



# Report and Recommendations of the President to the Board of Directors

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Project Number: 45354  
May 2013

Proposed Administration of Grant  
Republic of Tajikistan: Building Climate Resilience in  
the Pyanj River Basin

Asian Development Bank



## **CURRENCY EQUIVALENTS**

(as of 01/03/13)

Currency unit – somoni (TJS)

TJS1.0 = \$0.21

\$1.00 = TJS4.8

In this report, "\$" refers to US dollars

## **ABBREVIATIONS**

ADB	–	Asian Development Bank
EA	–	Executing Agency
KMK	–	Khojagii Manziliyu Kommunalii (State Unitary Enterprise for Housing and Communal Services)
MFI	–	Micro Finance Institutions
MLRWR	–	Ministry of Land Reclamation and Water Resources
MOF	–	Ministry of Finance
MSME	–	Micro, Small and Medium Enterprise
NGO	–	Nongovernmental Organization
O&M	–	Operations & Maintenance
PFI	–	Participating Financial Institution
PIG	–	Project Implementation Group
PIO	–	Project Implementation Office
PMO	–	Project Management Office
PPCR	–	Pilot Program for Climate Resilience
SCF	–	Strategic Climate Fund
SLA	–	Subsidiary Loan Agreement
SPS	–	Safeguard Policy Statement (2009)
TJS	–	Tajikistan Somoni
TOR	–	Terms of Reference

## **NOTE**

- (i) In this report, "\$" refers to US dollars



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## PROJECT AT A GLANCE

<b>1. Project Name:</b> Building Climate Resilience in Pyanj River Basin		<b>2. Project Number:</b> 45354-002	
<b>3. Country:</b> Tajikistan		<b>4. Department/Division:</b> Central and West Asia Department/Environment, Natural Resources & Agriculture Division	
<b>5. Sector Classification:</b>			
<b>Sectors</b>		<b>Primary</b>	<b>Subsectors</b>
Agriculture and natural resources		√	Irrigation, drainage, and flood protection
Finance			Microfinance
Water and other Municipal Infrastructure and Services			Water supply and sanitation
<b>6. Thematic Classification:</b>			
<b>Themes</b>		<b>Primary</b>	<b>Subthemes</b>
Environmental sustainability		√	
<b>6a. Climate Change Impact</b>		<b>6b. Gender Mainstreaming</b>	
Adaptation	High	Gender equity theme (GEN)	
Mitigation		Effective gender mainstreaming (EGM)	√
		Some gender elements (SGE)	
		No gender elements (NGE)	
<b>7. Targeting Classification:</b>		<b>8. Location Impact:</b>	
<b>General Intervention</b>	<b>Targeted Intervention</b>		
	<b>Geographic dimensions of inclusive growth</b>	<b>Millennium development goals</b>	<b>Income poverty at household level</b>
	√		
<b>9. Project Risk Categorization:</b> Low			
<b>10. Safeguards Categorization:</b>			
Environment		B	
Involuntary resettlement		B	
Indigenous peoples		C	
<b>11. ADB Financing:</b> nil			
<b>12. Cofinancing:</b>			
<b>Financier</b>	<b>Category</b>	<b>Amount (\$ million)</b>	<b>Administration Type</b>
ADB Strategic Climate Fund	Official-Grant	21.6	Full
Total		21.6	
<b>13. Counterpart Financing:</b>			
<b>Source</b>		<b>Amount (\$ million)</b>	
Government		0.8	
Participating Financial Institutions		0.3	
Total		1.1	
<b>14. Aid Effectiveness:</b>			
Parallel project implementation unit		No	
Program-based approach		No	

## I. THE PROPOSAL

1. I submit for your approval the following report and recommendation on a proposed administration of a grant to be provided by the ADB Strategic Climate Fund<sup>1</sup> to the Republic of Tajikistan for the Building Climate Resilience in the Pyanj River Basin Project.<sup>2</sup>

## II. THE PROJECT

### A. Rationale

2. Tajikistan is considered to be one of the countries in Central Asia most vulnerable to the adverse effects of climate change. It frequently experiences extreme climate events such as intense spring rainfall, excessive melt-waters from large snow accumulations, droughts and occasionally devastating glacial lake outburst floods. These cause mudflows, floods, reduced water availability, avalanches, landslides, and rock falls. These hazards routinely take lives and destroy or degrade land, crops and infrastructure.

3. With a population of approximately 1.27 million, the Pyanj River Basin (114,500 km<sup>2</sup>) is the largest of the five principal basins of Tajikistan (Pyanj, Vakhsh, Kafernigan, Zerevshan, Syr Darya). It has a large range of altitude from 300-350 m in the semi-arid lowlands of southern Khatlon to more than 7,000 m in the Pamir and Hindu-Kush mountains. It is also the bread-basket of Tajikistan and contains a large portion of the country's agricultural land. Communities located in the Pyanj River Basin are already experiencing extreme climatic events.<sup>3</sup> In the mountainous Gorno Badakhshan Oblast, droughts, avalanches, landslides, rockfalls and violent winds are routine events which disrupt social and economic life and damage houses, infrastructure and erode land. Occasional but devastating flash floods are released when temporary glacial lakes, created by glacier surges in the Pamir Mountains, burst without warning (glacier lake outburst flood). In the hills, lowlands and flood plains of eastern Khatlon Region, droughts caused by decreased snowfall, and mudflows and floods caused by intense spring rain occur annually. These hazards routinely destroy land, crops and infrastructure and, in the worst cases, lives.

