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Encouraging individual adaptive behaviour: Smart risk communication strategies in flood risk areas

Marie-Sophie Attems, Sven Fuchs, and Thomas Thaler

Institute of Mountain Risk Engineering, University of Natural Resources and Life Sciences, Vienna, Austria (marie.attems@boku.ac.at)

Amongst numerous natural hazards, flooding annually causes the highest economic and societal losses in Europe. A reason for these losses are rising number of exposed assets in risk prone areas. Additionally, changes in extreme hydro-meteorological events impact the flood-resilience of such cities. Complementing government led protection and adaptation measures, private measures (dry- and wet-flood proofing, barrier systems, deflection of flood discharge, etc.) have been seen to decrease potential damages by flood events. Nevertheless, private protection and adaptation measures are not always adequately implemented, which is amongst others, the result of insufficient communication pathways between flood authorities and homeowners. The aim of the FLOODLABEL project is to increase the resilience and the adaptive capacity of cities in a smart manner. The FLOODLABEL is a prototype tool which aims at informing homeowners about their individual flood risks and to support the planning and decision-making of experts and local governments in risk management processes. By developing the FLOODLABEL tool both private stakeholders and homeowners can be involved in decision-making processes to enhance the resilience of communities. Hence, this study focuses on how homeowners in flood prone areas can be motivated to realise private measures by considering their knowledge about hazards, their risk behaviour and individual communication strategies wanted. The case study areas are sites in neighbourhoods that are prone to different types of flooding in the Netherlands, Belgium, and Austria. In these areas, the FLOODLABEL is explored and tested in terms of its social and technical functionality as well as its ability to improve risk communication. Preliminary results give insight into current protection and adaptation strategies realised by inhabitants and the different needs of risk communication depending on their risk behaviour. Further expected results are to integrate insights to improve communication strategies to provide tailored information. This can additionally be applied to advance planning support systems in risk management strategies in order to move towards more flood resilient communities.