



Report and Recommendation of the President to the Board of Directors

Project Number: 47021-002
November 2014

Proposed Loan Pakistan: Federally Administered Tribal Areas Water Resources Development Project

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Asian Development Bank

CURRENCY EQUIVALENTS

(as of 25 October 2014)

Currency unit	–	Pakistan rupee/s (Pre/PRs)
Pre1.00	=	\$0.00970
\$1.00	=	PRs103.00

ABBREVIATIONS

ADB	–	Asian Development Bank
EARF	–	environmental assessment and review framework
EIRR	–	economic internal rate of return
FATA	–	Federally Administered Tribal Areas
FMA	–	financial management assessment
FRDP	–	FATA Rural Development Project
IEE	–	initial environmental examination
LAR	–	land acquisition and resettlement
O&M	–	operation and maintenance
PAM	–	project administration manual
PMU	–	project management unit
SDR	–	special drawing right

WEIGHTS AND MEASURES

ha	–	hectare
km ²	–	square kilometer
mcm	–	million cubic meter
mm	–	millimeter

GLOSSARY

<i>barani</i>	–	rainfed agriculture area
<i>kharif</i>	–	summer season of crops
<i>rabi</i>	–	winter season of crops
watercourse	–	tertiary channel system in a command area

NOTES

- (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., FY2015 ends on 30 June 2015.
- (ii) In this report, “\$” refers to US dollars.

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PROJECT AT A GLANCE

1. Basic Data		Project Number: 47021-002	
Project Name	Federally Administered Tribal Areas Water Resources Development Project	Department /Division	CWRD/PRM
Country	Pakistan	Executing Agency	FATA Secretariat
Borrower	Government of Pakistan		
2. Sector	Subsector(s)	ADB Financing (\$ million)	
✓ Agriculture, natural resources and rural development	Forestry		3.87
	Irrigation		32.66
	Water-based natural resources management		6.45
	Total		42.97
3. Strategic Agenda	Subcomponents	Climate Change Information	
Inclusive economic growth (IEG)	Pillar 2: Access to economic opportunities, including jobs, made more inclusive	Climate Change impact on the Project	Medium
Environmentally sustainable growth (ESG)	Natural resources conservation		
4. Drivers of Change	Components	Gender Equity and Mainstreaming	
Governance and capacity development (GCD)	Civil society participation	Some gender elements (SGE)	✓
5. Poverty Targeting		Location Impact	
Project directly targets poverty	Yes	Rural	High
Geographic targeting (TI-G)	Yes		
6. Risk Categorization:	Low		
7. Safeguard Categorization	Environment: B Involuntary Resettlement: C Indigenous Peoples: C		
8. Financing			
Modality and Sources		Amount (\$ million)	
ADB		42.97	
Sovereign Project loan: Asian Development Fund		42.97	
Cofinancing		0.00	
None		0.00	
Counterpart		4.93	
Government		4.93	
Total		47.90	
9. Effective Development Cooperation			
Use of country procurement systems		Yes	
Use of country public financial management systems		Yes	

I. THE PROPOSAL

1. I submit for your approval the following report and recommendation on a proposed loan to the Islamic Republic of Pakistan for the Federally Administered Tribal Areas Water Resources Development Project.¹

2. The FATA Water Resources Development Project will address low farm productivity, high poverty incidence, and pervasive food insecurity in the Federally Administered Tribal Areas (FATA). It will increase agriculture production and household incomes by providing reliable irrigation to non-irrigated rainfed farmlands and non-cultivated lands. The project includes the construction of new irrigation infrastructure, improved on-farm water management through activities such as terracing and land leveling, and watershed management. The FATA Water Resources Development Project will also strengthen the project area's natural resource base by improving selected watersheds, which will enhance the recharging of underground aquifers and reduce the impact of floods. The project will benefit 116,751 households, or about 1.4 million people, in the project area and improve about 9,700 hectares (ha) of land.²

