Toward Integrated Water Resources Management (IWRM) in Central Asia

Central Asia Energy-Water Development Program

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Background

In Central Asia, water and energy systems are interdependent. Kazakhstan, Kyrgyz Republic, Tajikistan, Turkmenistan, and Uzbekistan each benefit from the water resources of the Syr Darya and Amu Darya rivers, and from the shared infrastructure originally built in the Soviet era to manage those resources. Management of water resources at the regional rather than national level at that time helped address the issue of the uneven distribution of water between the Central Asian countries.

However, new political structures established in the countries of Central Asia have challenged the Soviet systems of coordinated, cross-country technical analysis and decision-making on resource issues. The current state of water resource management in Central Asia is marked by the fragmentation of information and data, a scarcity of innovative diagnostic tools and analytical technologies, and a vast disparity in access and capacity to analyze water resources management issues among the countries. This lack of coordination on Integrated Water Resources Management (IWRM) acts as a barrier for all of the countries of Central Asia to meet their development goals and resource security needs.

Strengthening Analysis for IWRM

Water experts across Central Asia agree that a commonly accepted knowledge platform on IWRM is necessary for the establishment of an evidence-based dialogue on water and energy management. In order to lay the groundwork for the creation of such a platform, the World Bank’s Central Asia Energy-Water Development Program (CAEWDP) initiated a consultative process with technical and policy experts in each country. At the same time, CAEWDP implemented a comparative diagnostic of the different national models for water management in the region, and introduced new tools and approaches on a demonstration basis, such as the Aral DIF hydrologic model.

These national-level consultations and diagnostic studies formed the basis for a regional workshop on strengthening analysis for IWRM held in July 2012 in Almaty, Kazakhstan. National delegations made up of technical experts and policy-makers from all five Central Asian countries plus Afghanistan participated in the workshop and discussed the draft report of “Strengthening Analysis for Integrated Water Resources Management (IWRM) in Central Asia: A Road Map for Action.” Prepared by CAEWDP in partnership with the World Bank, Swiss Cooperation and the United Nations Economic Commission for Europe.

The Central Asia Energy-Water Development Program (CAEWDP) is a knowledge and technical assistance multi-donor trust fund (MDTF) administered by the World Bank. CAEWDP’s mission is to build energy and water security for the countries of Central Asia – Kazakhstan, Kyrgyz Republic, Tajikistan, Turkmenistan, and Uzbekistan – through enhanced regional cooperation.

Since its inception in 2010, CAEWDP has received support from bilateral and multilateral donors including the Government of Switzerland’s State Secretariat for Economic Affairs (SECO), the European Commission (EC), the United Kingdom’s Department for International Development (DFID), the United States Agency for International Development (USAID), and the World Bank Group.
(UNECE), the Road Map outlined a three-year program to upgrade the knowledge platform for managing water resources in Central Asia. It drew on eight principles the six countries agreed should shape future IWRM efforts, emphasizing a commitment to transparency; balancing regional and national ownership; open source and public domain data, information products, and models; and strengthening capacity and institutional sustainability.

**Road Map Recommendations**

The Road Map proposed twelve separate activities under the components of data management, modeling, and governance, including:

- **Data management**: Creating an accessible Central Asia Energy-Water Knowledge Portal; establishing regional support for modernizing hydrometeorology services; creating transboundary bilateral water information systems.

- **Modeling**: Improving training on basin models and exploring modeling options and needs; identifying modeling tools for priority operations at large water infrastructure facilities.

- **Governance**: Building the institutional capacity of the International Fund for Saving the Aral Sea (IFAS); conducting an institutional needs assessment for regional-scale water resources analysis; supporting bilateral cooperation on hydrology and environmental issues between Afghanistan and Tajikistan; improving cooperation on legal and institutional frameworks for dam safety.

**Impact**

The July 2012 regional forum marked the first time a cross-sectoral team from all countries of the Aral Sea Basin convened on a framework for a regional-level IWRM decision support system. CAEWDP’s implementation of three follow-up activities – a data portal, capacity building in water modeling, and the strengthening of knowledge networks – provides further support to the region’s paradigm shift on IWRM. In addition, a multi-year investment project is currently under preparation to strengthen water resources information systems and knowledge platform in each country and at the regional scale. Although an eventual joint investment in a comprehensive, modern knowledge platform accepted by all countries as a basis for coordinated water management is far from inevitable, the success of the Road Map process suggests that it may be possible.

**Contacts**

- Daryl Fields: CAEWDP Energy-Water Linkages Pillar Leader: dfields@worldbank.org
- Abena Akuffo-Akoto: CAEWDP Partnership Specialist: aakuffoakoto@worldbank.org

**References**