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## Exploring disaster risk management pathways in complex, multi-risk systems using DAPP-MR

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Climate change and socioeconomic developments are driving risks from natural hazards and thus determine the effectiveness and efficiency for disaster risk management strategies. With DAPP-MR, an approach to apply a decision-focused lens, and a longer-term planning perspective in multi-risk systems has been recently developed. DAPP-MR guides the exploration of disaster risk management pathways under uncertainty while explicitly accounting for trade-offs and synergies of policy measures across (interconnected) sectors, hazards, and time.

This work provides a first insight into the utility of the DAPP-MR framework to support disaster risk management decision making in the complex context of multi-hazard, multi-stakeholder settings. We used an integrated impact assessment modelling environment to assess (multi-)hazard impacts in a synthetic river basin, capturing interests and dynamics of three sectors (agriculture, inland shipping, residential housing) exposed to interacting flood and drought-hazards. We showcase (interactive) methods and metrics for the analysis and evaluation of potential risk management pathways. They were selected to deal with the increasingly multi-objective set-up in multi-risk systems explicitly capturing and explore effects from integrating measures directed towards different hazards and sectors.