



Tajikistan: Water Resources Management in Pyanj River Basin

Project Name	Water Resources Management in Pyanj River Basin	
Project Number	47181-001	
Country	Tajikistan	
Project Status	Closed	
Project Type / Modality of Assistance	Technical Assistance	
Source of Funding / Amount	TA 8647-TAJ: Water Resources Management in Pyanj River Basin	
	Technical Assistance Special Fund	US\$ 800,000.00
	Multi-Donor Trust Fund under the Water Financing Partnership Facility	US\$ 200,000.00
Strategic Agendas	Environmentally sustainable growth Inclusive economic growth	
Drivers of Change	Governance and capacity development Partnerships	
Sector / Subsector	Agriculture, natural resources and rural development - Irrigation - Water-based natural resources management	
Gender Equity and Mainstreaming	Effective gender mainstreaming	
Description	The PPTA is to design an investment project for increased farm incomes in the Chubek Irrigation System (CIS) area in the Pyanj River basin (PRB). PPTA will be implemented over a period of 11 months (July 2014-May 2015).	

Project Rationale and Linkage to Country/Regional Strategy

Tajikistan is the most vulnerable in of central Asia and Caucasus countries to food insecurity due to its limited irrigated land which account for 95% of crop production and underdeveloped agriculture. 45% of the country's employment and 57% of all rural employment is still in agriculture. Almost 80% of the country's working poor live in rural areas and half of the working poor are in agriculture mainly due to low labor incomes.

Between 1990 and 2004 country's annual diversions from surface and groundwater declined from 13.7 km³ to 12.3 km³ and its water delivered declined from 12 km³ to 9 km³. This resulted in a decrease of water delivery efficiency from 88% to 75%. These are attributed to the deteriorating WRM infrastructure, in particular irrigation and drainage (I&D) as 91% of country's diverted water has been used for irrigation, and the weak capacity of WRM institutions including government agencies and water users' associations (WUAs) on the operation and maintenance (O&M) of the WRM.

The government has prioritized efforts to increase the effectiveness and efficiency of WRM and agriculture production. It targets the improvement of irrigated agriculture covering 320,000 ha and the creation of irrigated land of 1,500 ha to increase 7% in the value of agricultural products by 2015 to meet national food demand. To achieve these targets it calls for \$262 million for a better WRM and \$24 million for better agriculture investment.

The government is also reforming WRM system. The Ministry of Land Reclamation and Water Resources (MLRWR) was abolished in November 2013 and its responsibilities were reassigned to the newly formed: (i) the Ministry of Energy and Water Resources (MEWR) responsible for the policy and regulations on WRM; and (ii) the Agency of Land Reclamation and Irrigation (ALRI) responsible for development and management of WRM infrastructure. Further reforms include: (i) the change in WRM areas from territorial administrative to hydrological areas; and (ii) the establishment of river basin management plans (RBMPs) to clarify and monitor water allocations, water governance institutes such as river basin organizations to develop RBMPs, river basin councils which will provide a participation mechanism of different water users and approve RBMPs, in line with principles of integrated WRM. The World Bank has commenced support for these reforms at a national level and in the Kafernigan River basin. ADB is requested by the government to help reform and modernize deteriorated WRM infrastructure in PRB, the largest river basin in the country.

Given more than 40% of PRB comprises the territory of Afghanistan and serious flood disasters occurred frequently, in 2010 both governments signed a bilateral agreement for joint hydrological monitoring of Pyanj River, with the help of developing partners including ADB. A road map to establish a joint PRB commission was developed in 2013 with ADB assistance. The governments are seeking technical and financial assistance to implement the road map.

PRB's WRM will affect economy and food security in PRB as it includes the majority of Khatlon province which has the largest population (2.7 million) and agriculture production (e.g., 774,000 tons cereal production) in the country, and is country's poorest river basin (55% in poor population). For better PRB's WRM, the following in particular need to be paid attention: (i) PRB's water demand is 12% higher than diversion; and (ii) PRB is vulnerable to the climate change, and the following impacts to WRM are predicted, (a) gradual shift in the river flow seasonal distribution, and (b) increase of water deliveries requirements in irrigation systems.

Among irrigation systems covering about 120,000 ha in PRB, CIS is the largest system (45,000 ha) taking water from the Pyanj River. CIS's water supply capacity has declined up to around 80m³/s in 2013 compared to 150m³/s in 1950 due to a deterioration of I&D infrastructure, high sediment loads, and weak O&M capacity. While ADB financed \$3.7 million for partial rehabilitation, it is not enough for its full functioning. Major crops are wheat, cotton, and vegetables which account for 31%, 51%, and 18% of the cultivated area, respectively. Crop yields are low (e.g., wheat yield of 2.36 t/ha is significantly lower than the one in Uzbekistan of 4.50 t/ha) and water productivity in PRB is also low (e.g., estimated productivity for wheat of 0.6 kg/m³ could be between 0.8-1.0 kg/m³ with appropriate irrigation and sufficient other inputs).

The proposed project will reflect the following lessons learnt from previous ADB financed irrigation project: (i) focus should be on full rather than partial rehabilitation for effective system performance; (ii) projects dispersed over a broad geographic area are hard to implement and have high administrative burdens; (iii) improving on-farm agricultural productivity is important for project sustainability and an appropriate implementing partner should be chosen for the improvement; and (iv) sufficient funds should be raised through water use levies or government contributions to ensure the sustainability of WUAs and coverage of O&M costs.

A standard stand-alone project is proposed as the majority of the project scope (i.e. target river basin and WRM infrastructure), has been identified. It is included in the Country Operations Business Plan, 2014-2016.

Impact

Project Outcome

Description of Outcome

Progress Toward Outcome

Implementation Progress

Description of Project Outputs

Status of Implementation Progress (Outputs, Activities, and Issues)

Geographical Location

Khatlon

Summary of Environmental and Social Aspects

Environmental Aspects

Involuntary Resettlement

Indigenous Peoples

Stakeholder Communication, Participation, and Consultation

During Project Design The main beneficiary groups are those within the CIS areas. As the proposed works are rehabilitation and improvement of existing infrastructure and improved farmer/household capacity, no negatively affected people are identified.

During Project Implementation Consultant team was recruited and fielded in September 2014 and contract completion is 31 March 2016. The final report was submitted in February, reviewed and cleared by ADB in March 2016.

Business Opportunities

Consulting Services PPTA will require one consultancy contract and provide 22.5 international person-months and 51 national person-months through a firm using the QCBS procedure at 80:20 ratio and simplified technical proposals following ADB's Guidelines on the Use of Consultants and its Borrowers (2013, as amended from time to time)

Responsible Staff

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Timetable

Concept Clearance	-
Fact Finding	-
MRM	-
Approval	12 May 2014
Last Review Mission	-
Last PDS Update	29 Sep 2016

TA 8647-TAJ

Milestones					
Approval	Signing Date	Effectivity Date	Closing		
			Original	Revised	Actual
12 May 2014	05 Jun 2014	05 Jun 2014	31 May 2015	31 Mar 2016	-

Financing Plan/TA Utilization						Cumulative Disbursements		
ADB	Cofinancing	Counterpart				Total	Date	Amount
		Gov	Beneficiaries	Project Sponsor	Others			
800,000.00	200,000.00	120,000.00	0.00	0.00	0.00	1,120,000.00	12 May 2014	995,639.04

Project Page <https://www.adb.org/projects/47181-001/main>

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Date Generated 06 July 2017

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