



Project Readiness Financing Report

PUBLIC

Project Number: 52051-003
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Islamic Republic of Pakistan: Preparing Kurram Tangi Integrated Water Resources Development Project

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Asian Development Bank

CURRENCY EQUIVALENTS

(as of 18 October 2021)

Currency unit	–	Pakistan rupee/s (PRe/PRs)
PRs1.00	=	\$0.0058
\$1.00	=	PRs171.25

ABBREVIATIONS

ADB	–	Asian Development Bank
GDP	–	gross domestic product
GOKP	–	Government of Khyber Pakhtunkhwa Province
PAM	–	project administration manual
PRF	–	project readiness financing
TA	–	technical assistance
WAPDA	–	Water and Power Development Authority

NOTE

In this report, "\$" refers to United States dollars.

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PROJECT READINESS FINANCING AT A GLANCE

1. Basic Data		Project Number: 52051-003	
Project Name	Preparing Kurram Tangi Integrated Water Resources Development Project Pakistan	Department/Division	CWRD/CWER
Country	Pakistan	Executing Agency	Water and Power Development Authority
Modality	Project Readiness Financing (Loan)		
Borrower	Islamic Republic of Pakistan		
Country Economic Indicators	https://www.adb.org/Documents/LinkedDocs/?id=52051-003-CEI		
Portfolio at a Glance	https://www.adb.org/Documents/LinkedDocs/?id=52051-003-PortAtaGlance		
2. Sector		Subsector(s)	
✓ Agriculture, natural resources and rural development	Agricultural production	ADB Financing (\$ million)	
	Irrigation	0.50	
	Land-based natural resources management	2.50	
Energy	Large hydropower generation	0.50	
		Total	5.00
3. Operational Priorities		Climate Change Information	
✓ Addressing remaining poverty and reducing inequalities		GHG reductions (tons per annum)	0.000
✓ Tackling climate change, building climate and disaster resilience, and enhancing environmental sustainability		Climate Change impact on the Project	Low
✓ Promoting rural development and food security		ADB Financing	
✓ Strengthening governance and institutional capacity		Adaptation (\$ million)	0.00
		Mitigation (\$ million)	0.00
		Cofinancing	
		Adaptation (\$ million)	0.00
		Mitigation (\$ million)	0.00
Sustainable Development Goals		Poverty Targeting	
SDG 1.5		Geographic Targeting	✓
SDG 2.4			
SDG 6.4			
SDG 7.1			
SDG 10.1			
SDG 13.a			
4. Risk Categorization:	Low		
5. Safeguard Categorization	Not Applicable.		
6. Financing			
Modality and Sources		Amount (\$ million)	
ADB		5.00	
Sovereign Project (Regular Loan): Ordinary capital resources		5.00	
Cofinancing		0.00	
None		0.00	
Counterpart		2.70	
Government		2.70	
Total		7.70	
Currency of ADB Financing: US Dollar			

I. PROJECT READINESS FINANCING

A. Rationale

1. The agriculture sector in Pakistan contributes 19.3% to the country's gross domestic product (GDP) in the fiscal year of 2019-2020 and provides employment to about 39.2% of the labor force in the fiscal year 2018-2019.¹ Agriculture remains the main source of livelihood for the majority of Pakistan's rural population. The agriculture sector uses 93% of the available water resources in the country.² Agriculture productivity has remained subdued partly because of inadequate water availability.

2. Pakistan has limited water resources and is close to the water scarcity threshold of 1,000 cubic meters per person per year. The primary driver of the increased water scarcity is the country's large population, which is projected to reach 314.0 million by 2050 from 216.6 million in 2019.³ Pakistan's finite water resources are under increasingly competing demands from various water users, including the agriculture, urban, and industrial sectors. Water security is also undermined by poor water resources management, inefficient water services delivery, weak planning and allocation, deteriorated water quality, and low water productivity. A predicated increase in temperature and annual precipitation in Pakistan will impact the country's hydrological cycle. It will alter the frequency and intensity of extreme events, including floods and droughts.⁴

3. Pakistan's energy sector constrains economic growth. The population with access to electricity in 2019 was 73.9%.⁵ Hydropower accounted for only 25.8% of the country's total energy produced in 2019 (footnote 1). Using fossil fuels for energy production is intensifying greenhouse gas emissions and will intensify local warming. Pakistan needs to produce more green energy to cater to its current and future energy needs. The hydropower generated by the ensuing project will help the government's efforts to improve its energy mix and reduce greenhouse gas emissions.

