



Periodic Financing Request Report

Project Number: 43253-027
MFF Number: 0080-IND
October 2018

India: Karnataka Integrated Urban Water Management Investment Program (Tranche 2)

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CURRENCY EQUIVALENTS

(as of 2 October 2018)

Currency unit	–	Indian rupee (₹)
\$1.00	=	₹73.3415
₹1.00	=	\$0.0136

ABBREVIATIONS

ADB	–	Asian Development Bank
FFA	–	framework financing agreement
ha	–	hectare
IEE	–	initial environmental examination
IWRM	–	integrated water resources management
km	–	kilometer
KUIDFC	–	Karnataka Urban Infrastructure Development and Finance Corporation Limited
MFF	–	multitranche financing facility
O&M	–	operation & maintenance
PIU	–	project implementation unit
PMD CSC	–	project management, design, and construction supervision consultant
PMU	–	project management unit
SPS	–	Safeguard Policy Statement
UIF	–	urban local body incentive fund
ULB	–	urban local body
UWSS	–	urban water supply and sanitation

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., FY2018 ends on 31 March 2018.
- (ii) In this report, “\$” refers to United States dollars.

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TRANCHE AT A GLANCE

1. Basic Data		Project Number: 43253-027	
Project Name	Karnataka Integrated Urban Water Management Investment Program-Tranche 2	Department/Division	SARD/SAUW
Country	India	Executing Agency	Karnataka Urban Infrastructure Development and Finance Corporation Limited
Borrower	Government of India		
2. Sector	Subsector(s)	ADB Financing (\$ million)	
✓ Water and other urban infrastructure and services	Urban sewerage		12.89
	Urban water supply		62.11
		Total	75.00
3. Strategic Agenda	Subcomponents	Climate Change Information	
Inclusive economic growth (IEG)	Pillar 2: Access to economic opportunities, including jobs, made more inclusive	Climate Change impact on the Project	Medium
Environmentally sustainable growth (ESG)	Global and regional transboundary environmental concerns	ADB Financing	
	Urban environmental improvement	Adaptation (\$ million)	10.34
4. Drivers of Change	Components	Gender Equity and Mainstreaming	
Governance and capacity development (GCD)	Civil society participation	Effective gender mainstreaming (EGM)	✓
	Institutional development		
Partnerships (PAR)	Organizational development		
	Civil society organizations		
	Implementation		
5. Poverty and SDG Targeting		Location Impact	
Geographic Targeting	No	Urban	High
Household Targeting	No		
SDG Targeting	Yes		
SDG Goals	SDG6, SDG13		
6. Risk Categorization:	Low		
7. Safeguard Categorization	Environment: B Involuntary Resettlement: B Indigenous Peoples: C		
8. Financing			
Modality and Sources		Amount (\$ million)	
ADB		75.00	
Sovereign MFF-Tranche (Regular Loan): Ordinary capital resources		75.00	
Cofinancing		0.00	
None		0.00	
Counterpart		34.80	
Government		34.80	
Total		109.80	
Currency of ADB Financing: USD			

I. BACKGROUND

1. **Multitranchise financing facility.** On 28 March 2014, the Asian Development Bank (ADB) approved the provision of a loan under a multitranchise financing facility (MFF) for the Karnataka Integrated Urban Water Management Investment Program, for an aggregate amount not exceeding \$150 million until 15 March 2024.¹ Karnataka is one of India's most water-stressed states, and its rapid urbanization and industrialization require effective management of available water resources. The road map of the program seeks to enhance sustainable water security in Karnataka. The policy framework will follow the principle of integrated water resources management (IWRM) to establish a process of coordinated planning, development, and management of urban water resources. The investment program (i) provides investment support to modernize and expand urban water supply and sanitation (UWSS) services; (ii) strengthens institutions to improve water use efficiency, productivity, and sustainability; and (iii) pursues innovative technologies and instruments such as public-private partnerships and reform-oriented incentive funds. The executing agency is the State of Karnataka, acting through the Karnataka Urban Infrastructure Development and Finance Corporation limited (KUIDFC).²

