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>
<thead>
<tr>
<th>Source of Funding / Amount</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loan 3159-PAK: Trimmu and Panjnad Barrages Improvement Project</td>
<td>US$ 50.00 million</td>
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<td>Ordinary capital resources</td>
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<td>Loan 3160-PAK: Trimmu and Panjnad Barrages Improvement Project</td>
<td>US$ 100.00 million</td>
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<td>Concessional ordinary capital resources lending / Asian Development Fund</td>
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**Strategic Agendas**
Environmentally sustainable growth
Inclusive economic growth

**Drivers of Change**
Governance and capacity development
Knowledge solutions

**Sector / Subsector**
Agriculture, natural resources and rural development - Irrigation - Rural flood protection

**Gender Equity and Mainstreaming**
Effective gender mainstreaming

**Description**
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 (m³s⁻¹) to 12,743 m³s⁻¹. The project will enhance the FPC to 23,220 m³s⁻¹. 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 m³s⁻¹ to 24,495 m³s⁻¹.

**Project Rationale and Linkage to Country/Regional Strategy**
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&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. 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.

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.

**Impact**
Sustained agricultural production in the command areas of the barrages.

**Project Outcome**
Safe Trimmu and Panjnad barrages deliver reliable irrigation water supplies to their canals.

**Progress Toward Outcome**
The work on project outputs is going well to achieve the project the outcome. The project is on-track

**Implementation Progress**

**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)**
The project work is progressing at good pace. Details of project outputs and their progress status is mentioned below.

Output1. Rehabilitated and upgraded Trimmu barrage
Contract Awarded in Nov 2015. Civil Work Progress is 60.5%. 51 gates of main barrage and 15 gates of canal head regulators have been replaced.

Output2. Rehabilitated and upgraded Panjnad barrage
Contract Awarded in March 2018, contractor commenced work in July 2018 and project work will start with full swing in October 2018.

Output3. Improved capacities of the communities and PID
Government girls Primary school identified in Canal Colony which will be upgraded to Middle school. MOU has been signed with TEVTA Lahore for training of 50 women. O&M Manual will be finalized at completion.

13 Engineers trained in IHE Delft.

**Geographical Location**
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.

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
The consulting contract was awarded in September 2015 and currently the firm supervises the ongoing works for ICB-01 as well as ongoing procurement for ICB-02.

Procurement
Contract for ICB-01 (Rehabilitation and Upgrading of Trimmu Barrage) civil works was awarded in December 2015 and currently ongoing. Procurement works ongoing for ICB-02 (Rehabilitation and Upgrading of Panjnad Barrage) and expected contract award is in December 2017.

Responsible ADB Officer
Asad Ali Zafar

Responsible ADB Department
Central and West Asia Department

Responsible ADB Division
Pakistan Resident Mission

Executing Agencies
Irrigation Department of the Government of Punjab
C/o Superintending Engineer
Link Canal Circle, Canal Bank
Mughalpur, Lahore, Pakistan

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 26 Sep 2018

Loan 3159-PAK

Milestones

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<th>Effectivity Date</th>
<th>Closing</th>
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<td>22 Sep 2014</td>
<td>05 Dec 2014</td>
<td>21 Jan 2015</td>
<td>31 Mar 2021</td>
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Financing Plan

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<tr>
<th>Total (Amount in US$ million)</th>
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<th>ADB</th>
<th>Others</th>
<th>Net Percentage</th>
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<td>Cumulative Contract Awards</td>
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Cumulative Contract Awards
ADB: 100.00, 22 Sep 2014: 72.65, Others: 0.00, Net Percentage: 81%

Cumulative Disbursements
Cofinancing: 0.00, 22 Sep 2014: 44.07, Others: 0.00, Net Percentage: 49%

Project Page: https://www.adb.org/projects/47235-001/main
Request for Information: http://www.adb.org/forms/request-information-form?subject=47235-001
Date Generated: 04 October 2019

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