



Periodic Financing Request Report

Project Number: 42266-025
MFF Number: 0075
August 2016

India: Kolkata Environmental Improvement Investment Program (Tranche 2)

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CURRENCY EQUIVALENTS

(as of 01 July 2016)

Currency Unit	–	Indian rupees (Re/Rs)
\$1.00	=	Rs67.5093
Re1.00	=	\$0.014813

ABBREVIATIONS

ADB	–	Asian Development Bank
DMA	–	district metering area
DPR	–	detailed project report
EMP	–	environmental management plan
FFA	–	framework financing agreement
GAP	–	Gender Action Plan
GIS	–	Geographic Information System
IEE	–	initial environment examination
KEIIP	–	Kolkata Environmental Improvement Investment Program
KEIP	–	Kolkata Environmental Improvement Project
km	–	kilometer
KMC	–	Kolkata Municipal Corporation
m ²	–	square meter
MFF	–	multitranches financing facility
NRW	–	nonrevenue water
O&M	–	operation and maintenance
PAM	–	project administration manual
PFR	–	Project Financing Request
PMU	–	Program Management Unit
S&D	–	sewerage and drainage
SMU	–	Safeguards Monitoring Unit
SPS	–	Safeguard Policy Statement
TA	–	technical assistance
UABPT	–	Unit Area Basis of Property Tax
WSD	–	Water Supply Department

NOTES

- (i) The fiscal year (FY) of the Government of India and its agencies ends on 31 March. "FY" before a calendar year denotes the year in which the fiscal year ends, e.g., FY2016 ends on 31 March 2016.
- (ii) In this report, "\$" refers to US dollars.

Vice-President	W. Zhang, Operations 1
Director General	H. Kim, South Asia Department (SARD)
Director	S. Bonu, Urban Development and Water Division, SARD
Team leader	N. Pokhrel, Senior Urban Development Specialist, SARD
Team members	B. Fabe, Project Officer, SARD
	S. Majumder, Project Officer, SARD
	T. Morita, Counsel, Office of the General Counsel
	J. Nam, Urban Development Specialist, SARD
	A. Orbe, Senior Operations Assistant, SERD
	N. Pajarillaga, Environment Specialist, SARD
	E. Ravancho, Senior Operations Assistant, SARD
	I. Setyawati, Safeguards Specialist, SARD
	S. Shafiq, Finance Management Specialist, SARD

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TRANCHE AT A GLANCE

1. Basic Data		Project Number: 42288-025	
Project Name	Kolkata Environmental Improvement Investment Program - Tranche 2	Department /Division	SARD/SAUW
Country Borrower	India	Executing Agency	Kolkata Municipal Corporation
2. Sector	Subsector(s)	ADB Financing (\$ million)	
✓ Water and other urban infrastructure and services	Urban flood protection		90.01
	Urban sewerage		30.01
	Urban water supply		79.98
		Total	200.00
3. Strategic Agenda	Subcomponents	Climate Change Information	
Inclusive economic growth (IEG)	Pillar 2: Access to economic opportunities, including jobs, made more inclusive	Adaptation (\$ million)	56.47
Environmentally sustainable growth (ESG)	Global and regional transboundary environmental concerns	Climate Change impact on the Project	High
Urban environmental improvement	Urban environmental improvement		
4. Drivers of Change	Components	Gender Equity and Mainstreaming	
Governance and capacity development (GCD)	Institutional development	Effective gender mainstreaming (EGM)	✓
Partnerships (PAR)	Public financial governance		
	Implementation		
	International finance institutions (IFI)		
5. Poverty Targeting		Location Impact	
Project directly targets poverty	Yes	Urban	High
MDG-targeting (TI-M)	MDG7		
6. Risk Categorization:	Low		
7. Safeguard Categorization	Environment: B Involuntary Resettlement: B Indigenous Peoples: C		
8. Financing			
Modality and Sources		Amount (\$ million)	
ADB		200.00	
Sovereign MFF-Tranche (Loan): Ordinary capital resources		200.00	
Cofinancing		1.00	
Urban Climate Change Resilience Trust Fund under the Urban Financing Partnership Facility - Technical Assistance		1.00	
Counterpart		86.00	
Government		86.00	
Total		287.00	
9. Effective Development Cooperation			
Use of country procurement systems	Yes		
Use of country public financial management systems	Yes		