2. **Tranches.** ADB approved a loan of \$75 million for Project 1 under the MFF on 29 July 2014. The loan agreement was signed on 30 December 2014 and made effective on 7 May 2015. Project 1 aims to (i) strengthen UWSS infrastructure in three towns (Byadagi, Davangere, and Harihar) of the inland subbasin; (ii) support reforms such as the establishment of an urban local body incentive fund (UIF); and (iii) support capacity development, including project management and administrative capacity. The Urban Environmental Infrastructure Fund under the Urban Financing Partnership Facility provided grant cofinancing of \$1.8 million for Project 1 to improve access to sanitation facilities of low-income households through the Output-Based Assistance Toilet Program.³

3. On 18 May 2018, the Government of India submitted a periodic financing request for Tranche 2 (Project 2), amounting to \$75 million. Tranche 2 is in the country operations business plan for India, for 2018–2020 and will be the final tranche under the MFF.⁴ Project 2 will improve UWSS infrastructure and enhance water resource planning, monitoring, and service delivery for about 765,000 people in four coastal towns (Kundapura, Mangalore, Puttur, and Udupi).⁵ The project towns are in a narrow coastal belt, with the Arabian Sea to the west and the high ridge of the Western Ghats to the east, and fall within the watershed of Karnataka's west-flowing river system. Mangalore and Udupi are the region's main centers of commerce, trade, and industry. The rapid pace of economic development and urbanization of the coastal region of Karnataka has put considerable stress on the existing UWSS infrastructure. The groundwater table is shallow

¹ ADB. 2014. *Report and Recommendation of the President to the Board of Directors: Proposed Multitranchise Financing Facility for India: Karnataka Integrated Urban Water Management Investment Program*. Manila.

² The KUIDFC has implemented two projects funded by ADB loans and one investment program: ADB. 1995. *Report and Recommendation of the President to the Board of Directors: Proposed Loan to India for the Karnataka Urban Infrastructure Development Project*. Manila; ADB. 1999. *Report and Recommendation of the President to the Board of Directors: Proposed Loan to India for the Karnataka Urban Development and Coastal Environmental Management Project*. Manila; and ADB. 2006. *Report and Recommendation of the President to the Board of Directors: Proposed Multitranchise Financing Facility to India for the North Karnataka Urban Sector Investment Program*. Manila.

³ The Output-Based Assistance Toilet Program is a result-based financing mechanism under which payments of funds or subsidies are linked to the achievement of specified outputs. The subsidy is provided to beneficiaries following verification of satisfactory construction of the substructure, completion of the superstructure, and operation.

⁴ ADB. 2017. *India: Country Operations Business Plan, 2018–2020*. Manila. <https://www.adb.org/documents/india-country-operations-business-plan-2018-2020>.

⁵ All four towns proposed under Project 2 follow the selection criteria in Schedule 4 of the framework financing agreement: (i) consistency with IWRM principles, (ii) willingness of urban local bodies (ULBs) to reform, and (iii) UWSS infrastructure and investments gaps.

and contaminated by saltwater intrusion. The coastal towns should promote the efficient and sustainable use of water by reducing nonrevenue water, expanding water treatment capacity, improving storage facilities, and extending more connections to end-users. The sewerage system of Mangalore requires immediate rehabilitation and/or upgrading to enhance the capacity of the pumping main and expand coverage. To offer improved water services, urban local bodies (ULBs) must enhance their technical and financial capacity. Climate adaptation measures are required to protect this ecologically sensitive region from climate change impacts.

II. ASSESSMENT OF MULTITRANCHE FINANCING FACILITY IMPLEMENTATION

4. **Progress on road map and policy framework.** The policy objectives are (i) improved urban water management, (ii) technical and environmental sustainability, and (iii) institutional and financial sustainability. Under the policy direction of the IWRM steering committee and the State-level Empowered Committee, the Government of Karnataka and the KUIDFC have initiated reforms in key areas, including (i) carrying out a water audit to demonstrate their operational efficiency and developing volumetric tariff determination models for effective demand management, (ii) developing the asset management systems for better operation and maintenance (O&M) of UWSS infrastructure, and (iii) establishing the ring-fencing of water accounts in ULBs to improve financial sustainability. The Government of Karnataka, in partnership with K-water, is developing information technology modules to support the reforms.⁶ In October 2016, the UIF guidelines were approved to improve the sector planning and monitoring of UWSS and support project ULBs to become efficient and responsive service providers.⁷

