

## ***Interactive comment on “Evolution of events before and after the 17 June 2017 landslide at Karrat, West Greenland – a multidisciplinary approach for studying landslides in a remote arctic area” by Kristian Svennevig et al.***

**Kristian Svennevig et al.**

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Received and published: 24 September 2020

First and foremost, we thank you for taking the time to review our manuscript and contributing with constructive comments that helped improve the manuscript immensely. Listed here are the general comments to the issues of the major concerns you have raised: We have updated and simplified the terminology following your suggestion and now only use unstable rock slope, rock slope failure and rock avalanche. Similarly, we have simplified the temporal terms for events. We have furthermore added a new fig 2 showing the signs of previous activity and corrected the faulty figure referencing

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sequence.

**Abstract:** Restructured the abstract, we have however kept the introduction of the landslide in the start of the abstract as this sets the scene for the work that follows.

**Introduction:** We have made our aim/research question clearer in the title, abstract and introduction. “Our aims with this study are twofold: 1) to understand the processes that led to the disastrous Karrat 2017 rock avalanche and the continued threat from the area, 2) and to explore our ability to detect and locate rock slope failures and ultimately to assess the associated hazard in an inhospitable climate with very difficult access” We have furthermore restructured the introduction to support our aim more clearly.

**Methods and data:** We have expanded the various method descriptions and moved text on seismology from the discussion to the method section.

**Results:** We have made an introductory paragraph to the results section to describe more clearly what have been done with the results We did not find it necessary to compile the data in a repository as we clearly describe what data has been used to identify individual events and as all of the data is freely available through the sources listed in the method and data availability sections. We have reorganized the table and expanded on the explanatory notes

**Discussion:** We have made a paragraph on signs of previous activity in the start of the results section to accommodate this and added a new fig 2. We have added sentence about screening of the surrounding slopes in the fjord system. We have added a short discussion on the workflow relative to other workflows. We have rewritten and expanded this part of the discussion with some of the suggested references but avoided going into a detailed discussion. Based on our limited (mainly remotely sensed) data a detailed discussion on the trigger/conditioning mechanisms and contribution of permafrost degradation is beyond the scope of this paper.

For a detailed overview of the changes made and answers to individual questions we

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refer to the reviewer comments overview document attached here and the updated manuscript we resubmit.

Kind regards, on behalf of the authors Kristian Svennevig

Please also note the supplement to this comment:

<https://esurf.copernicus.org/preprints/esurf-2020-32/esurf-2020-32-AC5-supplement.pdf>

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Interactive comment on Earth Surf. Dynam. Discuss., <https://doi.org/10.5194/esurf-2020-32>, 2020.