



Flash floods versus river floods – a comparison of psychological impacts and implications on precautionary behaviour

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River floods belong to the most costly natural hazards which Germany has to face periodically. Yet, in May and June 2016, several municipalities in Southern Germany suffered from severe flash floods and debris flows which have been triggered by intense rainfall in Central Europe and caused monetary losses of EUR 2.6 billion. Although flash floods and debris flows are still unfamiliar events in Germany outside alpine regions, they characterize a serious hazard which – besides monetary losses - induces mental and physical health problems, e.g. psychological stress, and requires damage mitigation and prevention. With regard to riverine floods, private precaution measures form an essential part in integrated flood risk management by involving individuals in loss prevention strategies and can be applicable to prevent losses also during flash floods. Since previous studies revealed that psychological attributes of affected individuals lead to protective or non-protective responses, psychological characteristics can be potentially helpful to predict the implementation of private precaution measures. Therefore, this study follows two major aims. First, it is aimed to analyse differences between flash floods and riverine floods concerning their psychological impacts on flood affected individuals. Having surveyed flood affected households nine month after the severe river flood in 2013 (which affected the Elbe, Danube, Weser and Rhine) and nine months after the German-wide heavy rainfall in June 2016, psychological indicators such as avoidance, fatalism, threat appraisal, burden and coping appraisal could be derived and compared among both flood types. Second, it is tested if personal character traits and attitudes towards private precaution can be used to derive a probability for an individual protective response. Preliminary outcomes indicate that riverine floods have a stronger negative impact on affected people mainly with respect to psychological attributes such as burden, perceived threat, avoidance and fatalism. Additionally, first results indicate that if fatalistic attitudes and avoidance are pronounced, a trend for lower coping behaviour exists for both flood types. These findings need to be better accounted for in risk communication strategies.