5. **Progress of investment program.** The performance of the MFF is rated *on track*, based on the following parameters: (i) compliance with undertakings in the framework financing agreement is *on track*, (ii) the performance of tranche 1 is *on track*,⁸ and (iii) tranche approval timeliness is at risk as more than 3 years have elapsed since the approval of tranche 1 in July 2014. The overall physical progress of contracts under Project 1 is about 45%. All 10 civil works packages have been awarded. The cumulative contract award value is \$75.0 million (100% of the loan amount), while disbursements amount to \$33.4 million (45% of the loan amount). The UIF guidelines are being implemented in three stages; most ULBs for Project 1 are likely to complete stage 1 by October 2018. In December 2017, the KUIDFC completed validation of the first batch of beneficiaries of the Output-Based Assistance Toilet Program and started utilizing the grant. The KUIDFC aims to complete construction of most toilets and a substantial utilization of the grant within the second half of 2018. The KUIDFC has enhanced the supervision of project ULBs and has initiated advance contracting for all civil works of Project 2 with the support of consultants hired under Project 1. All outputs under the MFF-financed program will be completed within the original implementation period.

⁶ K-water is a Korean governmental agency for developing and managing water resources and providing water supply. It is supporting the KUIDFC to refine the functional requirements for the information and technology modules.

⁷ The UIF guidelines are implemented in three stages: (i) Stage 1 (financial and commercial capacity enhanced) includes updating water consumers in an information technology database, regularizing illegal connections, and exploring options to provide subsidized connections to the urban poor; (ii) Stage 2 (technical capacity enhanced for improving service level) includes developing a volumetric water tariff structure for different types of usages, adopting a subsidized rate for the poor, and rolling out computerized management of water billing and collection accounts; and (iii) Stage 3 (sustainable management capacity enhanced) includes developing system for continuous assessment of tariff on a regular basis and establishing an asset management system based on geographic information systems and management information systems. Eligible expenditures of these activities and incentives are allocated for the UIF upon successful completion. The KUIDFC will release the incentives to the ULBs after a third party verifies the completion of the reform activities in each stage.

⁸ Performance ratings are based on para. 32 and Table 2 of the Staff Instructions on Business Processes for MFF. ADB. 2018. *Staff Instructions on Business Processes for MFF*. Manila. Because two of the three parameters are rated *on track*, the MFF meets the criteria for the overall rating of *on track*.

6. **Compliance with undertakings and loan covenants.** Of the 20 undertakings in the framework financing agreement, 3 have been complied with, 16 are being complied with, and 1 is not yet due. Of the 32 loan covenants in Project 1, 4 have been complied with, 27 are being complied with, and 1 is not yet due. All four grant covenants of Project 1 are being complied with. The loan covenants that are not yet due are related to required O&M arrangements and achievement of key reform areas. The major areas that have been complied with are the establishment of the UIF, private sector participation in service delivery, subproject selection as per the required criteria, and the establishment of a project performance monitoring system.

7. **Environment.** An environmental safeguards compliance assessment found that Project 1 complies with ADB's Safeguard Policy Statement (SPS, 2009). ADB approved and disclosed the environmental assessment and review framework, initial environmental examinations (IEEs), and environmental management plans (EMPs) for all subprojects under Project 1. The IEEs and EMPs were included in the bid documents and contracts and disclosed on the ADB and KUIDFC websites, and relevant information shared with stakeholders. No major safeguard issues or gaps in implementation were identified. Grievance redress mechanisms were established. No complaints have been received about the project. Semiannual environmental monitoring reports are being submitted and publicly disclosed.

8. **Social.** Social safeguards documents for all packages were updated during the implementation, reviewed by ADB and disclosed. The project management unit (PMU) is keeping regular track of grievances, ensuring registration and follow-up until resolution and reporting on the status in the semiannual social monitoring reports. Necessary corrective actions are being taken to ensure the compliance of Project 1 with the SPS.⁹ The project required the acquisition of 3.54 hectares (ha) of land from six landowners through a negotiated settlement, and two housing societies donated 0.04 ha of land. The remaining 1.396 ha of land belonged to the ULBs, and the KUIDFC purchased 0.01 ha of government land on behalf of the ULBs. Adequate measures were used to prevent income loss and disruption due to temporary access disturbance. Semiannual social safeguards monitoring reports are being submitted to ADB and disclosed to the public. No indigenous people were identified in the project-affected areas. One area for improvement is project information dissemination to beneficiaries and affected persons.