TRANCHE AT A GLANCE

Date of Receipt by ADB of PFR: 21 April 2016		Tranche Number: 2
10. Country Operations Business Plan		
CPS	http://www.adb.org/documents/india-country-partnership-strategy-2013-2017	
COBP	http://www.adb.org/documents/india-country-operations-business-plan-2016-2018	
11. Tranche Summary		
Tranche 2 will continue improvements in coverage and operational sustainability of Kolkata Municipal Corporation's sewerage, drainage, and water supply services. The accompanying TA will strengthen climate resilience of Kolkata through improved planning and disaster risk management.		
Impact: Improved access to water supply and sanitation in the service areas of Kolkata Municipal Corporation (Investment Program).		
Outcome: Service quality, operational sustainability, and climate resilience, in water supply, sewerage and drainage in the service area of KMC increased		
Outputs: (i) Inefficient water supply assets rehabilitated, (ii) Sewerage and drainage extension to peripheral areas continued, and (iii) Financial and project management capacity further developed		
Implementation Arrangements: Kolkata Municipal Corporation will be the executing agency.		
Project Readiness: Project readiness for Tranche 2 is high. PMU is fully staffed. 80% of the works and goods packages' detailed project reports (DPR) have been completed and remaining DPRs to be completed by 15 May 2016. 50% of works contracts were tendered in February 2016 through advance action and the remaining works and goods will be tendered by 30 May 2016. 50% of works contracts are expected to be awarded by 30 October 2016. Of the 1.74 hectares of private land, one parcel will be donated and another is being negotiated for settlement and expected to be completed by June 2016. Consultants have been mobilized. Safeguards due diligence is compliant with SPS and on track. Process of obtaining all no-objection certificates and environmental clearances are ongoing with majority in possession for the contracts ready for tendering.		
12. Significant Developments in the MFF and Previous Tranches		
On 26 September 2013, the Asian Development Bank (ADB) approved loans under a multitranches financing facility (MFF) for the Kolkata Environmental Improvement Investment Program (KEIIP) for an aggregate amount not exceeding \$400 million. Tranche 1 (Loan 3053) for \$100 million was approved on 22 October 2013 and became effective on 30 May 2014. The availability period for the MFF is up to 31 August 2023. Tranche 1 is generally on track. As of 5 April 2016, overall physical progress of ongoing contracts is around 47% (ranging from 5% on recently awarded contracts to 80% on advanced contracts). Cumulative contract award and disbursement is around 69% and 17%, respectively. Of the 27 loan covenants under tranche 1, 4 have been complied with, 22 are being complied with, since they are ongoing covenants, and 1 is not yet due. Of the 7 FFA undertakings, all are generally being complied with, though there are some delays in implementation of some reforms.		
13. Milestones		
Estimated Approval	Estimated Effectiveness	Estimated Completion*
30 December 2016	30 March 2017	30 October 2021
14. Linked Documents		
	Required Document	Disclosure Date
(i) Environment	EARF - Environmental Assessment and Review Framework	
Weblink:	http://www.adb.org/projects/documents/ind-kolkata-environmental-improvement-t2-mar-2016-earf	25-APR-2016
	IEE - Initial Environment Examination	
	http://www.adb.org/projects/42266-025/main	25-APR-2016
(ii) Involuntary resettlement	RF - Resettlement Framework	
Weblink:	http://www.adb.org/projects/documents/ind-kolkata-environmental-improvement-t2-apr-2016-rf	22-APR-2016
	RP - Resettlement Plan	
	http://www.adb.org/projects/42266-025/main	22-APR-2016

* For Tranches, this refers to the financial closing date.

I. BACKGROUND

1. On 26 September 2013, the Asian Development Bank (ADB) approved loans under a multitranche financing facility (MFF) for the Kolkata Environmental Improvement Investment Program (KEIIP) for an aggregate amount not exceeding \$400 million until 31 August 2023. On 22 October 2013, ADB approved a loan under the MFF amounting to \$100 million for Project 1. The loan for Project 1 (Loan 3053-IND or Tranche 1) was signed on 3 March 2014 and made effective on 30 May 2014. Project 1 is designed to rehabilitate inefficient water supply facilities in Kolkata, including capacity restoration at two water treatment plants and nonrevenue water (NRW) management; extensions to the sewerage and drainage (S&D) network; and improvements to Kolkata Municipal Corporation's (KMC's) financial and project management capacity.

2. The executing agency is KMC, which created a program management unit (PMU) to implement the KEIIP. KMC is mandated to provide water supply and S&D services in the city of Kolkata under the KMC Act of 1980. KMC currently serves 81% of the city's population with water supply and 45% of its population with S&D. However, NRW losses are estimated at around 50%¹ and water is only available for 7 to 8 hours per day on average. The Organization for Economic Cooperation and Development (OECD) conducted the first global assessment of port cities' exposure to climate risks in 2007, and identified Kolkata and Mumbai in India among the top 10 cities with high exposure to flooding under current climate change forecasts.² Over the last decade, KMC has prepared and adopted master plans and policies to increase its climate resilience.³ Climate change adaptation measures were also assessed during preparation of KEIIP and Project 1. KEIIP is a result of these master plans, policies, and due diligence, and incorporates measures to increase Kolkata's resilience to climate change that include expansions in S&D network coverage to flood-prone areas and reductions to NRW.

