Climate variability influence to the evapotranspiration regime in the South Bulgaria

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One of the principal aspects of present and future water problems is the rational utilization of the existing surface and groundwater resources in order to satisfy the demand that is strictly connected to all aspects of human living and civilization. Climate variability's are directly related to water resources, which are of high socio-economic and environmental significance.

The evapotranspiration regime in Struma River, South Bulgaria is investigated. The aim of presented work is to analyse the trends in the evapotranspiration time series. Data from four meteorological stations in Struma river basin are used – Kustendil, Blagoevgrad, Petrich and Sandanski. Different methods for calculation of the evapotranspiration are used. The period of investigation is from 1961 to 2002. The Spearman and Man-Kendall tests are applied.

The expected values of actual evapotranspiration for the years 2025, 2050 and 2100 are obtained and will be discussed. The calculations are made on the basis of the results from HaDCM3 and ECHAM4 climate change scenarios.

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