9. **Gender.** The KUIDFC is implementing gender action plans with the assistance of public communication and awareness consultants. The project, with the assistance of the State Institute for Urban Development, conducted workshops on gender and social inclusion for the KUIDFC and ULBs, and social and behavioral change training programs on toilet demand creation, social leadership, health, and hygiene, with equal participation of women and men.

III. PERIODIC FINANCING REQUEST

A. Impact and Outcome

10. Project 2 is aligned with the following impact: sustainable water security in selected river basins in Karnataka improved.¹⁰ Project 2 will have the following outcome: urban water resource management in four coastal towns (Kundapura, Mangalore, Puttur, and Udupi) improved.¹¹

⁹ The following packages required corrective actions: (i) for the Harihar sewage treatment plant, the private ownership of part of the plant site (2,400 square meters out of 80,000 square meters) required resurveying, confirmation of land ownership, and a negotiated settlement with third-party oversight; and (ii) for the Davangere sewerage system, the landowners were identified as vulnerable and additional compensation was prepared as per the agreed resettlement framework.

¹⁰ Defined by the investment program.

¹¹ The design and monitoring framework is in Appendix 1.

B. Outputs

11. **Output 1: Urban water supply and sanitation infrastructure expanded and upgraded.**

Project 2 will provide continuous piped water supply to 765,000 people, and sanitation services with an improved conveyance system to 193,000 people.

- (i) **Water supply systems upgraded in four towns (Kundapura, Mangalore, Puttur, and Udupi).** This output includes: (a) the construction of about 14 kilometers (km) of new water transmission lines, a water treatment plant with a capacity of 8.7 million liters per day, about 76 km of new clear water feeder main, 29 overhead tanks and four ground-level service reservoirs, and a new water distribution network of 1,320 km; and (b) the replacement of about 78,900 existing house service connections with metered connections, the provision of new metered connections to about 32,700 households, and the replacement of about 29,500 old meters with new meters, including poor households, vulnerable households, and poor women-headed households targeted.
- (ii) **Sewerage systems rehabilitated in Mangalore.** This output includes the rehabilitation of about 11 km of pumping mains.

12. **Output 2: Water resource planning, monitoring, and service delivery of ULBs improved.**

- (i) **Operational capacity through policy and institutional reform actions strengthened.** This includes: (a) periodic water audits conducted, (b) volumetric tariff determination models developed and rolled out, (c) dynamic asset management system developed, (d) water operation accounts ring-fenced in ULBs, and (e) UIFs implemented by project towns.
- (ii) **Gender-responsive and inclusive service delivery systems institutionalized.** This includes: (a) water and sanitation committees formed in target slums, and (b) public awareness campaigns conducted.
- (iii) **Climate-resilient policy actions implemented.** This includes: (a) rainwater harvesting policy adopted and implemented; (b) policy to incentivize the use of treated wastewater for industry, agriculture, and horticulture adopted and implemented; and (c) monitoring of water quality and water audit institutionalized.

13. **Output 3: Institutional capacity of executing agency and ULBs strengthened.** This output includes: (a) the project management and service delivery capacity of the PMU, project implementation unit (PIU), and concerned ULB staff strengthened; and (b) key stakeholders sensitized on project scope, water conservation, nonrevenue water reduction, and gender and social inclusion in urban governance.

C. Summary Cost Estimates and Financing Plan

14. Project 2 is estimated to cost \$109.8 million (Table 1). Detailed cost estimates by expenditure category and by financier are included in the project administration manual (PAM).

Table 1: Summary Cost Estimates
(\$ million)

Item	Amount ^a
A. Base Cost^b	
1. Urban water supply and sanitation infrastructure expanded and upgraded	84.1
2. Water resource planning, monitoring, and service delivery of urban local bodies improved	5.2
3. Institutional capacity of executing agency and urban local bodies strengthened	4.2
Subtotal (A)	93.5

Item	Amount ^a
B. Contingencies^c	9.3
C. Financing Charges During Implementation^d	7.0
Total (A+B+C)	109.8

^a In early-2018 prices. Exchange rate of \$1 = ₹65.0 is used.

