

## **Abstract**

The bachelor's thesis deals with the identification of trends in time series of water temperatures in selected streams of the Czech Republic in connection with climate changes. Among the main goals of this thesis is a search of domestic and foreign scientific literature with a focus on monitoring surface water temperature trends in the context of climate change. Furthermore, the analysis of time series of water temperatures in streams was carried out and their dependence on air temperature was investigated with the help of statistical calculations (Spearman's correlation coefficient). The thesis used data from surface water quality profiles on streams from Povodí Vltavy, s.p. and data from weather and hydrological stations of ČHMÚ and DWD. The results showed that an increase in both water temperature and air temperature was recorded on all monitored profiles. The degree of dependence of water temperatures in streams on air temperatures was then proven to be high. Changes in air temperature were thus determined to be the major explanatory factor for changes in stream temperatures.

Key words: water temperature, air temperature, hydroclimatic variables, trend, time series, Mann-Kendall test