



Preparatory investigations for a public dialogue on flash flood risk in the Mehlemer Bach catchment, Germany

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On July 3rd, 2010, an extreme precipitation event occurred in the municipality of Wachtberg at the southern urban fringe of the Federal City of Bonn. The 30-min intensity of the torrential rain was estimated to represent a 1000 year event according to the KOSTRA dataset (German Meteorological Service, DWD). Rapid overland flow and the exceedance of the design values of the sewerage system caused a flash flood in the Mehlemer Bach catchment. Roughly 400 buildings were affected in its lower, urbanized part, and it took over two weeks to clear the damage. Similar flash flood events have been recorded in the same catchment regularly since the year 1693, three times in the last 80 years alone. The fact that, in case of the 2010 event, the official weather warning was released almost simultaneously to the beginning of the downpour highlights the urgent need for preparative action in the longer term.

Flash flood risk mitigation relies, among others, on risk awareness and preparedness of residents. One aim of this study is to analyse the current risk communication in the drainage area of Mehlemer Bach through questionnaires and expert interviews, which will provide a good basis for an open dialogue between residents and the authorities. There is an urgent need for practical and accessible advice, and it must be ensured that the resources and capabilities of the individuals involved are taken into consideration. In addition, we compare a hazard map of the area to mental maps drawn by the local population in order to assess their risk perception.