Report and Recommendation of the President to the Board of Directors

Project Number: 51036-002
November 2021

Proposed Loan, Grant, and Administration of Loan Islamic Republic of Pakistan: Khyber Pakhtunkhwa Cities Improvement Project

Asian Development Bank

CURRENCY EQUIVALENTS

(as of 15 October 2021)

Currency unit	–	Pakistan rupee/s (PRe/PRs)		
PRe1.00	=	€0.005065	or	$0.005839
$1.00	=	PRs171.25	or	€0.867303
€1.00	=	PRs197.45	or	$1.15

ABBREVIATIONS

ADB	–	Asian Development Bank
ADF	–	Asian Development Fund
AIIB	–	Asian Infrastructure Investment Bank
CDIA	–	Cities Development Initiatives for Asia
CIU	–	city implementing unit
COVID-19	–	coronavirus disease
EIA	–	environmental impact assessment
EMP	–	environmental management plan
ERP	–	enterprise resource planning
GHG	–	greenhouse gas
GOKP	–	Government of Khyber Pakhtunkhwa
GRM	–	grievance redress mechanism
IEE	–	initial environmental examination
IRCB	–	institutional review and capacity building
ISWM	–	integrated solid waste management
km	–	kilometer
KPK	–	Khyber Pakhtunkhwa Province
KPRO	–	Khyber Pakhtunkhwa Municipal Regulatory Office
LARP	–	land acquisition and resettlement plan
LGE&RDD	–	Local Government, Elections and Rural Development Department
O&M	–	operation and maintenance
PAM	–	project administration manual
PMU	–	project management unit
PRF	–	project readiness financing
SCADA	–	supervisory control and data acquisition
SWM	–	solid waste management
WASH	–	water, sanitation, and hygiene
WBDC	–	women's business development center
WSSC	–	water and sanitation services company

NOTE

(i) The fiscal year (FY) of the Government of Pakistan (and its agencies) ends on 30 June. "FY" before a calendar year denotes the year in which the fiscal year ends, e.g., FY2020 ends on 30 June 2020.

(ii) In this report, "$" refers to United States dollars.

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[a] Outposted to the Armenia Resident Mission.

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CONTENTS

PROJECT AT A GLANCE

1. Basic Data

Project Number: 51036-002

Project Name	Khyber Pakhtunkhwa Cities Improvement Project	**Department/Division**	CWRD/CWUW
Country	Pakistan	**Executing Agency**	Local Gov't, Elections and Rural Dev. Dept
Borrower	Islamic Republic of Pakistan		
Country Economic Indicators	https://www.adb.org/Documents/LinkedDocs/?id=51036-002-CEI		
Portfolio at a Glance	https://www.adb.org/Documents/LinkedDocs/?id=51036-002-PortAtaGlance		

2. Sector

Sector	Subsector(s)	ADB Financing ($ million)
✓ **Water and other urban infrastructure and services**	Urban flood protection	10.00
	Urban hazardous waste management	20.00
	Urban policy, institutional and capacity development	15.00
	Urban sewerage	70.00
	Urban solid waste management	90.00
	Urban water supply	180.00
	Total	**385.00**

3. Operational Priorities

- ✓ Addressing remaining poverty and reducing inequalities
- ✓ Accelerating progress in gender equality
- ✓ Tackling climate change, building climate and disaster resilience, and enhancing environmental sustainability
- ✓ Making cities more livable
- ✓ Strengthening governance and institutional capacity

Climate Change Information

GHG reductions (tons per annum)	249,890.70
	0
Climate Change impact on the Project	Medium

ADB Financing

Adaptation ($ million)	25.70
Mitigation ($ million)	81.13

Cofinancing

Adaptation ($ million)	13.24
Mitigation ($ million)	41.79

Sustainable Development Goals

SDG 3.9
SDG 5.a
SDG 6.2, 6.5
SDG 10.2
SDG 11.6, 11.7
SDG 12.c
SDG 13.a

Gender Equity and Mainstreaming

Gender Equity (GEN) ✓

Poverty Targeting

Geographic Targeting ✓

4. Risk Categorization: Complex

5. Safeguard Categorization

Environment: A **Involuntary Resettlement:** A **Indigenous Peoples:** C

6. Financing

Modality and Sources	Amount ($ million)
ADB	**385.00**
Sovereign Project grant: Asian Development Fund	5.00
Sovereign Project (Regular Loan): Ordinary capital resources	380.00
Cofinancing	**200.00**
Asian Infrastructure Investment Bank - Project loan (Partial ADB Administration)	200.00
Counterpart	**65.00**
Government	65.00
Total	**650.00**

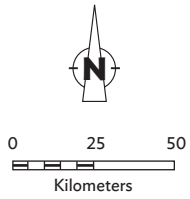
Currency of ADB Financing: Euro

Source: Asian Development Bank

PAKISTAN

KHYBER PAKHTUNKHWA CITIES IMPROVEMENT PROJECT

List of the Key Subprojects



MINGORA

Water Distribution Improvement Zone
Water Distribution Network Improvement
Water Treatment Plant
Integrated Solid Waste Management System
Green Urban Spaces with Nature-Based Solutions

MARDAN

Sewerage System Improvement Zone
Sewage Treatment Plant and Network
Integrated Solid Waste Management System
Green Urban Spaces with Nature-Based Solutions

PESHAWAR

Water Distribution Network
Water Distribution Network Improvement
Water Supply System Improvement
Integrated Solid Waste Management
Green Urban Spaces with Nature-Based Solutions

ABBOTTABAD

Water Distribution Network Improvement
Water Treatment Plant
Integrated Solid Waste Management System
Gender-Friendly Park
Green Urban Spaces with Nature-Based Solutions

KOHAT

Sewerage System Improvement Zone
Sewage Treatment Plant
Water Distribution Network Improvement
Integrated Solid Waste Management System
Woman Business Development Center
Gender-Friendly Park
Green Urban Spaces with Nature-Based Solutions

21-0055a AV

I. THE PROPOSAL

1. I submit for your approval the following report and recommendation on a proposed loan and a proposed grant to the Islamic Republic of Pakistan for the Khyber Pakhtunkhwa Cities Improvement Project. The report also describes the proposed administration of a loan to be provided by the Asian Infrastructure Investment Bank (AIIB) for the Khyber Pakhtunkhwa Cities Improvement Project, and if the Board approves the proposed loan and grant, I, acting under the authority delegated to me by the Board, approve the administration of the loan.

2. The project will support provincial and city governments of Khyber Pakhtunkhwa Province (KPK) in improving the livability of five cities[1] by (i) expanding physical investments in urban water, sewerage, solid waste disposal, and climate-resilient infrastructure; and (ii) strengthening institutional capacity in services delivery, mainstreaming gender equality, and improving the performance of municipal companies. The project will benefit up to 3.5 million people.

II. THE PROJECT

A. Rationale

3. **Background.** KPK is one of the four administrative provinces of Pakistan, located about 130 kilometers (km) northwest of Islamabad, the country's capital, sharing a border with Afghanistan. In 2000–2017, KPK accounted for about 11% of Pakistan's gross domestic product and had the fastest annual economic growth rate—about 5%—among the four provinces.[2] KPK has a population of about 32 million which is expected to increase to about 58 million by 2035.[3] By the same year, it is also projected that 35% of KPK's population will be concentrated in cities, up from 16% in 2017 (footnote 3). KPK's rapid urban population growth rate (about 3.4% per annum) is placing a tremendous strain on its cities. Inadequate infrastructure and limited capacity to manage municipal water, sanitation, and solid waste services are further exposing the population to health risks and making the cities more vulnerable to the effects of climate change.[4]

4. **Issues.** Supply of basic urban services such as water supply, wastewater collection and treatment, solid waste management (SWM), and green urban spaces (e.g., parks) has failed to meet increasing urban domestic and commercial demand, leading to gradual degradation of the urban environment and living standards. In KPK, only 42% of the urban population has access to piped water, and typically for only 6 hours per day. Poor maintenance and leakage contribute to significant losses in piped water networks and contamination of the water supply. In 2014, 75% of supplied water in Abbottabad was unsafe for consumption, while water loss in Peshawar was estimated at 67% in 2015.[5] Operational sewerage systems serve less than 5% of urban areas; where networks exist, they are poorly maintained and prone to overflow.[6] Most wastewater is conveyed through open drains, and there are no functional wastewater treatment plants in KPK. Wastewater and sewage are discharged untreated into natural drains, or onto farmland for irrigation purposes, which poses a significant health risk to the local farmers and communities.