4. The project is in the North Waziristan District of the Khyber Pakhtunkhwa Province.⁶ The province's population represents 17% of the country's population and contributes up to 10.5% to the country's GDP. Agriculture contributes to about 22% of the province's GDP. The sector provides employment to about 37% of the provincial labor force. Cultivated land per capita is very limited in the province and only about half of it is irrigated. The province's water resources scarcity is in a slightly better situation than overall Pakistan because of water availability in the mountainous northern districts. Finite and scarce provincial water resources require improved management because of the future impacts of climate change and population growth.⁷

5. The Government of Pakistan requested project readiness financing (PRF) from the Asian Development Bank (ADB) to prepare the Kurram Tangi Integrated Water Resources Development Project. The project supports the Government of Pakistan's Vision 2025⁸ and ADB's country

¹ Government of Pakistan, Ministry of Finance. 2020. [Pakistan Economic Survey 2019–2020](#). Islamabad; and Government of Pakistan, Bureau of Statistics. 2019. [Pakistan Labor Force Survey 2018–2019](#). Islamabad.

² Food and Agriculture Organization. AQUASTAT Database (accessed on 6 August 2021).

³ The World Bank. [Data](#) (accessed on 6 August 2021).

⁴ The World Bank Group and Asian Development Bank. 2021. [Climate Risk Country Profile: Pakistan \(2021\)](#).

⁵ The World Bank. [Data](#) (Accessed on 6 August 2021).

⁶ The area experienced conflict between 2004 until 2014. The proposed dam site area remains sensitive with additional security requirements.

⁷ Government of Khyber Pakhtunkhwa. [Integrated Water Resources Management Strategy](#). Peshawar.

⁸ Government of Pakistan. 2014. [Pakistan 2025: One Nation – One Vision](#). Islamabad.

partnership strategy for Pakistan, 2021–2025,⁹ which emphasizes the need for water, energy, and food security. It aligns with ADB’s Strategy 2030 in addressing poverty and inequalities, and gender equality, climate change, and rural development and food security.¹⁰ The project also aligns with Pakistan’s Nationally Determined Contribution.¹¹ Pakistan has committed to mitigating climate vulnerability and reducing its annual greenhouse gas emissions in 2030 by 20%. The PRF is included in ADB’s country operations business plan for Pakistan, 2021–2023.¹² The national government approved the Planning Commission Proforma-II for the proposed PRF in June 2021.

6. The PRF will ensure high-quality design, stakeholder engagement, and safeguards readiness of the ensuing project. It will facilitate the timely and cost-effective achievement of the project’s outcomes. The PRF builds on the updated feasibility study being conducted by the ongoing transaction technical assistance (TA) consultants.¹³ The PRF will prepare detailed engineering design and update social and environmental safeguards documents and other diligence assessments.

7. ADB’s value addition will include (i) promoting integrated water resources management through capacity development of federal and provincial governments; (ii) ensuring international best practices and standards are incorporated in the environmental impact assessment, land acquisition and resettlement planning, and gender action plans and social inclusion; (iii) ensuring climate-adaptive designs and contributing to resilient agriculture; (iv) integrating command area development with key water storage and irrigation infrastructure; and (v) introducing digital technologies for modernized irrigation and climate-smart agriculture practices.

B. Outputs and Activities

8. **Output 1: Detailed engineering design, and procurement and safeguard documents completed.** The PRF will support the preparation of a detailed engineering design for a dam, a spillway, three powerhouses, tunnels, intakes, irrigation canals and structures, and other allied infrastructure. The design for the command area and agriculture development will also be prepared. This will include support for surveys, studies, geological and hydrological investigations, climate-risk and vulnerability assessments, a community participation strategy, and other necessary assessments. Climate-resilience measures, innovative solutions using digital technologies, modernized irrigation methods, and climate-smart agriculture practices will be incorporated in the detailed design.

