

EGU22-11909

<https://doi.org/10.5194/egusphere-egu22-11909>

EGU General Assembly 2022

© Author(s) 2022. This work is distributed under the Creative Commons Attribution 4.0 License.



## An integrated assessment of multi-hazard events in Sweden

Johanna Mård<sup>1,2</sup>, Örjan Bodin<sup>3</sup>, and Daniel Nohrstedt<sup>2,4</sup>

<sup>1</sup>Department of Earth Sciences, Uppsala University, Uppsala, Sweden (johanna.maard@geo.uu.se)

<sup>2</sup>Centre of Natural Hazards and Disaster Science, Uppsala University, Uppsala, Sweden

<sup>3</sup>Stockholm Resilience Centre, Stockholm University, Stockholm, Sweden

<sup>4</sup>Department of Government, Uppsala University, Uppsala, Sweden

Sweden is prone to various natural hazards, including wildfires, storms, floods, cloud bursts and landslides, which have caused considerable economic losses in the past. Natural hazard risk is also expected to increase in several regions in Sweden due to climate change. However, considerable knowledge gaps remain on how to effectively mitigate societal effects of multiple natural hazard events. Current risk assessments often focus on single hazards within distinct administrative boundaries whereas multi-hazard or compound events, which often transcend these boundaries, are rarely accounted for. This poses a problem – particularly in vulnerable geographical areas where the risk for compound events with significant societal impacts are high. Here we present a new project that will address this knowledge gap, with the aims to identify underlying factors of multi-hazard events in Sweden, and to investigate capacities among public and private actors to mitigate these impacts via effective collaboration. The first outcome is an integrated natural hazards assessment that reveals how climate-related natural hazard events have evolved over time and space in Sweden since the 1970s, and what areas have been most exposed to multi-hazard events. These results provide knowledge on the spatiotemporal distribution of natural hazard events, including compound events, which is critical when analysing their underlying drivers.