^b Includes taxes and duties of \$9.8 million to be financed from government resources by cash contribution but excludes any tender premium.

^c Physical contingencies are computed at 5.0% for civil works and equipment. Price contingencies are computed at an average of 1.5%–1.6% on foreign exchange costs and 4.5%–4.6% on local currency costs and 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 the ADB loan has been computed at the 5-year United States dollar fixed-swap rate plus a spread of 0.5% and a maturity premium of 0.1%. Commitment charges for the ADB loan are 0.15% per year to be charged on the undisbursed loan amount.

Source: Asian Development Bank estimates.

15. The Government of India submitted a periodic financing request for a loan of \$75 million from ADB's ordinary capital resources to help finance Project 2. The loan will have a 25-year term, including a grace period of 5 years, an annual interest rate determined in accordance with 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. Based on the straight-line repayment method, the average maturity of the loan is 15.25 years, and the annual maturity premium payable to ADB is 0.10%. The summary financing plan is in Table 2. ADB will finance expenditures in relation to works and equipment and contingencies. The Government of India will on-lend the ADB loan proceeds to the Government of Karnataka. The Government of Karnataka will provide \$34.8 million to the investment costs of the project to finance (i) taxes and duties, (ii) land acquisition and resettlement, (iii) project management and capacity development, (iv) incremental recurrent costs, (v) financing charges during implementation, (vi) part of the civil works and equipment, and (vii) part of contingencies, and will provide the loan and counterpart funds to the implementing agencies. The government has assured that it will meet any financing shortfall to ensure that project outputs are fully achieved. 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.

Table 2: Summary Financing Plan

Source	Amount (\$ million)	Share of Total (%)
Asian Development Bank		
Ordinary Capital Resource (regular loan)	75.0	68.3%
Government	34.8	31.7%
Total	109.8	100.00

Source: Asian Development Bank estimates.

16. Climate adaptation is estimated to cost \$13.9 million. ADB will finance 74.4% (\$10.34 million) of adaptation costs. Details are in the climate risk assessment and management report.

D. Implementation Arrangements

17. The implementation arrangements are summarized in Table 3 and described in detail in the project administration manual.

Table 3: Implementation Arrangements for Project 2

Aspects	Arrangements
Implementation period	October 2018 ^a to September 2023

Aspects	Arrangements		
Estimated completion date	15 September 2023 (physical completion date) 15 March 2024 (loan closing date)		
Management			
(i) Oversight body—Steering committee	The state IWRM steering committee will provide policy direction on IWRM-related matters. The committee, chaired by the chief secretary, will comprise representatives of relevant line agencies. The Empowered Committee, chaired by the additional chief secretary with representatives from the urban, water, environment, planning, and finance departments, will provide guidance on project-related matters, including ULB reform.		
(ii) Executing agency	State of Karnataka acting through the KUIDFC		
(iii) Implementing agency	ULBs (assisted by the KUIDFC) of Kundapura, Mangalore, Puttur, and Udupi towns.		
(iv) Implementation unit	The KUIDFC has established a central program management unit with 10 staff that is responsible for coordination, management, monitoring, and supervision of the facility. A regional project management unit at the subbasin level has been established to assist project implementation. ULB-level project implementation units will monitor day-to-day construction works.		
Procurement	International competitive bidding (Works)	1 contract	\$42.53 million
	National competitive Bidding (Works)	4 contracts	\$41.26 million
Consulting services	Quality- and cost-based selection ^b 75:25 CAPRRC, FMIDC, and PMDCSC	1,975 person-months	\$5.04 million
Retroactive financing and advance contracting	Advance contracting is used for eligible expenditures incurred for (i) civil works, (ii) equipment and materials, and (iii) consulting services; and for the 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> (2017, as amended from time to time) and detailed arrangements agreed upon between the government and ADB.		

ADB = Asian Development Bank, CAPRRC = community awareness, participation, resettlement, and rehabilitation consultant, FMIDC = facility management and institutional development consultant, IWRM = integrated water resources management, KUIDFC = Karnataka Urban Infrastructure Development and Finance Corporation Limited, PMDCSC = project management, design, and construction supervision consultant, ULB = urban local body.

^a Tendering of contract packages started from June 2017 under advance action.

^b All consulting services will be funded and implemented by the government.

Source: Asian Development Bank estimates.

