



The 2017 Karrat fjord landslide, Greenland: Multidisciplinary analysis of the evolution of a landslide prone area through several years

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On June 17, 2017, a large landslide occurred in the Karrat Fjord, West Greenland. The slide entered the sea, and the ensuing tsunami caused the loss of four lives in the nearby village of Nuugaatsiaq. We here describe how the combination of techniques has allowed an analysis of the evolution of the landslide prone area before and after the June 17 2017 event. We use a combination of optical imagery and spaceborne Synthetic Aperture Radar data, DEM analysis and seismology to pinpoint time and location of events. This has revealed that the area initiated movement in 2009, with several surface deformation and surface change episodes leading to the main landslide event in June 2017. Following the latter, complex and temporally varying spatial deformation patterns has been observed on the slope.