU; (ii) Director General (Projects), KEIP, PMU; (iii) Deputy Municipal Commissioner (Finance), KMC; (iv) Deputy Municipal Commissioner (Administration), KMC; (v) Representative of PMC; and (vi) Representative of DSC.	(i) Open tender. (ii) Evaluate bids. (iii) Prepare evaluation reports. (iv) Submit recommendation to Executive and Tender Approval committee.

CMU = construction management unit, DSC = design and supervision consultant, EOI = expression of interest, KMC = Kolkata Municipal Corporation, PMC = project management consultant, PMU = program and project management unit.

Key Persons Involved in Implementation

Executing Agency

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ADB

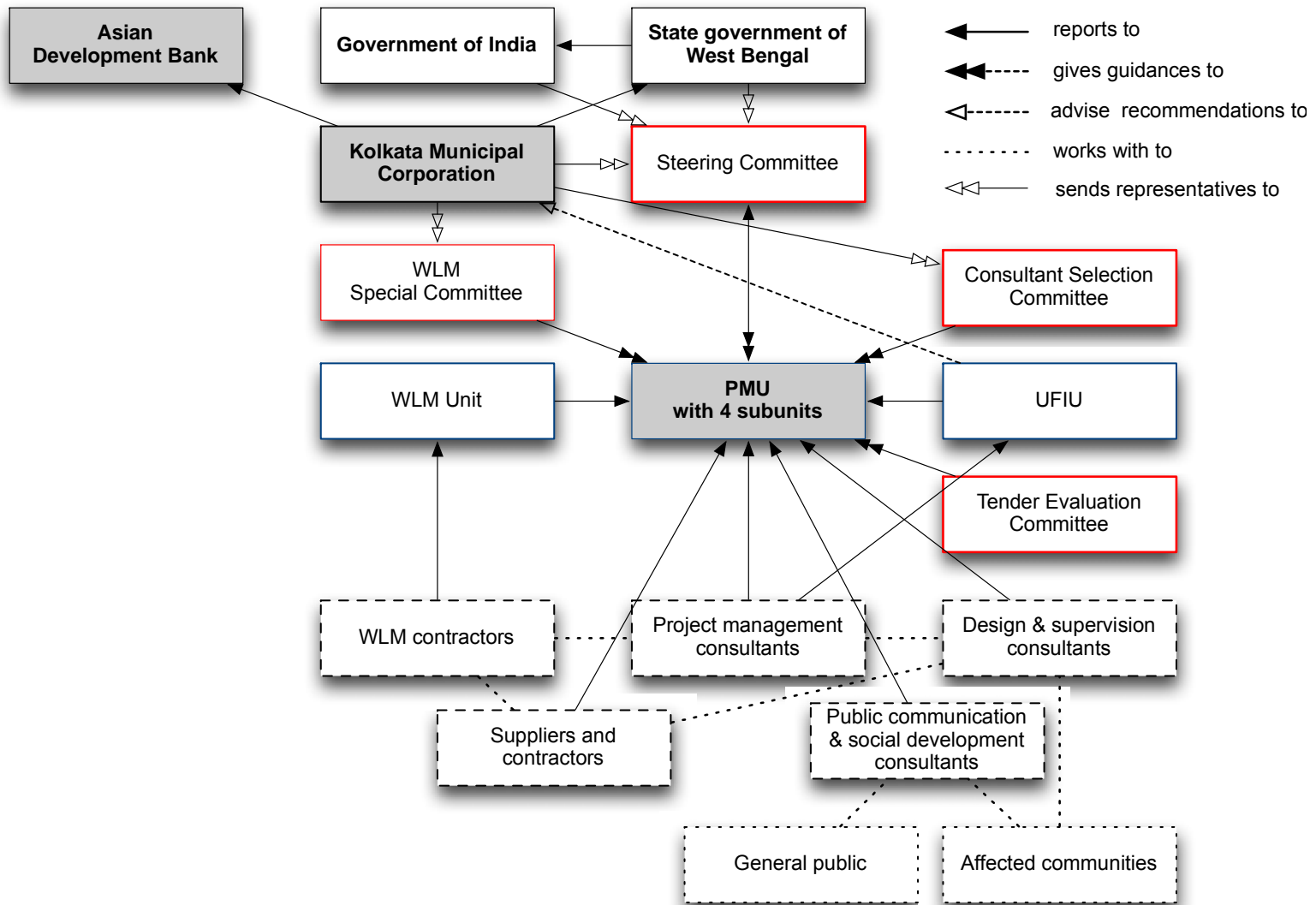
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C. Investment Program Organization Structure



PMU= program and project management unit, UFIU = utility finance improvement unit, WLM = water loss management.

IV. COSTS AND FINANCING

A. Tranche 1 Project Detailed Cost Estimates by Expenditure Category

(\$ million)

Items ^a	Cost
A. Investment Costs	
Civil works	93.40
Water loss management	12.06
Consultants	11.11
Environment and social mitigation	0.21
Subtotal (A)	116.78
B. Recurrent costs	
Program management and project implementation	4.45
Subtotal (B)	4.45
C. Contingencies^b	
Physical	8.30
Price	4.59
Subtotal (C)	13.88
D. Financing Charges During Implementation^c	
Interest During Implementation	5.20
Commitment Charges	0.69
Subtotal (D)	5.89
Total Project Cost (A+B+C+D)	140.00

Note: Numbers may not sum precisely because of rounding.

^a In mid-2013 prices.

^b Physical contingencies computed at 8.1% for civil works and nonrevenue water management. Price contingencies computed at minus 3.9%–0.5% on foreign exchange costs and 6.0% on local currency costs; includes provision for potential exchange rate fluctuation under the assumption of a purchasing power parity exchange rate.

^c Includes interest and commitment charges. Interest during construction for ADB loan(s) has been computed at the 5-year forward London interbank offered rate plus a spread of 40 basis points and an applicable maturity premium. Commitment charges for an ADB loan are 0.15% per annum, accrued on the full amount of the loan less amounts withdrawn from time to time.

Source: Asian Development Bank estimates.

B. Allocation and Withdrawal of Loan Proceeds under Tranche 1

Indicative Allocation and Withdrawal of Loan Proceeds		
Disbursement Category	Loan Amount Allocated	Disbursement Percentage
Civil work	79,631,000	
(a) Water loss management	10,423,000	100% of total expenditure claimed*
(b) Other works	69,208,000	74% of total expenditure claimed
Consultants	10,037,000	100% of total expenditure claimed*
Unallocated	10,332,000	
Total	100,000,000	

* Excluding taxes and duties.

Source: Asian Development Bank estimates.

C. Tranche 1 Project Detailed Cost Estimates by Financier

(\$ million)

	Asian Development Bank Financing		Government Financing				Total Cost (D)
	amount	% of Cost Category (A/D)	amount	% of Cost Category (B/D)	Taxes (C)	% of Cost Category (C/D)	
	(A)	(A/D)	(B)	(B/D)	(C)	(C/D)	
A. Investment Costs							
Civil works	69.12	74%	15.59	17%	8.61	9%	93.40
Water loss management	10.42	86% ^d	0.00	0%	1.64	14%	12.06
Consultants	10.04	90% ^d	0.00	0%	1.08	10%	11.11
Environment and social mitigation	0.00	0%	0.21	100%	0.00	0%	0.21
Subtotal (A)	89.67	77%	15.79	14%	11.33	10%	116.78
B. Recurrent costs							
Program and Project management and implementation	0.00	0%	3.86	87%	0.59	13%	4.45
Subtotal (B)	0.00	0%	3.86	87%	0.59	13%	4.45
C. Contingencies							
Physical	6.65	80%	1.65	20%	0.00	0%	8.30
Price	3.69	80%	0.90	20%	0.00	0%	4.59
Subtotal (C)	10.33	80%	2.55	20%	0.00	0%	12.88
D. Financing Charges During Implementation							
Interest During Implementation	0.00	0%	5.20		0.00	0%	5.20
Commitment Charges	0.00	0%	0.69	100%	0.00	0%	0.69
Subtotal (D)	0.00	0%	5.89	100%	0.00	0%	5.89
Total Project Cost (A+B+C+D)	100.00	71%	28.10	20%	11.91	9%	140.00

Note: Numbers may not sum precisely because of rounding.

^a In mid-2013 prices.

^b Physical contingencies computed at 8.1% for civil works and nonrevenue water management. Price contingencies computed at minus 3.9%–0.5% on foreign exchange costs and 6.0% on local currency costs; includes provision for potential exchange rate fluctuation under the assumption of a purchasing power parity exchange rate.

^c Includes interest and commitment charges. Interest during construction for ADB loan(s) has been computed at the 5-year forward London interbank offered rate plus a spread of 40 basis points and an applicable maturity premium. Commitment charges for an ADB loan are 0.15% per annum, accrued on the full amount of the loan less amounts withdrawn from time to time.

^d There is no Government financing portion in the items except for taxes and duties. Therefore, the percentages are equivalent to 100% of ADB's financing exclusive of taxes and duties.

Source: Asian Development Bank estimates.

D. Detailed Cost Estimates of Tranche 1 Project by Outputs/Components

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	(\$ million)						
	Total Cost	Comp 1		Comp 2		Comp 3	
		Amount	% of Cost Category	Amount	% of Cost Category	Amount	% of Cost Category
A. Investment Costs							
Civil works	92.41	40.87	44%	51.43	55%	1.10	1%
Water loss management	12.06	12.06	100%	0.00	0%	0.00	0%
Consultants	11.11	0.00	0%	0.00	0%	11.11	100%
Environment and social mitigation	0.21	0.10	50%	0.10	50%	0.00	0%
Subtotal (A)	115.79	53.03	45%	51.54	44%	12.21	10%
B. Recurrent costs							
Program management and project implementation	4.45	0.33	7%	0.00	0%	4.12	93%
Subtotal (B)	4.45	0.33	7%	0.00	0%	4.12	93%
				51.54	43%	16.33	13%
C. Contingencies							
Physical	9.40	4.08	49%	3.78	46%	0.44	5%
Price	4.51	2.65	58%	1.31	29%	0.62	14%
Subtotal (C)	13.90	6.73	52%	5.10	40%	1.06	8%
D. Financing Charges During Implementation							
Interest During Implementation	5.17	2.29	44%	2.21	43%	0.70	13%
Commitment Charges	0.69	0.30	44%	0.29	43%	0.09	13%
Subtotal (D)	5.86	2.59	44%	2.51	43%	0.79	13%
Total Project Cost (A+B+C+D)	140.00	62.68	45%	59.14	42%	18.18	13%

Note: Numbers may not sum precisely because of rounding.

^a In mid-2013 prices.

^b Physical contingencies computed at 8.1% for civil works and nonrevenue water management. Price contingencies computed at minus 3.9%–0.5% on foreign exchange costs and 6.0% on local currency costs; includes provision for potential exchange rate fluctuation under the assumption of a purchasing power parity exchange rate.

^c Includes interest and commitment charges. Interest during construction for ADB loan(s) has been computed at the 5-year forward London interbank offered rate plus a spread of 40 basis points and an applicable maturity premium. Commitment charges for an ADB loan are 0.15% per annum, accrued on the full amount of the loan less amounts withdrawn from time to time.

Source: Asian Development Bank estimates.

E. Tranche 1 Project Detailed Cost Estimates by Year

	(\$ million)						
	Total	2014	2015	2016	2017	2018	2019
A. Investment Costs							
Civil works	93.40	0.00	6.19	16.01	27.96	24.71	18.52
Water loss management	12.06	0.00	0.60	1.80	3.01	3.02	3.64
Consultants	11.11	0.53	3.27	3.08	2.51	1.73	0.00
Environment and social mitigation	0.21	0.00	0.02	0.04	0.08	0.06	0.01
Subtotal (A)	116.78	0.53	10.07	20.93	33.56	29.52	22.17
B. Recurrent costs							
Program management and project implementation	4.45	0.40	0.86	0.91	0.91	0.91	0.46
Subtotal (B)	4.45	0.40	0.86	0.91	0.91	0.91	0.46
C. Contingencies							
Physical	8.30	0.03	0.58	1.41	2.40	2.16	1.71
Price	4.59	0.01	0.18	0.55	1.14	1.33	1.37
Subtotal (C)	12.88	0.05	0.77	1.96	3.54	3.49	3.08
D. Financing Charges During Implementation							
Interest During Implementation	5.20	0.00	0.21	0.53	1.07	1.54	1.86
Commitment Charges	0.69	0.00	0.29	0.13	0.11	0.09	0.08
Subtotal (D)	5.89	0.00	0.50	0.66	1.18	1.62	1.94
Total Project Cost (A+B+C+D)	140.00	0.97	1.47	12.36	24.97	39.63	35.86

Note: Numbers may not sum precisely because of rounding.

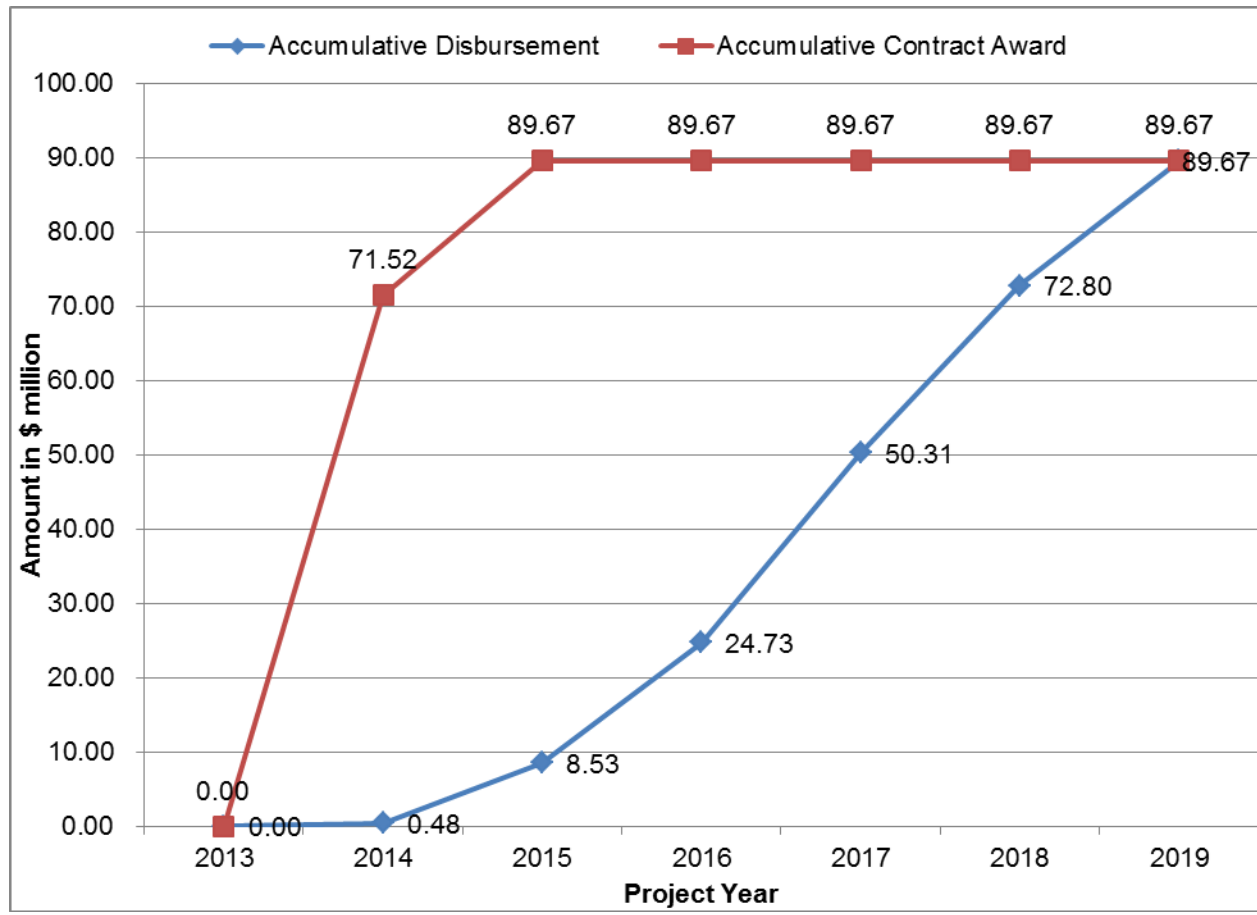
^a In mid-2013 prices.

^b Physical contingencies computed at 8.1% for civil works and nonrevenue water management. Price contingencies computed at minus 3.9%–0.5% on foreign exchange costs and 6.0% on local currency costs; includes provision for potential exchange rate fluctuation under the assumption of a purchasing power parity exchange rate.

^c Includes interest and commitment charges. Interest during construction for ADB loan(s) has been computed at the 5-year forward London interbank offered rate plus a spread of 40 basis points and an applicable maturity premium. Commitment charges for an ADB loan are 0.15% per annum, accrued on the full amount of the loan less amounts withdrawn from time to time.

Source: Asian Development Bank estimates.