4. Recent studies (see footnote 3) indicated that projected rise in temperature of up to 2°C by 2050 will result in glacial melt and early snow-melt. The most significant climate change impacts will emerge from changes in the seasonality of runoff and increase in extreme events such as droughts, floods and mudflows. The run-off peak is likely to shift from the current late spring/early summer towards a late winter/early spring runoff regime. This shift has significant repercussions for farming practices and water resources management because it leads to a major water deficit during the crop growing season. Increasing risks from hazards such as catastrophic flooding due to glacial lake outbursts, destabilizations of mountain slopes and more landslides will result in a progressive increase in economic losses and risk to the population, and reduce the ability of communities located in the Pyanj river basin to move out of poverty. These adverse effects will be exacerbated by an increase in water demand resulting from increased evapo-transpiration and a projected 25% population growth by 2050.<sup>4</sup>

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<sup>1</sup> Under the Pilot Program for Climate Resilience financed by the Strategic Climate Fund.

<sup>2</sup> The design and monitoring framework is in Appendix 1.

<sup>3</sup> ADB. 2010. *Technical Assistance to Tajikistan for Climate Resiliency for Natural Resources Investments*. Manila (Phase 1 of PPCR); ADB. 2010. *Technical Assistance for Water and Adaptation in Central Asia*. Manila.

<sup>4</sup> United Nations, Department of Economic and Social Affairs, Population Division. 2011. *World Population Prospects: The 2010 Revision*. New York.

5. Water infrastructure in the Pyanj river basin is in a state of disrepair. Irrigation systems need major repair, flood protection is inadequate and safe drinking water is often inaccessible. Planning and maintenance capacity at the jamoat (sub-district) and community level is very weak. Financial resources and subsector-specific development planning and operation and maintenance (O&M) are absent. National and local institutions are weak and lack planning and climate change risk management skills. In addition, the Pyanj river basin faces particular development challenges arising from the very high rate of out-migration by males and the consequent prevalence of female-headed households. The main barriers to climate resilience include the lack of information on climate change impacts on water resources; limited availability of financial resources to introduce resilient practices; absence of risk transfer mechanisms and limited women's involvement in decision-making.

6. As a result of its high exposure to climate variability and change and its limited capacity to anticipate and manage climate change risks, Tajikistan is a beneficiary of the Pilot Program for Climate Resilience (PPCR) - a multilateral programme financed by the Strategic Climate Fund (SCF) that aims to demonstrate approaches to increase climate resilience in developing countries. Building climate change resilience of communities in the Pyanj river basin was identified as a priority by country stakeholders in the extensive consultations<sup>5</sup> that the government of Tajikistan conducted in partnership with ADB, the World Bank and European Bank for Reconstruction and Development since 2009, as part of the first phase of the PPCR. Priorities identified include the need for a better coordinated and strategic approach to water resources management in the Pyanj river basin, encompassing: (i) improved access to water resources through climate resilient infrastructure for irrigation, drainage, water supply and storage; (ii) increased resilience to climate extreme events through flood protection, early warning systems and risk transfer mechanisms; and (iii) improved access to information and financial resources in particular for women.

7. The proposed project is consistent with the Tajikistan Country Partnership Strategy (2010-2014) and is included in the Tajikistan Country Operation Business Plan 2012–2013. This project is also in line with ADB's long-term strategic framework, Strategy 2020, which includes support to increase climate resilience of developing member countries.

## **B. Impact and Outcome**

8. The project's impact will be improved livelihoods of Pyanj River Basin communities vulnerable to climate variability and change. The project's outcome will be adverse effects of climate variability and climate change reduced in 59 villages in 19 Jamoats in the Pyanj River Basin.

## **C. Outputs**

9. The project has four outputs. Output 1 is flood protection infrastructures are climate-proofed in 10 Jamoats.<sup>6</sup> It will: (i) upgrade and climate-proof flood and mud-flow protection infrastructure in ten locations including river bank reinforcement, embankment reconstruction, restoration of stream beds, terracing and planting of trees, and soil stabilization; (ii) establish O&M practices, develop O&M guidelines and train local units of the responsible agencies; (iii) develop early warning

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<sup>5</sup> The consultations engaged over 1400 stakeholders from government agencies, international organizations, donors, civil society and communities living in the Pyanj River Basin.

<sup>6</sup> ADB (2005) defines climate proofing as "...a shorthand term for identifying risks to a development project ... as a consequence of climate variability or change, and ensuring that those risks are reduced to acceptable levels..."

communication systems through the use of modern technologies; (iv) establish Disaster Risk Management Committees; and (v) conduct training and disseminate information on the impact of climate change and adaptation measures for local government officials, local institutions such as khashar (mutual self-help groups), mahala (neighborhood associations), and women committees.

10. Output 2 is irrigation systems are climate-proofed in 8 Jamoats. It will: (i) rehabilitate and climate proof irrigation canals and network assets including re-construction and de-silting of drainage and delivery channels and rehabilitation of pumping stations; (ii) pilot a drip irrigation scheme in Pyanj district; (iii) strengthen water users associations; and (iv) provide advice and disseminate information on water resources management and climate resilient agricultural practices to farmers, local government officials, women groups and other stakeholders.

11. Output 3 is water supply infrastructure is climate-proofed in 7 Jamoats. It will: (i) rehabilitate and climate proof seven rural drinking water supply systems, including rehabilitation, upgrading, and construction of boreholes, provision of new and rehabilitated pumping equipment, construction of new service reservoirs and water tanks; (ii) establish O&M practices for drinking water supply systems, develop O&M guidelines and train local units of the responsible agencies; (iii) establish drinking water consumers groups to influence responsible agencies and ensure performance of the water supply facilities; and (iv) raise awareness of health risks associated with climate change.

12. Output 4 is microcredits and microdeposits are available to promote climate resilience in the Pyanj River basin. It will: (i) expand capacity of participating financial institutions (PFIs) in the Pyanj river basin to accept micro and small deposits and provide microloans in support of climate resilient economic activities; (ii) provide credit lines for agricultural improvements (climate resilient agriculture credit line) and economic diversification (income diversification credit line) targeting particularly women; (iii) strengthen financial literacy of the local population; and (iv) assess the feasibility of collateral insurance linked to credit and, if appropriate, pilot a credit insurance scheme.