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[1] Abbottabad, Kohat, Mardan, Mingora, and Peshawar.
[2] Hafiz Pasha. 2018. *Growth and Inequality in Pakistan: Agenda for Reforms*. Islamabad: Friedrich Ebert Stiftung.
[3] Government of Pakistan. 2017. *Population Census.* Islamabad.
[4] The Climate Change Vulnerability Index rates Pakistan as one of the 16 countries most vulnerable to extreme climate change risk. V. Maplecroft. Climate Change Vulnerability Index.
[5] Cities Development Initiative for Asia. 2017. *Pre-Feasibility Studies for Khyber Pakhtunkhwa Project*. Manila.
[6] R. Cooper. 2018. Water, Sanitation, and Hygiene Services in Pakistan. *Knowledge, Evidence and Learning for Development.* 28 November. Brighton, UK: Institute of Development Studies.

5. SWM in KPK is poor because of a lack of proper infrastructure, equipment, and management capacity. Less than 30% of municipal solid waste produced is collected.[7] Pakistan is one of the 10 weakest countries in management of plastic waste in Asia.[8] Cities in KPK are also among the main contributors of plastic waste trapped in rivers and drains. Without large-scale and properly engineered sanitary landfills, collected waste is either burned or disposed of in open dumps, typically along rivers and drains, severely polluting the surrounding environment.

6. Caregiving and household work primarily fall to women. Unreliable and inadequate water supply and sanitation services increase women's time poverty and drudgery, and restrict their ability to access the economic opportunities and social benefits offered by urbanization. The overall green urban space allocation in KPK cities is estimated at 3.5%, which is below the recommended international norm of 15%–20%. This represents a missed opportunity to provide intrinsic environmental and aesthetic benefits to the urban population.[9] KPK cities are highly vulnerable to disasters triggered by natural hazards and climate change. Since 2010, KPK has experienced at least four major floods because of extreme climate events, causing economic loss and physical damage of urban infrastructure. The coronavirus disease (COVID-19) pandemic underscores the need for adequate social infrastructure to protect public health.

7. **Institutional challenges.** The Government of Khyber Pakhtunkhwa (GOKP) is promoting the decentralization and corporatization of municipal services to improve their operational efficiency and sustainability. In 2015, the GOKP established seven independent utility companies to take over the provision of water supply, wastewater, and SWM from local government institutions in seven primary cities in KPK. These water and sanitation services companies (WSSCs) are contracted under asset management arrangements. The WSSCs have begun introducing improvements by strengthening client relationships, increasing accountability in municipal services provision, and improving both the quality and the coverage of services through performance enhancement measures.

8. However, the WSSCs in KPK are relatively new and still face several start-up challenges. Existing tariffs are insufficient to sustain their operations, and the WSSCs require further assistance in improving the quality and coverage of their services. In the absence of technical and financial resources, the WSSCs have limited capacity to prepare and implement new projects, which has contributed to the low quality of feasibility studies, safeguards, and engineering designs for their municipal operations. Although the WSSCs have started reforming tariffs to support cost recovery on a trial basis, they will require additional support to rationalize tariffs, improve revenue collection, and strengthen commercial performance. Women's participation at WSSCs is negligible, with only a handful of women recruited for junior administrative positions, which restricts the ability of WSSCs to engage effectively with women clients. Overall, the WSSCs need support in (i) strengthening governance and developing sustainable business models; (ii) promoting effective outsourcing and partnership arrangements; (iii) building staff capacity; and (iv) improving the gender balance to better cater to the needs of their clients, especially women.

9. **ADB's engagement.** In November 2017, the Asian Development Bank (ADB), in partnership with the Urban Climate Change Resilience Trust Fund and the Cities Development Initiatives for Asia (CDIA), both under the Urban Financing Partnership Facility,[10] completed

[7] Government of Khyber Pakhtunkhwa (GOKP). 2019. *Sector Roadmap*. Peshawar.
[8] C.M. Laurent et al. 2017. River Plastic Emissions to the World's Oceans. *Nature Communications 8.* 15611 (2017).
[9] World Health Organization. 2010. *Urban Planning, Environmental Health: From Evidence to Policy Action*. Geneva.
[10] Financing partners for Urban Climate Change Resilience Trust Fund: the Rockefeller Foundation and the governments of Switzerland and the United Kingdom. CDIA donors include the governments of Austria, France, Germany, and Switzerland, as well as the European Union.

prefeasibility studies and climate change risk and vulnerability assessments. These studies form the basis of project scope and approaches. In March 2019, ADB financed the project readiness financing (PRF) facility to complete the detailed engineering designs, safeguard assessments, advanced procurement, and establishment and staffing of the project management unit (PMU). Consequently, the project meets all the project readiness requirements for immediate project implementation upon approval (paras. 16 and 36). ADB, in partnership with Japan Fund for Poverty Reduction, also processed a technical assistance for regional development plans using an integrated urban planning approach.[11]

10. In May 2020, ADB approved the allocation of the Asian Development Fund (ADF) 13 Thematic Pool resources for the project to directly support the Sustainable Development Goal 5 transformative gender agenda—especially by reducing unpaid care and domestic work and ensuring women's access to economic and productive resources. The project will improve households' access to water and sanitation services, which will ease women's domestic work, and provide women with safe access to urban green spaces. The project will also facilitate institutionalization of gender-sensitive policies and programs to enable the recruitment and retention of female technical workers in WSSCs. The ADF 13 grant enables the project to go beyond its project scope to (i) provide women with scholarship and internship support and enlarge the pool of female technical and professional workers in urban governance and water supply and sanitation; (ii) rehabilitate and upgrade the women's business development center (WBDC) in Kohat, which will provide training and support to women entrepreneurs; (iii) establish a women's technical training center, which will provide women with formal technical skills so they can find employment in the urban services sector; and (iv) facilitate the establishment of childcare facilities in WSSCs.

11. **Alignment with strategies.** The project supports the government's development priorities established in (i) the KPK Water Act (2020), (ii) the amended Local Government Act (2019), (iii) the Integrated Water Resource Management (IWRM) Strategy for KPK (2018), and (iv) Pakistan's Nationally Determined Contributions.[12] The IWRM strategy highlights the need to (i) improve spatial planning, (ii) address climate change, (iii) streamline municipal operation structures, and (iv) increase the role of public–private partnerships. The project is aligned with ADB's country partnership strategy for Pakistan, 2021–2025 and the Strategy 2030 operational priorities (OPs) of (i) addressing remaining poverty and reducing inequalities (OP1); (ii) accelerating progress in gender equity (OP2); (iii) tackling climate change, building climate and disaster resilience, and enhancing environmental sustainability (OP3); (iv) making cities more livable (OP4); and (v) strengthening governance and institutional capacity (OP6).[13] The project is also aligned with ADB's Action Plan for Healthy Oceans and Sustainable Blue Economies through its focus on the circular economy (recycle and reuse) and reducing riverine and marine plastic pollution.

B. Project Description

12. The project is aligned with the following impact: livability and community health in urban centers of KPK improved.[14] The project will have the following outcome: access to reliable and

[11] ADB. 2016. *Technical Assistance to the Islamic Republic of Pakistan for Provincial Strategy for Inclusive and Sustainable Urban Growth*. Manila.
[12] Government of Pakistan. 2016. *Pakistan's Intended Nationally Determined Contribution*. Islamabad.
[13] ADB. 2018. *Strategy 2030: Achieving a Prosperous, Inclusive, and Sustainable Asia and the Pacific*. Manila; and ADB. 2020. *Country Partnership Strategy: Pakistan, 2021–2025—Lifting Growth, Building Resilience, Increasing Competitiveness*. Manila.
[14] GOKP. 2019. *KPK Local Government Act, Amended, 2019*. Pakistan.

resilient urban services in Abbottabad, Kohat, Mardan, Mingora, and Peshawar improved.[15] The outcome will be achieved through three interlinked outputs.

