3. Geohazards

Session Leader: Anders Solheim, NGI, Oslo
Session Co-leader: Lars Harald Blikra, NVE, Trondheim

Geohazards, whether they are climatically induced or caused by other mechanisms, adversely affect modern society to an increasing degree, both in frequency and magnitude. The increase in risk is, however, due to a number of factors in addition to those directly related to climate and geology; these include demographic changes, urbanisation, exposure of critical infrastructure, etc. We invite contributions from the whole spectrum of geohazards. This embraces studies related to the triggering, dynamics and mechanisms of the hazards, methods for investigating them, and how to mitigate the risks posed by them.

We would like to promote a holistic view on geohazards, and we welcome discussions on how society should act to deal with the risks, particularly the light of a changing climate. We challenge the Nordic geoscience community to also submit contributions related to topics such as cascading hazards/risks as well as risk-reducing measures. The latter may include a range of actions, from land use planning, traditional ‘grey’ and nature-based mitigation solutions, as well as new, innovative solutions. The NGWM 2020 is an arena to tell the Nordic geo-community about your geohazards project, whether it is small, or large and multi-institutional.

Subsession:
**Climate change and landslides in the artic and sub-arctic**
Convenor: Þorsteinn Sæmundsson, Reginald L. Hermanns

Following climate models is the artic and sub-arctic region one of the worlds areas that will be most affected by climate change. This has a strong impact on surface processes such as landslides. In addition, are the Nordic countries exposed to extreme weather conditions, such as storms with high wind speeds, heavy rainfall and fast temperature changes that often result in landslides, flooding and coastal erosion. A special condition is that permafrost conditions vary from south to north strongly and are in the region more dominant than elsewhere in Europe. Thus, there are special threats related to permafrost conditions and its disappearance due to climate change.

This session aims at focusing the interplay between climate change and all types of landslides in arctic and subarctic regions, including case studies from various geographical, geological and topographical settings. Following the experience from a panel discussion on the last Nordic Winter meeting in the Geohazard session on “Artificially triggering of rock slope failure” we are planning again a panel discussion following the presentation of invited speakers on the special topic of this session.