#### D. Investment and Financing Plan

13. The project is estimated to cost \$22.7 million (Table 1).

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

Item	Amount <sup>a</sup>
<b>A. Base Cost<sup>b</sup></b>	
1. Output 1: Flood protection infrastructure climate-proofed	7.3
2. Output 2: Irrigation infrastructure climate-proofed	4.6
3. Output 3: Water supply infrastructure climate-proofed	4.3
4. Output 4: Microcredits and microdeposits developed	3.8
<b>Subtotal (A)</b>	<b>20.0</b>
<b>B. Contingencies<sup>c</sup></b>	<b>2.7</b>
<b>Total (A+B)</b>	<b>22.7</b>

<sup>a</sup> Includes taxes and duties of \$ 0.87 million to be financed from government resources.

<sup>b</sup> In mid-2012 prices.

<sup>c</sup> Physical contingencies computed at 8% for civil works; 5% for equipment and 2% for field research and development, training, surveys, and studies. Price contingencies based on cost escalation factors.

Source: ADB.

14. The ADB Strategic Climate Fund<sup>7</sup> will provide grant financing equivalent to \$21.55 million to be administered by ADB.<sup>8</sup> The government will contribute to finance counterpart staff salary costs for project implementation. ADB will also contribute to counterpart staff salary and equipment operation and maintenance costs during project implementation, to ensure project staff retention and long term sustainability of the investment<sup>9</sup>. The Financing Plan is in Table 2.

**Table 2: Financing Plan**

Source	Amount (\$ million)	Share of Total (%)
ADB Strategic Climate Fund <sup>a</sup>	21.55	95.0
Government <sup>b</sup>	0.87	3.8
Participating Financial Institutions	0.28	1.2
<b>Total</b>	<b>22.70</b>	<b>100.0</b>

<sup>a</sup> Subject to ADB Board approval. Under the Pilot Program for Climate Resilience financed by the Strategic Climate Fund. The ADB Strategic Climate Fund is administered by ADB.

<sup>b</sup> Includes taxes and duties on goods, works, and services financed by the government.

Source: ADB.

15. MOF will lend a total of \$2.8 million in TJS equivalent of the grant to PFIs that meet ADB's eligibility criteria (see paragraph 18) and have demonstrated a willingness and ability to design and offer microfinance loans and deposits in the Pyanj River Basin.<sup>10</sup> PFIs will lend these funds to individuals, micro, small and medium enterprises (subborrowers) to finance investment activities (subprojects) that meet ADB's eligibility and safeguards requirements. PFIs will provide a minimum of 10% of each Subloan amount increasing the total amount made available under the credit lines to at least \$3 million equivalent. Relending to the PFIs will be based on a 5-year repayment term and an interest rate based on the prevailing National Bank of Tajikistan's refinancing rate.<sup>11</sup> Subloans to subborrowers will (i) cover a maximum of 90% of the eligible subproject cost; (ii) be for amounts of up to TJS 150,000; (iii) have a repayment term of up to 5 years; and (iv) carry a market-based interest rate. At least 50% of the subloans will be for amounts of TJS 5,000 or less, and at least 30% of the total number of subloans will be to women or organizations having substantial women ownership. PFIs will undertake independent assessment of subborrowers, including creditworthiness. All proposed subloans in excess of TJS 100,000 will require ADB approval and ADB will undertake prior review of the first three subloans issued by each PFI for each credit line and each subborrower type. Following project completion, the MOF will recycle the credit line funds for the same purposes as utilized under the project for a minimum additional period of 6 years. ADB and MOF will agree on the ultimate use of the credit lines before project completion.

## E. Implementation Arrangements

16. The project's completion date is 31 December 2019, and the grant closing date is 30 June 2020. The project will have three Executing Agencies (EAs): (i) Ministry of Land Reclamation and Water Resources (MLRWR), (ii) State Unitary Enterprise for Housing and Communal Services *Kochagi Manzillu Kommunal* (KMK, formerly *Tajikkomunservices*), and (iii) Ministry of Finance

<sup>7</sup> Under the Pilot Program for Climate Resilience financed by the Strategic Climate Fund.

<sup>8</sup> Subject to ADB Board approval.

<sup>9</sup> Tajikistan Country Partnership Strategy permits ADB to finance recurrent costs.

<sup>10</sup> \$1.9 million equivalent will be allocated to the climate resilient agriculture credit line and \$0.9 million equivalent to the income diversification credit line.

<sup>11</sup> MOF will bear the risk of any depreciation in the TJS/\$ exchange rate. Since the credit lines are being made available from grant proceeds, MOF does not bear any currency risks associated with creditor obligations.

(MOF). MLRWR will be responsible for Outputs 1 and 2. KMK will be responsible for Output 3. MOF will be responsible for Output 4. Overall coordination will be provided by the Executive Office of the President and the PPCR Inter-ministerial Committee, which is chaired by the Deputy Prime Minister. A project steering group comprising the three EAs will provide implementation guidance and monitor project performance. The Project management structure will consist of: (i) a project management office (PMO) in MLRWR; (ii) the existing project implementation group (PIG) in KMK; and (iii) the PMO in MOF, which is jointly financed under three ADB projects.<sup>12</sup> The project management units will ensure compliance with grant covenants, relevant ADB policies, project administration manual, gender action plan, financial, and safeguards requirements. Specific responsibilities will include: (i) overall financial management, (ii) procurement, disbursement, and accounting, including reports on withdrawal applications; (iii) monitoring and evaluation, including quarterly, annual and other progress reports for submission to ADB.

