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# INTEGRATED WATER RESOURCES MANAGEMENT IN CENTRAL ASIA: LESSONS LEARNED FROM THE ARAL SEA BASIN

by

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## **Abstract**

Water management and irrigated agriculture in the Aral Sea Basin has undergone a complicated period of political revival and economic transformation as a result of: independent statehood; transition to a market economy; intensive impacts caused by internationalization processes; and efforts to elaborate new forms of state development. Given the specific features of this arid zone, the local demographic situation, and the critical role of water and transboundary relations, these two sectors of the economy are of great socio-economic and ecological importance for the region.

It was in this period that the first large-scale projects were undertaken here, including: the Hunger Steppe and Karakum Canal schemes; and the Choo-Talas and Amudarya delta development. During the Soviet era, a number of hydropower projects were implemented, and the immense technical and economic system of irrigation, hydro-power and water supply came into being in the Basin. As a result, the Aral Sea, which used to rank as the fourth largest in volume among the world's inland lakes, has essentially disappeared from the surface of the Earth.

Concerns regarding the impact of development on the Aral Sea has led to the creation of the Interstate Commission for Water Coordination (ICWC), and supported by the five independent states (Kyrgyzstan, Kazakhstan, Tajikistan, Turkmenistan, and Uzbekistan) created since the dissolution of the Soviet Union. The ICWC is a collective body that manages transboundary rivers and is responsible for: water allocation among countries; monitoring water flow and quality; and preparation of proposals on institutional, ecological, technical, and financial programs, based on decisions mutually agreed to by all sides.

Since its inception, the ICWC has been successful in managing a number of complex situations of related to water supply and management without conflicts, even during dry years. However, future water management challenges will require even more integrated processes among the members states.