

## ABOUT MULTIYEAR FLOW ON HYDROPOST KERKI (AMUDARYA RIVER) AND WATER DISTRIBUTION BETWEEN TURKMENISTAN AND UZBEKISTAN

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Sustainable management of trans-boundary water resources in Central Asia (CA) is one of major in context of strengthening of regional cooperation and for prosperity of region. As is known, two great rivers of CA - Amudarya and Syrdarya - flow on territory of 5 post-soviet republics (Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan) and Afghanistan. Interstate water distribution (IWD) between Central Asian States (CASs) from the Amudarya and Syrdarya rivers was established in middle of 1980s by Moscow and is based on Water Use and Protection Master-Plans (WUPMP) developed in 1980s. According to the Interstate Agreement "About cooperation in area of joint management, use and protection of water resources from interstate sources" (1992, Alma-Ata), earlier accepted legal acts regarding water resources management (WRM) in CA and between CASs remain in force, including IWD. According to the Agreement 1992, the Interstate Coordination Water Commission (ICWC) of CA and its executive bodies – Basin Water Organizations "Syrdarya" and "Amudarya" were established; they are responsible for WRM in same river basins. Basic activity of these organizations consists in IWD according to the established by ICWC water limits for each CAS. In these conditions the precision of river flow's definition is represented very important. According to WUPMP and many other documents, including relevant publications, the IWD between Turkmenistan and Uzbekistan is established on basis of hydro-station "Kerki/Atamurat", for which the average multiyear river flow is equaled 44.0 cub km, which are divided between the Parties fifty-fifty.

Data of Hydro-Meteorological Service (HMS) are the basic document for water resources' definition, and these data are reflected in "Hydrological year-books" ("HYB") and other relevant documents of HMS. Analysis of the "HYB" data shows that other picture is observed on the multiyear water volume for the hydro-station "Kerki/Atamurat", namely (appropriate data for the hydro-station "Kerki/Atamurat" are available since 1911):

- For 1911-2006 we have four periods of continuous supervision for monthly flow: 1911-1917, 1926-1932, 1935-1937, 1953-1956, 1959-2006; for other periods (1918-1925, 1933, 1934, 1938-1952, 1957, 1958) the data on river flow are not available or they are incomplete;
- For the periods 1911-1917, 1926-1932, 1935-1937, 1953-1956 average annual river flow is equaled 63.0, 63.8, 61.5, and 69.5 cub. km, respectively;
- For the period 1959-2006 average annual river flow is equaled 48.4 cub. km, at a minimum in 27.9 cub. km (2001) and maximum in 91.2 cub. km (1969);
- For this period (48 years) river flow was more average long-term flow in 27 cases and less it in 21 cases;
- Marked in a line of publications long-term cycles (for 5-6, 12, 19 years) of annual river flow's dynamics are difficult for determining; etc

The basic conclusion of this analysis: the average long-term river flow on hydro-station "Kerki/Atamurat" should be determined for the period 1959-2006, which is long enough and for which a complete line of hydrological data is present. In particular, it is necessary to accept 48.4 (not 44.0) cub. km as multiyear flow on hydro-station "Kerki/Atamurat" and basis for the interstate water distribution between Turkmenistan and Uzbekistan.

**Key words:** Central Asia, Amudarya River, Turkmenistan and Uzbekistan, Interstate water distribution

**Topic:** Trans-boundary river basins and shared aquifers

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