17. The implementation arrangements are summarized in Table 3 and described in detail in the project administration manual.<sup>13</sup>

**Table 3: Implementation Arrangements**

Aspects	Arrangements		
Implementation period	October 2013 – December 2019		
Estimated completion date	June 2019		
<b>Management</b>			
(i) Oversight body	Deputy Prime Minister , PPCR Inter-ministerial Committee and PPCR Focal Point		
(ii) Executing agencies	MLRWR, KMK, MOF		
(iii) Implementation units	MLRWR PMO, KMK PIG, MOF PMO and PMO in each PFI		
Procurement	International competitive bidding	7 contracts	\$ 11.2 million
	National competitive bidding	2 contracts	\$ 0.9 million
	Shopping	5 contracts	\$ 0.3 million
Consulting services	Quality- and Cost-Based Selection	4 contracts (432 pm)	\$ 2.4 million
Retroactive financing and/or advance contracting	Advance contracting for civil works and consulting services contracts, undertaken in conformity with ADB's Procurement Guidelines (2010, as amended from time to time) and the Guidelines on the Use of Consultants by ADB and its Borrowers (2010, as amended from time to time). Retroactive financing is not required.		
Disbursement	Grant proceeds disbursed in accordance with ADB's Loan Disbursement Handbook (2012, as amended from time to time) and detailed arrangements agreed upon between the government and ADB.		

KMK = State Unitary Enterprise for Housing and Communal Services; MOF = Ministry of Finance; MLRWR = Ministry of Water Resources and Land Reclamation; PIG = Project Implementation Unit; pm = person-month; PMO = Project Management Office; PFI = Participant Financing Institution; PPCR = Pilot Program for Climate Resilience  
Source: ADB

18. Tajik regulated microfinance organizations may apply to be a PFI if they meet the following eligibility criteria: (i) compliance with mandatory prudential standards and anti-money laundering and combating the financing of terrorism laws and regulations in Tajikistan (including applicable MOF regulations); (ii) corporate, financial,<sup>14</sup> management and governance practices acceptable to ADB, and satisfactory completion of ADB's integrity, anti-money laundering and combating the financing of terrorism due diligence requirements; (iii) successful participation in bilateral and

<sup>12</sup> The PMO under the MOF will be financed jointly by this project, the Rural Development Project and the proposed Access to Green Finance Project.

<sup>13</sup> Accessible from the list of linked documents in Appendix 2.

<sup>14</sup> These include: (i) equity equal to at least 12% of its total assets; (ii) a ratio of return on assets (ROA) greater than zero; (iii) a ratio of return on equity (ROE) of at least 10%; (iv) have an intermediation cost ratio of less than 33%; (v) a portfolio at risk (PAR) over 30 days of less than 5%; and (vi) a write-off ratio of less than 5%;

multilateral institutions financed loan programs in the rural development sectors; and (iv) willingness and ability to grow and service beneficiaries in the Pyanj River Basin in line with the objectives of the program. MFIs will be required to (i) submit audited financial statements for the 2 years prior to entering into a sub-loan agreement; (ii) implement a basic environment and social management system; and (iii) implement adequate anti-money laundering and counter-financing of terrorism customer due diligence measures. PFIs will enter into a subsidiary loan agreement (SLA) with MOF and a project agreement with ADB. The terms of the subsidiary loans will include: (i) TJS denomination; (ii) a 5 year tenor; and (iii) interest at the rate equivalent to the National Bank of Tajikistan's refinancing rate prevailing on the date of the SLA reset annually to reflect changes in this rate.

19. ADB conducted financial and integrity due diligence on four micro financial institutions from July 2012 to March 2013. Based on the results of the due diligence assessment, [REDACTED] and [REDACTED]<sup>15</sup> have been selected to participate in the first round of microfinance activities under Output 4 of the project.

20. All procurement of goods and works will be undertaken in accordance with ADB's *Procurement Guidelines*. Procurement of civil work will require 7 contracts totalling \$10.3 million, comprising 4 contracts for irrigation and flood/mud flow protection infrastructure totalling \$7.5 million with ICB method, and 3 contracts for water supply infrastructure totalling \$2.8 million with ICB/NCB method. Procurement of goods will require 7 contracts totalling \$1.2 million, comprising heavy machinery totalling \$0.9 million with ICB method, and vehicles and office furniture totalling \$0.3 million with shopping method. Procurement of consulting services totalling \$2.4 million will require 4 contracts for project implementation support, engineering supervision and capacity building of community organizations. A procurement plan is included in the PAM.

21. The project will provide management support and assistance to ensure that project implementation fully complies with ADB's policies and operational requirements in terms of financial management, fund disbursement, procurement procedures, social and environment safeguards, and O&M. This will include external financial audit and monitoring of social and environment safeguards. A team of international and national consultants will be engaged by the EAs to provide management support during Project implementation. A team of international and national consultants from nongovernmental organizations (NGOs) will be engaged by the EAs to carry out the capacity building work in support of the outputs.<sup>16</sup> All consultants and nongovernment organizations (NGOs) will be recruited according to ADB's *Guidelines on the Use of Consultants*.

22. The consulting services to support the PMO under MLRWR will require an estimated 229 person-months (31 international including 5 from an NGO, 198 national including 124 from NGO) to (i) facilitate project management and implementation, and (ii) strengthen the institutional and operational capacity of the executing agency and, (iii) to carry out capacity building of community groups. The consulting services include international consulting firms, national consulting firm(s) and NGO(s). The consulting services to support the PIG under KMK will require estimated 120 person-months (18 international including 2.5 from NGO, 102 national including 29 from NGO) to (i) facilitate project management and implementation, and (ii) strengthen the institutional and

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<sup>15</sup> [REDACTED] and [REDACTED] are limited liability companies established under the Law on Microfinance Organizations 2012. Half of the total funds, i.e. \$1.4 million will be allocated to [REDACTED] and [REDACTED]. The remaining half will be allocated to PFIs selected to participate in the second phase. Should no other PFI be selected, the remaining amount will be divided between the initially selected two PFIs.

