

Early Warning System

ADB-59079-001

Managing Glacier Loss and Water Security Project

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Quick Facts

Countries	Tajikistan
Specific Location	Nation-wide, Gorno-Badakhshan
Financial Institutions	Asian Development Bank (ADB)
Status	Approved
Bank Risk Rating	C
Voting Date	2025-12-17
Borrower	Government of Tajikistan - Hydromet; Committee of Emergency Situations and Civil Defense
Sectors	Agriculture and Forestry, Climate and Environment, Technical Cooperation, Water and Sanitation
Investment Type(s)	Grant
Investment Amount (USD)	$ 3.40 million
Project Cost (USD)	$ 3.70 million

Project Description

According to the Bank’s website, the project aims to enhance Tajikistan's capacity to address the challenges posed by melting glaciers, a critical water source for the country. The reduction of mountain glacier water sources threatens the regularity of water flows, leading to drying watersheds and reduced water availability. Conversely, accelerated glacier melting increases the risk of flooding and associated hazards such as avalanche, landslides and mudslides, endangering lives and livelihoods. This project will strengthen Hydromet's ability to monitor and forecast glacier changes, reduce the vulnerability of glacier-dependent communities to related hazards, and improve water resource management in key glacier-dependent regions.

The melting of glaciers poses a threat to the country's agriculture and food security. The agriculture sector accounts for 22.9% of the country's GDP and 19% of exports and employs over 43.5% of the population. Tajikistan relies heavily on glacier-fed rivers for irrigation. About 85% of the country's water resources, withdrawn from natural sources (rivers and springs), are utilized by the agriculture sector. Glaciers provide meltwater that is crucial for irrigation. But as glaciers shrink, water shortages will become more severe, impacting regional stability, agriculture, and food production. The predicted decline in river discharge after 2080 will endanger the livelihood of farming communities, as irrigation systems depend on consistent water flow. Provision of accurate hydrological and meteorological information, forecasting and modeling of glacier melt and its impact on river flows and natural hazards are essential for mitigating climate change-induced risks to the economy and vulnerable communities.

Hydromet is mandated to monitor glaciers, analyze cryosphere dynamics, and disseminate hazard and risk information to stakeholders. This work is undertaken by the Glacier Center, which is currently constrained by limited capacity and outdated operational standards, equipment and observation infrastructure. Much of its equipment are non-automated, obsolete, and inadequate for modern data collection, management, and analysis. Its observation network, established during the Soviet era and now over 50 years old, no longer meets current needs. The absence of real-time data systems hampers the Glacier Center's ability to deliver early hazard warnings and quality forecast for effective water resources management. The Glacier Center faces capacity constraints. Most of its equipment are not automated, outdated and insufficient for modern data collection, management, and analysis. The observation network, dating back to the Soviet era (around 50 years old), is no longer adequate. Moreover, the lack of real-time telecommunication data systems limits the Center's ability to issue timely warnings and manage water resources effectively. These challenges have direct consequences for disaster risk reduction, hydropower generation, and irrigated agriculture. Financing support for glacier monitoring infrastructure, enhancing technical capacity, and strengthening the overall functionality of the Glacier Center is needed. This support is crucial to building resilience in Tajikistan's climate-vulnerable sectors and ensuring timely responses to glacial and cryosphere hazards.

Early Warning System Project Analysis

Environment: C

Involuntary Resettlement: C

Indigenous Peoples: C

Investment Description

- Asian Development Bank (ADB)

Grant (Japan Fund for Prosperous and Resilient Asia and the Pacific): US$ 3.00 million
Grant (Technical Assistance Special Fund): US$ 400,000.00
Cofinancing (Water Innovation Trust Fund): US$ 300,000.00

Contact Information

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ACCESS TO INFORMATION

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ACCOUNTABILITY MECHANISM OF ADB

The Accountability Mechanism is an independent complaint mechanism and fact-finding body for people who believe they are likely to be, or have been, adversely affected by an Asian Development Bank-financed project. If you submit a complaint to the Accountability Mechanism, they may investigate to assess whether the Asian Development Bank is following its own policies and procedures for preventing harm to people or the environment. You can learn more about the Accountability Mechanism and how to file a complaint at: http://www.adb.org/site/accountability-mechanism/main.

Bank Documents

- Advance Contracting Notice - 59079-001 TAJ: Managing Glacier Loss and Water Security Project
- Environmental and Social Safeguards Due Diligence Report
- Grant Agreement (Externally Financed - Japan Fund for Prosperous and Resilient Asia and the Pacific)
- Invitation for Bids - 9258-TAJ: Managing Glaciers and Water Security Project [GDS-01]
- Managing Glacier Loss and Water Security Project: Gender Assessment and Action Plan
- Managing Glacier Loss and Water Security Project: Grant Assistance Report
- Managing Glacier Loss and Water Security Project: Procurement Plan
- Managing Glacier Loss and Water Security Project: Project Administration Manual
- Strengthening Community-Based Disaster Risk Management: Technical Assistance Report

Media

- ADB Supports Glacier Monitoring and Disaster Resilience in Tajikistan
- 18 Dec 2025 | News Release