

## **Abstract**

This bachelor thesis analyzes the definition of hydrological drought and the definition of general drought. The introduction defines the main characteristics of meteorological, hydrological, agronomic and socio-economic droughts and their differences. Furthermore, it points out the causes and impacts of drought in different regions of the world from an economic, environmental and social view. The thesis also summarizes the recent hydrological drought in Czechia, which were the significant dry years 2015 and 2018. Additionally, the thesis deals with drought in selected regions in the world and describes the most affected areas with drought and water scarcity. Large part is devoted to monitoring and warning systems of hydrological drought in the Czech Republic and in the world. Finally, the thesis explains the differences between each hydrological model including HBV, VIC, LISFLOOD, Bilan, RAPID and mHM and describes different indexes like TSDI, DSCI, ODIB or CDI index.

**Keywords:** hydrological drought, monitoring of drought, warning services