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# Identifying and Modeling Pathways between Flood and Health in Vietnam and Germany

Previous hydrological research has focused on the physical basis of flood events. Thereby hydrodynamic models are established often ignoring societal and economic factors. This omission can lead to mischaracterization of flood events. Recently, the pathways between flooding and economic damage have therefore been integrated into the models. However, impacts on physical and mental health are underrepresented in ongoing studies. The aim of my project is to bridging this gap. I plan to map the linkages between physical characteristics of floods, regional socioeconomic factors, and physical and mental health outcomes.
In the first part of the PhD project, a longitudinal structured household survey of Ho Chi Minh City (HCMC), Vietnam, conducted in 2020 and in 2023, is analyzed. HCMC faces recurring seasonal flooding, especially between June and November. The survey allows for a comparison of flood characteristics, flood perception, and disaster preparedness. Three flood events were reported across in the two survey waves. In total, 559 participants answered the questionnaire in both 2020 and 2023, of whom 303 described a recent and a severe event. Of the 559 participants, over half experienced a flood between the survey waves. Participants described self-reported morbidity of various diseases for several household members following the respective floods. The aim of the descriptive study is to identify potential connections between this morbidity and flood characteristics and/or household characteristics. In the next step of the project, the results of the descriptive analysis can be used to develop models describing the pathways between floods and health in HCMC which can eventually be transferred to other regions of Vietnam.

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