13. **Output 1: Climate-resilient and gender-friendly urban infrastructure improved.** This output will comprise three subprojects: (i) water supply and sanitation, (ii) solid waste management, and (iii) green urban infrastructure. The water supply and sanitation subproject will include improvements and augmentation of more than 1,200 km of water supply and 156 km of sewerage network and household connection, and construction of two clean water supply treatment facilities, two sewage treatment facilities, and at least 10 tube wells. About 150,000 new households will be connected to water supply systems. To increase efficiency of operations and conserve water, about 150,000 smart water meters and supervisory control and data acquisition (SCADA) systems will be installed. The SWM subproject will include the development of primary and secondary waste collection systems and five third-generation integrated solid waste management (ISWM) facilities that support waste-to-energy conversion, material recovery, and waste reduction and recycling. The green urban infrastructure subproject will finance the development of green infrastructure to promote healthy and sustainable living environments. This subproject will also finance the rehabilitation of seven existing green spaces and nature trails, improvement of pedestrian sidewalks and streets, and conversion of one existing informal dumpsite to a park. Infrastructure under this output has been engineered to adapt to projected climate impacts, and will contribute to urban climate adaptation by improving the overall quantity and quality of water resources and reducing the impacts of floods. The green urban spaces will include women-friendly facilities such as women's sports complexes, family areas, and well-lit rest areas and toilets, as well as street beautification with streetlights and closed-circuit television cameras. The output 1 will significantly contribute to the overall improvement of environment and livability of the KPK cities.

14. **Output 2: Institutional capacity and gender inclusiveness of urban service providers, provincial government, and city governments strengthened.** Under this output, the project will finance (i) establishment of Khyber Pakhtunkhwa Municipal Regulatory Office (KPRO), a new and dedicated body to improve the regulatory and oversight mechanism of municipal services; (ii) launch of a financial sustainability action plan to introduce cost-recovery tariff programs based on a new set of service standards; (iii) development of enterprise resource planning (ERP) systems for the WSSCs to strengthen their operational systems and management of assets and resources; and (iv) improvement of a local government academy to train the staff of municipal service institutions, including WSSCs. These capacity-building initiatives will promote community ownership, also ensuring the sustainability of these investments. The project will capacitate communities and WSSCs in improving efficiency of operation and raising awareness and knowledge about adaptation, including reduction and management of waste, water conservation, increasing green cover in communities, and maintaining the efficacy of drainage systems to reduce flooding. New customer service functions will be established to increase participation of clients, especially women, in-service provision. A feedback mechanism will be set up to improve billing and complaint-handling systems, and an effective communication strategy will be prepared to promote behavior change in water, sanitation, and hygiene (WASH) practices that will contribute to COVID-19 recovery.

15. **Output 3: Women's participation in urban governance and access to economic opportunities increased.** This output will improve women's access to economic opportunities and increase their participation in urban governance and services. First, the WBDC in Kohat will

[15] All five cities are (i) divisional capitals in KPK, (ii) within top ten most populous cities of KPK, and (iii) have a functioning water and sanitation services company in place.

be rehabilitated and upgraded.[16] This center is a dedicated space for women's skills development and income-generating activities. It has a multipurpose community hall and exhibition center, an outdoor community recreational space, an area for selling home-based products, a day-care facility for working mothers, and a food-selling area. The project will implement a livelihood skills development program for women that includes training and materials support. Second, a scholarship program will be created for qualified female students to pursue education and research in urban development, engineering, environment, climate change, and similar fields. Third, the facilities of the Polytechnic Institute for Women in Peshawar will be equipped with better trained teaching staff and improved day-care facilities, transportation, and hostel facilities. Last, an extensive formal and on-the-job WASH and climate change training program for women will be provided. Outputs 2 and 3 will also support a new community-led climate adaptation and WASH initiative called "SAFA KHAR DA TOLO" (Clean City for All) within the new woman wings in WSSCs. The initiative will promote appropriate use of the project water and sanitation facilities and good hygiene practices at home and in the community.

16. **Lessons.** In financing 19 urban development and water projects in Pakistan from 1977 to 2017, ADB learned two key lessons.[17] First, it is important to achieve a high degree of project readiness before approval of ensuing projects. After approval and loan effectivity of urban projects, it takes time to complete and agree on detailed engineering designs and address environmental and social safeguard issues. This can cause significant implementation delays that affect project performance and delay delivery of benefits. The risk of subprojects being cancelled after project approval is also high because of the multiple layers of approval required and the competing interests and demands in the limited urban space. Reducing these risks requires a much higher degree of project readiness. Huge discrepancies in cost estimates between the feasibility and detailed engineering design stages have been observed because of social and location issues, which increases the chance that both ADB and the government will need to undertake onerous budget reallocations. The second key lesson concerns the importance of supporting institutional reform and capacity development. The absence of a viable operational plan and capacity of government and municipal service providers has jeopardized the sustainable operation of previous investments in Pakistan. Based on these lessons, ADB used its first PRF to prepare for the proposed project (para. 9). The use of technologies such as online surveys, video conferencing, and telephonic interviews has enabled the efficient completion of preparatory activities amid COVID-19-related lockdowns.

C. Innovation and Value Added by ADB

17. In March 2020, the GOKP formed a task force to explore viable innovations and technologies that could be adopted in the project.[18] Following the climate risk and vulnerability assessments, the GOKP completed climate change impact assessments on all project components. Results of these assessments were incorporated into the project design to make the project investment resilient to climate change impacts. Traditionally in Pakistan, utilities use waste-stabilization ponds for wastewater treatment, but these require large areas of land that is in short supply around most KPK cities. If not adequately managed, stabilization ponds can negatively impact the environment because of limited controls in their operating environment. The project will introduce Pakistan's first activated sludge and trickling filter plants, which are more

[16] The GOKP is already operating this center but the facility requires upgrading with additional management capacity.

[17] Independent Evaluation Department. 2013. *Country Assistance Program Evaluation: Pakistan: 2002–2012—Continuing Development Challenges*. Manila: ADB. The country assistance program evaluation includes desk reviews of available project completion reports, sector assessments, and other project reports.

[18] List of Adapted Innovations (accessible from the list of linked documents in Appendix 2). A total of 54 innovations were integrated into engineering designs.

controllable, have smaller carbon footprints, and are more acceptable to citizens. KPK cities are also quickly depleting groundwater resources through rapid urbanization and excessive use of tube wells. Under the project, groundwater sources will be replaced by new surface water facilities that are more environmentally sustainable and energy efficient. For existing water and sanitation systems, the project will provide more energy-efficient systems that offer lower operational costs. Water meters, SCADA, and ERP systems in WSSCs will help improve operations, conserve water, and reduce operational losses.

18. The project has adopted holistic, integrated SWM, and citywide inclusive sanitation approach. The SWM strategy will promote reducing, reusing, and recycling options through material recovery facilities for recyclable waste; production of biogas and compost from biodegradable waste; and disposal of residual waste in properly designed, constructed, and managed landfills that have a leachate control system. Marginalized groups that live off waste picking will be absorbed as formal employees of WSSCs and their operators, contributing to poverty reduction and employment. Smaller sources of greenhouse gas (GHG) emissions in KPK besides SWM include use of fossil fuels in vehicles and machinery, inefficient equipment and pumps, excessive energy waste, and use of groundwater sources. To further reduce GHG emissions in the province, the GOKP will introduce modern transport fleets, more efficient solid waste collection systems, and energy-efficient equipment.

