

This thesis deals with the evaluation impact of the modifications of floodplain and river network to the course and consequences of floods on the example of Stropnice river, located in South Bohemia. The thesis evaluate causes, course and effects of the floods, that took place in the basin with special focus to the recent floods. The basin was hit by extreme flood in 2002, while in 2005, 2006, 2009 other floods with different origin and magnitude took place in the basin.

The assessment was based on field survey, and application of GIS analysis of results for identification of critical stream segments, which may influence the course of flood events. To get information about river network modification the HEMF field survey methodology was used. The following rivers were mapped: Stropnice river, Svinenský, Klenský and Žárský brook. The critical stream segments are spread in the whole Stropnice basin. It can be concluded that the anthropogenic effects are apparent in the whole basin including its headwater part in mountains. In several critical stream segments there were proposed measures aimed to reduce the consequences of potential flood events.