F. Contract and Disbursement S-curve of Tranche 1 Project

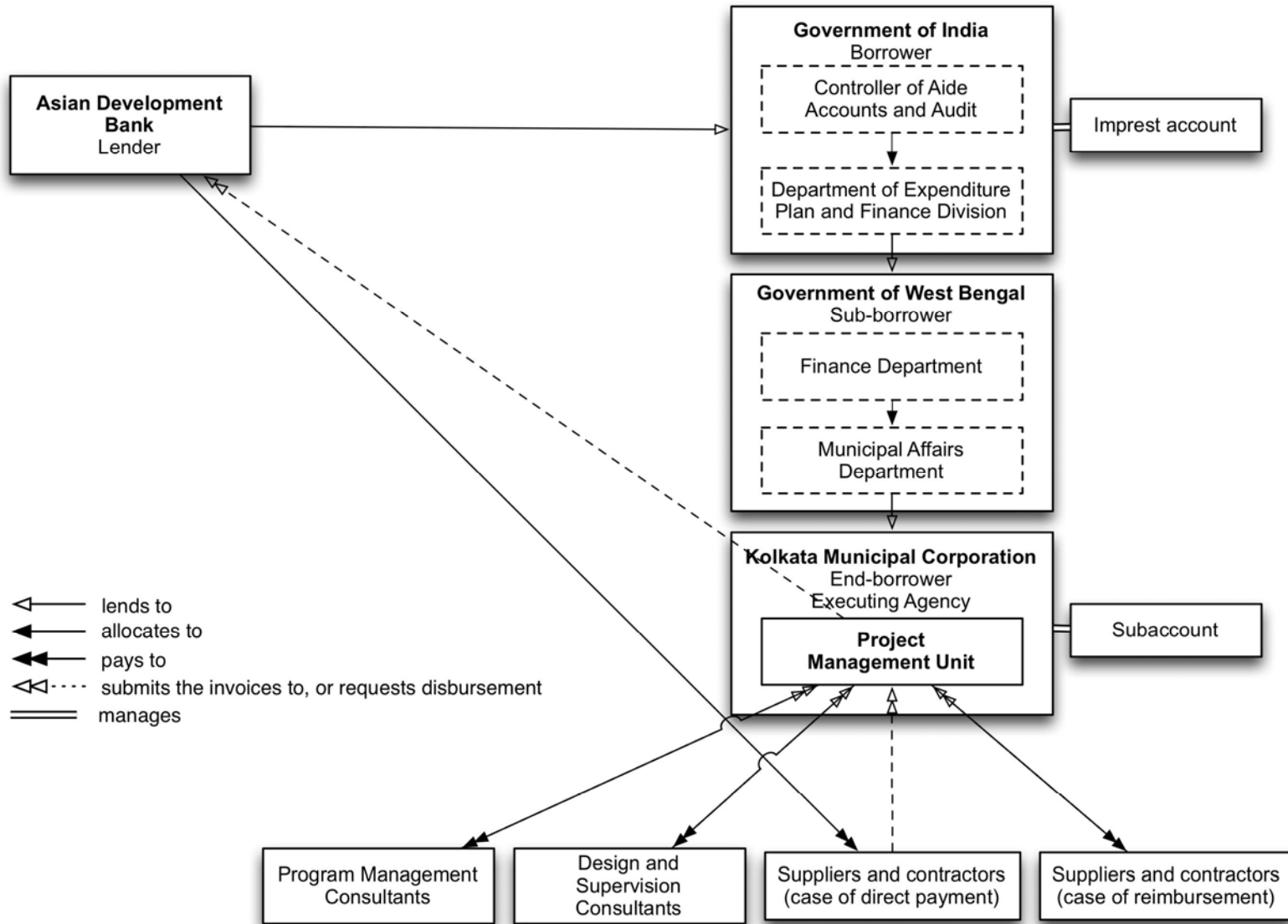


Note: Numbers may not sum precisely because of rounding.

Figures include civil works, water loss management, consultants, environment and social mitigation, program management and project implementation but exclude financial charges and contingencies.

Source: Asian Development Bank estimates.

G. Fund Flow Diagram



V. FINANCIAL MANAGEMENT

A. Financial Management Assessment

10. The financial management assessment was updated for the program and PMU, which would be involved in transaction of the loan proceeds for duration of the Facility.

Table 1: Findings of Financial Management Assessment

Area of Assessment	Findings
Executing agency	<p>The executing agencies are the State and KMC, a statutory body created under Kolkata Municipal Corporation Act, 1980. KMC was the executing agency for the ongoing Kolkata Environmental Improvement Project financed by Loans 1813-IND and 2293-IND (closing dates on June 2012 and June 2013 respectively).</p> <p>KMC will also manage and implement the Kolkata Environmental Improvement Investment Program between 2012 and 2022 with some organizational improvement and expansions.</p>
Major experiences of managing ADB financed projects.	<p>KMC has been implementing the ongoing project through the PMU acting as a dedicated unit for project implementation. The PMU has four sub-units (contract management, project accounts, social development, and project coordination) and each of which has appropriate delegation and supervision mechanism. These sub-units has 58 technical, financial, procurement, and support staff drawn from different state and local agencies, and are headed by an Indian Administrative Service officer as the project director, who is appointed by the state government of West Bengal.</p> <p>The PMU has the primary responsibility for ensuring the KMC's compliance with the loan covenants, managing consultants, and assisting the KMC in approving all technical and financial sanctions, policies, procurement, and disbursement during implementation.</p> <p>The PMU has gained staff and skills for program management and project implementation. It has procured and administered 122 contracts with the highest contract price at \$25 million, and successfully resettled 2,879 families between 2002 and 2012.</p>
Fund flow arrangements	<p>ADB will lend to India, which will onlend to the State, and through the State to KMC on the same terms and conditions.</p> <p>KMC will use the same fund flow arrangement for the Facility as the current one under the ongoing loans. The Controller of Aid Accounts and Audit of the Government of India will pass on the rupee equivalent of the loan proceeds to the State and then to KMC through the budgetary mechanism. KMC will open and maintain a sub-account of an imprest account separate from the existing bank account for the ongoing project at a bank acceptable to ADB.</p> <p>The eligible expenditures of subprojects under the Facility will be withdrawn from the designated bank accounts. The disbursement procedures will follow the current practice under the ongoing loans.</p> <p>The disbursement procedures of each subproject will follow the current practice under the ongoing loans, including but not limited to direct payment procedure; reimbursement procedure, and statement of expenditures procedure. Under the reimbursement procedure, the PMU received reimbursements 4 to 5 months after submission of the reimbursement requests.</p> <p>The PMU will be signatories to the contracts and the payment checks. In the past, no major issues have been observed during the implementation of the ongoing project.</p>
Organization and staffing	<p>The PMU has a project accounts unit. It has eight staff comprising of a financial manager who is appointed by KMC to the PMU and also holds the position of Deputy Municipal Commissioner (Finance) of KMC and seven accounts staff, including two project accountants and two general accountants.</p> <p>The financial manager has more than 16 years of accounting experience and has over 2 years of experience in managing ADB-financed project. The project accountants and general accountants have on average 12 years of experience in accounting, and 6 years in external aided projects.</p> <p>The current separation of responsibilities between the project accountants and general accountants is appropriate for the ongoing loans and will be continued for each tranche project under the investment program.</p>
Accounting Policies and procedure	<p>KMC has adopted the computer-based double entry accrual-based accounting as per the generally accepted accounting policies and procedures of India.</p>

Area of Assessment	Findings
	The PMU follows the same accounting procedures and guidelines of KMC and has created separate set of chart of accounts for the ongoing project. The chart of accounts will be adopted with minor adjustments for recording transactions of each project under the investment program. The chart of accounts is consolidated into KMC's water supply, sewerage and drainage account on an annual basis.
Segregation of duties	Authorization to execute a transaction, recording of the transaction, and custody of assets involved in transaction are performed by different persons. The project director, and/or deputy municipal commissioner (finance) have the authority to execute transactions of various values; recording of the transaction is conducted by the project accounts unit; and the chief engineer or director general is responsible for custody of project assets. Upon completion, value of project asset is verified by the director general and after accounting for overhead costs, transferred to KMC. The administrative officer is in charge of office assets and reports directly to the project director.
Budgeting system	The PMU prepares the budget once a year according to financial year following an assessment of funds requirement for various activities – in view of physical and financial targets for the financial year. Deputy Municipal Commissioner (Finance) prepares the budget, which is endorsed by Project Director and is approved by the House of KMC through Municipal Secretary. Actual expenditure is compared with budget on regular basis. The PMU also prepares monthly financial reports comparing actual against budget figures and provides explanations in case of significant variations from the budget. Monthly progress reports are prepared to monitor project execution.
Payments	Project Accounts Unit prepares the basic monthly payroll sheet in a standard form. All bills and invoices are stamped and stamped 'PAID'.
Cash at Bank	One signatory is required for a bank check value up to Rs0.3 million and one additional authorized signatory is required for a bank check value above Rs0.3 million. PMU maintains an adequate, up-to-date cashbook, recording receipts and payments. The Project Account Unit on a monthly basis conducts bank and cash reconciliation.
Safeguards over assets	The fixed assets register exists, following the laws and rules. Except for vehicles, assets are not insured. Assets will be covered under insurance depending upon the nature and cost of assets.
Internal and External Audit	The PMU has outsourced the internal audit functions to independent auditors who report to the project director. The PMU also prepares the financial statements of the ongoing project. The Office of Accountant General, West Bengal conducts audit. Audit certificates for up to fiscal year 2010 were issued. The PMU has developed appropriate internal controls, including segregation of duties, streamlined preparation, approval, recording, and custody procedures. Each project under the investment program will follow the same practice.
Reporting and Monitoring in implementing agency	The PMU has already adopted the enterprise resource planning system and has maintained separate accounts and records adequate to record incomes and expenditures of the ongoing project. There is also a well-established system of maintaining records in both paper format and electronic format.
Information System	Computerization of the double-entry accrual-based accounting records has been in practice since fiscal year 2000.

ADB = Asian Development Bank, IND = India, KMC = Kolkata Municipal Corporation, PMU = program and project management unit.

11. While there is no major obstacle identified for financial management during the project implementation, the use of a sub-account of an imprest account for each project under the investment program to reduce the time taken for reimbursement may be availed at the option of the State and KMC..

B. Disbursement

12. The loan proceeds will be disbursed in accordance with ADB's *Loan Disbursement Handbook* (2012, as amended from time to time),¹⁴ and detailed arrangements agreed upon

¹⁴ Available at: <http://www.adb.org/documents/loan-disbursement-handbook>

between the government and ADB.

13. **Types of Disbursement Procedures.** There are four major types of disbursement procedures:

- (i) Direct payment procedure where ADB, at the borrower's request, pays a designated beneficiary directly;
- (ii) Commitment procedure where ADB, at the borrower's request, provides an irrevocable undertaking to reimburse a commercial bank for payments made or to be made to a supplier against a letter of credit financed from the loan account;
- (iii) Reimbursement procedure where ADB pays from the loan account to the borrower's account, for eligible expenditures which have been incurred and paid for by the project out of its budget allocation or its own resources; and
- (iv) Imprest fund procedure where ADB makes an advance disbursement from the loan account for deposit to an imprest account to be used exclusively for ADB's share of eligible expenditures.

14. The four procedures are normally used for the following kinds of payment. Section 6.4 of the Disbursement Handbook presents graphically the interrelationship of the different types of loan disbursement procedures.

Table 2: Disbursement Procedures

Disbursement Procedures	Suggested Types of Payment
Direct payment	Mainly large civil works, progress payments, consultants' fees, procurement of goods
Commitment	Importation costs
Reimbursement	Local currency costs, petty purchases, and small civil works
Imprest fund	Contractors' bills and suppliers' invoices in local currency, numerous items of operating expenses, other relatively small eligible expenditures

Source: Asian Development Bank. 2012. *Loan Disbursement Handbook*. Manila.

15. The executing agency will be responsible for: (i) preparing annual contract award and disbursement projections; (ii) requesting budgetary allocations for counterpart funds; (iii) collecting supporting documents; and (iv) preparing and sending withdrawal applications to ADB through the office of the Controller of Aid Accounts and Audit (CAAA).

16. **Imprest Fund Procedure.** Immediately upon loan effectiveness under each project, India may open and maintain an imprest account in the name of the CAAA with the Reserve Bank of India. Imprest accounts will be opened separately for each loan under the Facility. The maximum ceiling of the imprest accounts will not, at any time, exceed 10% of the respective loan amount. The imprest accounts will be denominated in US dollars (loan currency). The initial advance or replenishment by ADB into the imprest account will be converted into equivalent rupees by the CAAA following its policy. The executing agency may open a sub-account in a commercial bank acceptable to ADB. If requested by the executing agency, the proceeds will be transferred from the imprest account in rupees in accordance with relevant procedures of the Government of India to the sub-account. The Government of India will assure ADB that the funds from the imprest accounts will be transferred to the sub-account within 30 calendar days of the receipt of the advance or replenishment.

17. The sub-account will allow withdrawal of all funds in credit at any time and places no restrictions on the number or amount of withdrawals at any time. Any interest earned on the credit balance in sub-account can be utilized to meet project expenditure. It is clarified that any temporary surplus balances in the sub-account should be retained in the savings account only, and may not be further re-deployed as fixed deposits. The request for initial advance to the

imprest account should be accompanied by an Estimate of Expenditure Sheet setting out the estimated expenditures for the first 6 months of project implementation, and submission of evidence satisfactory to ADB that the sub-account has been duly opened. For every liquidation and replenishment request of the imprest account, the executing agency will furnish to ADB (i) Statement of Account (Bank Statement) from the commercial bank where the sub-account is maintained, and (ii) the Imprest Account Reconciliation Statement reconciling the above mentioned bank statement against the executing agency's records.¹⁵

18. The executing agency will be responsible for the use, management, replenishment, and liquidation of the accounts, based on the submission of suitable supporting documentation to ADB.

19. **Statement of Expenditures (SOE).** SOE procedures¹⁶ will be adopted for reimbursement and liquidation and replenishment of the imprest accounts, for eligible expenditures not exceeding \$100,000 per payment. Original supporting documentation for expenditure claimed under the SOE procedure should be maintained and made 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. ADB has designed specific summary sheet formats to facilitate accurate preparation of withdrawal applications. These formats will be provided to the executing agency for implementation.

20. 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 their behalf, together with the authenticated specimen signatures of each authorized person.

21. The minimum value per withdrawal application is US\$100,000, unless otherwise approved by ADB. The executing agency will consolidate claims to meet this limit for reimbursement and imprest account claims. Withdrawal applications and supporting documents will demonstrate, among other things, that the goods and/or services were produced in or from ADB members, and are eligible for ADB financing. Withdrawal applications and other loan disbursement information are available at ADB Controller's Department's website.¹⁷

22. **Disbursement Practice.** To expedite disbursement, ADB's Loan Disbursement Handbook has a dedicated section in Chapter 4 on (i) actions to be taken by the Borrower, (ii) basic requirements for disbursement, and (iii) withdrawal application.

C. Accounting

23. The executing agency will maintain separate project accounts and records by funding source for all expenditures incurred on each project under the investment program. Project accounts will follow generally accepted accounting principles followed in India and the accounting standards followed by the government and respective states.

¹⁵ Follow the format provided in Appendix 30 of the *Loan Disbursement Handbook*.

¹⁶ Checklist for SOE procedures and formats are available at:

http://www.adb.org/documents/handbooks/loan_disbursement/chap-09.pdf

http://www.adb.org/documents/handbooks/loan_disbursement/SOE-Contracts-100-Below.xls

http://www.adb.org/documents/handbooks/loan_disbursement/SOE-Contracts-Over-100.xls

http://www.adb.org/documents/handbooks/loan_disbursement/SOE-Operating-Costs.xls

http://www.adb.org/documents/handbooks/loan_disbursement/SOE-Free-Format.xls

¹⁷ <http://lfis.adb.org>

D. Auditing

24. The executing agency will cause the project accounts to be audited in accordance with the standards prescribed by the Comptroller and Auditor General of India and/or the Institute of Chartered Accountants of India, and those applicable to the project, by an independent auditor, whose qualifications, experience and terms of reference are acceptable to ADB. The audited accounts, together with the auditors' report and management letter, will be submitted in the English language to ADB within 9 months of the end of the fiscal year by the executing agency.

25. The annual audit report will include a separate audit opinion on the use of the imprest accounts, sub-accounts, and the SOE procedures (as applicable). The audit reports should include an assessment of the adequacy of the accounting and internal control systems, the ability to maintain proper and adequate records and documents in support of transactions, and the eligibility of incurred expenditure for ADB financing. ADB retains the right to: (i) review and examine any account; and (ii) verify the validity of the certification issued by the executing agency for each withdrawal application.

26. The government and the executing agency have been made aware of ADB's policy on delayed submission, and the requirements for satisfactory and acceptable quality of the audited accounts. 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. Further, any critical audit observations on the project should be reported to ADB, and action taken also monitored. For revenue generating projects only, ADB requires audited financial statements for each executing and/or implementation agency associated with the project.

27. Under the Policy within 30 days of receipt ADB will disclose the annual audited financial statements for the projects by posting them on ADB's website.

VI. PROCUREMENT AND CONSULTING SERVICES

A. Advance Contracting and Retroactive Financing

28. All advance contracting and retroactive financing will be undertaken in conformity with ADB's *Procurement Guidelines*¹⁸ (February 2013, as amended from time to time) and ADB's *Guidelines on the Use of Consultants*¹⁹ (2013, as amended from time to time). The issuance of invitations to bid under advance contracting and retroactive financing will be subject to ADB approval. The borrower, executing, and implementing agencies have been advised that approval of advance contracting and retroactive financing does not commit ADB to finance each tranche project under the investment program.