3. The Government has submitted the Periodic Financing Request (PFR) for Tranche 2 of KEIIP, amounting to \$200 million, and a technical assistance (TA) grant from Urban Climate Change Resilience Trust Fund in the amount of \$1 million to strengthen Kolkata's climate resilience through improved planning and disaster risk management. The proposed Project 2, supported by the proposed Tranche 2 of the MFF and attached TA, will continue rehabilitation of water supply facilities, and improve the coverage, climate resilience, and operational sustainability of KMC's S&D and water supply services.

II. ASSESSMENT OF PROJECT 1 IMPLEMENTATION

4. **Implementation progress of Project 1.** Project 1 is generally on track.⁴ As of 7 July 2016, overall physical progress of ongoing contracts is around 51% - ranging from 7% on recently awarded contracts to 85% on advanced contracts. Cumulative contract award is 62% and disbursement is 20%.⁵ KMC approved its Water Loss Policy Roadmap in February 2016,⁶ a key milestone toward improving operational sustainability of its water supply services. The

¹ Nonrevenue water (NRW) losses are not known because KMC lacks domestic water supply metering. KMC's water supply department estimates NRW at an average of about 50%, but a survey conducted while preparing Project 1 estimated NRW in the Cossipore area of KMC at around 65%.

² World Bank. 2011. *Report No. 53282-IN, India: Vulnerability of Kolkata Metropolitan Area to Increased Precipitation in a Changing Climate*.

³ Kolkata Municipal Corporation. 2014. *Sewerage and Drainage Masterplan for Kolkata City*, KMC, December 2007, and *Action Plan to Mitigate Flood, Cyclone & Water Logging*.

⁴ Project 1 is rated "on track" in ADB's online project performance rating platform *e-ops*.

⁵ The only remaining large works contract—piloting an NRW reduction contract in Cossipore area, WS01—is in an advanced stage of bidding. A first attempt at tendering this contract in 2015 failed because of limited market participation.

⁶ Refer to Supplementary Appendix A.

government of West Bengal recently approved an amendment to the KMC Act, 1980, to introduce Unit Area Basis of Property Tax (UABPT), another key reform under KEIP, and plans its full implementation starting FY2017. Consultants engaged under Project 1 are mapping properties and utilities through geographic information systems (GIS).

5. Compliance with loan and project agreements, and Framework Financing Agreement (FFA) undertakings. Of Project 1's 27 loan covenants, four have been complied with; 22 are being complied with, since they are ongoing covenants; and one is not yet due. Of the seven FFA undertakings, all are generally being complied with, although there are some delays in implementation of some reforms. A detailed compliance review of the covenants and undertakings—including the specific covenants for processing Tranche 2—is in the PFR that the government submitted.

6. Lessons Learned. KEIP consolidates and builds upon Kolkata Environmental Improvement Project (KEIP), which started in 2000 and was financed through two ADB loans.⁷ The Project Completion Report of KEIP rated it successful.⁸ KEIP was one of the best-performing ADB-financed projects in India, with large disbursements over several consecutive years.⁹ KEIP also received awards and commendations for its implementation of social safeguards measures, such as providing permanent apartments for project-affected people, as reported in its Project Completion Report (footnote 8). Based on lessons learned from KEIP, KMC retained majority of the KEIP's original PMU staff and added more people to implement KEIP. Based on current progress in Project 1 and advanced readiness of Project 2, the PMU is capable of implementing Project 2 and disbursing more than \$35 million annually.

7. Based on lessons learned, KMC has turned the PMU's Social Development Unit into a Safeguards Monitoring Unit (SMU). The SMU is now co-headed by senior officials in charge of monitoring three aspects of safeguards: environment, social issues, and gender. SMU staff will function as compliance officers on these three aspects of the safeguards.

8. Environment. Environmental safeguards compliance assessment for Project 1 was carried out, and was found satisfactory with areas for improvement agreed with the executing agency. ADB reviewed and approved all initial environment examinations (IEEs) and environmental management plans (EMPs). These were included in bid documents and contracts, disclosed on ADB and KEIP websites, and relevant information was shared with concerned stakeholders. No major safeguard issues or gaps in implementation were identified. Grievance redress mechanisms were established. No complaints have been received to date on the project. Semi-annual environmental monitoring reports are being submitted and publicly disclosed. Issues identified during due diligence relate to weak implementation and monitoring of construction impact mitigation and safety measures, particularly in packages involving open-cut methods for pipe-laying works. Areas for improvement include: (i) strengthening occupational health and safety measures related to personal protective equipment, first aid, adequate toilets and bathing facilities for laborers, movement on the construction sites, and maintenance of accident logs, among other things; (ii) improving material storage and handling, such as covering stockpiles to

⁷ (i) 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); (ii) 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).

