This diploma thesis summarizes knowledges about the Vydra river headstream area runoff regime with special respect to formation and course of flood situations. The main focus is concentrated on explanation of runoff extremity relation to physical-geographic conditions of each catchment. Special emphasis is in this term adverted to peatbog hydrological function assessment. Thesis is based on data acquired during more than three years field survey which was realized in this area by the Faculty of Science, Department of Physical Geography and Geoecology.