<sup>16</sup> NGOs have a long-standing experience of mobilizing and increasing resilience to climate change of communities in the Pyanj river basin. NGOs are best placed to carry out the capacity building activities under the project.

operational capacity of the executing agency and, (iii) to carry out capacity building of community groups. The consulting services to support the PMO under MOF will require estimated 87 person-months (10 international, 77 national) to (i) facilitate project management and implementation, (ii) strengthen the institutional and operational capacity of the executing agency, (iii) carry out feasibility studies and technical assessments; and (iv) build capacity of PFIs and potential borrowers and savers.

23. Each consulting firm will be engaged using the quality- and cost-based selection (QCBS) method with a standard quality:cost ratio of 80:20. Full technical proposals (FTPs) will be required for each consulting services under MLRWR and KMK. Simplified technical proposal would be required for each consulting service under MOF. Detailed terms of reference for consultants to be engaged under the project are in the PAM.

### **III. DUE DILIGENCE**

#### **A. Vulnerability to climate variability and change**

24. A climate vulnerability, impact and adaptation assessment was carried out to identify priority communities that are particularly vulnerable to climate variability and change, with a focus on water resources. A methodology was developed to identify and rank the most vulnerable communities, and for each identified community, prioritize adaptation measures (sub-projects). Key criteria for prioritizing communities included: (i) exposure (magnitude and frequency) to climate shocks (drought, flood, mudslide, etc.); and (ii) technical, financial and human capacity to anticipate and manage climate risks. Key criteria for prioritizing subprojects include: (i) effectiveness in reducing climate risks; (ii) and replication potential. Community participation, including women, ensured that perspectives and insights of people whose livelihoods are being affected by changes in climate are reflected in the specific adaptation measures under the Project.

#### **B. Technical**

25. A technical feasibility assessment was carried out to assess the technical feasibility of the sub-projects, including preliminary engineering design of the infrastructure components. Twenty-two subprojects were selected based on field assessments and local experience, including ten flood and mud flow subprojects, five irrigation subprojects and seven drinking water subprojects. The flood and mud-flow subprojects will comprise: (i) construction and upgrading of river bank protection, including forestation of embankments and soil stabilization; (ii) provision for heavy machinery to maintain the restored flood protection and irrigation facilities; (iii) training of local authorities and communities, and (iv) establishment of early warning systems and disaster risk management committees. The irrigation sub-projects will comprise: (i) modernization and climate proofing of irrigation infrastructure; (ii) modernization and climate proofing of one existing pumping station and upstream delivery canal; (iii) construction of new infrastructure for piped drip type irrigation; and (iv) agricultural extension services and training of water users' associations. The rural drinking water supply sub-projects will comprise: (i) upgrading of ground water sources, and protection from flood risk and contamination; (ii) storage equivalent to one day's demand; (iii) provision of dedicated pumping mains; (iv) upgrading of communal water points with self-closing taps; and (v) establishment and training of water consumers groups.

#### **C. Economic**

26. An economic internal rate of return for the Project was estimated at 18% and the economic net present value at the discount rate of 12% was \$7.8 million. The Project will bring social

benefits, particularly for poorer beneficiaries, by reducing (i) losses of agricultural land, personal property, houses and livestock and consequent damage to family living conditions; (ii) declines in income levels; (iii) emergence of disease, (iv) decrease in agricultural crop yields, (v) deterioration of drinking water, and (vi) levels of migration. The Project is likely to have a significant positive impact on agricultural productivities, soil and water resources, public health, and rural livelihoods.

#### **D. Financial and Integrity Due Diligence of Prospective PFIs**

27. Financial, integrity and safeguards due diligence was conducted on four MFIs. The assessment comprised review of credit and risk management policies, operating systems, and procedures to prudently make loans; corporate and financial governance and management practices; sound business objectives and strategy; ability to assess creditworthiness of borrowers and determine market-based loan terms; policies and measures for anti-money laundering and combating the financing of terrorism laws and regulations in Tajikistan; environment and social management, and other requirements. As a result, two PFIs have been selected to participate in the project. It will be a condition to disbursement of credit line funds to PFIs that adequate anti-money laundering and counter-financing of terrorism customer due diligence measures are in place.

#### **E. Governance**

28. An assessment carried from January to March 2013 confirmed that the EAs' procurement capacity and financial management capacity is sufficient to manage international procurement and funds flow arrangements, accounting, internal and external audits, and information. Obstacles identified include less transparent operations, outdated operational tools, and a skills gap. Implementation support will be provided by consulting services to ensure that the project's financial management, procurement, accounting, monitoring, reporting and auditing requirements are met.

29. ADB's Anticorruption Policy (1998, as amended to date) was discussed with the three EAs and the Government. The specific policy requirements and supplementary measures are described in the project administration manual.

#### **F. Poverty and Social**

30. The project is aligned with Tajikistan's National Development Strategy 2015 and Poverty Reduction Strategy 2010-2012. It will improve the livelihoods of over 100,000 households in the Pyanj River Basin by reducing and reversing (i) livelihood losses and declining income levels; (ii) lack of access to essential services, (iii) outmigration in search of employment, and (iv) vulnerability to water-borne diseases. Women are particularly vulnerable in the project areas. High rates of male migration have resulted in high engagement of female population in agriculture. However, women have little access to financial resources and information to switch to more climate resilient livelihoods. The project is categorized as effective gender mainstreaming (EGM), and includes a gender action plan to ensure women are actively involved in all project components and benefit fully from them. Women will benefit from the project through improved access to water resources for irrigation and drinking water supply, enhanced knowledge of climate resilient agriculture and increased access to microdeposits and credit lines for climate resilient economic activities. The project will support local women's groups to mobilize and act collectively, assist women in accessing the micro-credit they need in order to undertake adaptive measures and build resilience, and support their active participation in irrigation water users groups, disaster risk management committees and drinking water consumer groups.