9. The PRF will include updating the land acquisition and resettlement planning documents, social impact assessment, environment impact assessment, financial and economic analysis, and gender analysis and a gender action plan. The PRF will also prepare a procurement strategy for the ensuing project and provide procurement support to implementing agencies. This will include support to the executing and implementing agencies in undertaking (i) the bidding process, specifically advance procurement actions before ADB approval of the ensuing project; and (ii) start-up activities, such as the recruitment of project implementation consultants and/or staff.

⁹ ADB. 2020. [Country Partnership Strategy: Pakistan, 2021–2025—Lifting Growth, Building Resilience, Increasing Competitiveness](#). Manila.

¹⁰ ADB. 2018. [Strategy 2030: Achieving a Prosperous, Inclusive, Resilient, and Sustainable Asia and the Pacific](#). Manila.

¹¹ Ministry of Climate Change. 2016. [Pakistan’s Intended Nationally Determined Contribution](#).

¹² ADB. 2020. [Country Operations Business Plan for Pakistan, 2021–2023](#). Manila.

¹³ ADB. 2019. [Technical Assistance to the Islamic Republic of Pakistan for Preparing Kurram Tangi Integrated Water Resources Development Project](#). Manila.

10. **Output 2: Capacity of executing and implementing agencies for project implementation readiness improved.** The output will support the capacity development of Water and Power Development Authority (WAPDA) and the Government of Khyber Pakhtunkhwa Province (GOKP). This includes training on financial and procurement management and the use of advanced technologies for improved water management. This will also support improved collaboration between WAPDA and GOKP departments to ensure a comprehensive project design, security, and stakeholder engagement.

C. Ensuing Project

11. The ensuing project will construct a 98-meter-high concrete-faced rockfill multipurpose dam on the Kurram River in North Waziristan. It will include three hydroelectric powerhouses with a combined installed capacity of 65 megawatts, construction of the Thal irrigation canal, and remodeling of the Civil and Marwat irrigation canals. It will also develop the command areas and undertake agricultural improvement. The project will create a reservoir to store 1,480 million cubic meters of water, generate 318 gigawatt hours of hydroelectric energy, and provide irrigation water supplies to 140,080 hectares. The ensuing project will include the construction of access roads to schools, water supply, and other facilities for local communities. Over 50,000 households are likely to benefit from improved irrigated agriculture. The project is estimated to cost about \$900 million, with indicative ADB financing of \$300 million. It is programmed for ADB approval in 2024.

D. Cost Estimates and Financing Arrangements

12. The PRF is estimated to cost \$7.70 million (Table 1). Detailed cost estimates by expenditure category and by financier are included in the project administration manual (PAM).¹⁴

Table 1: Summary Cost Estimates
(\$ million)

Item	Amount ^a
A. Base Cost^b	
1. Output 1: Detailed engineering design, and procurement and safeguard documents completed	5.15
2. Output 2: Capacity of executing and implementing agencies for project implementation readiness improved	1.35
Subtotal (A)	6.50
B. Contingencies^c	1.12
C. Financial Charges During Implementation^d	0.08
Total (A+B+C)	7.70

^a Includes taxes and duties of \$0.53 million. Such amount does not represent an excessive share of the project cost. The government will finance taxes and duties of \$0.53 million through cash contributions.

^b In mid-2021 prices as of 15 September 2021.

^c Physical contingencies computed at 3% of consulting services. Price contingencies computed at an average of 7% on local currency costs; includes a provision for potential exchange rate fluctuation under the assumption of a purchasing power parity exchange rate.

^d Interest during implementation for the ordinary capital resources loan has been computed at the 3-year United States dollar fixed swap rate plus an effective contractual spread of 0.5%.

Sources: Asian Development Bank and Water and Power Development Authority estimates.

13. The government has requested a regular loan of \$5,000,000 from ADB's ordinary capital resources to help finance the project preparation and design activities. The loan will have a 15-year term, including a grace period of 3 years; an annual interest rate determined in accordance

¹⁴ Project Administration Manual (accessible from the list of linked documents in Appendix 1).

with ADB's London interbank offered rate (LIBOR)-based lending facility (the interest and other charges during implementation to be capitalized in the loan); and such other terms and conditions set forth in the draft loan agreement.