II. THE PROJECT

A. Rationale

3. FATA is located along Pakistan's northwestern border with Afghanistan and is spread over 27,220 square kilometers (km²), or 3.4% of the country's land mass.³ FATA has a population of about 4.3 million, which represents about 2.4% of Pakistan's total population.⁴ The project area consists of three of seven FATA agencies: Bajaur, Khyber, and Mohmand. These agencies have an estimated population of 2.65 million (2013) living in 1,396 settlements. The vast majority of FATA's population is rural and depends on agriculture, including livestock, and the natural resource base for their livelihood. Farm sizes in the project area vary from less than 1.0 ha to more than 50.0 ha; however most farms are 2.5 ha or less and are owner-managed. Two distinct types of farming systems characterize agriculture in FATA: (i) rainfed or *barani* subsistence-level agriculture, which produces food staples, such as wheat and maize; and (ii) irrigated agriculture, which is more stable and productive. Irrigated agriculture in FATA enables farmers to earn higher incomes by expanding production beyond food staples into higher-value horticultural crops, including vegetables. There is significant scope to expand irrigated agriculture in FATA through utilization of the region's surface water resources.

4. A water assessment study was prepared under the FATA Rural Development Project (FRDP) to assess the surface and ground water potential in the 44 watersheds of the project area.⁵ The study noted that rainfall in the project area is scanty and mostly converts into flash floods, which flow into four rivers and their tributaries that traverse the project area.⁶ The study analyzed 30 years of rainfall data, which was found to vary from 295 to 1,048 millimeters annually in the project area. Surface runoff also varies from watershed to watershed depending

¹ The design and monitoring framework is in Appendix 1.

² The Asian Development Bank (ADB) provided small-scale project preparatory technical assistance for the FATA Water Resources Development Project (TA 8409).

³ FATA consists of seven agencies (Bajaur, Khyber, Kurram, Mohmand, Orakzai, and North and South Waziristan) and six bordering frontier regions (Bannu, Dera Ismael Khan, Kohat, Lakki, Peshawar, and Tank).

⁴ Government of Pakistan, Bureau of Statistics (FATA Cell), Planning and Development Department, FATA Secretariat. 2012. *FATA Development Statistics 2012*. Peshawar.

⁵ ADB. 2006. *Report and Recommendation of the President to the Board of Directors: Proposed Loan to the Islamic Republic of Pakistan for the Federally Administered Tribal Areas Rural Development Project*. Manila.

⁶ These are the Panjkora River in Bajaur Agency, the Bara River in Khyber Agency, the Kabul River at the border of Khyber and Mohmand agencies, and the Swat River in Mohmand Agency.

on the area of the watershed, its topography, soil type, soil and vegetation cover, and rainfall intensity, and is estimated to range from 2% to 21% of the annual rainfall volume.

5. Irrigated agriculture in FATA relies mainly on groundwater abstracted by tube wells, dug wells, and open wells, with very little utilization of surface water. Poor water resources management has become a major challenge to increasing agriculture productivity, and undermines efforts to improve the socioeconomic condition of FATA's inhabitants. The main problems faced by the water sector are as follows: (i) spillage of the surface runoff generated in the project area drains out due to lack of infrastructure for utilizing this resource for productive purposes; (ii) aquifers are depleted due to overexploitation of groundwater in all watersheds for irrigation and domestic use, and there is a need to shift from groundwater to surface water as the main source of water for irrigation; (iii) because most of FATA lies in arid and semi-arid zones, the area receives little precipitation throughout the year, which lowers the recharge rate of the subsoil aquifer, and reduces both the water table and the quantity available from surface sources; (iv) the area lacks infrastructure to store runoff and conserve the seasonal flows in the streams to provide a regular supply of irrigation water; (v) there is a lack of rain and stream gauges to measure the quantity of water and seasonal variations within the catchment area; and (vi) effective on-farm water management practices are absent.

6. Poor water resource management, along with extensive deforestation and overgrazing of rangelands, has put immense pressure on the region's watersheds. Their degraded condition has increased runoff and resulted in high rates of soil erosion. In the absence of proper tree and vegetation cover, the runoff leads to flash floods that often destroy the productive agricultural land in the valley bottom. Increasing tree cover and constructing check dams, where appropriate, will reduce runoff rates and soil erosion, and increase flood retention. This can also lead to aquifer replenishment.

7. The project scope is based on recommendations of the water assessment study (footnote 5). The study recommended that (i) investment decisions in the water sector in the project area should be based on the water balance of watersheds provided in the study, and (ii) there should be a shift from groundwater to surface water exploitation. It identified the potential for developing surface water resources for irrigation and other uses, and integrating them with watershed management and command area development to ensure their sustainable use without degrading the watersheds. The study proposed sites for small dams and diversion weirs in 44 watersheds in the project area to bring new land under irrigation along with improved watershed management.