D. Summary Cost Estimates and Financing Plan

19. The project is estimated to cost €563.747 million ($650 million equivalent) (Table 1).

Table 1: Summary Cost Estimates
(€ million)

Item			Amount [a]
A.	**Base Cost**[b]		
	1.	Output 1: Climate-resilient and gender-friendly urban infrastructure and services improved	449.492
	2.	Output 2: Institutional capacity and gender inclusiveness of urban service providers, provincial government, and city governments strengthened	15.434
	3.	Output 3: Women's participation in urban governance and access to economic opportunities increased	4.903
B.	**Contingencies**[c]		66.518
C.	**Interest During Implementation**		27.400
	Total (A+B)		**563.747**

[a] Includes taxes and duties of about €20.815 million ($24 million equivalent). Such amount does not represent an excessive share of the project cost.
[b] In mid-2021 prices as of 15 May 2021.
[c] Physical contingencies computed at 10% for all cost categories. Price contingencies computed at average of 1.7% of foreign exchange costs and 6.4% on local currency costs; includes provision for exchange rate fluctuation.
Sources: Asian Development Bank and Government of Khyber Pakhtunkhwa estimates.

20. The government has requested a regular loan of €329.575 million ($380 million equivalent) from ADB's ordinary capital resources to help finance the project.[19] The loan will have a 30-year term, including a grace period of 5 years; an annual interest rate determined in accordance with ADB's regular lending facility, a commitment charge of 0.15% per year, and such other terms and conditions set forth in the draft loan and project agreements. Based on the custom-tailored repayment method, the average maturity is 18.98 years, and the maturity premium payable to

[19] €0.867303 = $1.00 as of 15 October 2021. The loan will be denominated in Euros.

ADB is 0.20% per year. The government has also requested a grant not exceeding $5 million from ADB's Special Funds resources (ADF) to help finance the project.

21. The government has also requested a loan not exceeding $200 million equivalent from AIIB to help cofinance the project. The AIIB loan is expected to have a 20-year term, including a grace period of 6 years, an annual interest rate determined in accordance with AIIB's sovereign-backed loan pricing, a commitment charge of 0.25% per year, a one-time front-end fee of 0.25% charged to the loan principal, and such other terms and conditions to be set forth in the draft loan agreement between the government and AIIB. ADB will partially administer the AIIB loan.[20]

22. The summary financing plan is in Table 2. ADB will finance the expenditures in relation to (i) civil works; (ii) equipment; (iii) environment and social mitigation measures, including land acquisition and resettlement costs; (iv) consulting services; (v) taxes and duties; and (vi) other expenditures as justified during project implementation. The government will finance part of the social and environmental mitigation costs, and the project contingencies. The Islamic Republic of Pakistan (borrower) will relend the loan proceeds to the GOKP on the same terms and conditions and will make the proceeds of the ADF grant available to GOKP. The grant from Special Funds resources (ADF) will finance (i) establishment of women wings in WSSCs, (ii) the WBDC in Kohat, and (iii) scholarship and internship programs for women. Disbursements will be made based on different ratios specified for each cost category.

Table 2: Summary Financing Plan

Source	Amount (€ million)	Share of Total (%)
Asian Development Bank		
Ordinary capital resources (regular loan)	329.575	58.4
Special Funds resources (Asian Development Fund 13 Thematic Pool)[a]	4.337	0.8
Asian Infrastructure Investment Bank[b]	173.461	30.8
Government of Khyber Pakhtunkhwa	56.375	10.0
Total	**563.747**	**100.0**

Note: Numbers may not sum precisely because of rounding.

[a] $1 = €0.867303 as of 15 October 2021.

[b] Figure is estimated based on the exchange rate. Joint and contractual cofinancing to be partially administered by the Asian Development Bank.

Sources: Asian Development Bank and Government of Khyber Pakhtunkhwa estimates.

23. Climate mitigation is estimated to cost $122.92 million and climate adaptation is estimated to cost $38.94 million. ADB will finance 66.0% of adaptation and mitigation costs. The climate adaptation measures, incorporated in the design of all components, account for expected increases in temperatures and changes in rainfall patterns that will increase water demand, decrease groundwater and surface water availability, increase flood risks, and impact the performance of waste digestion processes and materials used in construction.

24. Project investment in recycling and treating solid waste; conversion of water sources to surface water, energy efficiency option as backup system for water pumping, and light-emitting diode (LED) lights; and harvesting energy from refuse-derived fuel combustion will contribute to climate mitigation. It is estimated that GHG emissions will be reduced by 249,890.70 tons of carbon dioxide equivalent annually in the project areas.

[20] AIIB will enter into separate loan agreement with the Government of Pakistan. These terms are indicative and subject to the negotiation and conclusion of such loan agreement. ADB's partial administration will entail oversight with respect to procurement, safeguards, and disbursement.

E. Implementation Arrangements

25. The Local Government, Elections and Rural Development Department (LGE&RDD) of the GOKP will be the executing and implementing agency for the project, supported by the WSSCs of the five target cities (footnote 1). The PMU, established in June 2019, will be expanded with dedicated, long-term incremental staff, secondees of senior staff from the LGE&RDD, and new consultants for technical, financial, and safeguard due diligence, and procurement support. The PMU will be responsible for project implementation under the overall guidance of the executing agency and will coordinate the project's implementation at the provincial level with the five city implementing units (CIUs) that will be established on the premises of the WSSCs. The PMU and the provincial government will be responsible for strategic oversight at the city level, and the WSSCs within the respective cities through their CIUs will be responsible for the day-to-day project implementation and contract management. Implementation arrangements are summarized in Table 3 and described in detail in the project administration manual (PAM).

Table 3: Implementation Arrangements

Aspects	**Arrangements**		
Implementation period	January 2022–December 2027		
Estimated completion date	31 December 2027		
Estimated loan closing date	30 June 2028		
Management			
(i) Oversight body	**Project Steering Committee** will decide strategic project directions and higher-level agenda at provincial level. **Central Project Administration and Management Committee** will decide routine day-to-day operational issues at provincial level. **Project Administration and Management Committee** will decide operational issues at city level.		
(ii) Executing agency	LGE&RDD, GOKP		
(iii) Key implementing agencies	LGE&RDD, GOKP, Five WSSCs (Abbottabad, Kohat, Mardan, Mingora, Peshawar) and project management unit		
(iv) Implementation unit	Five city implementing units established in WSSCs in Abbottabad, Kohat, Mardan, Mingora, and Peshawar		
Procurement	Open competitive bidding (international)	23 contracts	$455.0 million
	Open competitive bidding (national)	5 contracts	$23.0 million
	Request for quotations	Multiple contracts	$0.5 million
Consulting services	QCBS (90:10)	4 contracts	$17.3 million
	Single-source selection[a]	1 contract	$20.0 million
	Individual consultant selection	Multiple positions	$2.0 million
Retroactive financing and advance contracting[b]	Civil works, equipment, and consultant recruitment are proposed for advance contracting and retroactive financing and, in the case of the ADB loan and grant, subject to a maximum of 20% of the ADB loan amount and grant amount for such expenditures incurred up to 12 months prior to the date of signing of the ADB loan and grant.		
Disbursement	Disbursement of the ADB loan, grant, and administered cofinancing proceeds will follow ADB's *Loan Disbursement Handbook* (2017, as amended from time to time) and detailed arrangements agreed between the GOKP, ADB, and cofinancier.		

ADB = Asian Development Bank; GOKP = Government of Khyber Pakhtunkhwa; LGE&RDD = Local Government; Elections and Rural Development Department; QCBS = quality- and cost-based selection; WSSC = water and sanitation services company.

[a] Engineering design and construction management contract will be awarded to the same consultant of the phase 1 contract funded under the PRF, through direct contracting, subject to satisfactory performance of the phase 1 consultant (PRF paper footnote 5 and para. 16).
[b] Eight packages including two goods, four works, and two consulting services are for advance procurement.
Sources: Asian Development Bank and the Government of Khyber Pakhtunkhwa.