## **G. Safeguards**

31. The project is classified Category B for environment. The infrastructure subprojects are expected to have limited site-specific adverse environmental impacts during both construction and operation and are located outside environmentally sensitive areas. Two initial environmental examinations (IEEs) have been prepared, one by MLRWR for the flood protection and irrigation subprojects, and one by KMK for the water supply subprojects, in accordance with the ADB's safeguards policy statement.<sup>17</sup> Adequate mitigation measures for each subproject will be implemented through site-specific environmental management plans based on generic environmental management plans (EMPs) for water supply, flood management and irrigation components. Site specific EMPs will be prepared by contractors, and approved by the PMO in MLRWR and PIG in KMK. Consulting services will assist the MLRWR and KMK in strengthening their institutional capacity to manage environmental impacts.

32. The project is expected to have only non-significant land acquisition and resettlement (LAR) impacts and is classified as Involuntary Resettlement Category B, according to the ADB Safeguards Policy Statement (2009). The engineering design of the infrastructure subprojects under the Project has not yet advanced to a stage where LAR impacts on individual or collective land users can be identified. In accordance with OM Section F1/OP para.51, a Land Acquisition and Resettlement Framework (LARF) has been prepared in lieu of land acquisition resettlement plans (LARP). During project implementation each subproject will be screened for LAR impacts. For subprojects with LAR impacts, LARPs will be prepared and implemented in accordance with the LARF before the commencement of civil works. For subprojects involving the rehabilitation of existing facilities due diligence will be conducted to determine past or present social safeguards concerns and to identify corrective actions, as necessary. Capacity building on social safeguards will be provided to the EAs through ongoing ADB technical assistance.<sup>18</sup>

33. The project is classified as Category C for indigenous peoples. Project preparation activities have determined that there will be no indigenous peoples issues associated with the project.

34. Before receiving its first disbursement under the proposed project, PFIs will establish an environmental and social management system (ESMS) to screen out subprojects including activities listed in ADB's Prohibited Investment Activities List and posing more than minimal environmental and social risks.<sup>19</sup> The project will provide training on environment and social safeguards to PFIs. Each PFI will be required to designate at least one staff member responsible for the implementation of its ESMS. Only subprojects categorized as C for environment and social impacts will be eligible for financing under the project.

## **H. Risks and Mitigating Measures**

35. The project carries manageable risks that will be mitigated during implementation. Main risks and mitigating measures are summarized in Table 4 and described in detail in the risk assessment and risk management plan.<sup>20</sup>

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<sup>17</sup> Asian Development Bank. Safeguard Policy Statement. June 2009.

<sup>18</sup> ADB. 2011. Technical Assistance for Mainstreaming Land Acquisition and Resettlement Safeguards in the Central and West Asia Region. Manila.

<sup>19</sup> Accessible from the list of linked documents in Appendix 2.

<sup>20</sup> Accessible from the list of linked documents in Appendix 2.

**Table 4: Summary of Risks and Mitigating Measures**

<b>Risks</b>	<b>Mitigating Measures</b>
Lack of transparency	The grant agreement and project agreements makes provisions for covenants on including separate accounts, quarterly and annual reporting, annual audits of financial statements, and spot checks.
Limited capacity of executing agencies	The project includes provisions for engagement of consultants to assist EAs and the PFIs in implementation of the project.
Implementation delays, including disruptions during the upcoming presidential election.	Potential delays in project start-up may be reduced by taking advance action on contracting consulting services for detailed engineering design and for civil works.
Reputation Risk: PFI's ability to deliver	Extensive financial, integrity and safeguards due diligence has been carried to identify PFIs for the first phase of the project. Additional due diligence will be conducted on additional PFIs for subsequent phases of the project.
Limited sustainability of interventions	Sustainability will be addressed through climate resilient design, supervision of civil works to ensure appropriate built quality, preparation of O&M plans, government's committed to meet O&M cost after project completion; training of responsible agencies and capacity building of water users associations, disaster risk management committees, and water consumers groups.
Lack of coordination among the three executing agencies	The Executive Office of the President, the national coordination mechanism established under the Pilot Program for Climate Resilience (PPCR) and the PPCR Secretariat will ensure coordination among the three project executing agencies, and other stakeholders.

#### **IV. ASSURANCES AND CONDITIONS**

36. The government and the EAs 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 grant documents. The government, the EAs and the PFIs have agreed with ADB on certain covenants for the project, which are set forth in the grant agreement and project agreements.

#### **V. RECOMMENDATION**

37. I am satisfied that the proposed administration of the grant would comply with the Articles of Agreement of the Asian Development Bank (ADB) and recommend that the Board approve the administration by ADB of a grant not exceeding the equivalent of \$21.55 million to the Republic of Tajikistan for the Building Climate Resilience in the Pyanj River Basin Project, to be provided by the ADB Strategic Climate Fund, substantially in accordance with the terms and conditions set forth in the draft grant and project agreements presented to the Board.