E. Project Readiness

18. Project readiness of Project 2 is high. The PMU is fully staffed, and 7 of 8 positions are filled in the regional PMU. PIUs at the ULB level are staffed with 20 of 30 positions. Twenty-one percent of works contracts have been awarded, while additional 28% will be ready for awarding by the end of the third quarter of 2018 and 100% will be ready by the end of 2018. Environmental impacts are minimal, and the limited involuntary resettlement impacts will be adequately addressed. The process for obtaining no-objection certificates and environmental clearances is ongoing.

IV. DUE DILIGENCE

A. Technical

19. Based on the lessons and findings from the Karnataka Urban Development and Coastal Environmental Management Project,¹² Project 2 has been designed to (i) target a continuous (24/7) water supply, (ii) provide house service connections for water, (iii) decrease the complexity of the project scope, with fewer project components and fewer targeted towns, (iv) adopt a strategic approach to financial management and commercial efficiency, and (v) provide water

¹² The project performance evaluation report rated the overall project performance *successful*. ADB. 2016. *Performance Evaluation Report: Karnataka Urban Development and Coastal Environmental Management Project*. Manila.

supply to the poor residing in low-income communities. To ensure bulk water availability throughout the year, an associated project to be funded by the government is planned to bring water from an alternative source in the town of Udupi. The KUIDFC has initiated the procurement of the civil works and will regularly report to ADB on the implementation progress of the associated project.

20. The water supply subprojects will adopt the performance-based construct and operate contract modality. This modality was piloted under the ADB-funded North Karnataka Urban Sector Investment Program (footnote 2), and was adopted in towns under Project 1. It will include 8 years' O&M to ensure sustainable water service delivery for beneficiaries.¹³ For effective water audits, a supervisory control and data acquisition system will help strengthen the centralized supervision and control of water flow and water pressure.

21. The climate risk rating for Project 2 is medium. The project areas are prone to temperature increase, a decrease in precipitation levels, and prolonged drought conditions. The project was designed based on the KUIDFC's implementation experiences in urban water services. The major climate-resilient measures include: (i) utilization of sustainable surface-based sources; (ii) design of the distribution systems based on a district metered area to reduce nonrevenue water; (iii) use of updated standards and technical design; (iv) implementation of community awareness programs on water conservation and demand management; and (v) introduction of climate-resilient policy actions.

B. Economic and Financial

22. **Economic Analysis.** The economic rationale for the government's intervention is sound, as the proposed Project 2 aims to provide sustainable urban water supply and sewerage services in the project ULBs. The economic internal rates of return (EIRR) of subprojects range from 11.9% to 20.3%, while the combined EIRR was estimated at 17.5%—all higher than the economic opportunity cost of capital (EOCC) of 9.0%. This confirms the economic viability of the proposed subprojects under Project 2. The overall results of a sensitivity analysis are also satisfactory against all downside risks, i.e., (i) a capital cost overrun of 20%, (ii) an overrun in operation and management costs of 20%, (iii) a decline in estimated benefits of 20%, (iv) a 1-year delay of implementation, and (v) a combination the above factors. Project 2 is likely to be economically more viable because of unquantifiable benefits not reflected in the analysis, such as environmental improvements and increased property values.

23. **Financial Analysis.** Project 2 comprises both revenue-generating (water supply in all four towns) and nonrevenue-generating (sewerage in Mangalore) subprojects. An incremental recurrent cost analysis revealed that the water supply component would generate sufficient revenue from water tariffs for full O&M cost recovery through periodic tariff revisions. The operating ratio would range from 0.67 to 0.97 in project towns. A municipal cash-flow analysis was also conducted to ensure financial sustainability. All project ULBs receive consistent revenues such as tax income, user charges, and external grant resources. The project ULBs' revenue bases can be enhanced further through (i) the implementation of volumetric water tariffs, (ii) periodic water tariff revisions, (iii) improved collection efficiency, and (iv) continued government

¹³ ADB. 2017. *24/7 Normalized Water Supply through Innovative Public–Private Partnership—Case Study from Ilkal Town, Karnataka, India*. Manila. The performance-based construct and operate contract will leave the design risks to the public sector while construction and operation responsibilities rest with the private operator. In the construction phase, the remuneration of operators is fixed, with potential for an early-completion bonus. In operation, the remuneration includes not only fixed payments, but also performance-based portions based on indicators including continuous supply, water-loss reduction, minimum pressure level, and customer service targets.

support. The implementation of the UIF will enable the project ULBs to improve the financial efficiency and sustainability of water supply and sewerage services.