III. DUE DILIGENCE

A. Technical

26. Technical due diligence was carried out on the feasibility studies and detailed engineering designs for the proposed civil works using the integrated urban design principle and citywide sanitation planning. The GOKP also engaged with the third party design review consultants to conduct independent reviews of all engineering designs. These processes confirmed that infrastructure designs are in line with the relevant national codes and standards.

27. An essential feature of all subprojects is that they provide integrated and end-to-end solutions for service delivery in accordance with the planning frameworks of the cities, wherever these were available or in advance stages of preparation. Hydrological studies confirmed the sustainability of the surface sources for the water supply of Abbottabad and Mingora. Optimal treatment processes for water and wastewater were proposed based on the quality of water to be treated and the surrounding ecosystem. A conventional treatment process comprising coagulation, flocculation, and filtration followed by disinfection was found suitable to treat this raw water for potable use in Abbottabad and Mingora. Rapid groundwater depletion is another major concern in Abbottabad and Mingora, since the rate of abstraction is higher than the rate of recharge. Using surface water instead of groundwater will alleviate these issues and ensure sustainable water supply for the residents of these two cities. KPK's depleted water network is the major source of water contamination and loss in the province. Major portions of the water distribution networks will be replaced in four KPK cities. This will control technical losses in the system and ensure pressurized flows, which in turn will enhance water quantity and quality. Significant energy savings are expected to result from better leakage control, metered consumption, and energy-efficient equipment. Similarly, a sewer network has been designed to minimize the requirement of pumping stations (using gravity schemes) to reduce energy consumption and GHG emissions.

28. SWM subprojects have been designed to reduce, recover, and recycle waste. Given the scarcity of available land in urban areas, solid waste disposal systems have been designed to minimize residual waste earmarked for landfills, thus maximizing the life of the facilities, and ensure full utilization of whatever is economically recoverable. Similarly, landfill site selection and design features were guided by a range of technical assessments including a review of international best practices; consultation with local communities, especially vulnerable groups; assessment of geology, surface, and subsurface hydrology; ecological and environmental assessments; and climate change considerations. The project will contribute to post–COVID-19 recovery by improving social infrastructure, increasing economic opportunities, and promoting healthy lifestyles.

B. Economic and Financial Viability

29. An economic analysis of the project was conducted in accordance with ADB guidelines.[21] The analysis shows that the project is economically viable, with components that have major

[21] ADB. 2017. *Guidelines for the Economic Analysis of Projects*. Manila.

quantifiable and nonquantifiable benefits. Income loss during sick days and flood days, costs for treating waterborne diseases and wastewater, and flood damage to infrastructure will be avoided. The project will also help reduce GHG emissions, save time in trash disposal, and encourage residents to pay for improved SWM. The estimated overall economic internal rate of return is 14.1%, which is higher than the ADB economic opportunity cost of capital of 9.0%.[22]

30. Because of the COVID-19 pandemic, the GOKP carried out a socioeconomic survey using online survey services (SurveyMonkey) and social media rather than through physical face-to-face interviews.[23] The survey results confirmed that people in KPK are willing to pay more for improved municipal services. The fiscal viability of the project was also assessed through consultations with WSSCs and desk reviews of the projected financial performance of WSSCs. These assessments indicate that the annual operating costs of WSSCs average $20 million, provided as revenue grants through budgetary transfers from the provincial government. Although the financial sustainability of urban services may still depend on budgetary transfers, such transfers are expected to decrease over time. Hence, the project is designed to generate incremental revenue by expanding service area coverage, volume-based metered service using smart metering technologies, outsourcing the operation of revenue-earning components like composting and biogas plants to the private sector. The GOKP has also approved an institutional reform and capacity development road map that aims to improve the operational and financial sustainability of WSSCs. Ways to incrementally increase WSSC revenues include revising tariff structures, rationalizing operating and administrative costs, improving service standards, installing about 150,000 water meters, and reducing nonrevenue water in district-metered areas. However, incremental revenues are not likely to result in net positive cash flows because tariff levels will remain below cost recovery. Accordingly, the financial internal rate of return calculation was not considered relevant. The fiscal capacity of the provincial government to fund net incremental operation and maintenance (O&M) costs was assessed. The analysis revealed that the provincial government can adequately fund the WSSCs, while institutional review and capacity-building (IRCB) reforms are likely to improve the scale of WSSCs' revenues. In view of these considerations, the project is assessed to be financially viable.

C. Sustainability

31. Sustainability challenges facing the project include (i) low capacity of municipal operators for O&M, (ii) lack of quality independent oversight of municipal services and standards of operations, and (iii) lack of cost recovery for municipal services where applicable. Outputs 1 and 2 of the project focus on municipal infrastructure gaps, and improving the quality and efficiency of the operations to reduce the cost of services. In April 2019, the GOKP approved the amended Local Government Act to make provincial local government systems more efficient, responsive, and accountable. The project will support the GOKP to implement the actions described in the act. For instance, the project will finance the establishment of oversight body that will develop service standards and introduce cost-recovery tariffs. To support capacity development, the Local Government Academy, a training institution for the LGE&RDD and the WSSCs, will be strengthened and revitalized. The academy will provide capacity development programs using a blended approach of classroom learning, online courses, and on-the-job mentoring of WSSC management and board. The academy will also provide specialized training to WSSC staff in finance, billing, revenue, O&M, planning and design, asset management, ERP, construction management, customer relations, and more. These in-service courses will be linked to career

[22] Financial Analysis and Economic Analysis (accessible from the list of linked documents in Appendix 2).

[23] The willingness-to-pay survey was carried out in May 2021 in coordination with the GOKP, PMU, and the ADB team. A total of 550 people in KPK responded. Affordability analysis was also undertaken to support the survey.

progression within WSSCs. Under the gender components (output 3), the project will support research and development by funding internship programs targeting women to improve the quality of the workforce and bring new talent into the WSSCs. These internships will be institutionalized in the WSSC human resource departments to ensure sustainability and replicability in similar companies. WSSCs will start twinning program with other municipal service providers to facilitate cross fertilization of ideas.[24]

32. The GOKP approved the Institutional Reform Roadmap to be implemented under the project.[25] The road map's main component is the establishment of the KPRO to regulate and supervise water supply, sanitation, and SWM services in KPK. The project will support capacity development of the KPRO. During PRF implementation, the GOKP also prepared operational plans that define performance benchmarks and service standards for all WSSC operations. The project will support the implementation of these operational plans and will establish benchmarks for service quality. A financial sustainability action plan outlining the current and projected revenues, consumer surveys, operational costs, and cost-recovery tariffs of each type and level of services will be developed for all WSSCs. The financial sustainability action plan will be reinforced by the IRCB reforms under the PRF and will form the basis for an independent review of operations, regulations, and tariff setting for WSSCs by the KPRO once established.

D. Governance

33. The PRF facility has proven to be effective in mitigating the potential risks of ensuing projects in financial management, fiduciary, and procurement. The PMU staff have gained project implementation experience and have participated in ADB training programs in procurement and financial management. The PRF facility's performance has been rated *on track*, meeting all performance rating criteria.

34. **Financial management.** ADB carried out a financial management assessment of the PMU and WSSCs. The assessed pre-mitigation financial management risk is *substantial,* largely because of the project's wide geographic spread and large scale. The assessment concluded that the PMU has sufficient experience in managing ADB projects, including development of financial management guidelines and proper documentations of all transactions. However, the PMU requires additional financial management staff given the expected volume and complexity of incremental financial management activities. The implementing bodies (i.e., the WSSCs) were also found to possess adequate departmental financial management structures and policies. Procedures are adequately designed and documented. However, significant delays in the appointment of the board of directors, high financial management staff turnover, a general absence of financial management staff and internal audit functions, delays in the finalization of entity-level audits, and a lack of experience in managing ADB-funded projects make the overall pre-mitigation financial management risk of WSSCs *substantial*.

