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## Non-tectonic seismological events in Greenland - Cryo-generated events and landslides

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Following the large June 17 2017 landslide in Karrat Isfjord, Central West Greenland the necessity to differentiate between different kinds of seismological events has become relevant for hazard assessment. Greenland is the origin of a many different kinds of seismic signals. In addition to the than a thousand small to moderate magnitude tectonic earthquakes, most of them ranging between ML 1.0 and 3.0 are located along the coasts of Greenland every year, many other non-tectonic events are located. This is largely possible thanks to the data collected and distributed by the Greenland Ice Sheet Monitoring Network (GLISN) federation and its members (glisn.info). The non-tectonic events include cryo-generated events, and signals from landslides as for example illustrated by the globally seen seismological signal from the Karrat 2017 landslide. It is possible to separate tectonic events from non-tectonic events, based on the characteristics of the seismological signal alone, but the signals from cryo-generated events and landslides have many similar features. In the Karrat Isfjord area, several large glaciers terminate in the sea where for example calving generate seismological events. With poor location resolution due to large station spacing in the remote areas of Greenland, the differences in the seismological signals are important to determine the cause of the events.