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- Muntlig presentasjon

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Universitet/Bedrift: NGU

Hvis flere medforfattere:

Fornavn Etternavn: Odleiv Olesen
Fornavn Etternavn:

Nøkkelord: (minst 5 nøkkelord, eks: geofarer, skred, erosjon, flom, ras)

1. Geofarer
2. Fjellskred
3. Tsunami
4. Flom
5. Jordskred

Skriv sammendrag (Abstract) med minimum 200 ord, og maks 1 A4 side (2500 tegn, inkludert mellomrom) her:

Sammendrag / Abstract

Introduksjon: **Earthquake of magnitude c. 7 in Norway - … An earthquake of magnitude c. 7 along the Stuoragurra Fault Complex in Finnmark, northern Norway, occurred less than 600 years ago. Earthquakes of similar magnitude, with severe consequences, may therefore happen even today within the seismically most active areas in Norway.**

Metode: The 90 km long Stuoragurra Fault Complex (SFC) constitutes the Norwegian part of the Lapland province of postglacial faults in northern Fennoscandia. The central part of SFC was formed in an earthquake with magnitude c. 7 less than 600 years ago. The 90 km long SFC consists of three separate fault systems; the Fitnajohka fault system in the southwest, the Máze fault system in the central area and the Iešjávri fault system to the northeast. The distance between the fault systems is 7–12 km. The faults dip at an angle of 30–75° to the SE and can be traced on reflection seismic data to a depth of c. 500 m. Here we present data from trenching of different sections of the fault complex. The trenching reveals deformed sediments in all nine sites, and inclusions of peat and organic bearing soil in the deformed and partly overrun loose deposits on the footwall in eight of the sites.

Resultat: Radiocarbon dating of organic matter located in buried and severely deformed sediment horizons indicates late Holocene ages for the (final) formation of the different fault segments, more specifically that the Máze, Fitnajohka and Iešjávri (Guovziljohka) faults formed during earthquakes younger than 600 years, younger than 1,300 years and younger than 4,000 years BP, respectively. The youngest age is at the Masi (Mazé) site, where plant macrofossil data from the buried sediments suggest an early to late Holocene vegetation cover. The reverse displacement of c. 9 m and fault system lengths of 14 and 21 km of the two southernmost fault systems indicate a moment magnitude of c. 7 on Richter's scale if just one rupture event is associated with each of these systems. The fault rupture with length and height of fault scarps, and injections and throw-out of angular boulders and wedges of fault breccia reaching up to 15–20 m away from the fault scarp give the most distinct expressions of the associated earthquake magnitude with the SFC. Numerous landslides, possibly earthquake-induced, have been recorded along the SF. Initial breakage or fracturing of bedrock with a potential to lead to larger rock avalanches are also recorded at a few places in or close to the fault zone.