

# 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 kilometers 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.

The Isfara facility was constructed in 1971 and needed technical improvement. The staff operating the headwork had no proper equipment for accurate flow measurement and control, and all measurements were conducted manually and recorded on paper. As a result there were often disputes among riparian users about how water was 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.

Project name	Transboundary Water Management in Central Asia
Commissioned by	German Federal Foreign Office (Auswärtiges Amt)
Project region	Batken Oblast, Kyrgyzstan
Main partner	Department of Water Management and Melioration at the Ministry of Agriculture and Melioration of the Kyrgyz Republic
Duration	December 2010 – October 2012

### Objectives

The overall objective of this project was 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 should help control water flow and reduce loss. The new headwork's automated hydro-post should allow staff to measure water discharges with greater accuracy and monitor the regime of the river at the headwork.



*L.to r.: The Podvodyashi canal diverts water into the Tortgul reservoir*

*Radial gate hoist at the Isfara headwork's main body*

## Measures

Several technical upgrades were implemented for the Isfara headwork. Modern water flow meters and other technical devices were installed to improve flow control and introduce the remote operation of water gates. Flow meters at the headwork support the flow distribution of the Isfara river between riparian states. Parallel to the installation of the technical infrastructure, staff received training to ensure proper operation of the automated hydro-facility.

## Results

The upgraded headwork with modern equipment allows improved water flow control and reduces losses. During training provided by the programme, the staff operating the headwork learnt how to work on the automated hydro-post with new devices in a dispatch operation mode. Computer-based data is collected, analysed and distributed to the relevant authorities of riparian states, ensuring greater transparency.

The transparency in water distribution re-establishes the trust between riparian countries and provides a basis for integrated water management in the Isfara river basin. All project activities are closely coordinated with other initiatives of the Transboundary Water Management in Central Asia programme.

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