29. **Advance contracting.** "Advance contracting" refers to the process for procuring goods and related services and works, up to the stage of ADB's approval of the executing agency's recommendation for award of contract before the effective date of the loan agreement. Under each loan of the Facility, advance contracting of: (i) civil works, (ii) equipment and materials, and (iii) recruitment of consultants, has been already requested by the executing agency subject to these being eligible as per the agreed procedures and guidelines. Advance contracting would include: (i) pre-qualification of contractors, tendering, and bid evaluation for civil works packages; (ii) preparation of tender documents to procure materials and equipment; (iii) evaluation of bids; and (iv) recruitment of consultants.

30. **Retroactive financing.** "Retroactive financing" refers to ADB's financing of project expenditures incurred and paid for by the borrower or recipient of grant financing before the related loan agreement becomes effective. Except as otherwise agreed with ADB, the expenditures incurred for civil works, equipment and materials, and consulting services that are eligible for advance contracting, and program management and implementation expenses will be eligible for retroactive financing of up to 20% of the proposed amount for the loans under the Facility for eligible expenditures in each category incurred prior to effectiveness of each loan, but no earlier than 12 months before the signing of the respective loan agreement.

B. Procurement of Goods, Works and Consulting Services

31. All procurement of goods and works will be undertaken in accordance with ADB's Procurement Guidelines (2013, as amended from time to time). The concurred standard bidding documents for the national competitive bidding will be used throughout the Facility period. Also, all consultants will be recruited according to ADB's Guidelines on the Use of Consultants (2013, as amended from time to time). The procurement plan indicates the threshold, mode of procurement and consultant selection, review procedures, and contract packages.

C. Procurement Plan

32. The procurement plan provides: (i) a list of goods, works, and consulting services contract packages that will be processed over the next 18 months with milestone dates for activities; (ii) the proposed methods for procurement of such contracts that are permitted under the respective loan agreements; and (iii) the related ADB review procedures. The procurement packages in the procurement plan²⁰ will be updated by the PMU for approval by ADB. The

¹⁸ Available at: <http://www.adb.org/Documents/Guidelines/Procurement/Guidelines-Procurement.pdf>

¹⁹ Available at: <http://www.adb.org/Documents/Guidelines/Consulting/Guidelines-Consultants.pdf>

²⁰ The first procurement plan should provide indicative procurement contracts, acceptable to ADB setting forth: (i) a list of goods, works, and consulting services contract packages that will be processed over the next 18 months with

procurement plan should be updated at least every June (more frequently if necessary) and should cover the next 18 months of procurement activity. A delay in loan effectiveness, other start-up delays, and delays during implementation will require an unscheduled procurement plan update. ADB will review each updated procurement plan prior to its publication. When appropriate, this activity may be undertaken in the field by ADB missions working with the executing and implementing agencies. Procurement plan is in Appendix 2.

D. Consultant's Terms of Reference

33. Terms of reference for all consultant contracts are in Appendix 3.

34. The consulting firm will be engaged following the quality- and cost- based selection method, with a quality-cost ratio of 90:10 (due to the high complexity of the assignment and the impact of the expected outputs), using full technical proposal procedures.

milestone dates for activities; (ii) the proposed methods for procurement of such contracts that are permitted under the financing agreement; and (iii) the related ADB review procedures. The procurement plan shall list all packages in value by procurement method and the date by which procurement activity is expected to commence. The first procurement plan and the annual updates will be published on adb.org.

VII. SAFEGUARDS

35. **Key Safeguards Documents.** Safeguards frameworks, specifically:

- (i) An environmental assessment and review framework; and
- (ii) A resettlement framework.

have been prepared for the Facility. Consistent with the safeguards frameworks,

- (iii) an initial environmental examination (IEE) for water supply subproject under Tranche 1;
- (iv) an IEE for sewerage subproject under Tranche 1;
- (v) a resettlement plan for water supply subproject under Tranche 1; and
- (vi) a resettlement plan for sewerage subproject under Tranche 1

have been prepared in separate volumes.

36. **Prohibited Investment Activities.** Pursuant to ADB's Safeguard Policy Statement,²¹ 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. All financial institutions will ensure that their investments are in compliance with applicable national laws and regulations and will apply the prohibited investment activities list to the projects financed by ADB.

37. **PMU's Role in Safeguards.** The PMU will have a Social Development Unit (SDU), which will address environmental and social safeguards issues with assistance from the design and supervision consultants (DSC). The DSC will include an Environment Specialist and a Social Safeguards Specialist. The SDU will ensure that the IEE, and resettlement plan are followed during implementation of each tranche project under the investment program. The SDU in collaboration with DSC will also lead preparation of safeguards documents for future projects for the subsequent phases.

38. The PMU is also tasked with the day-to-day implementation of safeguards plans. Field implementation and monitoring of safeguards plans will be undertaken through the SDU. They will also ensure the PMU obtain all clearances and fulfill government requirements. Institutional roles and responsibilities are detailed in the IEE, and resettlement plan. The details for roles and responsibilities for PMU, DSC and ADB are in the two tables below:

Table 3: Matrix of Roles and Responsibilities for Environmental Safeguard Compliance

Phase	PMU	DSC	ADB
Subproject appraisal stage	Review the REA checklists and draft IEE. Disclose on its website the approved IEE. Ensure disclosure of information throughout the duration of the subproject.	Conduct REA for each subproject using checklists and to prepare IEE	Review the REA checklists and reconfirm the categorization. Review and approve EIA reports (Category A) and IEE reports (Category B) subprojects. Disclose on its website the submitted EIA/IEE report.
Detailed Design Phase	Incorporate the EMP, environmental mitigation and monitoring measures into contract documents, with assistance of DSC.	Revise the IEE and EMP in accordance with detailed design changes if warranted. Ensure incorporation of	Review and approve updated EIA reports (Category A) and IEE reports (Category B) subprojects.

²¹ Available at: <http://www.adb.org/documents/safeguard-policy-statement?ref=site/safeguards/main>

Phase	PMU	DSC	ADB
		<p>EMP in bid documents and contracts.</p> <p>Prepare inventory of utilities to be affected by the subproject.</p>	<p>Disclose on its website updated EIA and/or IEE report.</p>
Pre-construction Phase	<p>Conduct consultation disclosure process and reflect comments in IEE reports.</p> <p>Monitor the disclosure and public consultation.</p> <p>Approve contractor's proposed locations for construction work camps, storage areas, hauling roads, lay down areas, disposal areas for solid and hazardous wastes.</p>	<p>Ensure statutory clearances and permits from government agencies and other entities are obtained prior to start of civil works.</p> <p>Consult affected people and ensure resettlement plans are implemented prior to start of civil works.</p> <p>Ensure disclosure of information prior to start of civil works and throughout the duration of the construction period.</p> <p>Approve contractor's site-specific environmental plan (such as traffic management plan, waste management plan, locations for camp sites, storage areas, lay down areas, and other sites/plans specified in the EMP).</p> <p>Conduct baseline environmental conditions and inventory of affected trees.</p>	
Construction Phase	<p>Review semi-annual monitoring and EMP implementation report including the status of compliance with statutory clearances and with relevant loan covenants.</p> <p>Submit the semi-annual report to ADB and seek permission to disclose the same in the Project web site.</p>	<p>Monitor the implementation of mitigation measures by Contractor.</p> <p>Prepare monthly progress reports including implementation and mitigation (application of EMP and monitoring plan).</p> <p>Conducts environmental quality monitoring during construction stage (ambient air and noise, and water quality).</p> <p>Prepare the semi-annual monitoring report on environment by focusing on the progress in implementation of the EMP and issues encountered and measures adopted, follow-up actions required, if any.</p>	<p>Review the semi-annual report, provide necessary advice if needed to the PMU and approve the same.</p> <p>Disclose on its website environmental monitoring reports.</p>

Phase	PMU	DSC	ADB
Pre-operation Phase (Commissioning Defect Liability Period)	Review monitoring report of DSC on post-construction activities by the contractors as specified in the EMP.	Apply for the WTPs CTO prior to commissioning. Monitor and approve post-construction activities by the contractors as specified in the EMP.	
Operations Phase	Conduct monitoring, as specified in the environmental monitoring plan. Cause WBPCB to monitor compliance of the standards regarding drinking water quality, ground water, ambient air, effluent quality from treatment plant, as applicable.		

ADB = Asian Development Bank, CTO = Consent to Operate, DSC = Design and Supervision Consultant, EIA = Environmental Impact Assessment, EMP = Environmental Management Plan, IEE = Initial Environmental Examination, PMU = project management unit; REA = Rapid Environmental Assessment, WBPCB = West Bengal State Pollution Control Board, WTP = water treatment plant.

Table 4: Matrix of Roles and Responsibilities for Social Safeguard Compliance

Phase	PMU	DSC	ADB
Subproject appraisal stage	Finalize sites and alignments for the subproject. Disclose proposed subproject details and proposed entitlements and mitigation measures by issuing public notice. Organize meetings at a community and household level with affected persons of property. Disclose grievance redress process.	Organize meetings at a community and household level with affected persons of property.	
Resettlement Plan Preparation Stage	Conduct census of all affected persons. Conduct focus group discussion, meetings, consultations, and workshops during social impact. Conduct assessment surveys. Formulate compensation and rehabilitation. Conduct discussions with affected persons and stakeholders. Finalize entitlements and rehabilitation packages. Disclose entitlements and rehabilitation.	Conduct census of all affected persons. Conduct focus group discussion, meetings, consultations, and workshops during social impact. Conduct assessment surveys. Formulate compensation and rehabilitation. Conduct discussions with affected persons and stakeholders. Finalize entitlements and rehabilitation packages. Disclose entitlements and rehabilitation.	Approve a resettlement plan.

Phase	PMU	DSC	ADB
	Approve a resettlement plan. Deliver entitlements.	Approve a resettlement plan. Deliver entitlements.	
Implementation Stage	Implement proposed rehabilitation measures. Organize consultation workshop. Operate grievance redress. Engage external monitoring.	Implement proposed rehabilitation measures. Organize consultation workshop. Operate grievance redress. Undertake internal monitoring.	

ADB = Asian Development Bank, DSC = Design and Supervision Consultant, PMU = project management unit.

VIII. GENDER AND SOCIAL DIMENSIONS

39. The Tranche 1 project gender action plan²² is in Appendix 4. The gender action plan will deliver 13 outputs by incorporating gender aspects in the project implementation:

- (i) Awareness-raising activities on the importance of the water loss management conducted, linking it to health, gender, social empowerment and environmental conservation issues.
- (ii) Consultation activities conducted with community members in service areas, especially in the identified poor and slum areas, and with housewives, women heads of households, and heads of vulnerable households on the planning, design, and location of water and sewerage assets in the city.
- (iii) Gender- and socially inclusive O&M manuals, and translated in local language.
- (iv) Poor, unemployed women, and men trained to take on unskilled jobs in the O&M of water supply and sewerage assets.
- (v) Poor women and men trained on the O&M of water supply assets and employed following core labor standards such as equal pay for work of equal value.
- (vi) Organize ward level focus group responsible for identifying poor, vulnerable, households and who can be the community's monitor/watchdog of the proper implementation of the Tranche 1 project.
- (vii) Vulnerable households who need concessionary connections and subsidies on user fees identified.
- (viii) Rules for concessionary lifeline connections for vulnerable households proposed.
- (ix) Pro-vulnerability schedule of tariffs for water supply and sanitation services proposed.
- (x) New women staff in the PMU recruited and trained.
- (xi) Gender orientation to all PMU staff and contractors organized, highlighting gender and other social inclusion issues related to water supply and sanitation.
- (xii) Gender items in the project information format for regular reporting incorporated.
- (xiii) Gender indicators incorporated in the project performance monitoring system (PPMS).

40. Tranche 1 project's Communication Strategy²³ is in Appendix 5. It provides (i) who is responsible to ensure the actions and strategy are implemented, and (ii) what resources are required to implement the plan and strategy. The use of ADB's standard bidding documents and international competitive bidding documents ensures the contractors' responsibility in preventing HIV/AIDS.

²² *Briefing Note: Project Gender Action Plans*: <http://www.adb.org/Documents/Brochures/Project-Gender-Action-Plans/default.asp>, and *Updated Gender Mainstreaming Categories of ADB Projects*: <https://lpedgedmz.adb.org/lnadbg1/ocs0178p.nsf/0/37CC7D6E8E3CC57D482576E20083C156?OpenDocument>

²³ *Staff Guide to Consultation and Participation*: <http://www.adb.org/participation/toolkit-staff-guide.asp> and, *CSO Sourcebook: A Staff Guide to Cooperation with Civil Society Organizations*: <http://www.adb.org/Documents/Books/CSO-Staff-Guide/default.asp>.

IX. PERFORMANCE MONITORING, EVALUATION, REPORTING AND COMMUNICATION

A. Design and Monitoring Framework

41. The design and monitoring framework (DMF) for the investment program and Tranche 1 project is in Appendix 6.

B. Monitoring

42. The Steering Committee (See implementation arrangement for its structure and mandate) will be the highest authority responsible for monitoring and providing policy directions on (i) critical implementation issues and interdepartmental coordination, (ii) implementation of the reform agenda, (iii) compliance with the framework financing agreement and the loan covenants, and (iv) compliance with the social and environmental safeguards. To facilitate the monitoring process and illuminate the issues, PMU will establish an investment program and PPMS in a form and substance acceptable to ADB. The PPMS will cover the four areas:

- (i) Investment program performance monitoring;
- (ii) Project performance monitoring;
- (iii) Compliance monitoring; and
- (iv) Safeguards, gender, and social dimension monitoring.

43. **Project Performance Monitoring.** The performance monitoring team structure and responsibilities are summarized in Table 5. Within 6 months from the date the loan takes effect, the executing agency will establish and verify:

- (i) Baseline data for outputs and outcome indicators of the investment program DMF and each tranche project DMF, which are disaggregated by sex as well as poverty; and
- (ii) 18 indicators defined by the Service Level Benchmarking²⁴ of Ministry of Urban Development.

These will be quarterly updated by the executing agency.

Table 5: Project Performance Monitoring Structure and Responsibilities

Unit in Charge	Responsibility
Project Director, PMU	Endorse the report of the units and Institutional reform and capacity building officer, and submit it to the Steering Committee for review.
Contract Management Unit, PMU	Generate and consolidate and verify monitoring data on physical investment activities. Analyze the consolidated monitoring data on physical investment activities, and report the results and corrective actions to the Project Director.
Utility Finance Improvement Unit, PMU	Generate monitoring data on reform and capacity building activities, input them in the PPMS, analyze, and report the results and corrective actions to the Project Director.

PMU = program and project management unit, PPMS = project performance monitoring system.

44. **Compliance Monitoring.** The compliance monitoring team structure and responsibilities are summarized in Table 6. The covenants are in the framework financing agreement, and loan

²⁴ Ministry of Urban Development. June 2010. *Handbook on Service Level Benchmarking*. New Delhi. <http://www.urbanindia.nic.in/programme/uwss/slb/Handbook.pdf>

and project agreements.

Table 6: Compliance Monitoring Structure and Responsibilities

Staff in Charge	Responsibility
Project Director, PMU	Endorse the report of the Project Officer, and submit it to the Steering Committee for review.
Contract Management Unit, PMU	Generate compliance monitoring data on loan covenants, input them in the PPMS, analyze, and report the results and corrective actions to the Project Director.

PMU = project and program management unit, PPMS = project performance monitoring system.

45. **Safeguards, Gender, and Social²⁵ Dimension Monitoring.** The safeguards, gender, and social monitoring team structure and responsibilities are summarized in Table 7. Semi-annual safeguards monitoring requirements including suggested monitoring report formats are in safeguards plans and frameworks.

Table 7: Safeguards, Social Dimensions Monitoring Structure and Responsibilities

Unit in Charge	Responsibility
Project Director, PMU	Endorse the report of units, and submit it to the Steering Committee for review.
Social Development Unit, PMU	Generate the monitoring data on social safeguard, gender and social dimensions. Consolidate and verify monitoring data on social safeguard, gender dimension, and communication. Analyze the consolidated monitoring data on social safeguard, gender and social dimensions against the loan agreement and each works contract, and report the results and corrective actions to the Project Director.
Environment officer, PMU	Generate the monitoring data on environmental safeguard, gender and social dimensions. Consolidate and verify monitoring data on environmental safeguard. Analyze the consolidated monitoring data on environmental safeguard against the loan agreement and each works contract, and report the results and corrective actions to the Project Director.

PMU = project and program management unit.

C. Evaluation

46. **Regular Review.** The PPMS will aim to detect any deficiency and discrepancy between the plan and the execution of the investment program and each tranche project in order to ensure that timely corrections can be made to adjust the design of the investment program. Each of the monitoring teams will evaluate the causes of any deficiency and discrepancy between the plan and the execution illuminated by the PPMS, propose corrective measures, and seek policy guidance from the Steering Committee if still unresolved. There will be evaluation processes at four different levels in different intervals:

- (i) The executing agency through the PMU (monthly);
- (ii) The Steering Committee (semi-annually); and
- (iii) ADB (annually).