⁸ ADB. 2015. *Project Completion Report: Kolkata Environmental Improvement Project*. Manila. <http://www.adb.org/sites/default/files/project-document/173721/29466-013-pcr.pdf>

⁹ Of four ongoing and three completed urban projects in 2012, the KEIP ranked second, with \$30.5 million in annual disbursements.

protect from dust and erosion, safe disposal of construction waste, and ensuring disposal in pre-identified locations; and (iii) posting contact numbers for registering complaints on boards at sites.

9. **Social.** A social safeguards compliance assessment found that Project 1 complied with ADB's Safeguard Policy Statement (SPS). The project required acquisition of 262 square meters (m²) of land from nine landowners through negotiated settlement, and temporary disturbance in access to shops and houses during construction.¹⁰ Requirements under the SPS to manage these issues were met. Adequate measures were used to prevent income loss and disruption. Semi-annual social safeguards monitoring reports are being submitted to ADB and disclosed to the public. No indigenous people were identified in the project-affected areas. Areas for improvement include: (i) timely updating of the resettlement plan and due diligence reports after completion of detailed design and submission to ADB; (ii) close monitoring of works through regular site visits; (iii) timely submission of semi-annual safeguards monitoring reports; (iv) meaningful consultation with project-affected people and communities; (v) dissemination of project grievance redress mechanism and procedures to all affected people and communities; and (vi) maintenance of records of any grievances received by the contractors and the PMU.

10. **Gender.** Gender Action Plan (GAP) activities, primarily linked with the pilot water loss contract, WS01, will be initiated as soon as the contract is awarded.¹¹ The PMU has agreed to conduct yearly training on the GAP for PMU, loan consultants, and contractors.

III. PERIODIC FINANCING REQUEST

A. Impact and Outcome

11. The impact of Project 2 under KEIP will be improved access to water supply and sanitation in KMC's service areas.¹² The outcomes will be service quality, operational sustainability, and climate resilience in water supply and S&D in the service areas of KMC increased.¹³

B. Outputs

12. The outputs of Project 2 will be as follows:

1. Output 1: Inefficient water supply assets rehabilitated

13. This output will (i) demarcate and hydraulically isolate KMC's service area into district metering areas (DMAs) to improve equitable distribution and to reduce NRW from its current estimate of 50% to 25%; (ii) rehabilitate water supply to 31,800 households in Joka and adjoining areas that were recently incorporated into the KMC,¹⁴ and (iii) reduce NRW in East Kolkata through a specialized performance-based NRW contract to supply continuous pressurized water to 44,700 households. Performance indicators include:

¹⁰ For landowners selling land through negotiated settlement, ADB's Safeguards Policy Statement (SPS) requires that affected people's income or livelihood status be maintained or improved; that fair price be paid for land; that meaningful consultations, transparent procedures and information sharing take place; and that a third party witness the negotiated settlement process.

¹¹ Expected to be awarded in August 2016.

¹² Defined by the Investment Program. ADB. 2013. *Report and Recommendation of the President to the Board of Directors: Proposed Multitranchise Financing Facility for India: Kolkata Environmental Improvement Investment Program*. Manila. <http://adb.org/sites/default/files/projdocs/2013/42266-013-ind-rrp.pdf>

¹³ The design and monitoring framework for Project 2 is in Appendix 1. Draft loan agreement and project agreement for Project 2 are in Appendixes 2 and 3, respectively.

¹⁴ Residents in these areas currently only receive 49 liters per person and 4 hours' supply on average per day.

- (i) NRW in KMC's service area reduced to 25%;
- (ii) 100 KMC water supply department staff trained on NRW reduction;
- (iii) Existing supervisory control and data acquisition (SCADA) upgraded and operational with data from bulk meters and pressure loggers from the DMAs and production centres;
- (iv) 16 additional customer service centres and one meter calibration and testing centre established;
- (v) Nine elevated and two ground-level service reservoirs, 28 kilometers (km) of transmission mains, and 300 km of distribution network rehabilitated; and
- (vi) At least 90,000 domestic water meters installed, monitored, and maintained.

2. Output 2: Sewerage and drainage network extension to peripheral areas continued

14. This output will (i) expand S&D services in selected peripheral areas of KMC to at least additional 83,400 households, and (ii) reduce the vulnerability of the S&D network to any increase in flooding as a result of climate change. Performance indicators include:

- (i) At least 83,400 additional households connected to the S&D network;
- (ii) At least 128 km of additional sewer-drain pipes constructed; including 3 km of pipes with a diameter larger than 1,000 millimeters laid through micro-tunnelling; and
- (iii) Additional five pumping stations and 6 km of pumping mains constructed.