8. Lessons from the FRDP and similar area-based rural development projects, and small-scale water resources projects have informed the project design and selection of interventions. Instead of costly water resources interventions, very simple and small irrigation schemes that can be maintained and operated by the communities should be undertaken. Many of the earlier government-financed schemes in FATA did not perform well because funding for the operation and maintenance (O&M) of the newly constructed subprojects was inadequate and there was a lack of community ownership and participation in design and implementation, and post-construction operation and management of the irrigation network. In addition, command area development should be undertaken along with investments in water resources infrastructure to ensure the expected economic benefits materialize.

9. The proposed loan is included in the country operations business plan, 2014–2016 for Pakistan, and consistent with the interim country partnership strategy, 2014–2015 for Pakistan, which prioritizes improving the country's irrigation infrastructure. The project is in line with the

Midterm Review of Strategy 2020⁷ and the ADB strategy for water resources.⁸ ADB's agriculture sector evaluation (2006) for Pakistan emphasized improving water resources and irrigation.⁹ The FATA Sustainable Development Plan, 2007–2015 aims to ensure the optimal and equitable use, and sustainable management of existing surface water resources to bring more land under irrigated agriculture.¹⁰ This would be achieved through (i) developing efficient small-scale irrigation and water resources management infrastructure; (ii) conserving and recharging groundwater aquifers; (iii) utilizing seasonal rainfall runoff to enhance irrigation flows; (iv) harvesting surface water for irrigation; and (v) scaling up efficient irrigation systems. The federal government's new Vision 2025 includes water and food security among its core pillars with the aim of reducing the food-insecure population from 60% to 30%, and increasing access to an adequate supply of water for agriculture.¹¹

B. Impact and Outcome

10. The project impact will be farm incomes in the project areas (Bajaur, Khyber, and Mohmand agencies) are increased, thereby reducing poverty and increasing household food security. The project outcome will be improved agricultural productivity of selected watersheds and conservation of their associated natural resource base.

C. Outputs

11. Project outputs consist of (i) construction of new irrigation infrastructure, including nine small concrete gravity dams (each with a maximum height of 15 meters), 31 diversion weirs, and 95 kilometers of main and secondary irrigation channels; (ii) improved on-farm water management through construction of 144 kilometers of lined watercourses, terracing and land leveling on a command area of 4,615 ha, and installation of rain and stream gauges to measure water availability; (iii) improved watershed management on 5,050 ha through afforestation of the degraded watersheds and, where appropriate, the construction of check dams; and (iv) efficient project management and evaluation, including establishment of a project management unit and three project implementation units, timely procurement of goods, works and recruitment of consulting services, and effective financial management. A total of 40 subprojects were selected for financing based on criteria agreed with ADB.¹² The list of subprojects and selection criteria are in the project administration manual (PAM).¹³

D. Investment and Financing Plans

12. The project is estimated to cost \$47.9 million (Table 1). ADB financing in the amount of \$42.97 million will be required for the proposed project. Approximately 62% of the loan proceeds will finance the civil works, about 9% will finance consulting services, and the remainder will

⁷ ADB. 2014. *Midterm Review of Strategy 2020: Meeting the Challenges of a Transforming Asia and Pacific*. Manila.

⁸ ADB. 2012. *Water Operational Plan, 2011–2020*. Manila.

⁹ ADB. 2006. *Sector Assistance Program Evaluation: Evaluation of the Agriculture and Natural Resources Management Sector*. Manila.

¹⁰ Government of Pakistan, Planning and Development Department, Civil Secretariat (FATA). 2006. *FATA Sustainable Development Plan, 2007–2015*. Peshawar.

¹¹ Government of Pakistan, Ministry of Planning, Development and Reform, Planning Commission. 2014. *Pakistan 2025: One Nation–One Vision*. Islamabad.

¹² Among the selection criteria are the following: (i) the communities are willing to take ownership for the operation and maintenance of weirs, channels, and on-farm facilities using their own resources; (ii) subprojects must meet all ADB social and environmental safeguards requirements; (iii) the community organizations must ensure equity, i.e. subprojects must benefit all potential farmers; (iv) small reservoirs must be developed with international best practices for safety and should not increase flood risk to local communities; and (v) only subprojects identified by the water assessment study conducted under the FRDP will be considered.