²⁵ ADB's *Handbook on Social Analysis: A Working Document*, is available at: <http://www.adb.org/Documents/Handbooks/social-analysis/default.asp>, *Staff Guide to Consultation and Participation*: <http://www.adb.org/participation/toolkit-staff-guide.asp>, and, *CSO Sourcebook: A Staff Guide to Cooperation with Civil Society Organizations*: <http://www.adb.org/Documents/Books/CSO-Staff-Guide/default.asp>

47. **Midterm Reviews.** In addition, a midterm review of each loan under the Facility will be undertaken during the implementation period of each loan. The midterm reviews will evaluate in detail the scope of the Facility and the loans, implementation arrangements, any outstanding issues, environment and resettlement as well as other safeguard issues, achievement of scheduled targets, contract management progress, and other issues, as appropriate and generate agreement on any changes that may be needed.

D. Reporting

48. The executing agency will provide ADB with six types of reports, and all are subject to disclosure in compliance with ADB's Public Communications Policy (2011):

- (i) Semi-annual safeguards monitoring reports;
- (ii) Quarterly project progress reports in a format consistent with ADB's project performance reporting system within 15 days of the end of each quarter;
- (iii) Facility annual reports including: (a) progress achieved by output as measured through the DMF indicator's performance targets; (b) key implementation issues and solutions; (c) updated procurement plan; and (d) updated implementation plan for next 12 months;
- (iv) Each project accounts under the investment program, and the asset owning agencies' annual financial statement together with the associated auditor's report.
- (v) A project completion report²⁶ within 6 months of physical completion of the each project under the investment program; and
- (vi) A Facility completion report within 3 months of physical completion of the final tranche under the investment program.

E. Stakeholder Communication Strategy

49. Stakeholder communication strategy is in Appendix 5. In accordance with ADB's Public Communications Policy (2011), ADB will disclose documents which ADB prepared and/or received, such as:

- (i) Project data sheet;
- (ii) Information to affected people and other interested stakeholders;
- (iii) Project safeguards documents;
- (iv) Initial poverty and social analysis;
- (v) Technical assistance reports and documents produced under technical assistance;
- (vi) Report and recommendation of the President and supporting documents;
- (vii) Legal agreements;
- (viii) Audited project accounts;
- (ix) Major changes; and
- (x) Completion reports.

²⁶ Project completion report format is available at: <http://www.adb.org/Consulting/consultants-toolkits/PCR-Public-Sector-Landscape.rar>

X. ANTICORRUPTION POLICY

50. The government, states and implementing agencies are advised of ADB's Anticorruption Policy (1998, as amended to date). Consistent with its commitment to good governance, accountability and transparency, implementation of the projects under the Facility shall adhere to ADB's Anticorruption Policy. ADB reserves the right to review and examine, directly or through its agents, any alleged corrupt, fraudulent, collusive, or coercive practices relating to the projects under the Facility. In this regard, investigation of government officials, if any, would be requested by ADB to be undertaken by the government.

51. To support these efforts, relevant provisions of ADB's Anticorruption Policy are included in the Loan Regulations and the bidding documents. In particular, all contracts financed by ADB shall include provisions specifying the right of ADB to audit and examine the records and accounts of the states and implementing agencies and all contractors, suppliers, consultants, and other service providers as they relate to the projects under the Facility. Individuals/entities on ADB's anticorruption debarment list are ineligible to participate in ADB-financed activity and may not be awarded any contract under the project.²⁷

52. ADB's Anticorruption Policy designates the Office of Anticorruption and Integrity as the point of contact to report allegations of fraud or corruption among ADB-financed projects or its staff. Office of Anticorruption and Integrity is responsible for all matters related to allegations of fraud and corruption. For a more detailed explanation refer to the Anticorruption Policy and Procedures. Anyone coming across evidence of corruption associated with the project may contact the Anticorruption Unit by telephone, facsimile, mail, or email at the following numbers/addresses:

by email at integrity@adb.org or anticorruption@adb.org

by phone at +63 2 632 5004

by fax to +6326362152

by mail at the following address (Please mark correspondence Strictly Confidential):

Office of Anticorruption and Integrity
Asian Development Bank
6 ADB Avenue Mandaluyong City
1550 Metro Manila, Philippines

²⁷ ADB's Integrity Office web site is available at: <http://www.adb.org/integrity/unit.asp>

XI. ACCOUNTABILITY MECHANISM

53. People who are, or may in the future be, adversely affected by the project may submit complaints to ADB's Accountability Mechanism. The Accountability Mechanism provides an independent forum and process whereby people adversely affected by ADB-assisted projects can voice, and seek a resolution of their problems, as well as report alleged violations of ADB's operational policies and procedures. Before submitting a complaint to the Accountability Mechanism, affected people should make a good faith effort to solve their problems by working with the concerned ADB operations department. Only after doing that, and if they are still dissatisfied, should they approach the Accountability Mechanism.²⁸

Contract details:

Secretary
Compliance Review Panel
Asian Development Bank
6 ADB Avenue
Mandaluyong City
1550 Metro Manila, Philippines

Tel + 63 2 632 4149

Fax +63 2 636 2088

Email: crp@adb.org

Web: www.compliance.adb.org

²⁸ For further information see: <http://compliance.adb.org/>.

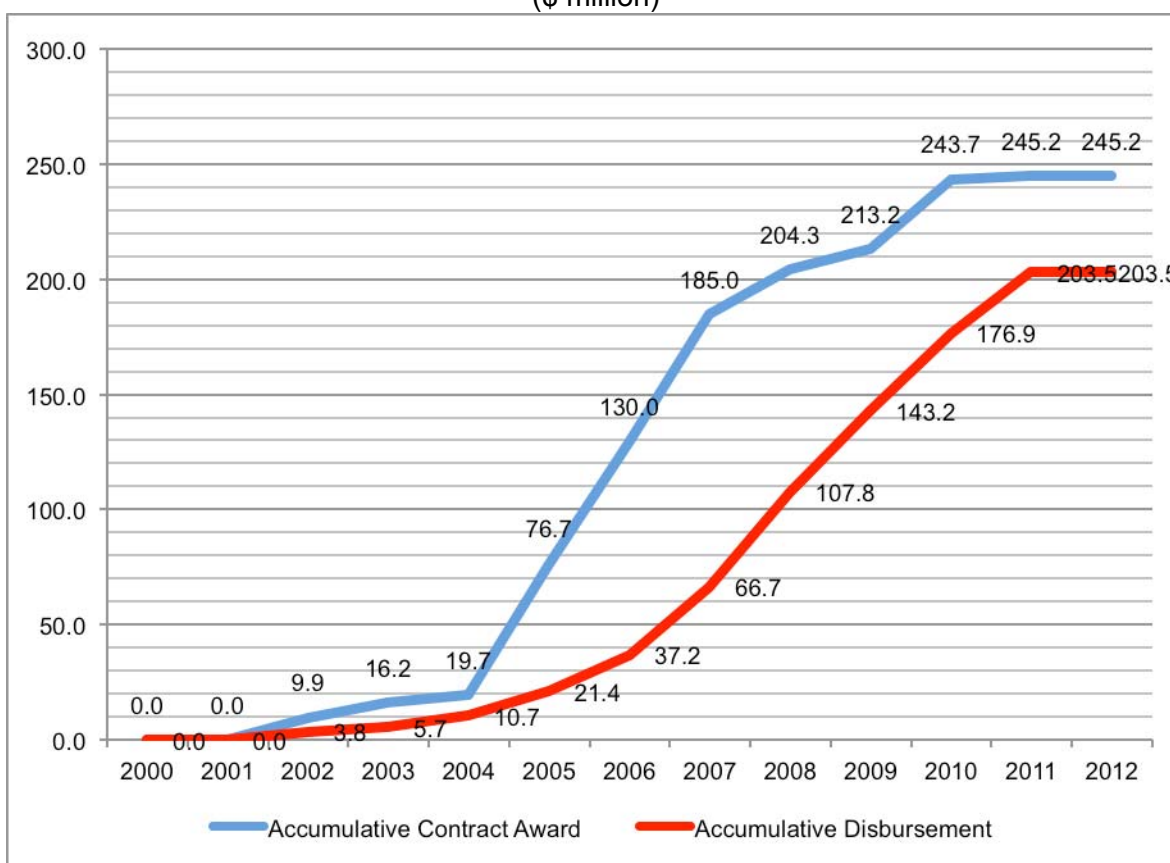
XII. RECORD OF FAM CHANGES

54. Upon approval of the subsequent tranche(s), this ADB mission will update this FAM by adding new sections specific to the new tranche(s), or modifying the existing sections to reflect the changes from the previous tranche(s).

LESSON LEARNED FROM PREVIOUS LOANS

1. Previous loans¹ for Kolkata Environment Improvement Project (KEIP) have provided both the Kolkata Municipal Corporation (KMC) and the Asian Development Bank (ADB) with valuable lessons on how to improve project performance. While the Kolkata Environmental Improvement Project was approved in 2000, it was only in 2005 that KEIP was in full swing. All major contracts were awarded between 2005 and 2010. Disbursement, an indication of progress in physical works, started to accelerate from 2007. The average annual disbursement amount was about \$30 million between 2007 and 2011. As of end 2011, the 5-year average disbursement record was one of the highest in the urban sector portfolio in India. This proves that KMC has evolved from an organization with weak implementation capacity to an organization highly capable of managing large works contracts in crowded urban areas.

Accumulative Contract Award and Disbursement under Loan 1813 and 2293-IND
(\$ million)



Note: Numbers may not sum precisely because of rounding.
Source: Asian Development Bank estimates.

2. To prevent repeating similar slow start-up and associated financial progress patterns under the Kolkata Environmental Improvement Investment Program, the table below has been

¹ ADB. 2000. *Report and Recommendation of the President to the Board of Directors: Proposed Loan to India for the Calcutta Environmental Improvement Project*. Manila (Loan 1813-IND, \$250 million, approved on 15 November 2000). The project completion date is 30 June 2012.

ADB 2006. *Report and Recommendation of the President to the Board of Directors: Proposed Supplementary Loan to India for the Kolkata Environmental Improvement Project*. Manila (Loan 2293-IND: \$80 million, approved on 20 November 2006). The project completion date is 30 June 2012.

prepared highlighting key causes for the delays under the closing project, and mitigation measures which will be incorporated in the design of each tranche project under the investment program.

Summary of Delay Factors and Mitigation Measures

Delay Factors During Loans 1813-IND and 2293-IND	Mitigation Measures Addressed in Design of New Loans
<p>Delay in introduction of water tariff. Loan covenants on procurement of water meters and introduction of water tariff have not been complied with.</p>	<p>⇒ All covenants are generally complied with except for those related to introduction of water tariff, sewer surcharge and water meters for domestic connections. KMC has introduced a water tariff and sewer surcharge for institutional, commercial and industrial users in 2008, and installed about 260 water meters for the bulk users. For domestic users, however, KMC continued to recover the operating cost through the property tax, and did not introduce user charges and meters. In fact, the covenants on tariff were conditioned by design elements. Firstly, the ongoing project sought a major water tariff reform, but was not accompanied by investments in water supply which would have led to service improvement. Secondly, since KMC was able to fully meet the operating expenses from existing sources, such as charges to industrial users, allocation from KMC's property tax revenue and subsidies from the state government, it faced difficulties in justifying to the public the immediate need for levying domestic user charges.</p> <p>KMC made partial effort to comply with two key loan covenants on procurement of water meters, and introduction of water user charges under the ongoing loans. A contract for 150 bulk water meters was awarded in January 2012. All units had been delivered by 30 June 2012. KMC considers that the introduction of tariff is an inevitable step for aiming beyond O&M cost recovery in a long-run and has prepared and adopted the policy paper on Road Map for Self Sustainable Water Supply System in Kolkata, which stipulates that KMC would introduce water tariff in 2014.</p>
<p>Start-up Delay. A substantial delay in project start-up due to absence of PMU at the early period of implementation.</p>	<p>⇒ The same PMU for Loans 1813-IND and 2293-IND will manage and implement the investment program. The PMU is already operational for the last 10 years, fully staffed and have institutional memory of the ongoing loans. Advance action is under implementation.</p>
<p>Unsuitable Systemic Design. An unsuitable design concept in feasibility study resulted in lengthy review and redesign process after loan agreement.</p>	<p>⇒ The consultants engaged by KMC have prepared a feasibility study and are engaged in the preparation of detailed designs. KMC's engineers have fully reviewed the design. KMC's engineers will lead engineering decisions.</p>
<p>Large Resettlement. Resettlement of around 3,500 families took long time to identify the relocation lands in the metropolitan area. Incomplete resettlement resulted in delay in handing over of sites to the contractors.</p>	<p>⇒ The investment program will not involve major resettlement. KMC will use micro-tunneling methods of pipe installation on busy roads. Minor land acquisition (350 square meters) is required, along with temporary disruption to livelihood in roads due to excavation. The EA has adequate capacity to implement resettlement.</p>
<p>Utility Shifting. Contractors took long time for underground utility shifting, and were not able to initiate works immediately after contract awards.</p>	<p>⇒ KMC has already started the detailed design. As a part of the detailed design, KMC started coordination with the other agencies to minimize interference of assets. KMC has decided to postpone one contract package, which would have resulted in interference with the</p>

Delay Factors During Loans 1813-IND and 2293-IND	Mitigation Measures Addressed in Design of New Loans
<p>Lack of Effective Supervision. Supervision of contractors on site could have been made more frequent. This resulted in underperformance of some contractors.</p>	<p>metro construction.</p> <p>⇒ The terms of reference for DSC will mandate DSC to conduct frequent contractor supervision. The contract management unit under the PMU also plays an active role in supervision.</p>
<p>Nonperforming contractors. The performance of contractors was poor in some large contracts.</p>	<p>⇒ The PMU has terminated underperforming contractors during implementation of the ongoing loans. This has resulted in 'hangs a dead crow' effect. The contractors are fully aware that the PMU will take a legal action for nonperformers.</p>
<p>Inappropriate contract packaging. Poor planning had resulted in uncertainty in works execution arrangements (such as availability of lands). Delays in planning had reduced loan period, and then resulted in impractical contract duration (matching contract closing date with loan closing date). These were regarded as risks to contractors, and then reflected in high bid prices and lack of participation of good contractors during initial bidding of larger contracts in 2004-2005. This led to repackaging and rebid, which further delayed the implementation of the ongoing project.</p>	<p>A new performance-based water loss reduction contract will be designed by a team of international specialist to ensure that the performance matrix, cost estimates, and scoping are reasonable enough to attract well-performed international practitioners.</p> <p>⇒ The loan size was limited to what KMC could absorb in 3 years (\$33 million times 3 years), estimating from the disbursement trend under the ongoing project. The total value of contracts under the investment program will be far less than the sum of those under Loan 1813 and 2293-IND.</p> <p>The PMU will plan to award major contracts before loan signing. This will allow KMC to set realistic contract duration, which are between 3 and 5 years.</p> <p>As reported in the RRP for Loan 2293-IND, the PMU uses market rates for estimating the contract values. Reasonable contract duration and realistic cost estimates will reduce the chances of discrepancy between the engineers' contract value estimates and actual bid prices. This will minimize the likelihood of rebidding.</p> <p>The largest works are rehabilitation of the water treatment plants, and require only minor land acquisition (350 square meters). The construction of pumping stations requires lands, and all lands were identified and transferred to KMC. The safeguards risk under the investment program is significantly less than the ongoing project.</p>

DSC = design and supervision consultants, IND = India, KMC = Kolkata Municipal Corporation, O&M = operations and maintenance, PMU = program and project management unit, RRP = report and recommendation of the President to the Board of Directors.

PROCUREMENT PLAN

Project Name: Kolkata Environment Improvement Investment Program	Loan Number: TBD
Loan Amount: US\$100 million	Executing Agency: Kolkata Municipal Corporation
Date of first Procurement Plan: May 2012	Date of this Procurement Plan: August 2013

Section 1: Process Thresholds, Review and 18-Month Procurement Plan

A. Project Procurement Thresholds

1. 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
ICB for Works	US\$10,000,000 and above
ICB for Goods	Between US\$1,000,000 and above
NCB for Works	Beneath that stated for ICB, Works
NCB for Goods	Beneath that stated for ICB, Goods
Shopping for Works	Below US\$ 100,000
Shopping for Goods	Below US\$ 100,000

ICB = international competitive bidding, NCB = national competitive bidding.

B. ADB Prior or Post Review

2. Except as ADB may otherwise agree, the following prior or post review requirements apply to the various procurement and consultant recruitment methods used for the investment program.

Procurement of Goods and Works		
Procurement Method	Prior or Post	Comments
ICB Works	Prior	
ICB Goods	Prior	
NCB Works	Prior for first bidding document	Subsequent bidding documents for post review
NCB Goods	Prior for first bidding document	Subsequent bidding documents for post review
Shopping for Works	Post	
Shopping for Goods	Post	

ICB = international competitive bidding, NCB = national competitive bidding.

