

Concerning water resources and achievement of water security in the Republic of Kazakhstan

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Water resources of Kazakhstan are limited, unevenly distributed in space and time and significantly contaminated. Almost half of the renewable water resources of the country are unregulated transboundary runoff. Over the long term, existing water threats are expected to aggravate due to global and regional climate change, lack of long-term interstate agreements on transboundary waters, as well as water-intensive technologies in industry [1].

Realization of water threats may cause escalation of interstate water conflicts, development of new hotbeds of environmental instability and disruption of country's socio-economic development programs. Elimination of water threats stipulates undertaking water-saving measures in industries, as well as increasing freshwater resources by improving interstate water relations, groundwater use, desalination of saline and brackish waters and territorial re-distribution of water resources [2].

The development scenarios for basin natural-economic systems by 2030 have defined a set of strategic measures to ensure water security in the Republic of Kazakhstan [1. 2].

“Business as usual” scenario assumes maintenance of existing water use trends and their determinants. Development of water use based on this scenario is accompanied by water shortage with serious economic and environmental damage.

Water saving scenario focuses on saving water in the economy in every possible way. The scenario does not exclude the possibility of water shortages in the long run that necessitates implementing the program of territorial re-distribution of water resources beyond 2020.

Innovative scenario combines water saving with the inter-basin and transboundary water re-distribution. This scenario ensures balancing multiple water uses in the basin natural-economic systems of the country.

At present, the Institute of Geography is implementing an interdisciplinary scientific and technical program, primary purpose of which is to develop a National Strategy for achievement of water security in the Republic of Kazakhstan as a basis for transition to sustainable development.

References:

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