¹³ Project Administration Manual (accessible from the list of linked documents in Appendix 2).

finance machinery and equipment, recurrent costs, contingencies and interest during implementation. Detailed cost estimates are in the PAM.

Table 1: Project Investment Plan
(\$ million)

Item	Amount ^a
A. Base Cost^b	
1. Construction of New Irrigation Infrastructure	24.2
2. Improved On-Farm Water Management	4.8
3. Improved Watershed Management	2.9
4. Efficient Project Management and Evaluation	7.0
Subtotal (A)	38.9
B. Contingencies^c	7.7
C. Financing Charges During Implementation^d	1.3
Total (A+B+C)	47.9

^a Includes taxes and duties of \$109,504.00 equivalent to be financed from government resources.

^b In 2014 prices.

^c Price contingencies were estimated using Asian Development Bank (ADB) cost escalation factors.

^d Interest during construction for the ADB loan has been computed at 2.0% per annum.

Source: ADB estimates.

13. The Government of Pakistan has requested a loan in various currencies equivalent to SDR29,274,000 (\$42.97 million equivalent) from ADB's Special Funds resources to help finance the project. The loan will have a 25-year term, including a grace period of 5 years, an interest rate of 2.0% per annum during the grace period and thereafter, and such other terms and conditions set forth in the draft loan agreement. The financing plan is in Table 2.

Table 2: Financing Plan

Source	Amount (\$ million)	Share of Total (%)
Asian Development Bank		
Special Funds resources (loan)	42.97	89.8
Government	4.93	10.2
Total	47.90	100.0

Source: Asian Development Bank estimates.

E. Implementation Arrangements

14. The FATA secretariat is the project's executing agency.¹⁴ It will establish a project management unit (PMU) in the Planning and Development Department of the FATA secretariat and project implementation units in each of the three agencies.¹⁵ Select line agencies will work with the PMU and project implementation units to implement the project. The project will also be implemented in cooperation with community organizations that were established under the FRDP. A project steering committee, headed by the additional chief secretary, FATA secretariat, has already been appointed and will provide policy guidance and monitor overall project performance and progress. The implementation arrangements are summarized in Table 3 and described in detail in the PAM.

¹⁴ The FATA secretariat was established by the government in 2006 for the purpose of local administration of FATA, including overseeing its development affairs.

¹⁵ The FATA secretariat will recruit incremental staff for the PMU and PIUs. In accordance with OM/H3/BP, the ADB loan will finance recurrent costs, including salaries for incremental project management staff. ADB financing of these recurrent costs will ensure effective implementation of the project and achievement of its development objectives. ADB. 2012. Cost sharing and Eligibility of Expenditures for ADB Financing. Operations Manual. OM H3/BP. Manila.

Table 3: Implementation Arrangements

Aspects	Arrangements		
Implementation period	March 2015–March 2020		
Estimated completion date	31 March 2020 (loan closing date is 30 September 2020)		
Management			
(i) Oversight body	Project Steering Committee Chair: Additional Chief Secretary, FATA secretariat Members: Secretary, Planning and Development, FATA secretariat; Secretary Finance, FATA secretariat; Director General Projects, FATA secretariat; Representative, Ministry of SAFRON; Representative, Federal Planning and Development Division; political agents of Bajaur, Khyber, and Mohmand agencies; representatives of concerned line department; Project Director, Secretary.		
(ii) Executing agency	FATA secretariat		
(iii) Key implementing agencies	Directorate of Irrigation, Directorate of Agriculture, and Directorate of Forest of the FATA secretariat.		
(iv) Implementation units	Project management unit, FATA secretariat, Peshawar; project implementation units in Bajaur, Khyber, and Mohmand agencies.		
Procurement ^a	National competitive bidding	15 civil works contracts and 1 supply contract	\$31.30 million
	Shopping	4 contracts	\$0.22 million
Consulting services	Design and supervision consultants (QCBS 90:10)	792 person-months of national consulting inputs	\$4.00 million
	Baseline and completion surveys	Least-cost selection contract	\$0.02 million
	Final project evaluation	Least-cost selection contract	\$0.03 million
	Accounting system installation and training	Individual	\$0.01 million
Disbursement	The loan proceeds will be disbursed in accordance with ADB's <i>Loan Disbursement Handbook</i> (2012, as amended from time to time) and detailed arrangements agreed upon between the government and ADB.		

ADB = Asian Development Bank, FATA = Federally Administered Tribal Areas, QCBS = quality- and cost-based selection, SAFRON = Ministry of States and Frontier Regions.

