# Konferenzbeiträge ExTrass
## im Rahmen von

## Vortrag: How to reduce the impacts of pluvial flooding: Results of a household survey in three German municipalities

Dillenardt, L., Otto, A., Heidenreich, A., Hudson, P., Thieken, A.H.
Universität Potsdam

In the last years, several German cities have been impacted by pluvial (or heavy rainfall) flooding. For instance: Munster (2014, damage to private households of ~€70 million), Hersbruck (2005, total damage of ~€2.8 million) and Lohmar (2005, total damage of ~€2.4 million). Additionally, pluvial flood impacts are projected to increase due to climate change and urbanization.

Moreover, in contrast to other floods (such as river floods) risk zones are not necessarily connected to water bodies as heavy rainfall can occur anywhere increasing the difficultly of mapping their potential occurrence. Furthermore it is difficult to determine occurrence probabilities. Therefore, all stakeholders, both private and administrative, tend to be less risk aware and prepared regarding pluvial flooding as compared to river flooding. This is important given the role of integrated flood risk management where all stakeholders must actively reduce flood impacts.

Therefore, it is important to ask how pluvial flood risk management can be improved in urban areas in order to reduce impacts. To answer this question, we developed a household survey that was deployed in 3 municipalities (Potsdam, Remscheid and Leegebruch) which were recently impacted by pluvial flooding and are situated in a range of contexts. This survey draws upon this range of contexts and experiences to provide insights on four core topics: how to improve *early warnings*; what *impacts, tangible and intangible*, did people suffer; *what helped people to reduce flood impacts*; and what information or help do people want to get back on their feet.

Data was collected between July & September 2019. We employed three response methods (paper, telephone, online) to reach a wide range of respondents. This dataset is one of the few empirical data sets to focus on solely pluvial flooding as compared to the much more common river flooding data sets. This allows for a comprehensive analysis of drivers and impacts of understudied pluvial flood events. Therefore, the innovative contribution of this study is that in providing a better understanding on the linkages between the four core topics and their effects on wellbeing. This better understanding will help enhance pluvial flood resilience by, inter alia, improving risk information campaigns, early warning systems, emergency responses and long-term adaptations.