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Rapid flood loss estimation for large scale floods in Germany

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Rapid evaluations of flood events are needed for efficient responses both in emergency management and financial appraisal. Beyond that, closely monitoring and documenting the formation and development of flood events and their impacts allows for an improved understanding and in depth analyses of the interplay between meteorological, hydrological, hydraulic and societal causes leading to flood damage.
This contribution focuses on the development of a methodology for the rapid assessment of flood events. In the first place, the focus is on the prediction of damage to residential buildings caused by large scale floods in Germany. For this purpose an operational flood event analysis system is developed. This system has basic spatial thematic data available and supports data capturing about the current flood situation. This includes the retrieval of online gauge data and the integration of remote sensing data. Further, it provides functionalities to evaluate the current flood situation, to assess the hazard extent and intensity and to estimate the current flood impact using the flood loss estimation model FLEMOps+r.
The operation of the flood event analysis system will be demonstrated for the past flood event from January 2011 with a focus on the Elbe/Saale region. On this grounds, further requirements and potential for improving the information basis as for instance by including hydrological and /or hydraulic model results as well as information from social sensors will be discussed.