



Changing level of vulnerability and risk due to floods - case study of the Becva River, the Czech Republic

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Nowadays flood risk management is different in each risk zone. But are these zones define correctly? In the Czech Republic there exist three flood risk areas – high, low, and no; but only along major rivers. In the last few years we witnessed an upward trend flooding on the small streams. And therefore we should determine which variables influence the level of flood risk. The main goal of this paper is to compare pattern of flood risk areas due to diverse defined variables by GIS. Among the basic variables there can be included flood areas, social perception of flood risk, and vulnerability presented by damages, quality / quantity of flood protection measures, and inhabitants' demographic structure. All these factors result from the risk equation. The integrated approach in our study is a significant added value. This requirement is contained in many disaster research strategies of international organizations, e.g. IRDR, ICSU as well as the EU itself.

The case study was carried out in the Becva River basin in the eastern part of the Czech Republic. The study area represents landscape along middle section of the river, in the foothills of the Beskids Mountain. We made there the interdisciplinary questionnaire and field mapping research, where we asked over 300 households and mapped about 184 square kilometres. We confirmed decreasing of deaths and increasing of economic losses. This new concept of flood risk areas assessment has a high potential to improve risk management strategies. Especially for prediction, prevention, and preparedness phase. And we try to apply these results to improve river management in the national level.