



FEATURES OF MAXIMUM FLOW CHANGE OF MOUNTAIN RIVERS IN THE CARPATHIAN REGION

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ABSTRACT

The research of flood flow gives an idea of the general features of the flow regime of a region, especially mountainous, where the floods in the periods of high water content due to intense rains is catastrophic and causes considerable damage for people. The goal of this paper is to analyze the maximum flow of warm and cold period on mountain rivers in the Carpathian region. It will allow estimating the dynamics and trends of water flow in these water bodies.

For the statistical analysis of the maximum flow the hydrological data of 16 gauges were used which are located on the mountain water courses: 4 small, 2 medium rivers and 5 streams in the upper part Rika River Basin (the right tributary of the Tusa River). The period of observation on these water bodies is from 47 to 49 years.

The estimation of the results of the long-term observations of the maximum flow of the rivers and streams during the cold and warm period is presented. The estimation of the homogeneity and stationarity of the series of observations of the flood flow is carried out by methods: the total integral curve, the statistical criteria the Fisher and the Stjudent and of the statistical significance of the linear trends. The statistical parameters for all points of observation are calculated and analyzed.

All points of observation has synchronous fluctuations of the maximum discharge. It is indicates on the homogeneity conditions of their formation. The maximum flow of the water courses of this research region is characterized by the decrease in the middle 80's of the 20th century during the cold period and since 1998 in the warm period. It is due to cyclical fluctuations climate.

Keywords: maximum flow, climate change, small mountain catchments, stationary