



Trends in hydrological drought in eastern Slovakia by analysis of low flows

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An important function in both engineering hydrology and integrated catchment area management is performed by statistical analysis. This paper presents the trend analysis of low water flows in selected rivers in Eastern Slovakia. There are many statistical methods for data evaluation. The most of useful, presented in this paper, is the non-parametric Mann-Kendall test. This analysis was carried out for statistical data from 63 river stations lying in the eastern part of Slovakia, namely in Hornád, Poprad, Bodva, Bodrog river basins. The data were obtained from the Slovak Hydrometeorological Institute, Regional Centre Košice. Because the low flow data are not comparable for the individual stations, normally it is only possible to do the statistical analysis for each river station separately. The relative sizes of the low stream flow trends in individual river stations were calculated as directives of the trend lines. Using ArcView GIS 3.2 was created thematic map from geographical map of Eastern Slovakia.