14. The summary financing plan is in Table 2. ADB will finance the expenditures in relation to consulting services, surveys, modeling, partial contingencies, and financial charges during implementation. The government will finance security arrangements and other management costs, counterpart staff, taxes and duties, and contingencies.

Table 2: Summary Financing Plan

Source	Amount (\$ million)	Share of Total (%)
Asian Development Bank		
Ordinary capital resources (regular loan)	5.00	64.9
Government	2.70	35.1
Total	7.70	100.0

Sources: Asian Development Bank and Water and Power Development Authority estimates.

E. Implementation Arrangements

15. The implementation arrangements are summarized in Table 3 and described in detail in the PAM (footnote 14). A project steering committee, working committee, and coordination committee will be established to facilitate the coordination of planning and implementing the PRF. Their compositions and responsibilities are detailed in Annex 1 of the PAM (footnote 14). Procurement will follow ADB Procurement Policy (2017, as amended from time to time), Procurement Regulations for ADB Borrowers (2017, as amended from time to time), and the associated staff instructions.

Table 3: Implementation Arrangements for Project Readiness Financing

Aspects	Arrangements		
PRF implementation period	December 2021–December 2024		
Estimated PRF completion date	31 December 2024		
Management			
(i) Oversight body	Project steering committee, working committee, and coordination committee		
(ii) Executing agency	WAPDA		
(iii) Key implementing agencies	WAPDA (dam and associated structures, powerhouses, and access roads) Irrigation Department of GOKP (irrigation canals and structures) Agriculture Department of GOKP (command area and agriculture development)		
Consulting services	QCBS (90:10)	407 person-months (detailed design)	\$4.49 million
	Individual consultant selection	13 person-months (dam safety panel of experts)	\$0.29 million
Advance contracting	Advance contracting will be used for the recruitment of consulting services for the detailed design.		
Disbursement	PRF disbursements will follow ADB's <i>Loan Disbursement Handbook</i> (2017, as amended from time to time) and detailed arrangements agreed between the national government and ADB.		

ADB = Asian Development Bank, GOKP = Government of Khyber Pakhtunkhwa Province, PRF = project readiness financing, QCBS = quality- and cost-based selection, WAPDA = Water and Power Development Authority.

Source: Asian Development Bank.

II. DUE DILIGENCE

16. **Technical.** The ongoing TA is updating the feasibility studies and due diligence of the ensuing project (footnote 13). The updated feasibility studies will (i) review and update hydrological data and sediment loads, (ii) verify dam and spillway designs to ensure their safety, and (iii) assess climate change impacts and recommend appropriate mitigation and adaptation measures. Digital technology and modernized irrigation will be applied in the design. The consulting services under the PRF will build on the updated feasibility studies to complete the detailed engineering design. This will meet Pakistan's applicable guidelines and regulations, and international best practices for dam design and safety requirements. An independent panel of international experts will be recruited to review the design and ensure safety of the dam.

17. **Governance.** The TA consultants are conducting a complete financial management assessment and procurement capacity assessment of WAPDA and the irrigation and agriculture departments of GOKP.

18. The initial financial management assessment of WAPDA indicates a moderate risk to implement the PRF. This is because the PRF loan amount will only finance the consulting services, and disbursements will primarily be through direct payments. WAPDA has an existing governance framework and extensive experience in undertaking major infrastructure projects, managing its finances, and exposure to foreign-funded projects. This provides reasonable assurance of WAPDA's capacity to demonstrate appropriate financial management. Despite WAPDA's prior experience in major project implementation, its staff is unfamiliar with ADB disbursement procedures and financial management requirements. Training on ADB's financial management requirements and disbursement procedures including the client portal for disbursements will be provided during the TA and PRF implementation.

19. The initial project procurement capacity risk is identified as *moderate* since only one consulting firm and a few individual consultants will be recruited under the PRF. WAPDA has sufficient procurement staff but lacks familiarity with ADB's new procurement framework. The capacity gap will be strengthened through organizing project-specific procurement training seminars and workshops for the procurement staff of WAPDA. These will be provided by ADB staff during TA and PRF implementation. Value for money will be achieved by using advance contracting and open competitive bidding procedures for consultant recruitment.