Recruitment of Consulting Firms		
Method	Prior or Post	Comments
Quality and Cost Based Selection (QCBS)	Prior	
Quality Based Selection (QBS)	Prior	
Other selection methods: Consultants Qualifications (CQS), Least Cost Selection (LCS), Fixed Budget (FBS), and Single Source (SSS)	Prior	
Recruitment of Individual Consultants		
Individual Consultants	Prior	

C. Goods and Works Contracts Estimated to Cost More Than US\$ 1 Million

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

General Description	Contract Value (\$ million)	Procurement Method	Prequalification of Bidders (y/n)	Advertisement Date (quarter/year)	Comments
1. WLM pilot in the Cossipore service zone, ward numbers 1 to 6 with OJT on WLM.	10.6	ICB Works	Y	Q2 2013	Advance contracting; Works and service contract with PBP
2. Rehabilitation of Palta water treatment plant and Garden Reach water treatment plant ^a + Cleaning of presetting tanks in Palta water treatment plant	12.3	ICB Works	N	Q3 2013	Advance contracting; Works contract
3. Supply and installation of pumps and motors at Tallah Palta and Garden Reach systems	6.4	ICB Goods	N	Q2 2013	Advance contracting; Goods contract
4. Micro-tunneling work on water trunk main between garden Reach and Taratala, and sewer along Diamond Harbor Road	43.5	ICB Works	N	Q3 2013	Advance contracting; Works contract
5. Construction of pumping station in Beghore Khal and in Joka Tram Depot + Construction of sewerage and drainage network within Diamond Harbor Road catchment I.	15.7	ICB Works	N	Q4 2013	Advance contracting; Works contract
6. Micro tunneling works on pressure main for Santoshpur-Garden Reach	7.4	NCB Works	N	Q2 2013	Advance contracting; Works contract
7. Renovation of PMU offices and other support infrastructure	Various packages up to 1.0	NCB Works	N	Q1 2014	Advance contracting; Works contract
Total	95.9				

ICB = international competitive bidding, OJT = on-the-job training, PBP = performance-based payment, Q = quarter, WLM = water loss management.

^a Works include rehabilitation of the existing raw intake jetty, and supply and installation of pumps and motors in Garden Reach and Palta water treatment plants; renovation and refurbishment of Palta water treatment plant; cleaning of presetting tanks at Palta water treatment plant; redevelopment of sludge ponds in Garden Reach water treatment plant.

Source: Kolkata Municipal Corporation. 2011. *Kolkata Urban Sector Investment Plan*. Kolkata.

D. Consulting Services Contracts Estimated to Cost More Than US\$ 100,000

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

General Description	Contract Value (\$ million)	Recruitment Method	Advertisement Date (quarter/year)	International or National Assignment	Comments
1. Program management consultants (2014-2019)	1.2	QCBS (90:10)	Q2 2013	International	Contract for subsequent tranches may be financed through contract variation ^a Total for MFF Int.=12 pm Nat.=370 pm
2. Design and supervision consultants (2014-2019)	6.0	QCBS (90:10)	Q2 2013	International	Contract for subsequent tranches may be financed through contract variation ^a Total for MFF Int.=18 pm Nat.=1,411 pm
3. Public communication and social development consultants (2014-2019)	1.9	QCBS (90:10)	Q3 2013	National	8-year assignment Advance contracting Nat.=437 pm
4. GIS-based management system consultant phase 1 (2014-2015)	1.1	QCBS (90:10)	Q4 2013	National	Advance contracting Nat.=97 pm
Total	10.2				

GIS = geographic information system, pm = person-month, Q = quarter, QCBS = quality- and cost-based selection.

^a There are three consulting service packages, each of which is ideally carried out by the same team throughout the investment program from 2014 to 2022 to ensure continuity and consistency. Each contract will cover the entire implementation period of the investment program from 2014 to 2022. The initial loan will cover the consulting service contracts partially while the subsequent loans will cover the remaining balances of the contracts.

Source: Kolkata Municipal Corporation. 2011. *Kolkata Urban Sector Investment Plan*. Kolkata.

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

5. 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	Cumulative Contract Value (\$)	Number of Contracts	Procurement / Recruitment Method	Comments
...
Total

Section 2: Indicative List of Packages Required Under the Investment Program

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

General Description	Estimated Value (\$ million)	Estimated Number of Contracts	Procurement Method	Domestic Preference Applicable ^a	Comments
1. Water loss management in more pilot areas with OJT.	100.0	2	ICB with PQ	N	Works contract Tranche 2 or 3 financing
2. Renovation of existing S&D network in Kidderpore area Borough IX; Construction of Rajdanga sewer main in Borough XII; Construction of sewer mains (diameter >600mm) in Diamond Harbor Road catchment (ward 125&126); Laying of sewer mains (diameter >600mm) and a pumping station in South Suburban Catchment (borough XIII ward 122&123 partially); Laying of S&D Mains (diameter ≥ 600 mm) in Churial Sub-Basin Borough XIII (remaining area); Laying of S&D Mains and construction of pumping station in Borough XIV; Laying of sewer mains and construction of pumping stations in Borough XIII wards 115 and 122; Borough XI wards 114 and 122; Borough XI, wards 112 and 113; and Borough XI, wards 113 and 114); Laying of laterals in Borough VII.	146.3	8	ICB	N	Works contract Tranche 2
3. Construction of a new pumping station with deeper sump at Palmer Bazar pumping station; Construction of Pumping Stations in Borough XII.	21.1	2	ICB	N	Design-built contract Tranche 2 financing
4. Construction of Kalagachia sewage treatment plant in Borough XIV and Suti sewage treatment plant.	13.5	2	ICB	N	Works contract Tranche 2 financing
5. Installation of supervisory control and data acquisition system for sewerage and drainage pumping station network.	3.1	1	ICB	TBD	Equipment contract Tranche 2 financing

General Description	Estimated Value (\$ million)	Estimated Number of Contracts	Procurement Method	Domestic Preference Applicable^a	Comments
6. Construction of sewer mains (diameter ≥ 600 mm) in Borough XII; S&D mains (diameter ≥ 600 mm) and a pumping station in Churial extension catchment in Borough XIII.	54.2	2	ICB	N	Works contract Tranche 3 financing
7. Trunk sewer by Micro-tunnelling along James Long Sarani up to Churial pumping station.	18.8	1	ICB	N	Works contract Tranche 3 financing
8. Construction of sewage treatment plant for Borough XII and Jeodagar sewage treatment plant; and renovation of existing Baghajatin sewage treatment plant.	11.3	2	ICB	N	Works contract Tranche 3 financing
9. Construction of a pumping station at Lalababu Nikashi/ Bagjola canal.	4.2	1	NCB	N	Design-built contract Tranche 3 financing
Total	372.5				
General Description	Estimated Value (cumulative)	Estimated Number of Contracts	Recruitment Method	Type of Proposal	Comments
1. Design and supervision consultant phase 2	TBD	1	Contract extension or SSS	NA	Tranche 2 financing
2. Design and supervision consultants phase 3	TBD	1	Contract extension or SSS	NA	Tranche 3 financing
3. Program management consultants phase 2	TBD	1	Contract extension or SSS	NA	Tranche 2 financing
4. Program management consultants phase 3	TBD	1	Contract extension or SSS	NA	Tranche 3 financing

GIS = geographic information system, ICB = international competitive bidding, mm = millimeter, NCB = national competitive bidding, OJT = on-the-job training, PQ = pre-qualification, QCBS = quality- and cost-based selection, S&D = sewerage and drainage.

^a Preference will only be extended to domestic contractors for civil works in countries with an annual per capita gross national income that is less than the limit set in the World Bank Operational Manual OP3.10, Annex D. The limit is at \$1,005 for granting civil works preference to eligible domestic contractors in evaluating civil works bids procured under international competitive bidding. India's GNP is \$1,340, and therefore, ineligible.

PROCUREMENT CAPACITY ASSESSMENT REPORT AND RECOMMENDATIONS

Proposed Project Name: Kolkata Environmental Improvement Investment Program		Proposed Amount: \$100 million
Executing/Implementing Agency: Kolkata Municipal Corporation		Source of Funding: Ordinary Capital Resources
Assessor: Hiroyuki Ikemoto		Date: May 2012
Expected Procurement		
The procurement primarily consists of (i) works on rehabilitation of two water treatment plants, pumps, and transmission pipes; (ii) design, supply, installation, fixed-year maintenance of water supply pipes with performance-based payments, (iii) installation of main sewer, and (iv) supply of energy-efficient streetlight lamps. This will be supported by the two teams of consultants (program management consultants, and design and supervision consultants).		
General Procurement Environment Assessment		
<u>Risk Assessment</u> Low	<u>Summary of Findings:</u> Each tranche project under the investment program will be at municipality-level. The state and municipal rules and regulation will govern its implementation. The basic framework of the state and municipal rules, policy and procedures require open tenders, open to all eligible firms without discrimination, use of non-discriminatory tender documents, public bid opening and selection of the most advantageous tender taking all factors (preferably pre-disclosed) into consideration. Restricted or limited tenders are permitted if the value is small or only limited suppliers are available and single tenders are permitted in the case of urgency, small value, and proprietary and in other exceptional circumstances. In this respect, the basic procedural framework is no different from ADB's Procurement Guidelines and Guidelines on Use of Consultants, and other good models of public procurement.	
Organizational and Staff Capacity		
<u>Risk Assessment</u> Low	<u>Summary of Findings:</u> The KMC, acting through its PMU, has been the executing agency of the ongoing Kolkata Environmental Improvement Project under two previous ADB loans since 2002 (Loans 1913-IND and 2297-IND). The PMU consists of five units (89 staff). One of the five units is the contract management unit headed by a chief engineer deputed from KMC and supported by two deputy chief engineers, six executive engineers, and 12 assistant engineers. During the last 10 years, the PMU has procured and administered 122 contracts in accordance with ADB's Procurement Guidelines and Use of Consultants with the highest contract value at \$25 million. No misprocurement or deviation from ADB's guidelines has been reported.	
Information Management		
<u>Risk Assessment</u> Low	<u>Summary of Findings:</u> The signed original contract and the evaluation report will be retained for at least 2 years after project completion. In addition to these two documents, a copy of the original invitation document, winning bid or proposal, and contract administration papers are also available for inspection.	
Procurement Practices: <i>Procurement of Goods and Works</i>		
<u>Risk Assessment:</u> Medium	<u>Summary of Findings:</u> There was no violation of the Procurement Guidelines in procurement of goods and works under the Loans 1813-IND and 2297-IND. The PMU has a contract management unit. The unit has a quality assurance manual, which sets out procedures for procurement with a timeframe. The manual has been internalized and become norm in the PMU, and the staff follows the timeframe for each steps of procurement. As a result, there are only a few cases of bid validity extension. For example, for the two-stage two-envelope selection under NCB, KMC generally takes 14 days for technical evaluation, 7 days for financial evaluation, 14 days for issuance of a letter of acceptance. While there is no foreseeable risk envisaged for procurement of works and goods using conventional contracts through ICB and NCB under each tranche project under the investment program, it would be the first time for the PMU to prepare a contract for design, supply, installation and fixed-year maintenance of water pipes with performance-based payments. TA7327-IND engaged a team of international consultants to assist KMC in design a PBC for nonrevenue water reduction in accordance with ADB's Procurement Guidelines (2013, as amended from time to time) and prepare a comprehensive narrative of evaluation. KMC will form a special committee for WLM, which exclusively looks after the works under the PBC. The PMC will provide technical support to the committee. The design and	

	supervision consultants under the loan will assist the PMU in bid evaluation and performance monitoring of the works under the PBC.	
Procurement Practices: <u>Consulting Services</u>		
Risk Assessment: Low	Summary of Findings: ADB assessed that the implementation delay under Loans 1813-IND and 2297-IND was partly due to lack of frequent supervision of contractors on site by the design and supervision consultants. This has resulted in underperformance of some contractors. The PMU solely prepared the terms of reference for the two consulting service contracts, and clearly stipulated the design and supervision consultants' mandate for frequent supervision of contractors on site.	
Effectiveness		
Risk Assessment: Low	Summary of Findings: As practiced since approval of Loan 2297-IND, KMC has empowered the PMU and given autonomy for faster decision making. The financial and decision-making powers of the project director are equivalent to those of the KMC's commissioner. The PMUs' accounting system is independent, and payments and disbursements are being processed and made from the PMUs.	
Accountability Measures		
Risk Assessment: Low	Summary of Findings: As practiced during implementation of Loans 1813-IND and 2297-IND, KMC segregates evaluation and approval roles in procurement. It has established the consultant selection committee (chaired by Municipal Commissioner) and the tender evaluation committee (chaired by Project Director) to evaluate bids, expression of interests and proposals. The steering committee approves (chaired by Minister-in-Charge for Municipal Affairs and Urban Development) approves the evaluation results. Results of procurement are disclosed on the investment program's web site.	
Summary Assessment		
The procurement risk is low as Tranche 1 under the multitranche financing facility will be the third ADB's financial assistance for KMC. Nonrevenue water management using private sector efficiency is an innovative initiative under the project, but requires preparation of a PBC. Such weakness will be strengthened by the ongoing TA7327-IND, which engaged a team of international consultants to assist KMC in designing a PBC for nonrevenue water reduction in accordance with ADB's Procurement Guidelines.		
Specific Recommendations, Project Implementation		
Risks	Recommended Action	Responsibility and comment
Considering the experiences accumulated during implementation of ongoing loans, there is no major risk identified.	The PMU staff should regularly participate in various ADB-run training programs to update the knowledge.	India Resident Mission will inform the training opportunities.
Capacity Constraint	Recommended Action	Responsibility and comment
Considering the experiences accumulated during implementation of ongoing loans, there is no major risk identified.	The PMU staff should regularly participate in various ADB-run training programs to update the knowledge.	India Resident Mission will inform the training opportunities.
General Recommendations, Executing Agency/Implementing Agency		
Risks/Capacity Constraint	Recommended Action	Responsibility and comment
The PMU does not have adequate experience in designing a performance-based WLM contract.	The ongoing TA7327-IND engaged a team of international consultants to assist KMC in designing a PBC for WLM in accordance with ADB's Procurement Guidelines.	SAUW and COSO will jointly review the WLM PBC to ensure full compliance with the ADB's Procurement Guidelines.
General Recommendations, Procurement Environment		
Risk/Capacity Constraint	Recommended Action	Responsibility and comment
No major risks and constraint are identified.	None	None

ADB = Asian Development Bank, COSO = Central Operations Services Office, ICB = international competitive bidding, IND = India, KMC = Kolkata Municipal Corporation, NCB = national competitive bidding, PBC = performance-based contract, PMC = program management consultant, PMU = program and project management unit, SAUW = Urban Development and Water Division, South Asia Department, TA = technical assistance, WLM = water loss management.

Source: Asian Development Bank estimates

**INDICATIVE TERMS OF REFERENCE FOR
PROGRAM MANAGEMENT CONSULTANTS**

Objective	The objective of the program management consultant is to provide assistance to the program and project management unit (PMU) in management of the Kolkata Environmental Improvement Investment Program, which will be financed by an Asian Development Bank's (ADB's) loans under the Multitranchise Financing Facility. The investment program will aim to increase service quality and operational sustainability in water supply and sewerage in 20% of the Kolkata Municipal Corporation (KMC) area. The investment program will deliver three outputs: (i) inefficient and outdated water supply assets rehabilitated; (ii) sewerage extension to newly developed areas continued; and (iii) financial and program management capacity further developed.
Scope of Services	The consultants will be responsible for effectively leading and taking initiative to manage, execute and implement the investment program, delineate PMU's method of working, installing procedures, operationalizing procedures and reporting systems, and work with the design and supervision consultant (DSC) and the PMU to prepare contracts, designing and procurement, assisting the PMU in approving all necessary surveys and subproject designs, establishing criteria for supervision, coordination, and management to ensure proper construction supervision by the DSC. Assignment is for 8 years.
Estimated assignment period	From Q1 2014 to Q1 2019 From Q1 2014 to Q1 2023 for MFF
Financing sources	The initial loan will cover the consulting service contracts partially while the subsequent loans will cover the remaining balances of the contracts.
Activities	<p>The activities include, but not limited to:</p> <ul style="list-style-type: none"> (i) Assist the PMU to finalize detailed design and bidding documents prepared by the DSC for the new projects for subsequent ADB financing. (ii) Assist the PMU in preparing annual work plan, detailed implementation schedule and budget using computer based program management tools. (iii) Support the PMU in developing mechanisms for accurately estimating the annual contract award and disbursement targets. (iv) Verify and evaluate the project performance indicators in ADB's design and monitoring framework and the service benchmark indicators as issued by the Ministry of Urban Development, in collaboration with the Public Communication and Social Development Consultant in accordance with the Gender Action Plan. (v) Compile and prepare on behalf of the PMU all the reports including progress report for the project in the formats acceptable to ADB and Government of India. (vi) Determine project accounting need, prepare necessary specification and assist the PMU in the procurement of all software necessary for effective management of the project. (vii) Supervise and/or install software and ensure its proper commissioning as and when required. (viii) Assist PMU in maintaining proper accounts with all ledger and control systems. (ix) Develop and recommend a subsidy strategy for water supply and sewerage service user charges. (x) Develop volumetric and non-volumetric water tariff schedule for domestic household connections with sewerage surcharge, which meets Jawaharlal Nehru National Urban Renewal Mission's reform agenda on operation and maintenance cost recovery and the subsidy strategy, but ensuring affordability for the poor and vulnerable, with complete financial simulation model and affordability analysis. (xi) Develop a plan for water meter reading, billing, and collection, with a draft service contracts acceptable to ADB, based on the actual contract being used in India and other countries. (xii) Draft various rules and regulations, which may be introduced upon completion of water supply and sewerage assets, based on the actual cases found in India and other countries. (xiii) Develop rules for apportioning costs for water supply and sewerage operations, such as energy and staff not directly involved in operations. (xiv) Assess the options for the PMU to transform an autonomous project management authority based on the actual examples found in India (such as Tamil Nadu, Karnataka, Delhi, Kerala) and other counties, and recommend the most appropriate option for KMC.

