

## Mass movements in Nunavik: hazard and risk

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### ABSTRACT

In Nunavik, Northern Québec, Canada, slope processes are active within rolling plateau landscapes. Escarpments are seldom; however snow avalanches and sudden mass movements are obvious from the study of slope deposits. According the archives and literature, Kangiqsualujuaq, one of the 14 Inuit villages in Nunavik, has been stricken by a dreadful snow avalanche: nine people died and 25 were injured on the night of December 31<sup>st</sup>, 1998-January 1<sup>st</sup>, 1999. At this time, the inhabitants were gathered to celebrate New Year's Eve in the school gymnasium that was located within the deposit zone of a short snow-avalanche track. The memory of this event is locally long-lasting, however, the perception of hazard is impeded by the lack of systematic data collection regarding slope activity in locations where hazard could easily shift to risk due to the vulnerability of settlements or short transportation corridors around settlements or within National Parks.

From the case study of three sites, within the village of Kangiqsualujuaq, in the surrounding of Umiujaq and in Lac-à-l'Eau-Claire inside National Park Tursujuq, we documentt the constraints of slope processes on the village expansion, and the methods developed to monitor changes on slopes all year-round, from the setting of automatic time lapse cameras to morphometric properties slope deposits.