



## Pakistan: Trimmu and Panjnad Barrages Improvement Project

Project Name	Trimmu and Panjnad Barrages Improvement Project								
Project Number	47235-001								
Country	Pakistan								
Project Status	Active								
Project Type / Modality of Assistance	Loan								
Source of Funding / Amount	<table border="1"> <tr> <td colspan="2"><b>Loan 3159-PAK: Trimmu and Panjnad Barrages Improvement Project</b></td> </tr> <tr> <td>Ordinary capital resources</td> <td>US\$ 50.00 million</td> </tr> <tr> <td colspan="2"><b>Loan 3160-PAK: Trimmu and Panjnad Barrages Improvement Project</b></td> </tr> <tr> <td>concessional ordinary capital resources lending / Asian Development Fund</td> <td>US\$ 100.00 million</td> </tr> </table>	<b>Loan 3159-PAK: Trimmu and Panjnad Barrages Improvement Project</b>		Ordinary capital resources	US\$ 50.00 million	<b>Loan 3160-PAK: Trimmu and Panjnad Barrages Improvement Project</b>		concessional ordinary capital resources lending / Asian Development Fund	US\$ 100.00 million
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Strategic Agendas	Environmentally sustainable growth Inclusive economic growth								
Drivers of Change	Governance and capacity development Knowledge solutions								
Sector / Subsector	<b>Agriculture, natural resources and rural development</b> - Irrigation - Rural flood protection								
Gender Equity and Mainstreaming	Effective gender mainstreaming								
Description	<p>1. Trimmu and Panjnad Barrages Project (TPBP) will rehabilitate and upgrade the Trimmu and Panjnad barrages on the Chenab River, which supply irrigation water to 1.74 million ha through six main canals. The project will (i) rehabilitate and upgrade the two barrages, and (ii) build institutional capacity in flood risk management. Trimmu barrage is located downstream of the confluence of Jhelum and Chenab rivers. Its flood passing capacity (FPC) is reduced from originally 18,265 cubic meters per second (m<sup>3</sup>s<sup>-1</sup>) to 12,743 m<sup>3</sup>s<sup>-1</sup>. The project will enhance the FPC to 23,220 m<sup>3</sup>s<sup>-1</sup>. Panjnad barrage is located downstream of confluence point of Sutlej and Chenab rivers. The project will enhance the barrage's FPC originally, from 19,822 m<sup>3</sup>s<sup>-1</sup> to 24,495 m<sup>3</sup>s<sup>-1</sup>.</p>								
Project Rationale and Linkage to Country/Regional Strategy	<p>Irrigated agriculture in Punjab (i) accounts for 28% of Punjab's gross domestic product (GDP) output; (ii) employs 54% of the labor force; (iii) produces 90% of Punjab's agricultural output; and (iv) uses more than 90% of the water resources. Punjab's agricultural GDP is 66% of the national agricultural GDP. Irrigated agriculture is crucial to generating higher incomes and attaining Punjab's targeted 6% 7% growth rate (3% in 2011-2012). The Punjab Irrigation Department (PID) is responsible for operation and maintenance (O&amp;M), and management of the irrigation system that covers 8.4 million hectares. The PID's infrastructure has an estimated replacement value of \$20 billion.</p> <p>The irrigation infrastructure in Punjab has seriously deteriorated due to aging (much is nearly 100 years old) and deferred maintenance. The estimated cost of the deferred maintenance of the irrigation system is about \$2 billion; the estimated cost to upgrade the system to modern standards is \$3.5 billion. The barrages structural deterioration and increasing water leakage through the gates pose serious risks and unreliable irrigation service delivery to the tail ends of the canals. Farmers have adapted unreliable and inadequate canal water by developing private tubewells. Increasing pumping, declining groundwater depth and saltwater intrusion in the downstream canal areas are causing land degradation, low productivity and high production cost.</p> <p>The Country Partnership Strategy (2009-2013) prioritizes improving the irrigation infrastructure. ADB's agriculture sector evaluation (2006) for Pakistan emphasizes improving water resources and irrigation. The water sector roadmap identifies improving the infrastructure, institutions and agricultural production to drive sustainable agricultural growth. The Medium-Term Development Framework (2007-2012; extended to 2015) estimates an investment requirement of over \$100 million per year for irrigation sector and allocates PKR9.0 billion (\$95 million equivalent) for new irrigation projects. The PID is working with ADB, World Bank and Japan International Cooperation Agency (JICA) on the improvement of irrigated agriculture.</p>								
Impact	Sustained agricultural production in the command areas of the barrages.								

