

RISK ASSESSMENT AND RISK MANAGEMENT PLAN

Risk Description	Rating^a	Mitigation Measures	Responsibility
A. Technical			
1. Shortage of water for diversion from the Jhelum River because of competition with other irrigation schemes, or erratic river flows, reducing agricultural benefits.	M	PID has an internal system to monitor and resolve conflicts among irrigation schemes that it manages against likely water shortages and sudden surge of demands. Allocation of water to the project will be monitored and recorded, and made available to ADB upon request for up to 5 years after project completion.	PID
2. Poor water management at the tertiary level exacerbates irrigation water losses, resulting in waterlogging and reduction of overall irrigation coverage. Distribution of irrigation water is inequitable, resulting in wider social and economic division between winners (farmers in canal heads, local elites) and losers (canal tail farmers, poor people, and smallholders).	M	DGA, through its OFWM, will train the selected members of all WUAs in the project area on improved irrigation water management, including monitoring of water allocation and conflict resolution, and demonstration of high-efficiency irrigation system technology. DGA, through its agriculture extension service wing, will also provide follow-up monitoring and training on improved irrigation practices before project completion.	DGA
3. Extreme weather events cause hill torrent floods above design discharges, damaging irrigation systems, farm land, and properties.	S	PMO for canals, with the help of project implementation consultants, will develop a flood disaster risk management plan, and cause PID staff to be trained for implementation of the plan.	PMU
B. Economic and Financial			
1. Deteriorating irrigation cost recovery and inadequate budget support lead to poor asset management, reducing financial and economic returns of irrigation services.	S	The Punjab government commits to provide adequate O&M budget from fiscal year (FY) 2023 for the completed Jalalpur irrigation distribution system and associated facilities. PID will also monitor and record the actual O&M expenses, budget allocation, and assessment and recovery of irrigation service fees of the project annually, and make such information available to ADB upon request.	Punjab Government and PID
2. Increase in agricultural production values remain less than anticipated because of other constraints such as poor farming practices and lack of access to market and finance.	M	DGA will cause the relevant local authorities to monitor and report the status of available agriculture support services in the project area annually, and make such reports available to ADB on request.	DGA
C. Governance			
1. Public Financial Management Insufficient allocation, or delay in release, of budget	M	PID and PAD shall ensure its annual budget is allocated and available during the fiscal year. The Government of Pakistan and	PID and PAD

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<p>limit efficient use of resources and slow down project implementation. Inadequate oversight and weak internal controls and auditing hinder effective expenditure management and affect effective and efficient project management.</p>		<p>Punjab government shall ensure the timely release of counterpart funds, as per loan covenants.</p>	
<p>2. PMO-Canal in the PID and PIO PAD lack staff to deal with financial matters or affairs of the project. PIO PAD does not have a sufficient understanding of ADB's financial management requirements and procedures which contributes to project delay and noncompliance with requirements.</p>	S	<p>Establish an accounting position and an assistant accountant position for PMO for canals in the PID and an accountant position for PIO PAD.</p>	
<p>3. Absence of internal audit at provincial departments may affect the effectiveness of risk management, control, and governance processes.</p>	S	<p>A financial management manual be adopted and tailored accordingly to the need of the project.</p>	
<p>4. Procurement Inadequate procurement capacity in PMO for canals results in delays, inefficiencies, and suboptimal awards of contracts.</p>	L	<p>PID has substantial experience of externally funded projects financed by ADB, the World Bank, and JICA. The existing PMO for canals under PID for an ADB-financed project will serve as PMO of the proposed project, and PMO for canals staff are familiar with ADB's procurement requirements and procedures. Project management support consultants will further strengthen the capacity of the PMO for canals. The Punjab government's interdepartmental procurement committee oversees and approves main procurement-related transactions before submission to ADB.</p>	<p>PMU and Consultants</p>

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<p>5. Corruption Corruption compromises the efficient use of resources, timely and effective project implementation management, and the achievement of intended development results.</p>	M	<p>Punjab's Anticorruption Establishment Department under Anticorruption Ordinance 1961; Prevention of Corruption Act, 1947 receives complaints and investigates corruption-related allegations. The department is established at the district level. The National Accountability Bureau of Pakistan is established at the provincial level. It takes a variety of corruption cases, including contracts greater than PRs15 million (\$0.15 million). These two departments have already established their websites. A proactive judicial system exists. Transparency International, vibrant media, and active civil society act as watchdog.</p> <p>At the project level, Punjab's oversight body—the project steering committee—will periodically monitor procurements and financial transactions and will issue minutes twice a year.</p> <p>The PID's secretariat will closely monitor project progress through monthly meetings. Provision for a supervisory consultant in the role of engineer and ADB's prior review of consultancy and works contracts and direct payment and post-review for shopping contracts reduce the related risks.</p>	Project steering committee and PID
D. Poverty, Social, Gender, Security			
Farm households headed by women suffer disadvantages in receiving irrigation water services because of difficulty in speaking out at public meetings, overseeing water allocation at night, or other restrictive social customs.	M	PID and PAD will cause the PMO for canals and the PIO to implement the project's gender action plan and monitor and report the progress of implementation through semi-annual progress reports.	PID and PAD
E. Safeguards			
Increased waterlogging and soil salinity in the command area causes land degradation.	L	PMO for canals, with assistance from project implementation consultants, will develop an EMP, including regular monitoring and assessment of land degradation within the project area. PID will cause the irrigation management authority to implement the EMP, and report the progress annually. The progress reports should be made available to ADB upon	PMU

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		request for up to 5 years after completion of the project.	
OVERALL	M	Overall, the risks appear manageable, and if mitigation measures are implemented effectively, the project's benefits are expected to outweigh the potential risks.	

H = high, S = substantial, M = moderate, L = low.

ADB = Asian Development Bank, DGA = Directorate of General Agriculture, EMP = environmental management plan, JICA = Japan International Cooperation Agency, OFWM = on-farm water management, O&M = operation and maintenance, PAD = Punjab Agriculture Department, PID = Punjab Irrigation Department, PIO = project implementation office, PMO = project management office, PMU = project management unit, WUA = water user association.

^a ADB. 2016. *Guidelines for Preparing a Design and Monitoring Framework*. Manila.

Source: Asian Development Bank.