20. **Safeguards.** Since the proposed activities comprise consulting services only, they were not categorized following ADB's Safeguard Policy Statement (2009). The safeguards classification for the ensuing project is expected to be category A for the environment and involuntary resettlement. This is because of the new 98-meter-high dam and its associated infrastructure, which will cause significant physical and economic displacement. Although mostly Pashtu-speaking tribal people are in the project area, they are Muslim and are mainstreamed under Pakistan's laws. The tribal people do not recognize themselves as indigenous peoples as defined in the Safeguard Policy Statement. The ensuing project is expected to be categorized as C for indigenous peoples.

21. The safeguards and cultural sensitivity of the project and project area are complex. The TA consultants will screen and verify the categorization of indigenous peoples, assess the impact on tribal communities, and ensure their comprehensive consultation and participation. The consultants are preparing their assessments and reports, including stakeholder analysis and communication strategies, a social and poverty analysis and social action plan, environmental

surveys and an environment impact assessment, a survey on land acquisition and resettlement impacts, and a resettlement framework and plan.

22. The PRF will build on the ongoing TA consultants' feasibility studies and due diligence assessment and reports to extend and enhance the due diligence. It will finance the updating and finalization of the safeguard documents for the ensuing project. This will be following the detailed engineering design. It provides a robust approach to ensure more rigor in project design. The PRF consultants will study and examine the proposed land prices and document how the prices have been assessed and/or fixed. It will determine if these prices are acceptable to the tribes. The PRF consultants will document the demanded prices as proposed by the tribes. This will be for the independent third-party valuation experts to consider while undertaking independent valuation and before finalizing the land acquisition and resettlement plan. The independent third-party valuer will be engaged to assess full replacement costs of the affected assets to ensure those costs are paid as compensation. Beyond monetary compensation, the potential of viable replacement land will also be investigated and analyzed, within a broader livelihood impact and restoration study. The consultants will finalize mitigation measures for any adverse social impacts that may arise. They will also prepare and finalize an integrated environment and social impact assessment.

23. A stakeholder engagement and communication plan will be prepared to identify and carry out meaningful consultations with all stakeholders. It will highlight that ADB's financing support for updating feasibility studies and for PRF consultants to undertake the detailed design is to improve and optimize the project design. The PRF detailed design will maximize benefits to project beneficiaries while ensuring ADB's safeguards are fully complied with. There will be clear messaging that ADB's TA and PRF do not commit ADB to financing the ensuing loan. ADB project team, including safeguard specialists, will review and provide guidance to the consultants to improve safeguards planning and implementation at various stages of TA implementation.

24. The ensuing project is in a fragile and conflict-affected area near the border of Afghanistan. Access to the project area and security are critical for TA and PRF implementation. The required social, environmental, agriculture, water rights, and topographic surveys may not be possible without adequate security arrangements. The TA, PRF, and ensuing project cannot be effectively implemented without suitable access and security for relevant personnel. The merger of the Federally Administered Tribal Areas into Khyber Pakhtunkhwa Province has improved the security situation. National consultants are able to access the project sites with adequate security arrangements by WAPDA and GOKP. Close coordination of the district administration with the local tribes and an adequate arrangement for enhancing the security of project staff and consultants will further strengthen the ease of movement. The project team will coordinate with WAPDA and closely monitor the security situation to limit risks to personnel and enable movement for productive consultations and site activities.

III. PRESIDENT'S DECISION

25. The President, acting under the authority delegated by the Board, has approved the loan of \$5,000,000 to the Islamic Republic of Pakistan for the Preparing Kurram Tangi Integrated Water Resources Development Project, from the ordinary capital resources of the Asian Development Bank (ADB), in regular terms, with interest to be determined in accordance with ADB's London interbank offered rate (LIBOR)-based lending facility; for a term of 15 years, including a grace period of 3 years; and such other terms and conditions as are substantially in accordance with those set forth in the draft loan agreement; and hereby reports this action to the Board.

LIST OF LINKED DOCUMENTS

<http://www.adb.org/Documents/RRPs/?id=52051-003-3>

1. Loan Agreement
2. Project Administration Manual

Supplementary Documents

3. Environmental and Social Safeguards and Security Arrangements
4. Financial Management Assessment
5. Strategic Procurement Planning