## Project Outcome

Description of Outcome	Safe Trimmu and Panjnad barrages deliver reliable irrigation water supplies to their canals.
Progress Toward Outcome	
<b>Implementation Progress</b>	
Description of Project Outputs	1. Rehabilitated and upgraded Trimmu barrage 2. Rehabilitated and upgraded Panjnad barrage. 3. Improved capacities of the communities and PID.
Status of Implementation Progress (Outputs, Activities, and Issues)	Consultancy contract for construction supervision awarded on 30 September 2015. Civil works contract for the rehabilitation and upgrading of Trimmu barrage awarded on 23 December 2015. PBER for ICB/02 submitted by PMO on 3 March 2016. Review of the PBER is ongoing.
Geographical Location	Punjab

## Safeguard Categories

Environment	B
Involuntary Resettlement	A
Indigenous Peoples	C

## Summary of Environmental and Social Aspects

Environmental Aspects	The environment impacts are site-specific, mostly reversible and mitigation measures can be designed more readily. However, due diligence during fact-finding mission will further confirm the categorization.
Involuntary Resettlement	A total of 75 households including 28 kiosks will be affected and 250 m of rural road will be relocated. However, due diligence during fact-finding mission will further confirm the categorization.
Indigenous Peoples	Indigenous Peoples are not identified in the project area; therefore, no impacts are expected.

## Stakeholder Communication, Participation, and Consultation

During Project Design	The main stakeholders are project displaced persons, local community, Punjab irrigation department and other concerned departments, and local NGOs. The stakeholders were consulted at design stage during preparation of feasibility study.
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During Project Implementation	Stakeholders will be participated through i) community consultations; ii) project awareness campaigns; iii) grievance redress committees; iv) project displaced person committee; and v) engage locals in the project related jobs, preference will be given to the displaced persons particularly the vulnerable people.

## Business Opportunities

Consulting Services	Advance contracting is requested and retroactive financing up to \$1.5 million is considered.
Procurement	Advance contracting is requested and retroactive financing up to \$6.0 million is considered.

## Responsible Staff

Responsible ADB Officer	Sato, Noriko
Responsible ADB Department	Central and West Asia Department
Responsible ADB Division	Environment, Natural Resources & Agriculture Division, CWRD
Executing Agencies	<i>Punjab Irrigation Department c/o Superintending Engineer Link Canal Circle, Canal Bank Mughalpur, Lahore, Pakistan</i>

## Timetable

Concept Clearance	25 Nov 2013
Fact Finding	02 Dec 2013 to 02 Dec 2013
MRM	18 Jun 2014

Approval	22 Sep 2014
Last Review Mission	-
Last PDS Update	30 Mar 2017

### Loan 3159-PAK

Milestones					
Approval	Signing Date	Effectivity Date	Closing		
			Original	Revised	Actual
22 Sep 2014	05 Dec 2014	21 Jan 2015	31 Mar 2021	-	-

Financing Plan		Loan Utilization			
	Total (Amount in US\$ million)	Date	ADB	Others	Net Percentage
Project Cost	73.00	Cumulative Contract Awards			
ADB	50.00	22 Sep 2014	45.79	0.00	92%
Counterpart	23.00	Cumulative Disbursements			
Cofinancing	0.00	22 Sep 2014	12.03	0.00	24%

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Milestones					
Approval	Signing Date	Effectivity Date	Closing		
			Original	Revised	Actual
22 Sep 2014	05 Dec 2014	21 Jan 2015	31 Mar 2021	-	-

Financing Plan		Loan Utilization			
	Total (Amount in US\$ million)	Date	ADB	Others	Net Percentage
Project Cost	100.00	Cumulative Contract Awards			
ADB	100.00	22 Sep 2014	41.18	0.00	46%
Counterpart	0.00	Cumulative Disbursements			
Cofinancing	0.00	22 Sep 2014	13.06	0.00	14%

Project Page	<a href="https://www.adb.org/projects/47235-001/main">https://www.adb.org/projects/47235-001/main</a>
Request for Information	<a href="http://www.adb.org/forms/request-information-form?subject=47235-001">http://www.adb.org/forms/request-information-form?subject=47235-001</a>
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