



A Source of Peace – Transboundary Water Management in Central Asia

Isfara headwork regulation gate automation and flow metering

Context

The Isfara headwork is located in Batken Oblast (administrative district), 15 kilometres west of Batken city. The headwork regulates irrigation water abstraction from the Isfara river, which originates in Kyrgyzstan and flows into the territories of Tajikistan and Uzbekistan. Altogether, the headwork serves more than 8,000 hectares of land across the three states.

Since Soviet times an interstate agreement has set water allocation quotas for Kyrgyzstan, Tajikistan and Uzbekistan. Accordingly, Kyrgyzstan receives 37%, Tajikistan 55% and Uzbekistan 8% of the headwork’s water resources.

The Isfara facility was constructed in 1971 and has benefited from only minor technical improvements since, mean-



A radial gate hoist at the headwork’s main body

Objective

The overall objective of this project is to make the process of water allocation and abstraction through the Isfara headwork transparent and thereby increase mutual trust between Kyrgyzstan, Tajikistan and Uzbekistan.

In particular, during the flood season the headwork will help control water flow and reduce loss. The new headwork’s automated hydro-post will allow staff to measure water discharges with greater accuracy and monitor the regime of the river at the headwork. Computer-based data will be collected, analysed and distributed to the relevant authorities of riparian states, ensuring greater transparency.

Measures

Several technical upgrades are planned for the Isfara headwork. Modern water flow meters and other technical devices will be installed to re-establish flow control and automate the operation of water gates. Flow meters and level meters at the Tortgul reservoir will help assess the

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ing current water flow measurement is very inaccurate. Staff operating the headwork have no proper equipment for accurate flow measurement and control, and all

measurements are conducted manually and recorded on paper. As a result there are often disputes among riparian users about how water is being allocated.

The Isfara headwork consists of an upstream canal; a flow regulation structure equipped with two radial gates and one flat gate; the Podvodyashi canal, which is equipped with three sluice gates and feeds the Tortgul reservoir; and a downstream canal. Incoming water flow in the upstream canal is measured at the Tash Kurgan hydro-post, located in the Tajik enclave of Vorukh. The flow in the Podvodyashi canal is controlled by another hydro-post located on Kyrgyz territory.

reservoir's overall water balance and a computer system will compile electronic data and distribute this to the relevant authorities of riparian states.



A flat gate hoist mechanism in the main body of Isfara headwork

In parallel to the installation of technical infrastructure, staff will receive training to ensure proper operation of the rehabilitated hydro-facility.



The Podvodyashi canal diverts water into the Tortgul reservoir

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