Takehiko Nakao  
President

Date

### Design and Monitoring Framework

Design Summary	Performance Targets and Indicators	Data Sources and Reporting Mechanisms	Assumptions and Risks
<p><b>Impact</b></p> <p>Improved livelihoods of Pyanj River Basin communities vulnerable to climate variability and change</p>	<p>Household incomes in project areas increased by at least 40% by 2023 (baseline = 7,700 Somoni in 2012)</p>	<p>National statistics of the Government of Tajikistan (Ministry of Economic Development)</p>	<p><b>Assumptions</b> Local government and communities sustained commitment to climate change adaptation measures</p> <p><b>Risks</b> Actual climate change related impacts are more severe than predicted levels</p>
<p><b>Outcome</b></p> <p>Adverse effects of climate variability and climate change reduced in 59 villages in 19 Jamoats in the Pyanj River Basin</p>	<p>By 2019: Economic losses from climate induced extreme events reduced by 20% compared to 2012 (baseline to be defined during first year of implementation)</p> <p>At least 50% of surveyed beneficiaries, including at least 50% of surveyed women, confirm improved access to financial resources for climate change adaptation.</p>	<p>Statistics and reports of Ministry of Health and other national statistics</p> <p>Public opinion survey carried out by the Project</p>	<p><b>Assumptions</b> Climate change impacts are not estimated with adequate level of accuracy</p>
<p>Output 1. Flood protection infrastructure is climate proofed in 10 jamoats</p>	<p>At least 231 ha of arable land protected from annual floods (frequency less than 1 in 10 years) (2012 baseline=0)</p> <p>At least 1,490 ha of arable land protected from high floods (frequency greater than 1 in 10 years but less than 1 in 50 years) (2012 baseline=0)</p> <p>Disaster risk management plans based on early warning system established in 10 target jamoats</p> <p>At least 500 people, including at least 50% women, trained on disaster risk management by the DRMCs in 10 jamoats</p>	<p>Report of the monitoring program established under PPCR</p> <p>Statistics of Committee for Emergency Situations and MLRWR</p> <p>Report of the monitoring program established under PPCR</p> <p>End of project surveys with head of target jamoats</p>	<p><b>Assumptions</b> Sufficient contractors available in the project districts</p> <p>Trained stakeholders retained</p> <p><b>Risks</b> Sub-projects contracts may not be attributed due to lack of fair competitions</p> <p>Training experience is lost and retraining has to be carried out for new stakeholders</p>
<p>Output 2. Irrigation systems are climate-proofed in 8 Jamoats</p>	<p>At least 1,450 ha of arable land serviced by 5 climate proofed irrigation canals and network (2012 baseline=0)</p> <p>At least 8 WUAs trained to deliver agricultural advice</p> <p>At least 20% of members of WUAs are women (2012 baseline=0)</p> <p>At least 200 farmers trained on climate resilient agriculture practices by 8 WUAs</p>	<p>Cadaster of agricultural land use in the communities of the Pyanj River Basin</p> <p>End-of-project survey with heads of 8 jamoats</p> <p>Monitoring program established under PPCR</p> <p>Monitoring program established under PPCR</p>	

Output 3. Water supply infrastructure is climate-proofed in 7 Jamoats	<p>At least 4,150 households serviced by 7 climate proofed water supply systems</p> <p>At least 50% of surveyed beneficiaries, including at least 50% of surveyed women, confirm perception of improved access to drinking water</p> <p>At least 30% of members of Water Consumer Groups are women</p> <p>At least 350 people trained on climate change risks by the Water Consumer Groups in 7 jamoats</p>	<p>Monitoring program established under PPCR</p> <p>End-of-project surveys with heads of target communities</p> <p>Monitoring program established under PPCR</p> <p>Monitoring program established under PPCR</p>	
Output 4. Micro-credit and microdeposit established to promote climate resilience	<p>At least 1,000 people access climate resilient agriculture and revenue diversification credit lines (2012 baseline=0)</p> <p>A minimum of 30% of all subloans are to eligible subborrowers who are either women or enterprises with a minimum of 50% ownership by women</p> <p>3 branches of finance institutions offer climate resilience micro credits (2012 baseline=0)</p> <p>At least 1,000 potential borrowers, of whom at least 50% are women, trained in climate resilient agricultural practice</p> <p>\$2.8 million of ADB grant fund is disbursed for on-lending to beneficiaries</p>	<p>Number of signed subsidiary loans agreements signed by PFIs for credit lines</p> <p>Quarterly reports from PFIs and MFIs</p> <p>End of project surveys on access to financial services</p> <p>Attendance sheets and evaluation forms from training courses</p> <p>Quarterly reports from PFIs and MFIs</p>	<p><b>Assumptions</b> Microfinance institutions are able to train and retain staff with micro-lending skills applied to climate change related projects.</p>

<b>Activities with Milestones</b>	<b>Inputs</b>	
<p><b>1. Flood protection infrastructure is climate proofed in 10 Jamoats</b></p> <p>1.1 Establish MLRWR PMO - by Q4 2013</p> <p>1.2 Contract implementation support consultants – by Q1 2014</p> <p>1.3 Produce detailed engineering design and surveys – by Q3 2014</p> <p>1.4 Procure civil work contracts – by Q1 2015</p> <p>1.5 Procure equipment and machinery – by Q1 2016</p> <p>1.6 Rehabilitate and climate proof flood protection infrastructure – by Q2 2019</p> <p>1.7 Carry out two workshops on climate change risk management each year for communities and local government – (2014 to 2019)</p> <p>1.8 Establish early warning systems in 10 target jamoats – by Q4 2016</p> <p>1.9 Establish DRMC in 10 jamoats - by Q4 2014</p> <p>1.10 Carry out annual opinion survey in 10 target jamoats (2014 to 2019)</p> <p>1.11 Carry out end of project surveys with 10 target jamoats – by Q4 2019</p> <p>1.12 Establish project monitoring systems with indicator baselines by Q2 2014</p> <p>1.13 Produce quarterly progress report, and annual M&amp;E report - 2014 to 2019</p> <p>1.14 Produce O&amp;M manual – by Q4 2017</p> <p>1.15 Carry out annual O&amp;M trainings in 10 target jamoats</p> <p>1.16 Hold a mid-term project workshop – by Q3 2016</p> <p>1.17 Hold a final project workshop – by Q1 2019</p>	<b>ADB SCF Grant: \$21.55 million</b>	
	<b>Item</b>	<b>Amount (\$ million)</b>
	Civil Work	10.29
	Vehicles & Equipment	1.79
	Training and Workshops	0.15
	Surveys and Design	0.38
	Consulting Services	2.38
	Administration and Audit	0.35
	Operation and Maintenance	0.25

