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The history of mathematical simulation of water ecosystem development

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Abstract

The stages of presentation of the research results on aquatic ecosystems using mathematical modeling have been discussed. The characteristic features of hydro-biological and hydro-chemical stages for describing water reservoirs are singled out.

The first descriptive phase was completed by the beginning of XX century with working out the models of optimization of fish haul. The next stage is characterized by accumulating information on ecosystems and improvement of the mathematical apparatus for presenting the results. The current stage is characterized by the use of remote sensing methods to collect information on aquatic ecosystems and the complexity of results. The tendency for reducing the number of mistakes and errors in the calculations and for increasing the accuracy and reliability of predictive modeling results of aquatic ecosystems has been noted.