^a The executing agency has the option to consider awarding the civil works to the Frontier Works Organization, subject to ADB approval, under the Force Account method given that the works are small, scattered, and in remote locations for which qualified construction firms may be unlikely to bid at reasonable prices, and whereby the risks of unavoidable work interruption are better borne by the borrower than by a contractor. This could be considered only for those parts of the project area where the security situation would be too high risk for regular contractors to operate.

Source: Asian Development Bank estimates.

III. DUE DILIGENCE

A. Technical

15. The project's proposed interventions—small dams, diversion weirs, conveyance channels, and on-farm water delivery systems, are well-known in the project area and have been practiced for several decades. The required skill for operational management is already available and farmers are well acquainted with the farming practices. Further, training on the latest know-how, operational management, and farming practices will strengthen the existing capacity. A sound O&M mechanism has been provided in the PAM. Subprojects selection criteria and communal management of the interventions are the enhanced technical and management features of the proposed project.

B. Economic and Financial

16. The main project benefit is increased agricultural production from greater availability and reliability of irrigation supplies provided by construction of small dams and weirs. This is a function of increased crop intensity, improved crop yields, and the introduction of high-value vegetable crops. Currently, land is cultivated with conventional low-yielding and low-value crops—predominantly wheat in the *rabi* season and maize in the *kharif* season. Wheat production is a combination of *barani* wheat and low-input irrigated wheat from uncontrolled water supply sources, which has relatively low yield due to intermittent irrigation. Considerable uncertainty surrounds the values of key variables that influence the project benefits, including (i) capital costs, (ii) the impact of security conditions and potential delays in project benefits, (iii) improved crop yields, (iv) increased crop intensity, and (v) the adoption rate of high-value vegetable crops. These are specified as random variables in a risk modeling framework. An economic analysis yielded a mean economic internal rate of return (EIRR) of 12.4% (with a standard deviation of 1.4%). The EIRR ranged from 8.1% to 17.2%, and there was a 35% probability that the EIRR would be less than the 12% threshold. Overall, it is concluded that the project will have a positive impact on improving the welfare of the poor in Pakistan.

17. Each year, the federal government sets aside a block allocation, the Annual Development Program, intended exclusively for development spending in FATA. Sector allocations from the Annual Development Program are made at the FATA secretariat, based on priorities and needs. FATA's overall annual allocation has been increasing steadily.¹⁶ The regular budget covers nondevelopment expenditures and recurring costs, including O&M costs and salaries. The Irrigation Department will be responsible for O&M of the dams and appurtenant structures. Table 4 provides information on the department's development and nondevelopment budgets for fiscal years (FY) 2012–2014. Requisite resources will be included in the annual nondevelopment budget of the Irrigation Department to finance the regular O&M costs of the dams and appurtenant structures.

Table 4: Irrigation Department Budget Allocations versus Expenditures

Fiscal Year	Development Budget (\$ equivalent)		Nondevelopment Budget (\$ equivalent)	
	Allocation	Expenditures	Allocation	Expenditures
2012	8,802,810.00	8,575,540.00	707,970.00	679,740.00
2013	11,962,110.00	11,748,540.00	720,030.00	773,930.00
2014	18,268,540.00	18,253,080.00	798,800.00	738,880.00

Note: Budget allocations and expenditures are provided in \$ equivalent at an exchange rate of \$1.00 = PRs100.

Sources: Government of Pakistan, Federally Administered Tribal Areas secretariat, Irrigation Department.

¹⁶ Annual Development Programme allocations for FATA were PRs10.35 billion for FY2011, PRs12.5 billion for FY2012, and PRs13.0 billion for FY2013.

C. Governance

18. The financial management assessment (FMA) confirmed that the FATA secretariat's financial management system generally meets ADB requirements for institutional capability and accounting and budgetary systems and procedures, and verified that the executing agency has the capacity to successfully implement the project. The FMA noted that while a fully functional internal audit unit is still not in place at the FATA secretariat, the pilot internal audit unit that has been set up will be made fully operational before the project starts. The risks and mitigation measures have been included in the risk assessment and management plan. The FMA assesses the pre-mitigation financial management risk as moderate. The identified risks will be mitigated by the establishment of a PMU staffed by qualified professionals who will assume day-to-day management of the project, with adequate financial management system software installed. Other initiatives by various donors to improve the budgetary process and monitoring and evaluation systems will benefit project implementation.