Activities with Milestones	Inputs	
<p><b>2. Irrigation systems are climate-proofed in 8 Jamoats</b></p> <p>2.1 Contract implementation support consultants – by Q1 2014            2.2 Produce detailed engineering design and surveys – by Q3 2014            2.3 Procure civil work contracts – by Q1 2015            2.4 Procure equipment and machinery – by Q1 2016            2.5 Rehabilitate and climate proof 5 irrigation systems – by Q2 2019            2.6 Establish WUAs in 5 target jamoats – by Q4 2014            2.7 Carry out two workshops on climate change risk management each year for communities and local government of the 5 target jamoats – (2014 to 2019)            2.8 Carry out annual opinion survey in 5 target jamoats (2014 to 2019)            2.9 Carry out end of project surveys with head of 5 target jamoats            2.10 Establish project monitoring systems with indicator baselines by Q2 2014            2.11 Produce quarterly progress report, and annual M&amp;E report - 2014 to 2019            2.12 Produce O&amp;M manuals for 5 irrigation systems – by Q4 2016            2.13 Carry out annual O&amp;M trainings in 5 target jamoats (2014 to 2019)            2.14 Hold a mid-term project workshop – by Q3 2016            2.15 Hold a final project workshop – by Q3 2019</p>	Incremental Staff	0.36
	Microfinance Lending	2.87
	Contingency	2.71
	<b>Government: \$0.87 million</b>	
	<b>Item</b>	<b>Amount (\$ million)</b>
	Duties and Taxes	0.87
	<b>Participating Financial Institutions: \$0.28 million</b>	
	<b>Item</b>	<b>Amount (\$ million)</b>
	Microfinance Lending	0.28
<p><b>3. Water supply infrastructure is climate-proofed in 7 Jamoats</b></p> <p>3.1 Produce detailed engineering design and surveys – by Q3 2014            3.2 Procure civil work contracts – by Q1 2015            3.3 Procure equipment and machinery – by Q1 2016            3.4 Rehabilitate and climate proof water supply infrastructure – by Q2 2019            3.5 Establish WCGs in 5 targets jamoats – by Q4 2014            3.6 Conduct two workshops each year for communities and local government of the 7 target jamoats – (2014 to 2019)            3.7 Carry out annual opinion survey in 7 target jamoats (2014 to 2019)            3.8 Carry out end of project surveys with 7 target jamoats – by Q3 2019            3.9 Establish project monitoring systems with indicator baselines by Q2 2014            3.10 Produce quarterly progress report, and annual M&amp;E report - 2014 to 2019            3.11 Produce O&amp;M manuals for 7 irrigation systems – by Q4 2017            3.12 Carry out annual O&amp;M trainings in 5 target jamoats (2014 to 2019)            3.13 Hold a mid-term project workshop – by Q3 2016            3.14 Hold a final project workshop – by Q3 2019</p>		
<p><b>4. Microcredit and microdeposit are available to promote climate resilience in the Pyanj River basin</b></p>		
4.1 Support PFIs to establish M&E and ESMS – by Q1 2014		
4.2 Establish agricultural credit line – by Q2 2014		
4.3 Establish revenue diversification credit line – by Q2 2014		
4.4 Conduct 10 seminars on savings products for PFIs and beneficiaries - by Q4 2014		
4.5 Conduct 6 seminars each year on climate resilient agriculture for PFIs and beneficiaries – (2014 to 2019)		
4.6 Conduct feasibility study on micro credit-life and collateral insurance – by Q4 2015		
4.7 If appropriate, pilot insurance scheme – by Q2 2019		
4.8 Produce quarterly progress report, and annual M&E report - 2014 to 2019		
4.9 Carry out annual opinion survey in 10 target jamoats		
4.10 Carry out annual end of project survey in 10 target jamoats		
4.11 Hold midterm project workshop - by Q3 2016		
4.12 Hold a final project workshop – by Q3 2019		

ADB = Asian Development Bank; DRMC = disaster risk management committee; ESMS = environmental and social management system; KMK = State Unitary Enterprise for Housing and Communal Services; M&E = monitoring, reporting and evaluation; MOF = Ministry of Finance; MLRWR = Ministry of Land reclamation and Water Resources; PPCR = Pilot Program for Climate Resilience; SCF= Strategic Climate Fund; WCG = water consumers groups; WUA – water users association.

Source: Asian Development Bank.

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Makoto Ojira  
Director, CWER

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Klaus Gerhaeusser  
Director General, CWRD

**LIST OF LINKED DOCUMENTS**

<http://www.adb.org/Documents/RRPs/????>

1. Grant Agreement
2. Project Agreement (KMK)
3. Project Agreement (PFIs)
4. Sector Assessment (Summary)
5. Project Administration Manual
6. Climate Change Vulnerability Assessment
7. Development Coordination
8. Economic and Financial Analysis
9. Country Economic Indicators
10. Summary Poverty Reduction and Social Strategy
11. Gender Action Plan
12. Environment and Social Management System of Participating Financial Institutions
13. Initial Environmental Examination: Flood Protection and Irrigation Facilities
14. Initial Environmental Examination: Water Supply Facilities
15. Resettlement Framework
16. Risk Assessment and Risk Management Plan
17. Contribution to ADB Results Framework

## Supplementary Appendix

- A. Financial Management Assessment
- B. Financial Assessment of the Participating Financial Institutions