C. Governance

24. **Financial management.** A financial management assessment revealed that the executing agency (KUIDFC) and implementing agencies (project ULBs) were capable of conducting the financial management of Project 2. The KUIDFC and project ULBs have sufficient experience handling externally funded projects. The KUIDFC and its PMU are also implementing Project 1, funded by ADB, at a satisfactory level in terms of obtaining project funds (including counterpart funds) in a timely manner, managing the project efficiently, providing sufficient staff, and promptly releasing payments to contractors and consultants. The overall risk assessment for Project 2 is moderate. Risk mitigation measures include (i) full training and capacity building support to enhance the financial management capacity of the PMU, regional PMU, PIUs, and project ULBs; (ii) commitment of the Government of Karnataka and the KUIDFC to ensure timely and full staffing of PIUs and project ULBs; and (iii) commitment of the Government of Karnataka and the KUIDFC to conduct internal and external audits on an annual basis. Close monitoring and resolving these capacity gaps will be implemented with the support of the project management, design, and construction supervision consultant (PMDSC) and the facility management and institutional development consultant.

25. **Procurement.** All procurement of goods and works will follow ADB's Procurement Guidelines (2015, as amended from time to time). The KUIDFC has prior and ongoing experience in implementing procurement for projects financed by ADB and other organizations. A procurement risk assessment in 2016 recommended that the KUIDFC be given a *low to moderate* procurement risk rating because it lacked experience in procuring large contract packages. Another risk is that procurement packages will not ensure the participation of capable bidders. These risks will be mitigated through the prior review of evaluation by ADB of contracts worth more than \$20 million, hiring of consultants with experience in procurement of large contracts, and proactive sourcing and classification of competent bidders. The KUIDFC, with support from the PMDCSC, will also implement the capacity building for ULB officials to enhance project management, procurement, and contract administration.

26. **Anticorruption.** 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.

D. Poverty, Social, and Gender

27. The summary poverty reduction and social strategy was updated. Project 2 will have a direct impact on achieving Sustainable Development Goal 6 and will result in improved access to reliable and affordable water services, leading to reduced health-related risks. Project 2 is classified as effective gender mainstreaming. A gender equality and social inclusion action plan and a community awareness and participation plan were prepared and included in the PAM. Project 2 will provide direct benefits to women-headed and vulnerable households by providing them with free or subsidized piped potable water connections. Key initiatives also include: (i) constitution of water and sanitation committees in target slums for inclusive service delivery; (ii) community consultation and awareness programs; (iii) a socioeconomic survey to assess community needs, with findings incorporated into service delivery; and (iv) sensitization workshops and training for elected representatives and PMU, PIU, and/or ULB staff on project scope and gender equality and social action plans. These activities will ensure the equitable

representation of women and will be supported by the PMDCSC and the community awareness, participation, resettlement, and rehabilitation consultant.

E. Safeguards

28. In compliance with ADB's SPS, the project's safeguard categories are as follows.¹⁴

29. **Environment (category B).** The environmental assessment and review framework prepared in 2014 has been updated to reflect recently notified government environmental regulations. The environmental assessment and review frameworks and IEEs for all subprojects have been prepared, reviewed, and disclosed in accordance with the SPS, including disclosure to affected people. The IEEs demonstrate that subproject sites are not within or adjacent to environmentally sensitive areas, and that works will likely have only small-scale, temporary, and local impacts on the environment that can be readily mitigated and minimized by applying proven measures and construction practices.¹⁵ The stakeholders were involved through meaningful consultations and their views were incorporated in the planning and development of the subprojects. The consultation process will be continued during project implementation. Environmental grievances will be handled according to the grievance redress mechanism developed for Project 1 and included in the PAM. The IEEs will form part of the bid and contract documents. No works can be commenced until ADB approves the final IEEs. Consultant support to the PMU is included to supervise and monitor environmental safeguards compliance. The KUIDFC will continue to report to ADB semiannually on the implementation of environmental management plans.

