

The EMERGE project

Multi-hazards and emergent risks in Northern Europe's remote and vulnerable regions

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ABSTRACT

The EMERGE project, funded by the Natural Environment Research Council (NERC), has formed a new partnership across northern Europe in the last 2 years, between the University of Strathclyde, the Icelandic Meteorological Office, the Norwegian Water Resources and Energy Directorate, the British Geological Survey, Newcastle University and the Scottish Environment Protection Agency, by bringing together experts to explore the interaction of hazards (in particular rainfall, landslides and floods) and their emergent risks in remote regions with low density population and limited transport links and supply chains.

We have organized four workshops. The first workshop was conducted virtually in February 2022. The following workshops were organized in Oslo, Norway in May 2022, in Glasgow, Scotland in March 2023 and finally a workshop in Reykjavík, Iceland in May 2023. All were attended by representatives of local communities and local stakeholders with whom we discussed their unique challenges in remote regions and the main natural hazards affecting them.

The unique challenges posed by compounding risks of weather-driven natural hazards in remote regions, the latest science in remote areas, and the key science, observational, prediction and monitoring gaps were themes discussed across all workshops. In the Oslo workshop we discussed warning service and warning communication, challenges in local response and assistance, and the role of research, monitoring and data collection in hazard prevention. Remote resilience, the science and policy developments needed to face the challenge of interacting natural hazards in a warming climate, warning and response were also key themes at the Glasgow workshop. During the Reykjavik workshop we discussed the challenge of issuing timely and meaningful warnings to the public about natural hazards, including the needs of the tourism sector, and the close working relationships between government monitoring agencies, first-responders, and educational institutes.

Herein will be presented some of the main outcomes from the workshops as well some of the experiences of remote and rural communities in Norway, Scotland and Iceland.

The outputs from EMERGE project will form the basis of a new forum that fosters open scientific collaboration, knowledge brokering and information sharing relating to extreme events, and identify the needs and opportunities specific to remote regions across northern Europe.

Keywords: remote areas, compounding risks, emergent hazard