35. To mitigate financial management risk, the GOKP agreed to centralize project financial management and funds flow at the PMU. The GOKP has agreed to allocate additional human resources for project financial management. The GOKP will also prepare a financial management action plan to strengthen the PMU's financial management governance, systems and internal controls, staff resources, and accountability arrangements. In parallel, engagement with WSSCs will be continued to build sustainable governance and financial management capacity in the medium term. The IRCB reforms will continue to support WSSCs in implementing these actions.

[24] For instance, Maynilad Water in the Philippines and Macau Water have staff capacity development programs.
[25] The GOKP approved the road map on 10 June 2021 and it is included as part of PC-1 for the project.

The financial management action plan has been included in the PAM (footnote 21), which will provide more localized financial management options at the city level during implementation.

36. **Procurement.** Supported by the PRF, the GOKP has completed the detailed engineering designs, bills of quantities, terms of reference for consultants, and procurement documents and master bidding documents. The PMU was established in September 2019, and has been exposed to ADB operations, including procurement. The project has already achieved high procurement readiness with the commencement of six out of 11 bidding documents and two consultant recruitments for advance procurement (worth about 75% of total ADB financing) for 2021–2022 procurement. Despite the high procurement readiness, the overall procurement risk is assessed as *high* mainly because of the large volume of subprojects and contract managements across five cities. As additional mitigation measures, the GOKP agrees to (i) increase procurement staff positions to support the PMU, (ii) engage external consultant firms to oversee and support the PMU (including preparation and prior review of all bidding documents and contracts), and (iii) build procurement good practices in coordination with ADB.[26] All procurement of civil works, goods, and consulting services will follow the ADB Procurement Policy (2017, as amended from time to time), and the Procurement Regulations for ADB Borrowers (2017, as amended from time to time).

37. **Anticorruption measures.** Pakistan ranked 124 out of 180 countries in the 2020 Corruption Perceptions Index of Transparency International.[27] The provincial governments of Pakistan are responsible for legislations in their respective provinces. Since 2013, there have been several legislative efforts to combat corruption in KPK. Under the PRF, ADB performed integrity due diligence of the executing agency and implementing agencies and found no significant risks. ADB's Anticorruption Policy (1998, as amended to date) was explained to and discussed with the government and the WSSCs. The specific policy requirements and supplementary measures are described in the PAM. Based on integrity due diligence and risk assessments, several mitigation measures have been adopted, including (i) regular update of the project website and social media to enhance transparency of the project; and (ii) establishment of a grievance redress mechanism (GRM) to ensure effective resolutions of grievances, if any.

E. Poverty, Social, and Gender

38. The project will benefit about 3.5 million people in five KPK cities, of which an estimated 10% are poor.[28] The project will improve water supply and sanitation services to reduce the incidence of waterborne disease and household health expenses and implement ISWM operations to improve the health of citizens and the value of assets. The project design adopts an inclusive approach and pro-poor features. Key design elements include (i) subsidized tariffs for municipal services provided for poor, vulnerable, and low-income households from socially excluded classes and vulnerable segments of the population;[29] (ii) the Clean City for All initiative for promoting water conservation, SWM, and green practices, which will be offered to women and youth including poor and low-income households (para. 15); (iii) scholarships and internship

[26] ADB. 2017. *Report and Recommendation of the President to the Board of Directors: Proposed Loan to the Islamic Republic of Pakistan for the Punjab Intermediate Cities Improvement Investment Project*. Manila. Under a proposed twinning arrangement, the project administration unit of the Punjab project will share good procurement practices with the project team of the Khyber Pakhtunkhwa Cities Improvement Project.

[27] Transparency International. 2021. *Corruption Perceptions Index 2020*. Berlin.

[28] Government of Pakistan, Ministry of Planning, Development and Reforms. 2016. *Multi-Dimensional Poverty*. Islamabad.

[29] Socially excluded and vulnerable segments of the population include minorities, households headed by women, poor, and people with disabilities.

programs for women (para. 15); and (iv) preference of local laborers and communities for semiskilled or unskilled jobs for construction works.

39. **Gender.** Gender equality issues addressed by the project include (i) lack of access to 24/7 safe water supply and sanitation services, which makes it difficult for women, especially poor women, to do household work; (ii) limited women's participation in urban water supply and sanitation because the WSSCs and other urban sector companies are predominantly staffed by men; and (iii) low women's urban labor force participation, reaching only 8% in KPK. Pakistan also has one of the lowest rates of women entrepreneurs in the world—only 8% of micro, small, and medium-sized enterprises are owned by women. Categorized as *gender equity theme*, the project will (i) provide households in project KPK cities with 24/7 clean water supply and sanitation services; (ii) increase the number of women technical employees in WSSCs and WSSC boards, and support the development of gender policies at WSSCs; (iii) provide scholarship and internship opportunities for female students in science, technology, engineering, and related courses for potential employment in technical positions; (iv) construct a WBDC with a livelihood training program; (v) establish a Community Incentive Fund to support women entrepreneurs in setting up green businesses; and (vi) upgrade a technical training institute to promote women's formal technical skills training. The ADF 13 gender thematic pool grant will finance the scholarship for women and girls; the construction of the WBDC and rehabilitation of the Polytechnic Institute for Women, including development of their training programs; and the establishment of the Community Incentive Fund.

F. Safeguards

40. In compliance with ADB's Safeguard Policy Statement (2009), the project's safeguard categories are as follows.[30]

41. **Environment (category A).** The GOKP prepared the environmental safeguards documentation to meet the requirements of both the KPK Environmental Protection Agency and ADB's Safeguard Policy Statement. Four draft environmental impact assessments (EIAs) for the ISWM facilities were disclosed in March 2021. The ISWM facilities may cause site-specific adverse environmental impacts on air, water, and land quality. The measures proposed in the EIAs are to offset any adverse environmental impacts resulting from ISWM operations. The overall impact of ISWM operations will be positive, with net reductions in GHG emissions to be achieved during operations estimated at 250,630 tons of carbon dioxide equivalent per year. In addition to preparing the EIAs, the GOKP also prepared eight initial environmental examinations (IEEs) for water supply, sewage treatment plants, and green urban space subproject that includes converting a landfill to a park. Environmental management plans (EMPs) were prepared to cover all subprojects including *category C* subprojects.

42. The potential impacts from all subprojects have been assessed to be site-specific, and most of them can be readily mitigated and minimized using effective design changes, housekeeping during implementation, and effective controls during facility operations. Under the PRF, the GOKP organized a series of stakeholder consultations, and the community views were incorporated into the EIAs, IEEs, EMPs, and project designs. Meaningful engagement with communities will continue during project implementation. The EIAs, IEEs, and EMPs will be included as part of the bid and contract documents, and disclosed on the ADB and project websites. These documents will also be disclosed using local language. No contract will be awarded until ADB approves the updated or final EIAs, IEEs, and EMPs. Prior to execution of civil

[30] ADB. Safeguard Categories.

works, contractors will prepare site-specific EMPs, which will be approved by the PMU and cleared by ADB. All statutory clearances and no objections must be obtained prior to the commencement of construction activities. Grievances will be handled following the project GRM and details provided in the EIAs, IEEs, and EMPs.

43. **Involuntary resettlement (category A).** A consolidated social due diligence report screened all 24 subprojects for involuntary resettlement impacts. Fifteen subprojects were assessed as not having any involuntary resettlement impact, while nine subprojects have varying degrees of land acquisition and resettlement impacts. About 215.24 acres of private land comprising 30.43 acres of agriculture land and 184.81 acres of barren land will be required. An estimated 10,856 persons will be affected. Of these, 21 households (with 143 members) will likely lose 10% or more of their agriculture land. All others will lose barren land only. Six households, totaling about 40 individuals, living within the buffer zone of one integrated landfill site may need to relocate. Although the number of severely affected persons is fewer than 200, there is a risk that additional impacts may arise given the location and alignment of the subprojects (urban, near settlements, and in busy commercial areas). Based on the detailed engineering designs, the GOKP prepared and disclosed land acquisition and resettlement plans (LARPs) and corrective action plans to address involuntary resettlement issues arising from the project. The GOKP will update these documents after completing the independent valuation study and issuance of displaced person acquaintance roll from the Revenue Department.