	<p>(xv) Draft the government order and the article of association or equivalent for establishment of the project management authority and the business plan, human resource plan and financial plan.</p> <p>(xvi) Develop a legal agreement template for the project management authority to enter into agreement with the potential clients.</p> <p>(xvii) Assist the PMU in the evaluation of bid proposals and prepare bid evaluation report jointly with the DSC.</p> <p>(xviii) Assist the PMU in the negotiation with the successful bidders as and when necessary.</p> <p>(xix) Assist the PMU in preparing various reports to ADB as defined in the facility administration manual.</p> <p>(xx) Collaborate with the DSC in the preparation of contract documents.</p> <p>(xxi) Collaborate with the DSC in checking detailed engineering designs and drawings prepared by the contractors.</p> <p>(xxii) Assist the PMU in managing and supervising all consultancy contracts (except that of the DSC).</p>																																																
Output/report requirements	<p>(i) Finalized detailed project reports and detailed engineering design.</p> <p>(ii) Draft work plan and detailed implementation schedule.</p> <p>(iii) Annual contract award and disbursement estimates.</p> <p>(iv) Project performance monitoring system baseline data and their semi-annual updates in accordance with the facility administration manual and Ministry of Urban Development's service level benchmarking indicators.</p> <p>(v) Compiled monthly and quarterly progress report.</p> <p>(vi) Specification of project accounting system for upgrade.</p> <p>(vii) Draft subsidy policy on water supply and sewerage service user charges.</p> <p>(viii) Draft tariff on volumetric and flat rate water supply and sewerage service.</p> <p>(ix) Draft notifications as requested by the PMU.</p> <p>(x) Draft rules for apportioning the common costs of water supply and sewerage operations, such as energy and staff not directly involved in operations.</p> <p>(xi) Assessment and recommendations of the options for the PMU to transform an autonomous project management authority.</p> <p>(xii) Draft the government order and the article of association or equivalent for establishment of the project management authority.</p> <p>(xiii) A legal agreement template for the project management authority to enter into agreement with the potential clients.</p> <p>(xiv) Draft bid evaluation reports.</p> <p>(xv) Draft contract negotiations minutes.</p> <p>(xvi) Finalized contract documents.</p> <p>(xvii) Checklist and assessment reports on the detailed engineering designs and drawings prepared by the contractors.</p> <p>(xviii) Inception report, progress reports, draft final report and final report.</p>																																																
Office, support staff and equipment	<p>The PMU will provide office accommodation and office equipment, including desks and chairs.</p> <p>The consultants will quote the remuneration, per-diem, cost of support staff and assistants, and domestic travels.</p> <p>The cost of organizing workshop and meetings, vehicles, office supplies, computer consumables, communication and annual subscription for on-line database services will be paid out of the provisional sum.</p>																																																
Inputs (Tranche 1) Int. = 1 person-months Nat. = 105 person-months	<p style="text-align: center;">Estimated Input Requirements (Tranche 1)</p> <table border="1"> <thead> <tr> <th></th> <th>Positions</th> <th>Type</th> <th>Inputs</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Team Leader cum Public Health Engineering Specialist</td> <td>National</td> <td>29</td> </tr> <tr> <td>2</td> <td>Deputy Team Leader</td> <td>National</td> <td>20</td> </tr> <tr> <td>3</td> <td>Drainage Specialist</td> <td>National</td> <td>10</td> </tr> <tr> <td>4</td> <td>SCADA Specialist</td> <td>International</td> <td>0</td> </tr> <tr> <td>5</td> <td>GIS Specialist</td> <td>International</td> <td>0</td> </tr> <tr> <td>6</td> <td>GIS Specialist</td> <td>National</td> <td>5</td> </tr> <tr> <td>7</td> <td>Water Loss Management Contract Specialist</td> <td>International</td> <td>1</td> </tr> <tr> <td>8</td> <td>Electrical Engineer</td> <td>National</td> <td>8</td> </tr> <tr> <td>9</td> <td>Mechanical Engineer</td> <td>National</td> <td>8</td> </tr> <tr> <td>10</td> <td>Procurement Specialist</td> <td>National</td> <td>6</td> </tr> <tr> <td>11</td> <td>Institutional and Legal (autonomous entity) Expert</td> <td>National</td> <td>1</td> </tr> </tbody> </table>		Positions	Type	Inputs	1	Team Leader cum Public Health Engineering Specialist	National	29	2	Deputy Team Leader	National	20	3	Drainage Specialist	National	10	4	SCADA Specialist	International	0	5	GIS Specialist	International	0	6	GIS Specialist	National	5	7	Water Loss Management Contract Specialist	International	1	8	Electrical Engineer	National	8	9	Mechanical Engineer	National	8	10	Procurement Specialist	National	6	11	Institutional and Legal (autonomous entity) Expert	National	1
	Positions	Type	Inputs																																														
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10	Procurement Specialist	National	6																																														
11	Institutional and Legal (autonomous entity) Expert	National	1																																														

	12	Project Account Expert	National	16
	13	Utility finance specialist	National	2
	14	Pool of Experts	National	TBD
		Total		106
<p>GIS = geographic information system, SCADA = supervisory control and data acquisition. Note: Additional 1300 person-months inputs of support staff will be required. Source: Kolkata Municipal Corporation estimates.</p>				

**INDICATIVE OUTLINE TERMS OF REFERENCE FOR
DESIGN AND SUPERVISION CONSULTANTS**

Objective	The Objective of the Design and Supervision Consultant is to provide assistance to the program and project management unit (PMU) in implementation of the Kolkata Environmental Improvement Investment Program, which will be financed by an Asian Development Bank's (ADB's) loans under the Multitranches Financing Facility. The investment program will aim to increase service quality and operational sustainability in water supply and sewerage in 20% of the Kolkata Municipal Corporation (KMC) area. The investment program will deliver three outputs: (i) inefficient and outdated water supply assets rehabilitated; (ii) sewerage extension to newly developed areas continued; and (iii) financial and project management capacity further developed.
Scope of Services	The consultants will update various studies and project preparation documents, preparation of subproject appraisal reports, carry out contract planning and detailed engineering designs, prepare schedule of quantities and specifications, review drawings prepared by the contractors, support the PMU in preparation of procurement packages, bid documents, invitations, receipt and evaluation of bids. The consultants will also supervise and manage the construction with frequent site visits, carry out quality control, testing and reporting, monitor construction activities and certify contractor's progress claims. Assignment is for 8 years.
Estimated assignment period	From Q1 2014 to Q1 2019 From Q1 2014 to Q1 2022 for MFF
Financing sources	The initial loan will cover the consulting service contracts partially while the subsequent loans will cover the remaining balances of the contracts.
Activities	<p>The activities include, but not limited to:</p> <p>Survey and Design</p> <ul style="list-style-type: none"> (i) Undertake necessary surveys and investigations on the project sites and its surroundings. (ii) Update maps and plans of the water supply and sewerage project sites. (iii) Review available secondary data, and update the data with primary sources. (iv) Report analysis of the existing assets before designing. (v) Prepare and update the detailed designs of the agreed technical options, technical specifications, cost estimates, and bid documents for subprojects which should be in accordance with the ADB procurement guidelines and standard bidding document. (vi) Carry out baseline surveys, and ensure the contractors comply with environmental management plans, and initial environmental examination. (vii) Carry out baseline surveys, and ensure the contractors comply with resettlement plan. (viii) Assist the PMU with all aspects of procurement including preparation of bid document, bid invitation, evaluation and award of work. (ix) Ensure compliance of contractors with ADB's procedures and guidelines for project implementation and management. (x) Provide inputs including preparation of detailed project reports for advance preparations of subproject for subsequent loans, if any. (xi) Ensure designs are implementable on ground with the path of least disturbance to other utilities. (xii) Recommended design, technology, and process having the simplest and least expensive for operation and maintenance. (xiii) Prepare the operation and maintenance manual of the mechanical assets created by the project in collaboration with the respective contractors and the public communication and social development consultant. <p>Supervision</p> <ul style="list-style-type: none"> (i) Administer and manage the works and supply contracts. (ii) Provide most reasonable interpretation of technical specifications in consultation with the PMU. (iii) Verify the surveyed maps and design in the light of the ground situation and make necessary modifications, if required, with approval by the PMU. (iv) Scrutinize and improve the contractors' detailed work program and guide

	<p>contractors for each contract.</p> <p>(v) Scrutinize the construction methods proposed by contractor including environmental; safety, personnel and public issues.</p> <p>(vi) Monitor the construction method by assessing the adequacy of the contractor's input materials, labor, equipment, and construction methods.</p> <p>(vii) Review and modify the detailed construction drawings as necessary during the works contractual period.</p> <p>(viii) Supervise and monitor construction work of each contract.</p> <p>(ix) Monitor contractors' implementation of environmental standards, environmental and social safeguards, and gender action plans, and provide contractors with mitigation measures in case of failures.</p> <p>(x) Establish quality assurance system including verification of source of material and certification.</p> <p>(xi) Carry out necessary quality control activities and certify that the quality of works conforms to the specifications and drawings.</p> <p>(xii) Supervise the construction of the various contract packages for achieving the expected outputs of the project.</p> <p>(xiii) Record the work measurement and certify the contractors' interim and final bill of payment.</p> <p>(xiv) Assist third party inspections, if necessary, as decided by the employer.</p> <p>(xv) Review and finalize the "as built" drawings submitted by Contractor.</p> <p>(xvi) Assist the employer in issue of completion certificates.</p> <p>(xvii) Assist for resolution of all contractual issues including examining the contractor's claims for variations/extensions, or additional compensations, etc., and prepare recommendations for approval by the employer.</p> <p>(xviii) Inspect the works at appropriate intervals during defect liability period and issue certifications.</p> <p>(xix) Prepare monthly project progress reports in accordance with the facility administration manual,</p> <p>(xx) Assist the PMU in collecting the baseline data from primary sources, and monitoring the progress as per the project performance monitoring system as well as the service level benchmarks defined by the Ministry of Urban Development,</p> <p>(xxi) Assist the PMU in other tasks as assigned by the PMU,</p> <p>(xxii) Provide all necessary information to the PMC regarding project related issues and prepare solutions for recommendations to the Project Director,</p> <p>(xxiii) Accompany client in meetings with KMC and state government officials, police, local representatives, utility service providers as and when necessary.</p>																				
Output/report requirements	<p>(i) Detailed project reports and detailed engineering designs,</p> <p>(ii) Monthly progress reports on physical, financial, safeguards and gender action plan compliance,</p> <p>(iii) Bidding documents for each contracts,</p> <p>(iv) Manuals for operations of mechanical assets,</p> <p>(v) Draft completion certificates,</p> <p>(vi) Third party inspection reports,</p> <p>(vii) Project performance monitoring system updates,</p> <p>(viii) Briefing notes to the Project Director on project related issues,</p> <p>(ix) Inception report, progress reports, draft final report and final report.</p>																				
Office, support staff and equipment	<p>The PMU will provide office accommodation and office equipment, including desks and chairs.</p> <p>The consultants will quote the remuneration, per-diem, cost of support staff and assistants, and domestic travels.</p> <p>The cost of organizing workshop and meetings, vehicles, office supplies, computer consumables, communication and annual subscription for on-line database services will be paid out of the provisional sum.</p>																				
Inputs (Tranche 1) Int. = 12 person-months Nat. = 407 person-months	<p style="text-align: center;">Estimated Input Requirements (Tranche 1)</p> <table border="1"> <thead> <tr> <th></th> <th>Positions</th> <th>Type</th> <th>Inputs</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Team leader cum Drainage Expert</td> <td>National</td> <td>29</td> </tr> <tr> <td>2</td> <td>Deputy team leader cum water supply expert</td> <td>National</td> <td>29</td> </tr> <tr> <td>3</td> <td>Water supply network expert</td> <td>National</td> <td>20</td> </tr> <tr> <td>4</td> <td>Drainage network expert (2)</td> <td>National</td> <td>15</td> </tr> </tbody> </table>		Positions	Type	Inputs	1	Team leader cum Drainage Expert	National	29	2	Deputy team leader cum water supply expert	National	29	3	Water supply network expert	National	20	4	Drainage network expert (2)	National	15
	Positions	Type	Inputs																		
1	Team leader cum Drainage Expert	National	29																		
2	Deputy team leader cum water supply expert	National	29																		
3	Water supply network expert	National	20																		
4	Drainage network expert (2)	National	15																		

5	Structural engineer	National	14
6	Micro-tunneling expert	International	1
7	Micro-tunneling expert	National	3
8	Water treatment expert	National	10
9	River water intake expert	National	4
10	Environmental expert	National	16
11	Survey expert	National	8
12	Construction managers (10)	National	150
13	Electrico-mechanical engineer	National	20
14	Procurement expert	National	8
16	Safety expert	National	4
17	Soil expert	National	4
18	Nonrevenue water management expert	International	1
19	Leak Detection expert	International	6
20	Nonrevenue water management expert	National	24
21	Quantity surveyors	National	20
22	Economic analysis expert	National	3.5
23	Financial analysis expert	National	3.5
24	District metered area hydro-modeling expert	International	2
25	District metered area hydro-modeling expert	National	8
26	Hydro-modeling expert (for drainage)	International	2
27	Hydro-modeling expert (for drainage)	National	8
28	Social safeguard expert	National	3
29	GIS expert	National	3
30	Contingency man month	National	TBD
	Total		419

GIS = geographic information system.
Source: Kolkata Municipal Corporation estimates.

**INDICATIVE OUTLINE TERMS OF REFERENCE FOR
PUBLIC COMMUNICATION AND SOCIAL DEVELOPMENT CONSULTANTS**

Objective	The objective of the public communication and social development consultants is to provide assistance to the program and project management unit (PMU) in successfully communicating with the public on the Kolkata Environmental Improvement Investment Program, which will be financed by an Asian Development Bank's (ADB's) loans under the Multitranchise Financing Facility. The outcome of the investment program will be increased quality and sustainability of water supply and sewerage operations in 30% of the peripheral areas of Kolkata Municipal Corporation areas.
Scope of Services	The consultants will (i) develop and provide information, education and communication materials in various paper and digital formats, (ii) provide strategic advice on public communication of the project, (iii) coordinate, organize, and supervise various participation and consultation activities in accordance with the Communication Strategy, and (iv) implementation of the effective gender mainstreaming initiative under the project following the Gender Action Plan. The consultants will report to and will work under the overall guidance, control and direction of the Project Director. The consultants will work closely with the program management consultants, and design and supervision consultants, to deliver required outputs collectively. The consultants will have its office established in the office of the Project Director.
Estimated assignment period	From Q2 2014 to Q1 2018
Financing sources	The initial loan will cover the consulting service contracts partially while the subsequent loans will cover the remaining balances of the contracts.
Detailed Tasks	The activities include, but not limited to: <ul style="list-style-type: none"> (i) Prepare a new public relations strategy incorporating the Gender Action Plan and Communication Strategy. (ii) Prepare information, education and communication materials in both printed and digital format, and update the printed materials every 3 months, and the digital materials every week. (iii) Format and standardize the digital presentation materials prepared by the PMU, program management consultant (PMC) and design and supervision consultant (DSC) to have a uniform look representing one organization. (iv) Suggest editorial changes to the PMU's, PMC's and DSC's written materials for public disclosure and submission to the financiers in accordance with Gender Action Plan. (v) Support the PMU, PMC, and DSC in artwork in preparation of various reports. (vi) Identify the participants for various workshops and focus group meeting in accordance with the Gender Action Plan and Communication Strategy. (vii) Organize and conduct awareness campaign, workshops and focus group meeting on the project following the Gender Action Plan and Communication Strategy. (viii) Prepare records/minutes of campaigns, workshops and meetings. (ix) Develop gender sensitive nonrevenue water management manual, and gender sensitive sewage pumping station operation and maintenance manuals in collaboration with the nonrevenue water management contractor and DSC. (x) Provide support in developing radio broadcasting program on the project in accordance with the Gender Action Plan and Communication Strategy. (xi) Provide support in developing video program on the project for internet in accordance with the Gender Action Plan and Communication Strategy. (xii) Recommend specific detailed action plan for raising awareness among the beneficiaries on their responsibilities, including issues such as water metering, and user-charges for water supply and sewerage services for achieving the goal of the project, and implement such actions upon endorsement by the Project Director. (xiii) Open and maintain Facebook and twitter accounts dedicated for the project. (xiv) Consolidate and summarize the comments, suggestions, and grievances posted on the project's website, Facebook and Twitter daily, and report it to the Project Director with recommended replies and solutions. (xv) Collect the newspaper articles on the project daily, and maintain in a digital

