

Managing Features of Complex Water Resource Systems Under Climate Change

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climate uncertainty, climate risks,
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The article considers methods and models of water use management in territorial natural production complexes in the context of climate change. We have proposed a model of the mutual influence of climate change and water resource systems. It will make it possible to substantiate the impact of climate change on water resources. To assess the effectiveness of managing the hydrological cycle and production processes in complex water resource systems, the criteria for the effectiveness of their functioning are determined. The structure of interaction between water user enterprises of various sectors of the economy in natural production complexes to mitigate the effects of climate change on water resources is substantiated. The management of water resource systems in the context of climate change is associated with a high degree of uncertainty, which requires new non-traditional decision-making methods, such as the optimization of the use of water resources. We have discussed a fundamentally new actual system of environmental management of relationships between various subjects of the territorial natural production complex, taking into account climate uncertainty. This system will make it possible to model the optimal water use strategy depending on climate risks based on various scenarios for the formation of climatic conditions.

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