44. The GOKP also prepared a land acquisition and resettlement framework (LARF) to address identified and unanticipated impacts that may arise during project implementation. The GOKP issued the notification of Section 5 under Pakistan's Land Acquisition Act for three subprojects as part of the normal land acquisition procedures. These safeguard documents have been disclosed on the project website and also shared with affected persons. Implementation-ready plans will be a condition for contract award, while commencement of civil works will be conditional on full disbursement of compensation payments and assistance according to the approved LARPs or corrective action plans as verified in a compliance report. The project will include internal and external resettlement monitoring for the entire project implementation period. The GOKP will disclose semiannual social monitoring reports in the project website. The project management and construction supervision consultants to be hired under the project are responsible for supporting CIUs in strengthening safeguard capacity and day-to-day implementation, periodic monitoring of LARPs, and management of the project-based GRM.

45. **Indigenous peoples (category C).** A consolidated social due diligence report assessed the impact on indigenous peoples through documentary reviews, field visits, and consultations with locals in the subproject areas. No impacts on indigenous peoples, involving direct or indirect impacts to the dignity, human rights, livelihood systems, territories, or natural and cultural responses that are used, owned, or occupied by indigenous peoples, is anticipated per ADB's Safeguard Policy Statement. The project has been classified *category C* for indigenous peoples.

G. Summary of Risk Assessment and Risk Management Plan

46. The PRF has helped the GOKP mitigate risks substantively.[31] The PMU has been established and its key staff have gained operations experience. The PMU has also prepared all procurement documents and safeguard assessments, reducing operational risks. There are several *substantial* risks because of the project's large scale and geographic spread (Table 4).[32]

[31] ADB. Pakistan: Khyber Pakhtunkhwa Cities Improvement Projects – Project Readiness Financing.
[32] Risk Assessment and Risk Management Plan (accessible from the list of linked documents in Appendix 2).

Table 4: Summary of Risks and Mitigating Measures

Risks	Mitigation Measures
Financial management is weak.	GOKP will (i) centralize project financial management at the PMU, (ii) allocate additional human resources, and (iii) undertake a financial management action plan.
Capacity development activities are delayed.	Incentive schemes will be devised in the capacity-building programs to ensure that these are carried out as planned.
Procurement risk still exists.	GOKP will (i) increase PMU staff, (ii) recruit additional national and international procurement experts, and (iii) engage external consulting firm for oversight and support.
GOKP approvals are delayed.	Project implementation will follow a realistic schedule. Working with ADB's Pakistan Resident Mission, the project team will liaise closely with relevant counterparts.

ADB = Asian Development Bank, GOKP = Government of Khyber Pakhtunkhwa, PMU = project management unit.
Source: ADB.

IV. ASSURANCES

47. The Government of Pakistan and the GOKP have assured ADB that implementation of the project shall conform to all applicable ADB requirements, including those concerning anticorruption measures, safeguards, gender, procurement, consulting services, financial management, and disbursement as described in detail in the PAM and loan documents.

48. The government and the LGE&RDD have agreed with ADB on certain covenants for the project, which are set forth in the draft loan agreement, grant agreement, and project agreement. The conditions for withdrawal are execution of the AIIB loan agreement and resolution of the auditor general's audit observations on the 2020 project financial statements for the PRF facility.

V. RECOMMENDATION

49. I am satisfied that the proposed loan and grant would comply with the Articles of Agreement of the Asian Development Bank (ADB) and recommend that the Board approve:

(i) the loan of €329,575,000 to the Islamic Republic of Pakistan for the Khyber Pakhtunkhwa Cities Improvement Project, from ADB's ordinary capital resources, in regular terms, with interest to be determined in accordance with ADB's regular lending facility; for a term of 30 years, including a grace period of 5 years; and such other terms and conditions as are substantially in accordance with those set forth in the draft loan and project agreements presented to the Board; and

(ii) the grant not exceeding $5,000,000 to the Islamic Republic of Pakistan, from ADB's Special Funds resources (Asian Development Fund), for the Khyber Pakhtunkhwa Cities Improvement Project, on terms and conditions that are substantially in accordance with those set forth in the draft grant and project agreements presented to the Board.

Masatsugu Asakawa
President

19 November 2021

DESIGN AND MONITORING FRAMEWORK

Impact the Project is Aligned with Livability and community health in urban centers of Khyber Pakhtunkhwa Province improved[a]			
Results Chain	**Performance Indicators**	**Data Sources and Reporting Mechanisms**	**Risks and Critical Assumptions**
Outcome Access to reliable and resilient urban services in Abbottabad, Kohat, Mardan, Mingora, and Peshawar improved	By 2028: a. At least 800,000 people, of which 400,000 are female, have access to piped water supply system (2021 baseline: 247,000 people, of which 124,000 are female) (OP 2.1.4; OP 4.1; OP 4.1.1) b. At least 180,000 people, including 90,000 women, are served by sewerage network connected to new wastewater treatment system (2021 baseline: 19,880 people) (OP 2.1.4; OP 4.1.1) c. At least 250,000 households received door-to-door solid waste collection services (2021 baseline: 0) (OP 4.1.1) d. At least 35% reduction in time spent by women and girls in the collection, storing, and treatment of water (2021 baseline: 76 minutes per day) (OP 2.4) e. At least 90,000 people visit renovated green urban spaces annually, of which 50% are female (2021 baseline: 0) f. Greenhouse gas emissions reduced to 177,109 tCO2e/year in the project area (2021 baseline: 427,000 tCO2e/year) (OP 3.1) g. At least 50% of the 270 women beneficiaries of project scholarships, research scholarships, and internships gained employment in urban water supply and sanitation (2021 baseline: 0) (OP 2.1.1) h. Number of residents' reporting problems with their household water supply services declines to 25% in four project cities (2020 baseline: 58%) (OP 4.1)	a.–h. Project progress reports, WSSC and city government records, project monitoring reports (all reports are prepared annually in Q1 of each year)	R: Poor water resource management and uncontrolled abstraction by other users outside project domains lead to decreased water supply at source. R: Government approval delays. A: Asian Infrastructure Investment Bank financing of $200 million remains available for delivery of outputs 1 and 2. A: Communities' acceptance and ownership for integrated solid waste management.
Outputs 1. Climate-resilient and gender-friendly urban infrastructure and services improved	By 2027: 1a. Clean water supply capacity of WSSCs increased to 400,000 m^3 daily (2019 baseline: 238,443 m^3/day) (OP 4.1.2) 1b. About 1,200 km of new water distribution network installed, and 550 km of existing network rehabilitated (2019 baseline: 550 km) (OP 4.1.2) 1c. 150,000 smart meters installed (2019 baseline: 0) (OP 4.1.2)	1a.–g. Project progress reports, WSSC and city government records, and project records (annual reporting)	R: Water sources and reservoirs are unable to keep up with demand. R: Procurement risks remain substantive. A: No delays in providing land for landfill sites and water filtration and