3. Output 3: Financial and project management capacity further developed

15. This output will support KMC in implementing the policies on NRW reduction, enhancing climate resilience, achieving reforms and cost recovery of services, and implementing projects. Performance indicators include:

- (i) KMC's property tax collection efficiency ratio improved to 75%;
- (ii) KMC's Water Loss Policy Roadmap implemented;
- (iii) An early warning system for flood risk management designed, installed, and implemented for KMC, and at least 20 staff trained on its usage;
- (iv) KMC's capacity development on climate resilient infrastructure and land use planning, and disaster management, completed;
- (v) KMC's land use maps updated to incorporate climate change principles; and
- (vi) An additional 50 training sessions conducted with PMU staff on project implementation, sector best practices, and ADB's policies and procedures.

C. Investment and Financing Plans

16. Project 2 is expected to cost \$286 million, and its investment plan is shown in Table 1.¹⁵

**Table 1: Project 2 Investment Plan
(in \$ million)**

Item	Amount ^a
A. Base Cost^b	
1. Inefficient water supply assets rehabilitated	113.78
2. Sewerage and drainage network extension to peripheral areas continued	128.25
3. Financial management and project management capacity further developed	12.54

¹⁵ The cost estimates have been prepared by PMU and project team, based on Subproject Appraisal Reports and the draft procurement plan prepared by the PMU. The cost estimate model is available with the project team and PMU.

Item	Amount ^a
Subtotal (A)	254.57
B. Contingencies^c	20.26
C. Financing Charges During Implementation^d	11.17
Total (A+B+C)	286.00

^a Includes taxes and duties of \$8.01 million to be financed from government sources in cash.

^b In end-2015 prices.

^c Physical contingencies computed at 3%. Price contingencies computed at an average of 1.5% on foreign exchange costs and 5.5% on local currency costs in line with escalation rates published by ADB at <https://lnadbg1.adb.org/erd0004p.nsf/>. Contingencies also include provision for potential exchange rate fluctuation under the assumption of a purchasing power parity exchange rate.

^d Includes interest and commitment charges. Interest during construction for ADB loan has been computed at the 5-year fixed US dollar swap rate plus a spread of 50 basis points (bps) effective contractual spread. Commitment charges for the ADB Ordinary Capital Resource (OCR) loan are 0.15% per year to be charged on the undisbursed loan amount.

Source: Asian Development Bank estimates.

17. The government submitted a PFR requesting a loan of \$200 million from ADB's ordinary capital resources to help finance Project 2. The loan will have a 20-year term, including a five-year grace period, an annual interest rate determined following ADB's London interbank offered rate-based lending facility, a commitment charge of 0.15% per year, and such other terms and conditions as set forth in the loan and project agreements.¹⁶ The financing plan is in Table 2. The ADB loan will partly finance civil works, equipment, goods, consulting services, capacity building, and project administration costs. The government has provided ADB with (i) reasons for its decision to borrow under ADB's London interbank offered rate-based lending facility based on the terms and conditions, and (ii) an undertaking that the choice was its own decision and not made based on any communication or advice from ADB.¹⁷

Table 2: Project 2 Financing Plan

Source	Amount (\$ million)	Share of Total (%)
Asian Development Bank Ordinary Capital Resource ^a	200.0	70.00
Government	86.0	30.00
Total	286.0	100.00

^a Climate financing is tracked as \$56.47 million including (i) \$54.41 million for nonrevenue water (NRW) reduction, and (ii) \$2.07 million for capacity development. See Table 7 and Appendix 6 of Project Administration Manual for more details.

Source: Asian Development Bank estimates.

D. Implementation Arrangements

18. The implementation arrangements are summarized in Table 3 and described in detail in the Project Administration Manual (PAM) for Project 2 (Appendix 4). The PAM includes the agreed procurement plan for Project 2.

Table 3: Implementation Arrangements

Aspects	Arrangements
Implementation period	September 2016 ^a to October 2021
Estimated completion date	31 October 2021; 30 April 2022 (loan closing date)
Management	
(i) Oversight body – Steering committee	Chair: Minister-in-Charge, Municipal Affairs Department (MA Department). Members: Mayor, Kolkata Municipal Corporation (KMC); Principal Secretary, MA

¹⁶ The loan will follow the straight line method of repayment. The average maturity is 12.75 years, and the maturity premium payable to ADB is 0.0% per annum.

¹⁷ Financing includes minor taxes on training costs to simplify disbursement arrangements. The estimated expenditure is not excessive and will apply only with respect to ADB-financed expenditures.

