Flood damage assessment – Literature review and recommended procedure

The assessment of flood risk is an essential tool in evaluating the potential consequences of a flood. The analysis of the risk can be applied as part of the flood plain management, but can also be used in a cost-benefit analysis, when comparing different adaptation strategies. This analysis is therefore important when assessing flood disaster mitigation options and economical optimizations of possible measures. A common definition is that the flood risk is found with the use of a flood hazard assessment and a flood vulnerability assessment (Apel, Merz and Thieken, 2008).

The flood hazard is the quantification of amount, extent, and location of flooding expected to occur with a given return period. This means that the spatial distribution of the calculated inundation depth as a function of the return period can be used to describe the flood hazard. The vulnerability is the susceptibility of the area subjected to the flooding. A way to express the vulnerability is through a damage cost assessment.

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