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Exploring multicriteria flood vulnerability by integrating flood risk and coping capacity – from a starting point view towards an end point view of vulnerability

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We present an approach to modelling multicriteria flood vulnerability which integrates the economic, social and ecological dimension of risk and coping capacity. We start with an existing multicriteria risk mapping approach. The term risk is used here in a way that could be called a starting point view, looking at vulnerability without considering coping capacities. We extend this approach by a multicriteria modelling of coping capacities towards an end point view of vulnerability. In doing so, we explore a way to differentiate coping capacity from flood risk in each of the dimensions of vulnerability. The approach is tested in a flood-prone urban case study, the city of Leipzig, Germany. Our results show that it is possible to map multicriteria risks as well as coping capacities and relate them in a simple way. However, a detailed calculation of end point vulnerability would require more detailed knowledge on the causal relationships between risk and coping capacity criteria and their relative importance.