Aspects	Arrangements		
	Department; Chief Executive Officer, Kolkata Metropolitan Development Authority (KMDA); and the Municipal Commissioner, KMC. Member-secretary: Project Director, Program Management Unit (PMU). Invitees: Director General of the KMC's Water Supply Department; and Director General of KMC's Sewerage and Drainage Department (S&DD).		
(ii) Executing agency	State of West Bengal through KMC		
(iii) Implementing agency	PMU. PMU has more than 80 staff, assisted by consultants under Project 1, and is capable of handling additional responsibilities under Project 2.		
(iv) Implementation unit	PMU		
Procurement	ICB (Goods)	1 contract	\$12.00 million
	NCB (Works)	15 contracts	\$230.72 million
	NCB (Goods)	2 contracts	\$0.08 million
Consulting services	QCBS (Quality-cost ratio: 80:20)	733 person-months	\$6.30 million
Retroactive financing and advance contracting	Advance contracting for eligible expenditures incurred for (i) civil works, (ii) equipment and materials, and (iii) consulting services; and for retroactive financing of eligible expenditures incurred not more than 12 months before the signing of the loan agreement and up to a maximum of 20% of the loan amount.		
Disbursement	The loan proceeds will be disbursed in accordance with ADB's <i>Loan Disbursement Handbook</i> (2015, as amended from time to time) and detailed arrangements agreed upon between the government and ADB.		

ADB = Asian Development Bank, ICB = international competitive bidding, NCB = national competitive bidding, QCBS = quality- and cost-based selection.

^a Tendering of contract packages, under advance action, has started from February 2016.

Source: Asian Development Bank estimates.

E. Project Readiness

19. Readiness for Project 2 is advanced with the following status:

- (i) PMU is fully staffed and capable to handle Project 2.
- (ii) Detailed project reports are completed for more than 95% of the works and goods packages.
- (iii) Around 50% of works contracts were tendered in February 2016, under advance action, and remaining works and goods will be tendered by 30 July 2016. Around 50% works contracts are expected to be awarded by 30 October 2016.
- (iv) Of the two parcels of private land of 1.74 hectares required, one is under process of negotiated settlement, and the other is being donated. Both processes are expected to be completed by July 2016, and the required consultants are already engaged.
- (v) Safeguards due diligence is compliant with SPS and on schedule. The process for obtaining all no-objection certificates and environmental clearances is underway. Most of the environmental certificates and clearances have been received for the contracts that are ready for tendering.

F. Advance Contracting and Retroactive Financing

20. Advance contracting is requested for procurement of civil works, equipment, and materials. Advance contracting would include: (i) preparation of tender documents to procure works, materials, and equipment; and (ii) tendering and evaluation of bids. Retroactive financing is requested for civil works, equipment, and materials, not exceeding the amount of up to 20% of the loan amount for Tranche 2, incurred before loan effectiveness, but not earlier than 12 months before the signing of the loan agreement. An assessment of executing agency's overall procurement capacity, including e-procurement, was carried out and found acceptable.

IV. TECHNICAL ASSISTANCE

21. **Technical Assistance (TA) for Strengthening Climate Resilience of Kolkata City through Improved Planning and Disaster Risk Management.** A TA of \$1 million will be financed on a grant basis by the Urban Climate Change Resilience Trust Fund¹⁸ under the Urban Financing Partnership Facility and administered by ADB to support KMC in further strengthening its climate resilience, through (i) design and implementation of an early flood warning system; and (ii) capacity development in climate-resilient land use planning, infrastructure planning, and disaster management. Further details on the TA are in Supplementary Appendix B.

V. DUE DILIGENCE¹⁹

A. Technical

22. All subprojects proposed under Project 2 follow the subproject selection criteria in Schedule 4 of the FFA. Water supply subprojects are focused on optimizing existing systems and reducing water losses (by demarcating the KMC service network into DMAs, improving metering and management, and implementing specialized performance-based NRW contracts in selected zones). Outcomes include reducing NRW from around 50% to 25%, in line with KMC's approved Water Loss Management Roadmap and KEIIP reforms plan. S&D subprojects are in line with KMC's approved drainage master plan and action plan on flood control.²⁰ Technologies selected are appropriate, have been assessed on the basis of life-cycle cost analysis, and are compatible with local conditions and capabilities.²¹ All investments in water supply and S&D prioritize flood-prone, densely populated, and underserved areas to maximize benefits and increase Kolkata's climate resilience.

B. Economic and Financial

23. **Economic analysis.** The economic rationale for government intervention for Project 2 is sound, since Project 2 supports stronger and more sustainable basic urban services. The economic analysis (Appendix 6) evaluated Project 2's economic viability at an aggregate level. The expected quantifiable benefits for the water supply subprojects are: (i) an increase in the value of non-incremental water through savings in replaced resource cost, and (ii) an increase in the value of incremental water, using a willingness-to-pay-related approach. Other non-incremental benefits considered include savings in (i) earnings that might otherwise be lost because of waterborne diseases, and (ii) construction and maintenance of water storage tanks. Quantifiable benefits considered for S&D subprojects include savings in: (i) earnings that might otherwise be lost during sick days related to waterborne diseases; (ii) construction and maintenance of septic tanks; (iii) earnings that people might otherwise lose if their areas are affected by water-logging due to the absence of drainage; and (iv) road maintenance costs in water-logged areas. The overall economic internal rate of return is estimated at 13.4%, which exceeds the economic opportunity cost of capital of 12.0%. The results of the sensitivity analysis are not satisfactory against: (i) capital costs overrun by 20%; (ii) benefit decrease by 20%; or (iii) a combination of both (i) and (ii). However, Project 2 is likely to be economically viable even in those cases because of unquantifiable benefits not reflected in the analysis such as environmental improvements, reduced cost of health treatment, and increased property values.