	<p>database archive, such as Evernote.</p> <p>(xvi) Liaise with all forms of media for all project activities.</p> <p>(xvii) Work with media to ensure regular positive coverage about the project in Bengali and English newspaper, and minimize the prejudice, bias, misconceptions and stereotypes on project impacts, outcome and outputs.</p> <p>(xviii) Collect poverty and gender indicators in the project areas for project performance monitoring system in accordance with the design and monitoring framework in collaboration with the PMC and DSC.</p>																																				
Output/report requirements	<p>(i) A new public relations strategy incorporating the Gender Action Plan and the Communication Strategy.</p> <p>(ii) Education and communication materials in both printed and digital format.</p> <p>(iii) Template and standard digital presentation materials.</p> <p>(iv) Awareness campaigns, workshops and focus group meetings on the project following the Gender Action Plan and the Communication Strategy.</p> <p>(v) Records/minutes of campaigns, workshops and meetings.</p> <p>(vi) Inputs to gender sensitive nonrevenue water management manual, and gender sensitive sewage pumping station operation and maintenance manuals.</p> <p>(vii) Radio broadcasting program on the project in accordance with the Gender Action Plan and the Communication Strategy.</p> <p>(viii) Video program on the project for internet in accordance with the Gender Action Plan and the Communication Strategy.</p> <p>(ix) Project's website, Facebook, and Twitter accounts.</p> <p>(x) Recommendation on specific detailed action plan for raising awareness among the beneficiaries.</p> <p>(xi) Consolidated and summarized comments, suggestions and grievances posted on the project's website, Facebook and Twitter accounts on every weekdays.</p> <p>(xii) Consolidated newspaper articles on the project everyday.</p> <p>(xiii) Primary baseline data (secondary data is not accepted) from a reasonably sized samples and their semi-annual update on gender-sensitive project performance indicators.</p> <p>(xiv) Inception report, progress reports, draft final report, and final report.</p>																																				
Office, support staff and equipment	<p>The PMU will provide office accommodation and office equipment, including desks and chairs.</p> <p>The consultants will quote the remuneration, per-diem, cost of support staff and assistants, and domestic travels.</p> <p>The cost of organizing campaigns, workshops and focus group meetings, and mass publication of printed materials, social surveys, office supplies, computer consumables, communication and annual subscription for on-line database services will be paid out of the provisional sum.</p>																																				
Inputs Nat. = 437 person-months	<p style="text-align: center;">Estimated Input Requirements</p> <table border="1"> <thead> <tr> <th></th> <th>Positions</th> <th>Type</th> <th>Inputs</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Media relation management expert as team leader</td> <td>National</td> <td>99</td> </tr> <tr> <td>2</td> <td>Public communication strategy expert</td> <td>National</td> <td>18</td> </tr> <tr> <td>3</td> <td>Contents and editing expert</td> <td>National</td> <td>99</td> </tr> <tr> <td>4</td> <td>Public communication and event coordination expert</td> <td>National</td> <td>81</td> </tr> <tr> <td>5</td> <td>Digital contents and media creator</td> <td>National</td> <td>68</td> </tr> <tr> <td>7</td> <td>Social development (gender and poverty) expert</td> <td>National</td> <td>36</td> </tr> <tr> <td>8</td> <td>Social development (survey and data collection) expert</td> <td>National</td> <td>36</td> </tr> <tr> <td></td> <td></td> <td></td> <td>437</td> </tr> </tbody> </table> <p>Source: Kolkata Municipal Corporation estimates.</p>		Positions	Type	Inputs	1	Media relation management expert as team leader	National	99	2	Public communication strategy expert	National	18	3	Contents and editing expert	National	99	4	Public communication and event coordination expert	National	81	5	Digital contents and media creator	National	68	7	Social development (gender and poverty) expert	National	36	8	Social development (survey and data collection) expert	National	36				437
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**INDICATIVE OUTLINE TERMS OF REFERENCE FOR
Geographic Information System-Based Management Systems Phase 1**

Objective	The objective of the public communication and social development consultants is to provide assistance to the program and project management unit in developing a geographical information system (GIS)-based management systems for water supply and sewerage in a phased manner under the Kolkata Environmental Improvement Investment Program, which will be financed by an Asian Development Bank's loans under the multitranche financing facility. The outcome of the investment program will be increased quality and sustainability of water supply and sewerage operations in the peripheral areas of Kolkata Municipal Corporation (KMC) areas.
Scope of Services	The first phase assignment requires 97 person-months of national consultants for 18 months between 2013 and 2015. In case KMC successfully obtains further loans, there may be the second phase. Performing the contract for the first phase is not expected to constitute a conflict of interest affecting that contractor's eligibility to bid for the contract for the second phase. The consultants will prepare of updated GIS base map, undertake topographic survey, incorporate existing utility network for water supply, sewerage and drainage as available with the respective department up to road/lane level. The consultants will have its office established in the office of the Project Director, Kolkata Environmental Improvement Project.
Detailed Tasks	<p>The activities include, but not limited to:</p> <ul style="list-style-type: none"> (i) Update and convert the existing base map into GIS ready format at 1:1,000 for KMC. The base map will be updated with respect to geo-referenced high-resolution satellite image and the final map will be prepared by incorporating the ground truth data. (ii) Procure satellite image at 50 centimeter for World View-2, 60 centimeter for Quick Bird, with coverage for present spread of KMC with sufficient buffer. (iii) Undertake differential global positioning system survey to collect ground control points and correct various geometric anomalies in raw satellite image. Geo Referencing and Geo-coding of data will on WGS-84 with projection on universal transverse mercator. For the differential global positioning system survey, ground control points will be selected at well-defined sharp points both on the ground and on satellite image. (iv) Develop data model design compatible with both ArcGIS and Oracle server. (v) Digitize the satellite images, and check for dimensional accuracy, completeness, displacement, edge matching, symbols, and layering. (vi) Update the administrative boundary and land use map. (vii) Plot the hardcopy of the maps with unique-identification through field survey. (viii) Establish permanent benchmark at interval of 1 kilometer. (ix) Take spot levels on the centerline of the road at 30 meter interval or at road junction. (x) Take cross section of all drains with clear width and depth every 30 meters. (xi) Mark the location of manholes with unique identification and capture topographic levels. (xii) Conduct filed survey, and correct spatial topography. (xiii) Generate the grid wise hard copy with utility information. (xiv) Prepare draft water supply, sewerage and drainage network map.
Output/report requirements	<ul style="list-style-type: none"> (i) Weekly grid wise hardcopy print on 1:500 scale of base map superimposed on satellite image for incorporation of utility lines by concerned KMC departments. (ii) Digital base map of all the thematic layers excluding building/plot on 1:2500 scale in three sets in hard copy (A0 Paper) and one set in soft copy in GIS format with corner premises number. (iii) Ward wise check prints in hardcopy on 1:1000 scale for three sets on A0 paper incorporating water supply, sewerage and drainage. (iv) Training manual for different Module for respective department. (v) Inception report, progress reports, draft final report and final report.
Office, support staff and equipment	<p>The program and project management unit will provide office accommodation and office equipment, including desks and chairs.</p> <p>The consultants will quote remuneration, per diem, survey, travel, and transportation as competitive items.</p>

Inputs	Estimated Input Requirements			
	Positions	Type	Inputs	
	1	Team leader	National	12
	2	GIS database quality expert	National	12
	3	Water supply expert	National	2
	4	Sewerage expert	National	2
	5	Storm water drainage expert	National	2
	6	Urban planner	National	2
	7	Design assistants (water, sewerage, drainage)	National	12
	8	GIS executives (water, sewerage, drainage)	National	24
	9	GIS executives (data base)	National	12
	10	Senior software specialist	National	1
	11	Software engineers (water, sewerage, drainage)	National	2
	12	Junior Software engineers (water, sewerage, drainage)	National	2
	13	Database administrator	National	0
	14	Graphics designer	National	0
	15	CAD Draughtsman	National	12
				97

GIS = geographic information system.
Source: Kolkata Municipal Corporation estimates.

GENDER ACTION PLAN FOR TRANCHE 1 PROJECT^a

Gender focused outputs in relation to DMF outputs	Indicators and Targets	Responsible Unit for Delivery
<p>1. Inefficient water supply assets rehabilitated.</p> <p>1.1 Awareness-raising activities on the importance of the WLM works conducted, linking it to health, gender, social empowerment, and environmental conservation issues in the pilot zone immediately after award of the WLM contract.</p> <p>1.2 Consultation activities conducted during the WLM contract period in the pilot zone with community members in service areas, especially in the identified poor and slum areas, and with housewives, women heads of households, and heads of vulnerable households on the planning, design, and location of works.</p> <p>1.3 Gender-sensitive WLM manuals developed.</p> <p>1.4 Poor women and men recruited for unskilled jobs in leakage repair works.</p> <p>1.5 Ward level focus group responsible for identifying poor, vulnerable households and can be the community's monitor/watchdog of the proper implementation of the project, organized.</p>	<p>Four project orientation seminars conducted with at least 50 urban dwellers participating of which at least 30% are women, for a total of 200 urban dwellers oriented.</p> <p>Two women-only project orientation seminars conducted in the city, targeting 50 women per seminar.</p> <p>Three public advertisements on the project highlighting its benefits to women and the poor put up in strategic places in the city.</p> <p>A short radio program on the project's core messages that include gender-sensitive messages produced and played regularly in government-run radio programs.</p> <p>50 urban household representatives (target: at least 30% women and 30% from poor/slum/ vulnerable households) consulted per session with four consultation sessions conducted, for a total of 200 household representatives consulted.</p> <p>Gender-sensitive WLM manuals developed.</p> <p>Gender-sensitive WLM manuals adopted, institutionalized and regularly utilized.</p> <p>At least 30% of recruited unskilled workers are women.</p> <p>Focus group (with 50% women) comprising of eminent local citizens/residents, preferably women, local NGOs/CBOs, and ward councilors.</p>	<p>PCC, in collaboration with WLM contractor under guidance of SDU and respective ward committees.</p> <p>PCC, in collaboration with WLM contractor under guidance of SDU and respective ward committees.</p> <p>PCC in collaboration with WLM contractor under guidance of SDU.</p> <p>PCC in collaboration with WLM contractor under guidance of SDU and CMU.</p> <p>PCC in collaboration with DSC under guidance of SDU and ward committees.</p>

Gender focused outputs in relation to DMF outputs	Indicators and Targets	Responsible Unit for Delivery
<p>2. Financial and project management capacity further developed.</p> <p>2.1 Women staff in the PMU recruited and trained.</p> <p>2.2 Gender orientation to all PMU and KMC officials, and contractors, organized, highlighting gender and other social inclusion issues related to water supply and sanitation.</p> <p>2.3 Gender items in the project information format for regular reporting incorporated.</p> <p>2.4 Gender indicators incorporated in the PPMS.</p> <p>2.5 Poor, vulnerable households who need concessionary connections and subsidies on user fees identified.</p> <p>2.6 Rules for concessionary lifeline connections for vulnerable and poor women-headed households proposed.</p> <p>2.7 A pro-vulnerability schedule of tariffs for water supply and sanitation services proposed.</p>	<p>Women staff comprises 30% of PMU's new positions.</p> <p>Participation of all PMU staff, contractors and relevant KMC officials.</p> <p>Project information format developed, with gender items.</p> <p>PPMS with gender indicators and sex-disaggregated data in PPMS.</p> <p>Roster of vulnerable households per ward (with information on number, sex, ages, and occupations of household members, income, expenditures, living conditions, etc.).</p> <p>270 new water supply connections and 375 new sewerage connections provided to identified vulnerable and poor women-headed households.</p> <p>A pro-vulnerability schedule of tariffs.</p>	<p>PCC under guidance of PMU.</p> <p>PCC in collaboration with DSC under guidance of PMU.</p> <p>PCC in collaboration with DSC under guidance of PMU.</p> <p>PCC in collaboration with DSC under guidance of PMU.</p> <p>PCC in collaboration with ward committees and PMC under guidance of SDU and UFIU.</p> <p>PMC under guidance of SDU and UFIU.</p> <p>PMC under guidance of SDU and UFIU.</p>
Activities with Milestones	Funding Sources	
<p>Common preparatory activities</p> <p>Divide the household in the pilot zone in to groups by zones (each group is composed of geographically contiguous wards)</p> <p>Engage local community groups to identify vulnerable households.</p>	<p>As a part of PMU operation</p> <p>As a part of PCC contract</p>	
<p>1 Gender focused activities in relation to DMF Output 1 (2013-2018)</p> <p>1.1 Engage PCC to organize separate project orientation seminars by ward group for general households and for exclusively women.</p> <p>1.2 Engage PCC to develop public advertisement with clear and crisp core messages on how the project will benefit the community.</p> <p>1.3 Engage PCC to develop a short radio program for non-literate members of the community.</p> <p>1.4 Engage PCC to gather issues and concern of communities relevant to planning, designing and managing service assets.</p> <p>1.5 Provide the results of consultation to DSC so as to incorporate in the management and operations plans.</p> <p>1.6 Engage DSC to develop O&M manuals.</p>	<p>As a part of PCC contract</p> <p>As a part of PCC contract</p> <p>As a part of PCC contract</p> <p>As a part of PCC contract</p> <p>As a part of PCC contract</p> <p>As a part of PCC and DSC contracts</p>	

Activities with Milestones	Funding Sources
1.7 Pre-test the manual against a small group of potential, unskilled, semi-skilled, and skilled O&M workers. 1.8 Submit the manuals to KMC for adoption. 1.9 Engage leakage repair contractors to train the unemployed women and men using the O&M manuals. 1.10 Engage leakage repair contractors to engage the trained poor women and men for paid O&M activities.	As a part of PCC contract As a part of PMU operation As a part of WLM management and PCC contract As a part of WLM management and PCC contract
2 Gender focused activities in relation to DMF Output 3 (2013-2018) 2.1 Obtain approval of the Steering Committee on the gender-sensitive structure and composition of the PMU and PIU staff. 2.2 Prepare staff selection criteria in favor of women and advertise the positions. 2.3 Engage PCC to organize gender orientation seminars for PMU, PIU and others in a single occasion. 2.4 Engage PCC and PMC to prepare a format for project information with the gender-sensitive structure and composition 2.5 Engage PCC, PMC and DSC to collect and input the gender-sensitive data in accordance with the DMF. 2.6 Engage PCC to organize ward level focus group responsible for identifying vulnerable households. 2.7 Engage PCC and PMC to draft rules for concessionary lifeline connections following GAP. 2.8 Engage PCC to identify the beneficiaries based on activity 2.1. 2.9 Engage PCC and PMC to draft schedule of tariff following GAP.	As a part of PMU operation As a part of PMU operation As a part of PCC contract As a part of PCC contract As a part of PCC contract As a part of PCC contract As a part of PCC and PMC contracts As a part of PCC contract As a part of PCC and PMC contracts

CBO = community-based organizations, CMU = contract management unit under the PMU, DMF = design and monitoring framework, DSC = design and supervision consultants, GAP = gender action plan, KMC = Kolkata Municipal Corporation, NGO = nongovernment organizations, O&M = operations and maintenance, PCC = public communication and social development consultants, PIU = project implementation unit, PMC = program management consultant, PMU = program and project management unit, PPMS = project performance monitoring system, SDU = social development unit under the PMU, UFIU = utility finance improvement unit, WLM = water loss management.

Note: Vulnerable households are those fulfilling five or more of the following criteria: (i) household belongs to most backward communities, (ii) head of household is a woman, (iii) head of household is illiterate, (iv) head of household is working as a daily wage laborer, or without a regular source of income, (v) household with income below poverty line, and (vi) household residing in a *kutcha* house.

^a ADB's Operations Manual Section D14/OP (Issued on 18 May 2010) Para 31 (iii) states "Gender mainstreaming project categorization will be done for each PFR."

COMMUNICATION STRATEGY FOR TRANCHE 1 PROJECT

Outputs, aims of participation, means of communication	Target stakeholders	Terms of reference and messages
<p>Projects information</p> <p>1. A one-day project orientation workshops^a organized by PMU for:</p> <ul style="list-style-type: none"> (i) Information sharing (ii) Consultation (iii) Shared responsibility (iv) Shared decision-making <p>2. One half-day project orientation seminars^a in each of the ward affected by project, organized by PMU:</p> <ul style="list-style-type: none"> (i) Information sharing (ii) Consultation (iii) Shared decision-making 	<p>Representatives from:</p> <p>MAD WBSPCB KMC PMU Consultants Contractors</p> <p>50 community members, preferably household heads, with at least 15 women in each of the four seminars. 50 women community members exclusively in each of the two seminars (in accordance with GAP).</p>	<ul style="list-style-type: none"> (i) Introduce the project. (ii) Demonstrate the link between improved water supply and sewerage infrastructure and good health, women's empowerment, and environmental conservation. (iii) Present safeguards and social plans, and disclosure requirements. (iv) Discuss roles and accountabilities of various government units. (v) Discuss issues related to use of government lands and property for the project, environmental risks. (vi) Gather and agree on recommendations. <ul style="list-style-type: none"> (i) Introduce the project, highlighting its importance and benefits to the community. (ii) Demonstrate the link between improved water supply and sewerage infrastructure and good health, women's empowerment, and environmental conservation. (iii) Inform of the plans, design, location, management of water supply and sewerage infrastructure and services. (iv) Present safeguards and social plans. (v) Gather concerns and views related to water supply and sewerage. (vi) Solicit views, suggestions on plans, design, location, management of water supply and sewerage. (vii) Gather recommendations.
<p>Field level monitoring</p> <p>3. Half-day semi-annual participatory monitoring meetings^a for community watchdogs organized by PMU in collaboration with local communities:</p> <ul style="list-style-type: none"> (i) Information sharing (ii) Consultation 	<p>20 representatives (50% women) from the local community in each project city (in accordance with GAP).</p>	<ul style="list-style-type: none"> (i) Surface issues and concerns during project implementation. (ii) Discuss and recommend measures to mitigate/address the problems. (iii) Monitor progress of project implementation.
<p>User charge introduction</p> <p>4. Half-day semi-annual participatory meetings^a for community in each borough organized by PMU in collaboration with local communities:</p> <ul style="list-style-type: none"> (i) Information sharing (ii) Consultation 	<p>20 representatives (50% women) from the local community in each project city (in accordance with GAP).</p>	<ul style="list-style-type: none"> (i) Surface issues and concerns on introduction of tariff. (ii) Discuss and recommend measures to mitigate/address the problems.

