

**Burying the head in the sand, and hoping for the best? The role of non-protective responses in private adaptation to flood risks**

Philipp Babicky, Sebastian Seebauer

Wegener Center for Climate and Global Change

The positive effect of risk perception on protective action is taken for granted in most studies on risk behaviour. A large proportion of the variance in protective behaviour, however, remains unexplained, and numerous studies suggest that additional factors need to be considered to more fully explain why some individuals translate perceived risks into protective action while others do not. Against this background, we apply the Protection Motivation Theory to examine socio-psychological determinants of private flood preparedness. We specifically focus on the role of non-protective responses, which do not reduce the physical vulnerability but rather alleviate the negative emotional stress (e.g. fear, worry) of risk-prone individuals and thus undermine protection motivation. We include three established non-protective responses (fatalism, denial and wishful thinking) and add two additional non-protective risk attitudes: reliance on public flood protection and reliance on social support. These two attitudes reflect the tendency of risk-prone households to attribute responsibilities and expectations to other societal actors (authorities, community/neighbourly networks). This might lead households into a false sense of security, rather than taking protective action to strengthen actual physical security.

Our analysis is based on data recently collected in a postal and online survey among 10 flood-prone municipalities in Austria, yielding a total sample size of 2.007 households. We run multiple regression analyses and structural equation models to estimate the relationships between latent, multi-item factors according to the theory on protection motivation. We report on the significance of five non-protective responses and compare their explanatory power with other factors such as risk perception, response efficacy and costs, previous flood experience and socio-demographic characteristics.

The results on the relative contribution of risk-related factors to protective action provide important insights for flood risk communication. While most risk campaigns are developed on the notion that 'adequate' risk perception is central to spark protective behaviour, we make a case for future risk campaigns to consider the role of non-protective responses. If flood risk managers are to encourage households to act, they also need to better understand the factors that result in non-action. However, reliance on public protection or social support should not be discounted entirely as evasive responses, since they may to some extent reflect existing coping capacities within the respective communities.