

Abstract

The object of the bachelor thesis is to analyze the change of extremity and seasonality of floods in the Zdobnice basin. The literary research comprehensively presents floods with description of the biggest historical floods in the Czechia and in the Zdobnice basin. The literary research also includes the physical-geographical characteristic of the studied area. The practical part is based on the daily flow data analysis, obtained from CHMI (Czech Hydrometeorological Institute). Runoff analysis is performed on the base of these data, with focus on extreme flows. To compare the seasonality change, data series is divided into two periods (1945-1969 and 1970-2014), which point of change was determined by Pettit's and Buishand's homogeneity test. Seasonality change is compared by directional statistics, polar graphs, curves of cumulative frequency and flood index. As a result of these methods, it is found that in the second period, the flood risk is greater in earlier parts of the year. It has been also found, that there are more flood events in July.

Key words: Floods, discharge, hydrological extremes, historical floods, seasonality, Zdobnice