30. **Involuntary resettlement (category B).** Limited involuntary resettlement impacts are envisaged. The total land requirement for Project 2 is about 5.09 ha, of which about 5.02 ha are owned by the government, with the remaining 0.068 ha privately owned. Only one site is privately owned, and that is being purchased through negotiated settlement with third-party oversight. Negotiated settlement will follow the requirements of the SPS. The project will potentially have temporary impacts on people's livelihoods, including 75 shops and small business owners, of whom one is identified as vulnerable. It is projected that these business owners will face an average of 15 days' temporary income loss. In addition, it is anticipated that three vulnerable persons will face loss of fruit-bearing trees grown on municipal land. The project will ensure that they are compensated for their loss at the replacement cost of the trees, and will provide additional assistance to the vulnerable persons. The resettlement framework was updated.¹⁶ The KUIDFC has prepared draft resettlement plans for the Kundapura and Udupi water-supply-system and Mangalore sewerage subprojects. Draft due diligence reports have been prepared for the Mangalore and Puttur water-supply-system subprojects. Based on tranche 1 outcomes, the KUIDFC has demonstrated the capacity and commitment to complete the requirements of the updated resettlement framework and the resettlement plans and due diligence reports. Safeguard documents will be finalized based on detailed measurement surveys during project implementation, and will be reviewed and approved by ADB. The resettlement plans will be

¹⁴ ADB. Safeguard Categories. <https://www.adb.org/site/safeguards/safeguard-categories>.

¹⁵ Potential impacts during the construction phase include (i) health and safety hazards to workers; (ii) noise and dust; (iii) increased road traffic; and (iv) soil erosion and/or silt runoff from stockpiled materials and wastes. During operation the environmental impact will be much less than during construction, as maintenance will be infrequent and will affect only small areas. The IEEs also included environmental compliance audits of existing facilities that will be rehabilitated or expanded under Project 2, and due diligence of associated facilities, as defined in the SPS. Corrective actions such as treatment of backwash water and sludge management system are included in the subproject (Kundapura and Puttur) and associated project (Mangalore water supply).

¹⁶ 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.

disclosed to affected people and communities and posted on the KUIDFC and ADB websites. Social safeguards monitoring and reporting to ADB will continue on a semiannual basis.

31. **Indigenous peoples (category C).** No indigenous peoples have been identified within the project areas and/or sites. If indigenous peoples' issues are identified during project implementation, the mitigation actions will be prepared according to the updated indigenous peoples planning framework and the SPS.

F. Summary of Risk Assessment and Risk Management Plan

32. Major risks and mitigating measures are summarized in Table 4 and described in detail in the risk assessment and risk management plan.

Table 4: Summary of Risks and Mitigating Measures

Risks	Mitigating Measures
Climate change reduces raw water availability, minimizing project benefits.	The project will include climate resilient designs, including using raw water from sustainable sources, based on prior experiences in the coastal districts in Karnataka. The project will also implement reform actions to ensure sustainable service delivery.
The water supply system may be underutilized because of delays in associated projects to be funded by the government.	Government budgets for the associated projects were secured. The KUIDFC is the executing agency of those projects and will ensure their coordinated implementation. The KUIDFC will report regularly to ADB on progress.
Inadequate revisions of water tariffs and no enforcement of sewerage tariffs may constrain the sustainability of assets developed under the project.	Project ULBs will implement the UIF and other efficiency improvement reform measures to enhance the revenue base, such as ring-fencing of the ULB water account, 100% household metering, adoption of volumetric water tariffs, periodic tariff revisions, and use of an information technology-based billing and collection system.

ADB = Asian Development Bank, KUIDFC = Karnataka Urban Infrastructure Development and Finance Corporation Limited, UIF = urban local body incentive fund, ULB = urban local body.

Source: Asian Development Bank.

V. ASSURANCES

33. The Government of India and the KUIDFC 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 project administration manual and loan documents.

34. The Government of India and the KUIDFC have agreed with ADB on certain covenants for the project, which are set forth in the loan agreement and project agreement.

VI. THE PRESIDENT'S DECISION

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 \$150,000,000 to India for the Karnataka Integrated Urban Water Management Investment Program, the President has approved the tranche as described in para. 15 and such other terms and conditions as are substantially in accordance with those set forth in the draft loan and project agreements.

Takehiko Nakao
President

17 October 2018