Results Chain	Performance Indicators	Data Sources and Reporting Mechanisms	Risks and Critical Assumptions
	1d. Cumulative sewage treatment capacity of 30,000 cubic meters daily achieved with construction of 2 new sewage treatment plants (2021 baseline: 0) (OP 4.1.2) 1e. 156 km of new sewerage pipes installed (2021 baseline: 0 km) (OP 4.1.2) 1f. Solid waste treatment capacity of at least 2,000 tons daily achieved with modern solid waste management facilities constructions (2021 baseline: 0 facilities) (OP 4.1.1; OP 4.1.2; OP 4.3.1) 1g. 1.6 km^2 of gender-friendly and climate-resilient urban spaces and parks established[b] (2021 baseline: 0) (OP 2.1.4; OP 4.1.2; OP 2.4.1)		sewage treatment plants.
2. Institutional capacity and gender inclusiveness of urban service providers, provincial government, and city governments strengthened	By 2027: 2a. Nonrevenue water reduced to 30% of total water produced (2021 baseline: estimated at 45%)[c] (OP 4.2) 2b. New tariff scheme formulated and adopted by WSSCs (2021 baseline: Not applicable) (OP 4.2.1) 2c. An estimated 150 district metered areas with SCADA system for water supply commissioned (2021 baseline: 0) 2d. Gender-inclusive human resources policies and procedures developed and adopted for 5 WSSCs (2021 baseline: 0) (OP 4.2.1; OP 4.2.2; OP 2.3.2) 2e. At least 20% of board members in each WSSC are women (2021 baseline: 3%) (OP 2.3) 2f. Performance and service benchmarks for key urban services, with sex-disaggregated targets approved for 5 WSSCs (2021 baseline: 0) (OP 6.3) 2g. At least 50% of the target population reached through consultations and awareness-raising campaigns are women (2021 baseline: 0) (OP 4.2.1; OP 4.2.2)	2a.–g. WSSC, GOKP, project progress reports (annual reporting)	R: Political commitment for institutional reforms wanes over time. R: The proposed regulator for water services lacks adequate and qualified professionals. A: The existing service and asset management agreements with the WSSCs are revised to make them more focused with well-defined and measurable targets. A: WSSCs can exercise the administrative and financial powers given to them as per applicable legislation, rules, and regulations.
3. Women's participation in urban governance and access to economic opportunities increased	By 2027: 3a. 1 WBDC in Kohat constructed and 1 technical training institute for girls in Peshawar upgraded (2020 baseline: 0) (OP 2.4.1) 3b. At least 100 WBDC business development trainees provided with materials and technical training have set up	3a.–d. WSSC, GOKP, project progress reports (annual reporting)	R: The government's COVID-19 containment measures (such as bans on social gatherings) may delay training and social mobilization activities.

Results Chain	Performance Indicators	Data Sources and Reporting Mechanisms	Risks and Critical Assumptions
	their own businesses (2020 baseline: 0) (OP 2.2.1) 3c. At least 100 women entrepreneurs have established green enterprises[d] with the material and business under the Community Incentive Fund established by the project[e] (2020 baseline: 0) (OP 2.4.1) 3d. At least 55 female beneficiaries of the project's scholarship program earned university degrees in fields related to urban water supply and sanitation (2020 baseline: 0) (OP 2.2.1)		R: Sociocultural norms and values may impede participation of women and girls in project activities.

Key Activities with Milestones

1. Climate-resilient and gender-friendly urban infrastructure and services improved

Water supply and sanitation subproject

1.1 Start procurement of water treatment plants (Q3–Q4 2021).
1.2 Sign contract (Q2 2022).
1.3 Start procurement of water resource development subprojects (Q3 2021).
1.4 Construct water and sewerage network (Q4 2024).
1.5 Implement nonrevenue water management (Q3 2027).
1.6 Construct wastewater treatment plants (Q1 2027).

Solid waste management subproject

1.7 Start procurement of landfill sites and equipment (Q2 2022).
1.8 Sign contract (Q1 2023).
1.9 Construct primary and secondary collection and sanitary disposal facilities (Q4 2026).
1.10 Start program for waste reduction and recycling and waste-to-energy conversion (Q4 2026).
1.11 Construct sanitary (engineered) landfill sites (Q1 2027).

Green urban infrastructure subproject

1.12 Start procurement of green urban spaces and equipment (Q4 2021).
1.13 Sign contract (Q2 2022).
1.14 Rehabilitate existing green urban spaces, riverside trails, parks (Q1 2025).

2. Institutional capacity and gender inclusiveness of urban service providers, provincial government, and city governments strengthened

2.1 Start consultant recruitment (Q1-Q2 2022).
2.2 Strengthen capacity of WSSCs and local government (Q4 2022).
2.3 Implement citizen satisfaction surveys and technical baseline surveys by WSSCs (Q2 2022).
2.4 Map geographic information system for asset management and install SCADA (Q3 2022)
2.5 Develop and implement time-bound financial sustainability action plans for WSSCs (Q4 2022).
2.6 Promote and support environmentally sound technologies (Q2 2023).
2.7 Complete governance and regulatory reforms to increase efficiency of urban service operations (Q3 2027).

3. Women's participation in urban governance and access to economic opportunities increased

3.1 Complete recruitment of gender specialist of project management unit (Q1 2022).
3.2 Award civil works contract for WBDC, Kohat (Q1 2023).
3.3 Complete orientation of WSSC staff, gender staff, and consultants on gender-inclusive water, sanitation, and hygiene; solid waste management; and social mobilization (Q2 2027).
3.4 Engage community, and design and commence incentive fund (Q4 2023).
3.5 Design and roll out scholarship and internship program (Q2 2023).
3.6 Establish small green enterprises owned by women (Q3 2027).
3.7 Complete rehabilitation of Polytechnic Institute for Women in Peshawar (Q4 2025).

3.8 Complete the scholarships and research program (Q4 2027).
Inputs Asian Development Bank: €329.575 million ($380.000 million equivalent) (loan) Asian Development Fund 13 Thematic Pool resources: $5.000 million (grant) Asian Infrastructure Investment Bank: $200.000 million equivalent Government of Khyber Pakhtunkhwa: €56.375 million ($65.000 million equivalent)

A = assumption, COVID-19 = coronavirus disease, GOKP = Government of Khyber Pakhtunkhwa, km = kilometer, km^2 = square kilometer, m^3 = cubic meter, OP = operational priority, Q = quarter, R = risk, SCADA = supervisory control and data acquisition, tCO^2e = ton of carbon dioxide equivalent, WBDC = women's business development center, WSSC = water and sanitation services company.

[a] Government of Khyber Pakhtunkhwa. 2019. *KPK Local Government Act, Amended, 2019*. Pakistan.

[b] Gender-friendly urban spaces and parks will include dedicated spaces for women's sports and physical fitness, family areas, well-lit rest areas and toilets, and other improved facilities. These will also include street beautification with streetlights and closed-circuit television cameras.

[c] The GOKP will identify district metering areas for each project city to assess water loss.

[d] Refers to environment-friendly enterprises such as the provision of safe water, sanitation, solid waste management services, and greening the environment.

[e] The Community Incentive Fund will support women in establishing and expanding green enterprises.

Contribution to Strategy 2030 Operational Priorities

Expected values and methodological details for all OP indicators to which this operation will contribute results are detailed in Contribution to Strategy 2030 Operational Priorities (accessible from the list of linked documents in Appendix 2). In addition to the OP indicators tagged in the design and monitoring framework, this operation will contribute results for

OP 1.3: Poor and vulnerable people with improved standards of living (number)

OP 3.3: People benefitting from strengthened environmental sustainability (number)

Source: Asian Development Bank.

LIST OF LINKED DOCUMENTS

http://www.adb.org/Documents/RRPs/?id=51036-002-3

1. Loan Agreement
2. Grant Agreement
3. Project Agreement
4. Sector Assessment (Summary): Water and Other Urban Infrastructure and Services
5. Project Administration Manual
6. Financial Analysis
7. Economic Analysis
8. Summary Poverty Reduction and Social Strategy
9. Risk Assessment and Risk Management Plan
10. Contribution to Strategy 2030 Operational Priorities
11. Climate Change Assessment
12. Gender Action Plan
13. List of Environmental Impact Assessments
14. List of Initial Environmental Examination Reports
15. Land Acquisition and Resettlement Framework
16. List of Land Acquisition and Resettlement Plans

Supplementary Documents

17. Development Coordination
18. Social Due Diligence Report
19. List of Corrective Action Plans
20. Financial Management Assessment
21. Financial Statements Analysis
22. Strategic Procurement Planning
23. List of Adapted Innovations
24. List of Environmental Management Plans
25. Resettlement Plan: Pedestrianizing of the Old City Commercial Area, Abbottabad
26. Due Diligence Report for Use of ADB Funds for Land Acquisition and Resettlement