¹⁸ Financing partners are the Rockefeller Foundation and the governments of Switzerland, the United Kingdom and the United States.

¹⁹ Project 2's contribution to ADB's Results Framework is in Appendix 5.

²⁰ *Sewerage and Drainage Masterplan for Kolkata City*, KMC, December 2007; and *Action Plan to Mitigate Flood, Cyclone & Water Logging*, 2014. Refer Supplementary Appendix C for further details on related studies.

²¹ Life-cycle cost was analyzed to ensure that the systems selected carried the lowest cost for the subprojects' entire design, construction, and operational life.

24. **Financial Analysis.** A financial analysis (Appendix 7) was conducted for Project 2, in accordance with ADB's *Guidelines on Financial Management and Analysis of Projects, 2005*, to determine KMC's overall financial health, its ability to absorb incremental operation and maintenance (O&M) costs, debt-service costs of the assets constructed under Project 2, and the extent to which O&M costs for water supply assets are recovered through tariffs. An assessment of Project 2's viability to meet its costs, including capital expenditure and O&M, out of its revenue streams on a present value basis, was not carried out, since the S&D investments are not revenue generating and the water supply component is also not premised on full cost recovery. An incremental recurrent cost analysis is considered more appropriate for understanding Project 2's financial viability. This analysis indicates that KMC's water supply department will remain in revenue surplus and the operations will remain sustainable if the UABPT is implemented as envisaged and revenue subsidies continue. Although Project 2 is justified primarily on the grounds of economic development and financial sustainability, the Water Loss Policy Roadmap of KMC approved in February 2016 includes measures (i) for establishing and operationalizing the Water Loss Management Unit, (ii) full metering up to the household level, and (iii) GIS mapping of all properties, among others. All of these measures will enhance KMC's financial sustainability and significantly reduce water waste and losses.

C. Governance

25. Project-specific governance risks were identified through an updated financial management assessment of KMC, which has been included in Supplementary Appendix C. Identified risks draw on lessons learned from ongoing and completed projects at KMC. KMC is an established organization with strong accounting, reporting, internal control, and audit mechanisms. Based on the assessment, the overall fiduciary risk is considered moderate, and proposed risk mitigating actions include (i) mobilizing the Utility Finance Improvement Unit in the PMU; (ii) enhancing the project financial accounting system in the PMU; and (iii) capacity building of staff for improving quality of the audited project financial statements in line with the Comptroller and Auditor General's approved terms of reference. KEIIP also includes measures to strengthen KMC's institutional and financial structures under its reform program, which are slightly delayed but generally on track. Based on these and the detailed policy and supplementary measures described in the PAM for Project 2, the financial management arrangements are adequate.

26. ADB explained and discussed its Anticorruption Policy (1998, as amended to date) with the government and the executing agency. The specific policy requirements and supplementary measures are described in the PAM for Project 2.

D. Poverty, Social, and Gender Dimensions

27. The Summary Poverty Reduction and Social Strategy for KEIIP was updated (Appendix 8). Project 2 is classified as effective gender mainstreaming (EGM). A GAP and a consultation and participation plan for Project 2 were prepared and included in the PAM. Project 2 will be socially inclusive and gender-focused, and will complement the ongoing activities under Project 1. Project 2 will provide direct benefits to an estimated 1.95 million women and girls in KMC in the form of improved water supply. Initiatives include (i) improved access to household-level water supply and S&D connections, with affirmative actions for female-headed households; (ii) capacity building of the PMU and the water supply department of KMC on gender-responsive planning and project implementation; (iii) improved employment in the facilities created by Project 2; and (iv) enhancement of technical skills of KMC's water supply department staff.

E. Safeguards

28. **Environment.** Project 2 is classified as category B for environment. None of the sites is located in or near environmentally sensitive areas, and significant environmental impacts are not anticipated. The environmental assessment and review framework for KEIIP was updated, and two (2) IEEs with EMPs were prepared for proposed subprojects following ADB's SPS, 2009.²² Any environmental impacts during the project's construction phase will be site-specific, short in duration, not significant, and can be avoided and/or mitigated through measures identified in the EMPs. The IEEs will be disclosed to stakeholders and affected people in local language and form, and will form part of the bidding and contract documents to be monitored during implementation. The PMU has demonstrated good capacity in implementation of previous projects. Adequate consultant support is included and/or continued in Project 2 to promote sufficient environmental monitoring. EMP implementation reporting to ADB will be continued on a semi-annual basis.