19. The procurement of goods and works will be carried out in accordance with ADB's Procurement Guidelines (2013, as amended from time to time) and consultant selection with ADB's Guidelines on the Use of Consultants (2013, as amended from time to time). All 15 civil works contracts will be procured through national competitive bidding as the value of each contract is less than \$15,000,000. The national competitive bidding method will be used for supply contracts costing between \$100,000 and \$2,000,000, and the shopping method will be used for contracts costing less than \$100,000. A firm will be recruited to provide design and supervision consulting support through the quality- and cost-based selection method based on a 90:10 ratio. Three service contracts will be awarded. ADB's Anticorruption Policy (1998, as amended to date) was explained to and discussed with the government and the FATA secretariat. The specific policy requirements and supplementary measures are described in the PAM. ADB is currently conducting a governance and anti-corruption risk assessment at the country and sector level covering public financial management, procurement and anti-corruption that will inform the proposed country partnership strategy for 2015-2019.

D. Poverty and Social

20. The project will directly benefit 116,751 rural households, most of whom are poor and food insecure, by shifting them from rainfed agriculture to irrigated agriculture. This will enable them to diversify and intensify agriculture production, which will increase household incomes, lifting most of the farming families in the project area above the poverty line and enabling them to become more food secure. The additional water will also benefit their livestock, and the improved condition of the watersheds will reduce the population's exposure to the potential impacts of climate change, land erosion, and flashfloods. The project's gender analysis explored potential gender design features, which were then discussed with civil society and government agencies. The gender analysis and consultations indicated that the culturally restricted role of women in farm water management in FATA limited the scope to include gender design features in the project. However, measures and actions have been identified to ensure women's access to project benefits, such as water for domestic use, and small-scale income-generating opportunities that would address the practical needs of women and improve their well-being.

E. Safeguards

21. **Environment.** An environmental assessment and review framework (EARF) has been prepared for the sector investment, which sets out the procedures and environmental safeguards requirements for future subprojects as required by ADB's Safeguard Policy Statement (2009). The EARF provides environmental requirements for future screening of the

remaining subprojects, selection, assessment, review, and monitoring. The three subprojects selected for implementation are the Jay Kalay Dam, Mohmand Agency; the Kharkai Weir, Bajaur Agency; and the Shangade Dam, Khyber Agency. These involve the construction of two small storage dams and one diversion weir to regulate flood water runoff for community agriculture purposes. Due to the limited scale of the subprojects and prevailing environmental conditions in the areas, the three subprojects selected under the project are categorized as category B for environment. Initial environmental examination (IEE) reports have been prepared for each subproject.¹⁷ The generic environmental management plan will be made part of the bidding documents for the contractors, and the FATA secretariat will supervise the preparation and implementation of an environmental management plan for each site before construction begins. The IEEs and the EARF have been disclosed on the ADB website on 14 August 2014. A national environment officer will be recruited on a full-time basis to assist the FATA Secretariat with environment categorization of proposed subprojects and monitoring of all ongoing subprojects.

22. **Involuntary resettlement.** Detailed design of the first 3 of total of 40 subprojects has been completed and they are confirmed for involuntary resettlement as category C. A criterion for financing of subprojects is that there should be no involuntary land acquisition and resettlement (LAR). Therefore, all the subprojects are expected to be involuntary resettlement category C. The project has therefore been proposed as involuntary resettlement category C overall. However an LAR framework has been prepared in order to be equipped and ready to address any unanticipated LAR issues that may arise during project implementation. A national resettlement officer will be recruited on a full-time basis to assist the FATA secretariat with involuntary resettlement categorization of proposed subprojects and monitoring of all the ongoing subprojects, specifically with regard to LAR processes and the grievance redress mechanism, which will be established at each agency for subprojects. If involuntary resettlement issues arise, the resettlement officer will help the FATA secretariat prepare a resettlement plan in accordance with the LAR framework, and implement the plan. An external independent monitor will be appointed by the FATA secretariat, as required, to monitor the implementation of LAR. An independent third party will monitor project performance, including safeguards and (i) provide independent oversight of the voluntary land contributions for all applicable subprojects; and (ii) be responsible for ensuring that all procedures for voluntary land donation under the project are conducted in a transparent manner and that land is donated without duress as part of communities' contribution for their own benefit. The monitor will also ensure that the vulnerable are not physically displaced or made demonstrably worse off through land donation versus benefits accrued.

