

Territorial re-distribution of water resources as a strategic priority of water security in the Republic of Kazakhstan

I.M. Malkovsky, L.S. Toleubaeva

National Science and Technology Holding Company “PARASAT”,
“Institute of Geography”
67/99 Kabanbay batyr (Pushkina) Str., 050010, Almaty, Kazakhstan
E-mail: lstoleu@mail.ru

The measures on territorial re-distribution of water resources, coupled with widespread use of modern water-conservation technologies, may provide substantial basis for ensuring water security in the Republic of Kazakhstan [1].

Being a place of formation of the half of local renewable water in the country, the Yertis River Basin is a potential donor-basin for water supply to the Central, Northern and Southern Kazakhstan. The construction of the second phase of Shulbinsky Hydroscheme by regulating lateral inflows of the Yertis will provide gravity water intake to Trans-Kazakhstan canal designed to implement environmental and socio-economic programs of the country related to water resources use [1].

An effective tool to compensate reduction of transboundary flow in the Ili River in Chinese territory might be diversion of a part of Yertis's flow from Buktyrma reservoir to Lake Balkash to maintain the level and salt regime of this lake - the water body of a particular state importance.

In the context of large-scale withdrawals from the Yertis River, Kazakhstan and China would have a very advantageous scheme of mutually beneficial use of Russian rivers' flow along the Upper Katun. Diversion of flow from the Upper Katun to Buktyrma allows Russia to compensate for the reduction in the Yertis inflows to Omsk province, as well as participate in development of energy resources on the way to watershed. In the meantime, Kazakhstan is interested in increasing electricity generation by Yertis cascade of HPPs, as well as in improving navigation and floodplain conditions [2, 3].

Further development of inter-basin and transboundary water relations will ultimately lead to the establishment of the Unified Water Supply System of the Republic of Kazakhstan [4].

References:

1. Medeu A.R., Malkovsky I.M., Toleubaeva L.S. (2008) Territorial re-distribution of water resources: prospects of transboundary and inter-basin water diversions for water supply in Kazakhstan, *Geography and Geoecology Issues*, Almaty, No. 2 (21), pp. 5-11.
2. Busalaev I.V., Kalachev N.S., Lavrenteva L.D., Pavlenko V.P. (1976) Katun-Koksa-Bukhtarmin Water Utilization System/ *Hydropower and Water Management Problems*, Almaty: Science of KazSSR, Issue13, pp. 65-73.
3. Medeu A.R., Malkovsky I.M., Toleubaeva L.S.(2008) Prospects of using Russian rivers' flow for water supply in Kazakhstan, Satpaev readings, Actual Problems of Earth Sciences, International Scientific and Practical Conference Proceedings, Almaty, pp. 169-172.
4. Malkovsky I.M., Toleubaeva L.S. (2010) Establishment of the Unified Water Supply System of the Republic of Kazakhstan, *Geography and Geoecology Issues*, Almaty, No. 2, pp. 19-23