29. **Increased climate change adaptation and climate resilience for KMC.** The climate risk rating for Project 2 is high. Sufficient analytical studies have been conducted for KMC resulting in adoption of master plans and policies by KMC (Footnote 3) to increase its climate resilience. KEIIP, including Project 2, is a result of these master plans and policies of KMC, and is designed to incorporate the climate change adaptation and resilience measures, such as increased coverage with S&D network, and NRW reduction for better water supply management. Further, the attached TA will assist KMC in strengthening Kolkata's climate resilience through improved planning and disaster risk management.

30. **Social.** Project 2 is classified as category B for involuntary resettlement impacts and C for impacts to indigenous people.²³ Limited impacts on involuntary resettlement are envisaged. The total land requirement for Project 2 is around 7.17 acres, around 5.43 acres of which are owned by the government and the remaining 1.74 acres privately owned. Of the five privately owned sites, two are being purchased through negotiated settlement and three are under a process of land donation, with third-party oversight. Potential temporary impacts on people's livelihoods include 220 shop and small business owners and daily workers, of which 14 are vulnerable persons, likely to face temporary income loss for an estimated period of 10 days each. These will be mitigated. The Resettlement Framework, which provides instruction for any unforeseen impacts on involuntary resettlement during KEIIP implementation including Project 2, was updated (Appendix 11).²⁴ Three resettlement plans were prepared to address identified impacts, and 11 due diligence reports were prepared for subproject components where no resettlement impacts were assessed (Appendix 12). The social impacts have been assessed and the measures developed in the safeguards plans are adequate to deal with identified risks. All safeguards documents will be reviewed and concurred by ADB, disclosed to affected people and communities, and posted on the KMC and ADB websites. The SMU has adequate staff and has demonstrated capacity for grievance redress, social mobilization, and awareness creation. Social safeguards monitoring and reporting to ADB will be continued on a semi-annual basis.

²² Appendixes 9 and 10.

²³ The project is located in Kolkata Municipality. No indigenous communities have been identified within the project areas/sites. In the event that indigenous peoples' issues are identified during project implementation, mitigation actions will be prepared according to ADB's SPS, 2009.

²⁴ The assessment based on field visits, surveys, and consultations reveals that no one will be physically displaced or lose 10% or more of their productive assets. Temporary income effects to 220 people will be mitigated.

F. Risks and Mitigating Measures

31. Major risks to Project 2's success and measures to mitigate those risks are summarized in Table 4.²⁵ Integrated benefits and impacts from Project 2 are expected to outweigh costs.

Table 4: Summary of Risks and Mitigating Measures

Risks	Mitigating Measures
Lack of political will in introducing volumetric tariffs at household level	KMC approved the Water Loss Policy Roadmap in February 2016, which includes commitments on cost recovery and has agreed to implement it within the agreed timelines.
Lack of political will in fully shifting to area-based property tax	Government of West Bengal approved change in KMC Act in 2014 to enable implementation of UABPT, and has committed to commencing its implementation from FY 2016/2017.
Delays in timely issuance of clearances by the statutory bodies	PMU has already obtained more than 80% of clearances required to complete tendering of majority of packages.

FY = fiscal year; KMC = Kolkata Municipal Corporation; PMU = project management unit; UABPT = unit area based property tax.
Source: Asian Development Bank

G. Risk Categorization

32. Project 2 is *low risk* according to OM Section D11/OP para. 6. Low-risk features of the project are: (i) a loan amount of less than \$200 million, (ii) a sound record of ADB's previous experience in the sector and country, (iii) reasonable capacity on the part of the executing agency, and (iv) safeguard categorizations other than A.

VI. ASSURANCES

33. The government and the KMC have assured ADB that implementation of the project shall conform to all applicable ADB policies including those concerning anticorruption measures, safeguards, gender, procurement, consulting services, and disbursement as described in detail in the PAM and loan documents.

34. The government and the KMC have agreed with ADB on certain covenants for the project, which are set forth in the draft loan agreement and draft project agreement.

VII. RECOMMENDATION

35. On the basis of the approval by ADB's Board of Directors for the provision of loans under the multitranche financing facility in an aggregate principal amount not exceeding \$400,000,000 to India for the Kolkata Environmental Improvement Investment Program, it is recommended that the President approve the proposed tranche as described in para. 17 and such other terms and conditions as are substantially in accordance with those set forth in the draft loan and project agreements for the proposed tranche.

36. It is recommended that the President, acting under the authority delegated by the Board, approve ADB administering technical assistance not exceeding the equivalent of \$1,000,000 to the Government of India for the Kolkata Environmental Improvement Investment Program-capacity development technical assistance to be provided by the Urban Climate Change Resilience Trust Fund under the Urban Financing Partnership Facility on a grant basis.

²⁵ The Risk Assessment and Management Plan prepared for the multitranche financing facility remains unchanged.