23. **Indigenous peoples.** The project area contains no known indigenous people with a social and cultural identity distinct from the dominant society that makes them vulnerable to being disadvantaged in the development process. Hence, there are no indigenous people in the area that fit the broad definition of indigenous people as adopted by ADB. Accordingly, the project is categorized C for indigenous peoples.

F. Risks and Mitigating Measures

24. Major risks and mitigating measures are described in Table 5 and in detail in the risk assessment and risk management plan.¹⁸ The integrated benefits and impacts are expected to outweigh the costs of the risk-mitigation measures.

¹⁷ The IEEs study the environmental impacts that would result from the implementation of these subprojects and propose mitigation measures to address those impacts.

¹⁸ Risk Assessment and Risk Management Plan (accessible from the list of linked documents in Appendix 2).

Table 5: Risks and Mitigation Measures

Risk Description	Mitigation Measures
Security situation delays project implementation.	The FATA secretariat (the executing agency) will arrange the provision of security to project personnel and contractors by the political agents of the respective project agencies.
The executing agency's internal controls, procedures, and mechanisms are inadequate.	The FATA secretariat has set up a pilot internal audit unit, which should be made fully operational and staffed to strengthen the project's internal controls.
Financial reporting is inadequate.	ADB is working with all the executing agencies in Pakistan under a regional technical assistance project to improve the quality of financial statements so that all essential financial information is suitably disclosed.
There is a lack of qualified contractors to undertake project works.	The 40 subprojects have been packaged into 15 contracts of higher value to attract larger, more qualified contractors.
Procurement is delayed due to lack of familiarity with ADB procurement procedures.	The PMU will be staffed with requisite expertise. In addition, PMU staff will receive training in ADB procurement procedures to ensure efficient procurement and contract management.

ADB = Asian Development Bank, FATA = Federally Administered Tribal Areas, PMU = project management unit.

Source: Asian Development Bank.

IV. ASSURANCES AND CONDITIONS

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

26. The government and the FATA secretariat have agreed with ADB on certain covenants for the project, which are set forth in the loan agreement.

27. It shall be a condition for loan effectiveness that the PMU shall have been established and each of a full-time (i) project director (PMU head); (ii) deputy director, engineering; (iii) deputy director, procurement and contract management; and (iv) deputy director, finance and administration, with qualifications, experience, expertise and terms of reference acceptable to ADB, shall have been appointed.

V. RECOMMENDATION

28. I am satisfied that the proposed loan would comply with the Articles of Agreement of the Asian Development Bank (ADB) and recommend that the Board approve the loan in various currencies equivalent to SDR29,274,000 to the Islamic Republic of Pakistan for the Federally Administered Tribal Areas Water Resources Development Project, from ADB's Special Funds resources, with an interest charge at the rate of 2.0% per annum during the grace period and thereafter; for a term of 25 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 agreement presented to the Board.

Takehiko Nakao
President

24 November 2014

DESIGN AND MONITORING FRAMEWORK

Design Summary	Performance Targets and Indicators with Baselines	Data Sources and Reporting Mechanisms	Assumptions and Risks
Impact Farm incomes in the project areas (Bajaur, Khyber, and Mohmand agencies) are increased	By 2022: Average per capita incomes increased as follows: (i) Bajaur: \$2.31 per day (112% increase), (2014 baseline \$1.09 per day) (ii) Mohmand: \$1.44 per day (144% increase), (2014 baseline \$0.59 per day) (iii) Khyber: \$1.21 per day (89% increase) (2014 baseline \$0.64 per day)	FATA Development Bureau of Statistics Cell, Planning and Development Department, FATA secretariat	Assumption Government will continue to pursue socioeconomic development of FATA.
Outcome Improved agricultural productivity of selected watersheds and their associated natural resource base	By 2020: Average crop intensity increased as follows: (i) Bajaur 165% (2014 baseline 79%) (ii) Mohmand 155% (2014 baseline 97%) (iii) Khyber 152% (2014 baseline 57%) By 2020: Average crop yields are improved as follows: (i) Wheat 2.46 t/ha (2014 baseline 1.37t/ha) (ii) Maize 2.24 t/ha (2014 baseline 1.44 t/ha) (iii) Vegetables 7.96 t/ha (2014 baseline 6.27 t/ha)	FATA Development Bureau of Statistics Cell, Planning and Development Department, FATA Secretariat Executing agency baseline and project completion surveys Executing agency PPMS semi-annual reports Executing agency quarterly and annual progress reports Executing agency project completion report	Assumptions Political and social conditions remain conducive to project implementation. Development of water resources and irrigation remains a government priority. Community organizations and communities are willing and able to carry out O&M activities. Risk The security situation delays implementation of project activities.
Outputs 1. Construction of new irrigation infrastructure 2. Improved on-farm water management	By 2020: The command area receiving secure irrigation supply increased to 4,291 ha (2014 baseline = 1,294 ha) Average irrigation requirements reduced to 3.70 mcm/ha from land	Executing agency PPMS semiannual reports Executing agency quarterly and annual progress reports	Assumption Political and institutional support is adequate for effective project implementation. Risks Security situation precludes timely implementation of

