Abstract

Limitations of renewable water resources and increasing water demand in different parts of consumption, have been increased the importance and sensitivity of water resources management. It will be more sensitive, especially in dry years. The experience of different countries in water resources management shows that management on water resources will greatly moderate limitations and problems caused by the shortage of water resources. So that, organizing the water allocation, is strategic approach and main action for gaining water security and sustainable water resources development. The purpose of this research is to determined available water demands in Haraz dam catchment for different climates (wet, dry and normal) and estimating transference water volume from this catchment to east of mazandaran and golestan province. A lot of computer base models were produced and developed for water resources management. In this research Ribasim model were used to simulate the study catchment. The Ribasim is a software package for simulating behavior of river basin during hydrological changes . Using deterministic and stochastic models in simulating hydrological processes of catchment and including more variables in simulating process is the advantage of this model. In this research after shematic implementing in model, six scenarios are defined and evaluated.in the mentioned scenarios the proportion of constructing Haraz dam and overall channel on supplying demands of the catchment were evaluated. Although the potential of Haraz dam on supplying domestic water of region were examined. Results showed that with constructing Haraz dam and Chalus channel the demands of catchment were provided with confidence level more than 90 percent. Also the Haraz dam can provide at a rate of 130 million cubic meter domestic water of the region.

Keywords: sustainable development, integrated water resources management, water allocation, Haraz dam, Ribasim.

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Simulation and evaluation of Haraz dam water allocation scenarios using RIBASIM model

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