



How do different parts of a basin contribute to discharge? Case study Rokytká Brook, Šumava Mts., Czech Republic

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Runoff formation is a very important issue within a flood protection and drought prevention. To solve this topic a lot of parameters, which affect the outflow, need to be known. Especially it is necessary to find out which part of a catchment contributes mostly to discharge during flood events or during drought periods. Optimal conditions for such a research are provided by our study in Šumava Mts., where a number of former floods has been created. In near future this area can play role within the water storage enhancement in SW Czech Republic during drought periods. Central part of Šumava Mts. is covered with peat bogs and other peaty soil types which are mostly supplied by rain water.

This study takes place in the small catchment (1 km²) in Šumava Mts. It is created by 2 main slopes with different vegetation and soil coverage. First slope is covered by well-developed peat bog where 3 springs were found, the second slope is covered by dead spruce forest and soil type of entic Podzol, where one spring was found. Each specific part of the catchment was mapped and equipped by devices such as water level probe or tensiometers. Spring discharges and outflow have been observed. For consecutive analyses water silica, stable isotopes and temperature observations have been carried out as well.

Results of this research should help to better understand the runoff process taking place in the core zone of Šumava Mts. Moreover it should improve a flood forecasting and the knowledge about retention ability of Czech mountains.