Design Summary	Performance Targets and Indicators with Baselines	Data Sources and Reporting Mechanisms	Assumptions and Risks
3. Improved watershed management 4. Efficient project management and evaluation	leveling by 2020 Water measuring gauges installed and provide real-time information At least 5,050 ha of targeted watersheds have effective vegetation cover (2014 baseline = 0 ha) Over 90% of contracts are awarded and completed on time and within budget Quarterly progress reports, annual reports, and audit reports are submitted within 4 weeks of due date	Executing agency project completion report	subprojects. Delays are incurred in recruiting consultants and tendering of civil works contracts. There is a lack of interest from qualified consulting firms and contractors.
Activities with Milestones			Inputs
1. Construction of new irrigation infrastructure 1.1 Prepare feasibility studies for remaining subprojects (November 2016) 1.2 Complete nine small concrete gravity dam subprojects (March 2019) 1.3 Complete 31 diversion weir subprojects (September 2019) 1.4 Gender design features (e.g., washing pads, and safe and easy access for water fetching) included in 15% of the subprojects (September 2019) 1.5 Construct 95 km of main and secondary channels (December 2019) 2. On-farm water management is improved 2.1 Construct 144 km of field channels (December 2019) 2.2 Install turn out structures (January 2020) 2.3 Install water monitoring equipment (June 2019) 2.4 Complete terracing and land leveling (January 2020) 3. Management of watersheds improved 3.1 Identify areas for watershed work in 37 subprojects (June 2016) 3.2 Prepare watershed management manual (December 2015) 3.3 Raise nurseries and carry out plantation works on 5,050 ha (February 2020) 3.4 Construct check dams in select watersheds (January 2020) 4. Efficient project management and evaluation 4.1 Establish PMU and PIUs and recruit key staff (April 2015) 4.2 Recruit design and supervision consultant firm (July 2015) 4.3 Procure vehicles and project equipment (June 2015) 4.4 Establish accounting and financial management system, and train staff (June 2015) 4.5 Undertake baseline survey (September 2015) 4.6 Ensure operational M&E and PPMS systems (October 2015) 4.7 Conduct midterm review (June 2017)			ADB Loan: \$42.97 million (ADF) Government: \$4.93 million

Activities with Milestones	Inputs
4.8 Ensure that the project completion survey is completed (January 2020)	
4.9 Ensure that the executing agency's project completion report is finalized (March 2020)	
4.10 Facilitate the closing of the loan (30 September 2020)	

ADB = Asian Development Bank, ADF = Asian Development Fund, FATA = Federally Administered Tribal Areas, ha = hectare, km = kilometer, M&E = monitoring and evaluation, mcm/ha = million cubic meters per hectare, O&M = operation and maintenance, PIU = project implementation unit, PMU = project management unit, PPMS = project performance monitoring system, t/ha = tons per hectare.

Source: Asian Development Bank.

LIST OF LINKED DOCUMENTS

<http://www.adb.org/Documents/RRPs/?id=47021-002-3>

1. Loan Agreement
2. Sector Assessment (Summary): Agriculture, Natural Resources, and Rural Development
3. Project Administration Manual
4. Contribution to the ADB Results Framework
5. Development Coordination
6. Economic and Financial Analysis
7. Country Economic Indicators
8. Summary Poverty Reduction and Social Strategy
9. Environmental Assessment and Review Framework
10. Resettlement Framework
11. Risk Assessment and Risk Management Plan

Supplementary Document

12. Financial Management Assessment