Outputs, aims of participation, means of communication	Target stakeholders	Terms of reference and messages
<p>Involuntary resettlement (if any) 5. A half-day focus group discussions,^a and one half-day small group meetings on resettlement and entitlement organized by PMU: (i) Information sharing (ii) Consultation</p>	<p>Affected persons, including farmers, titled and non-titled affected persons, landowners, representatives of affected schools, if any.</p>	<p>(i) Introduce the project. (ii) Demonstrate the link between improved water supply and sewerage infrastructure and good health, women's empowerment, and environmental conservation. Show possible livelihood/business opportunities. (iii) Mitigate potential conflict. (iv) Solicit the views of affected persons on resettlement and compensation. (v) Agree on resettlement processes, location, and compensation.</p>
<p>Program and Project management 6. Half-day semi-annual steering committee meetings organized by KMC for: (i) Information sharing (ii) Shared responsibility (iii) Shared decision-making (iv) Control</p> <p>7. A one-day annual strategic and action planning workshop organized by PMU for: (i) Information sharing (ii) Shared responsibility (iii) Shared decision-making (iv) Control</p> <p>8. Half-day quarterly PMU monitoring meetings (half-day) organized by PMU for: (i) Information sharing (ii) Shared responsibility (iii) Shared decision-making (iv) Control</p>	<p>Steering committee members KMC PMU</p> <p>PMU PMC/DSC/PCC Contractors</p> <p>PMU PMC/DSC/PCC Contractors</p>	<p>(i) Make policy decisions and directions in accordance with the investment program. (ii) Review compliance with social and environment safeguards, and other plans such as CAP and communication strategy. (iii) Discuss progress in implementation, including problems encountered and means to mitigate/address them. (iv) Regularly report on the progress of implementation.</p> <p>(i) Develop and modify action plans in accordance with the steering committee decisions. (ii) Confirm social and environment safeguards, and other plans such as GAP and communication strategy. (iii) Discuss investment program implementation, including problems and means to mitigate them. (iv) Regularly report on the progress of implementation.</p> <p>(i) Assess overall compliance with social and environment safeguards, and other plans such as GAP and communication strategy. (ii) Discuss investment program implementation progress, including problems and means to mitigate them. (iii) Regularly report on the progress of implementation.</p>

Activities and Responsibility	Timeline
1. PMU organizes a project orientation workshop.	Q1 2014
2. PMU organizes project orientation seminars.	Q1 2014
3. PMU organizes half-day performance monitoring meetings.	Semi-annually from Q4 2014
4. PMU organizes half-day user charge meetings.	Semi-annually in 2014-2016
5. PMU organizes half-day focus group discussion.	As required
6. KMC organizes half-day steering committee meeting.	Semi-annually from Q4 2013
7. PMU organizes one-day meetings for annual planning.	Annually from Q1 2014
8. PMU organizes a half-day meeting for project monitoring.	Quarterly from Q1 2014

CAP = community and participation plan, DSC = design and supervision consultant, GAP = Gender Action Plan, KMC = Kolkata Municipal Corporation, MAD = Municipal Affairs Department of the state government, PCC = public communication and social development consultants, PMC = program management consultant, PMU = program and project management unit, Q = quarter, WBSPCB = West Bengal State Pollution Control Board.

^a Seminar topics and contents should be gender-sensitive, socially inclusive, and raise environmental awareness.

DESIGN AND MONITORING FRAMEWORK FOR THE INVESTMENT PROGRAM

Design Summary	Performance Targets and Indicators with Baselines	Data Sources and Reporting Mechanisms	Assumptions and Risks
<p>Impact Improved access to water supply and sanitation in KMC</p>	<p>By 2025, coverage of water supply services sustained at 92% (baseline = 92% in 2011). By 2025, coverage of underground sewerage service through direct connection increases to 55% from 43% in 2011.</p>	<p>KMC's customer records and population projection^a KMC's customer records and population projection^a</p>	<p>Assumption 10-year population growth and water consumption do not substantially deviate from projections.</p>
<p>Outcome Improved water supply, sewerage, and drainage service quality and operational sustainability in selected areas of KMC</p>	<p>By 2023, water supply hours in pilot areas are increased to 24 hours from 4–7 hours in 2011. By 2023, 100% of collected sewage continues to be treated (baseline = 100% in 2011). By 2023, incidence of flooding reduced in 98% of area (baseline = 80%). By 2023, O&M cost recovery, including state subsidies and the KMC's property tax, maintained at more than 100%.</p>	<p>Readings from meters in each district metered area Reports from monitoring of sewage treatment plant operations KMC report on incidence of flooding KMC audited financial statement of water and sewerage account</p>	<p>Assumption Rainfall and other climate variability fall within the projected ranges.</p>
<p>Outputs 1. Inefficient water supply assets rehabilitated</p>	<p>By 2023, water production capacity is restored to 1,478 mld (baseline = 1,374 mld in 2011). By 2023, leakage from 700 km of water pipes is detected and repaired through a PBC (baseline = 0 km in 2011). By 2023, water meters are installed on at least 40,000 connections in the pilot area, 15% of which are for households that are vulnerable or headed by women, and maintained and read through the</p>	<p>PPMS and KMC reports WLM contractor's progress reports and their party's progress validation reports WLM contractor's progress reports and their party's progress validation reports^a</p>	<p>Assumptions The KMC receives national and state statutory clearances on time.</p>

Design Summary	Performance Targets and Indicators with Baselines	Data Sources and Reporting Mechanisms	Assumptions and Risks
	PBC (baseline = 0 in 2011).		
2. Sewerage extension to peripheral areas continued	<p>By 2023, three sewage treatment plants with 47 mld capacity are constructed with measures to reduce greenhouse gas emissions (baseline = 0).</p> <p>By 2023, 170 km of sewer–drain pipes are installed (baseline = 0 km in 2011).</p> <p>By 2023, 27,000 direct connections are newly installed, 15% of which are for households that are vulnerable or headed by women (baseline = 0 in 2011).</p>	<p>PPMS and KMC reports</p> <p>PPMS and KMC reports</p> <p>KMC customer records and population projection^a</p>	
3. Financial and project management capacity further developed	<p>By 2023, operating receipts and state subsidies exceed operating expenses (baseline = N in 2011).</p> <p>Contract award and disbursement achieved for not fewer than 80% of the annual targets in each year during 2013–2022</p> <p>By 2023, at least 90 PMU staffers (at least 30% of them women) retrained on ADB's updated policies and procedures (baseline = 0 in 2011).</p>	<p>KMC audited financial statement of water and sewerage account</p> <p>KMC signed contracts and disbursement claims</p> <p>Training seminar attendance and completion certificates^a</p>	Assumption Experienced staffers stay with the PMU.
Activities with Milestones			Inputs
<p>1. Output 1: Inefficient water supply assets rehabilitated</p> <p>1.1 Rehabilitate existing water treatment plants (Q2 2014–Q2 2018).</p> <p>1.2 Augment the transmission main in the Garden Reach zone (Q2 2014–Q2 2018).</p> <p>1.3 Establish a WLM unit in the KMC with dedicated staff (Q2–Q3 2014).</p> <p>1.4 Identify and repair leaks in the pilot area (Q3 2014–Q2 2018).</p> <p>1.5 Identify and repair leaks in the wider area (Q1 2017–Q1 2020).</p> <p>1.6 Give the WLM unit on-the-job training (Q3 2014–Q1 2020).</p> <p>1.7 Establish a database on water assets (Q2 2014–Q4 2015).</p> <p>1.8 Make official arrangements for sharing the database (Q1–Q4 2015).</p>			<p>MFF</p> <p>ADB: \$400 million</p> <p>KMC: \$170 million</p>

Activities with Milestones	Inputs
<p>2. Output 2: Sewerage extension to peripheral areas continued</p> <p>2.1 Construct a new water treatment plant (Q2 2015–Q4 2018).</p> <p>2.2 Construct a sewage network in borough XIV (Q3 2014–Q2 2019).</p> <p>2.3 Construct a sewage network in boroughs XII, XIV, and XV (Q3 2015–Q1 2021).</p> <p>2.4 Construct a sewage network in boroughs XI, XII, XIV, and XV. (Q3 2015–Q1 2021)</p> <p>2.5 Provide direct connections to sewers (Q1 2017–Q1 2021).</p>	
<p>3. Output 3: Financial and project management capacity further developed</p> <p>3.1 Establish a utility finance improvement unit in the KMC (Q1 2014–Q3 2014).</p> <p>3.2 Revise and renegotiate existing bulk water contracts (Q1 2015–Q1 2016).</p> <p>3.3 Integrate energy cost in water account (by Q1 2015).</p> <p>3.4 Establish a cost recovery and subsidy policy (Q3 2015–Q1 2016).</p> <p>3.5 Develop a domestic water tariff and sewer surcharge (Q2 2016–Q1 2017).</p> <p>3.6 Arrange billing collection for domestic users (Q2 2017–Q1 2018).</p> <p>3.7 Submit a tariff proposal to KMC (Q2 2017–Q1 2018).</p> <p>3.8 Establish a project performance monitoring system (Q3 2013–Q4 2017).</p> <p>3.9 Send PMU staff to ADB training programs (Q3 2013–Q3 2022).</p> <p>3.10 Recruit contractors and suppliers for all activities (Q2 2013–Q4 2017).</p> <p>3.11 Submit a proposal to KMC for the PMU's transformation into an autonomous entity, (Q2 2015–Q1 2016).</p> <p>3.12 Prepare legal documents to effect the transformation of the PMU into an autonomous entity (Q2 2015–Q1 2016).</p> <p>3.13 Issue notification on the establishment of an autonomous entity (Q2 2016–Q1 2018).</p> <p>3.14 Disclose project information to the public (Q2 2013–Q1 2021).</p>	

ADB = Asian Development Bank, km = kilometer, KMC = Kolkata Municipal Corporation, mld = million liters per day, N = negative; O&M = operation and maintenance, PBC = performance-based contract, PMU = project and program management unit, PPMS = project performance management system, Q = quarter, WLM = water loss management.

^a Data to be disaggregated by sex, poverty category, and vulnerability.

Source: Asian Development Bank estimates based on Kolkata Municipal Corporation. 2011. *Kolkata Urban Sector Investment Plan*. Kolkata.

DESIGN AND MONITORING FRAMEWORK FOR TRANCHE 1 PROJECT

Design Summary	Performance Targets and Indicators	Data Sources and Reporting Mechanisms	Assumptions and Risks
<p>Impact Improved water supply, sewerage, and drainage service quality and operational sustainability in select areas of KMC</p>	<p>By 2023, water supply hour in pilot areas increased to 24 hours from 4-7 hours in 2011. By 2023, 100% of collected sewage continues to be treated (baselines = 100% in 2011). By 2023, incidence of flood reduced in 98% of area (baseline = 80% in 2011). By 2023, O&M cost recovery, including state subsidies and KMC's property tax, maintained at more than 100%.</p>	<p>Readings from meters in each DMA. Sewage treatment plant's operations monitoring reports. KMC's report on incidence of flood. KMC's audited financial statement of water and sewerage account.</p>	<p>Assumptions Rainfall and overall climate variability fall within projected range.</p>
<p>Outcome Improved Operational efficiency and coverage of water supply, sewerage, drainage services in selected areas of KMC.</p>	<p>By 2019, water loss in the pilot area reduced to less than 20% from 30% of water supplied in 2011. By 2019, additional 5.7 mld of sewage collected (baseline = 0). By 2019, 8.8 km² of land improved for flood management (baseline = 0).</p>	<p>Readings from meters in each DMA. Sewage treatment plant's operations monitoring reports. KMC's report on incidence of flood.</p>	<p>Assumptions KMC committed to timely implement institutional and financial reforms</p>
<p>Outputs 1. Inefficient water supply assets rehabilitated.</p>	<p>By 2018, water production capacity restored to 1,478 mld (baseline = 1,374 mld in 2011). By 2018, 200 km of water pipes rehabilitated through PBC. (baseline = 0 km in 2011). By 2018, 4 km of trunk main augmented. By 2018, water meters installed at least in 13,000 connections in pilot area, 15% of which are VWH, and maintained and read through PBC (baseline = 0 in 2011).</p>	<p>Water treatment plants' operations records. Contractor's measurement books. Contractor's measurement books. WLM contractor's progress reports and their party's progress validation reports. (GEN).</p>	<p>Assumptions KMC receives national and state's statutory clearances on time. ADB's technical assistance successfully prepares PBC.</p>
<p>2. Sewerage extension to peripheral areas continued.</p>	<p>By 2018, 11.5 km of sewer-drainage pipes installed (baseline = 0 km in 2011). By 2018, 2,300 direct connections newly installed, 15% of which are VWH. (baseline = 0 km in</p>	<p>Contractor's measurement books. KMC's records of sewer connections (GEN).</p>	

Design Summary	Performance Targets and Indicators	Data Sources and Reporting Mechanisms	Assumptions and Risks
	2011)		
3. Financial and project management capacity further developed.	By end 2016, domestic user charges with lifeline water user rates drafted, especially benefiting VWH. Contract award and disbursement achieved not less than 80% of the annual targets in each year during 2013-2018. By 2018, at least 45 PMU staff (at least 30% women) retrained in ADB's updated policies and procedures (baseline = 0 in 2011).	KMC's draft notification. (GEN). KMC's signed contracts and disbursement claims. Training seminar attendance and completion certificates. (GEN).	Experienced staff continues to stay with PMU.

Activities with Milestones	Inputs
1. Inefficient water supply assets rehabilitated 1.1 Rehabilitate the existing water treatment plants. (Q1 2014-Q2 2018) 1.2 Augment transmission main in Garden Reach zone. (Q1 2014-Q2 2018) 1.3 Establish WLM unit in KMC with dedicated staff. (Q1-Q2 2014) 1.4 Identify and repair the leakages in pilot area. (Q3 2014-Q2 2018) 1.5 Identify and repair the leakages in wider area. (Q1 2017-Q1 2020) 1.6 Train WLM unit on OJT. (Q3 2014-Q1 2020) 1.7 Establish database on water assets. (Q2 2014-Q4 2015) 1.8 Make official arrangement for sharing database. (Q1-Q4 2015)	ADB \$100 million KMC, GOWB \$40 million Total \$140 million
2. Sewerage extension to peripheral areas continued 2.1 Construct sewage network in borough XIV. (Q3 2014-Q2 2019) 2.2 Provide direct connections to sewer. (Q1 2018- Q2 2019)	
3. Financial and project management capacity further improved 3.1 Establish a utility finance improvement unit in the KMC (Q1 2014-Q3 2014). 3.2 Revise and renegotiate existing bulk water contracts (Q1 2015-Q1 2016). 3.3 Integrate energy cost in water account (by Q1 2015). 3.4 Establish a cost recovery and subsidy policy (Q3 2015-Q1 2016). 3.5 Develop a domestic water tariff and sewer surcharge (Q2 2016-Q1 2017). 3.6 Arrange billing collection for domestic users (Q2 2017-Q1 2018). 3.7 Submit a tariff proposal to KMC (Q2 2017-Q1 2018). 3.8 Establish a project performance monitoring system (Q3 2013-Q4 2017). 3.9 Send PMU staff to ADB training programs (Q3 2013-Q3 2022). 3.10 Recruit contractors and suppliers for all activities (Q2 2013-Q4 2017). 3.11 Submit a proposal and legal documents for the PMU's transformation into an autonomous entity, (Q2 2015-Q1 2016). 3.12 Issue notification on the establishment of autonomous entity (Q2 2016-Q1 2018). 3.13 Disclose project information to the public (Q2 2013-Q1 2021).	

ADB = Asian Development Bank, DMA = district metered zone, GEN = collect and maintain data in a sex-disaggregated, poverty level categorized, and vulnerability identified manner, GOWB = State Government of West Bengal, km = kilometer, km² = square kilometer, KMC = Kolkata Municipal Corporation, O&M = operations and maintenance, OJT = on-the-job training, PBC = performance-based contract, PMU = program and project management unit, mld = million liters per day, Q = quarter, VWH = vulnerable and/or women-headed households, WLM = water loss management.

Source: Asian Development Bank estimates based on Kolkata Municipal Corporation. 2011. *Kolkata Urban Sector Investment Plan*. Kolkata.