Photo Credit: Karen Conniff

successstories

Issue 1 - 2010

Sharing water equitably in the Ferghana Valley, Central Asia

The Ferghana Valley

New management practices improved water supply and significantly reduced conflict and disputes over water management in the Ferghana Valley. The 49,000 square kilometer (km^2) valley lies in western Central Asia. Formerly part of the Soviet Union, it spans parts of Uzbekistan (71%), Tajikistan (8%) and Kyrgyzstan (21%). The Naryn and Karadarya rivers merge in the valley to form the Syrdarya. In Tsarist times, the valley's fertile soils supported wheat, rice, barley, maize, millet, tobacco, vegetables, plus fruit and vines. Subsequent Soviet rulers installed extensive irrigation systems and made cotton, wheat and rice the primary crops. These huge irrigation schemes were centrally managed to supply predetermined quotas of cotton and grain. The irrigation canals were maintained by the government.

In Soviet times, water authorities delivered predictable volumes of water to a relatively small number of large farms growing limited crops. Now they have to meet the demands of many more farmers growing a much wider array of produce on smaller farms. This resulted in unreliable, unfairly shared and inefficient water supplies. With a decaying infrastructure compounding problems, many disputes arose.

IWMI International Water Management Institute

An impact assessment showed that water savings of at least 30% were made on each of the three pilot canals during the vegetation season of 2008, compared with 2003 figures.

In 2001, IWMI and its partner organizations began working in the Ferghana Valley to help resolve these difficulties. In an initial phase, we selected three main canals for pilot-testing new management practices at an irrigation-system level: Uzbekistan's South Ferghana Canal, Kyrgyzstan's Aravan Akbura Canal and Tajikistan's Khodja-Bakirgan Canal.

Integrated Water Resources Management

The Integrated Water Resources Management in the Ferghana Valley (IWRM-FV) project team comprised experts from IWMI and the Scientific Information Center of the Interstate Commission for Water Coordination. In 2002, they jointly developed guidelines for introducing integrated water resources management in the three countries, supported by a national water department from each country. Formerly, water supplies were managed according to administrative districts (*oblast*), by management organizations called *oblovodhozes*. Each *oblast* was divided into subdistricts (*rayon*), with subdistrict water management organizations called *raivodhoz* managing water supplies within each district.

Conflicts arose between administrative districts. IWMI and its partners helped resolve the conflict by creating new management structures between 2003 and 2005: a single Canal Management Organization for each pilot canal headed by a Chief Engineer; farmer-led Water Users Groups to feed information upwards to Water User Associations, which in turn fed information upwards to a Union of Canal Water Users (UCWU); and a joint governance board called the Water Canal Committee. This comprised representatives of the UCWU and the former *oblovodhozes* (renamed by the governments as Basin Irrigation system Management Organizations [BISMO] and other key stakeholders along the main canals, under the concept of holistic river basin management).

Improved water supply

An impact assessment showed that water savings of at least 30% were made on each of the three pilot canals during the vegetation season of 2008, compared with 2003 figures. Water supply per hectare of land in the three canals decreased by over 50%, and conflicts over water resources stopped. A more detailed study of four water users associations in Kyrgyzstan concluded that irrigation demands were being overestimated, and that operational performance could be improved by collecting more accurate information on crops. The current shortage of water management specialists able to make such assessments is now being addressed by incorporating principles of integrated water resources management and the Ferghana Valley project results into the curriculum of leading regional academic institutions, including Kyrgyz Agrarian University.

Donors and collaborators

Swiss Agency for Development and Cooperation (SDC); Interstate Commission for Water Coordination (ICWC); Basin Water Organization Syrdarya; Kyrgyz Ministry of Agriculture, Water Resources and Processing Industry; Tajik Ministry of Water Resources and Land Reclamation; Uzbek Ministry of Agriculture and Water Resources; Osh Basin Water Department and Batken Basin Water Department in Kyrgyzstan; State Water Management Administration of the Sougd Province in Tajikistan; Sokh-Syrdarya Basin Irrigation System Administration (BISA) and Naryn-Karadarya-Syrdarya BISA in Uzbekistan; Unified Canal Dispatcher Service of Ferghana Valley; Participating canal and district organizations; and Participating Water User Associations and farmer organizations.

For more information

IWMI report:

centralasia.iwmi.org/projects.aspx

International Water Management Institute

All IWMI Publications are available online free of charge at www.iwmi.org/Publications
Comments and questions are welcome. Please contact us at: IWMI-Publications@cgiar.org
Publications Unit, International Water Management Institute, PO Box 2075, Colombo, Sri Lanka
Tel: +94 11 2880000 Fax: +94 11 2786854

www.iwmi.org

Improving the management of land and water resources for food, livelihoods and the environment