

Dear Reviewer,

We thank you for your suggestions and observations. Below, we answered point-by-point to your comments. In black (your comments), in red (our comments).

Review – Nicu et al. 2022 „Multi-hazard susceptibility mapping of cryospheric hazards in a high-Arctic environment: Svalbard Archipelago“

I think the authors' work in Arctic context is very valuable as it contributes to filling a knowledge gap in an area affected by complex and understudied processes that have become an issue in light of climate change. Personally, I found the manuscript clear, well written, and well referenced.

We highly appreciate your positive general comment on our paper.

I do not see major issues but I tend to agree with the comment of the other reviewer calling for better stressing the limitations of the work. On my end, it seems to me that more stress was put into the modelling strategy and results rather than on the construction of the inventory which, in ESSD, should be the focal point. So, I suggest that the authors try to provide more details on the data collection, remote sensing imagery interpretation, and in-situ validation. I think that the GAM modelling, as one of the possible approach, can be shown as an example of potential use of the data but, I repeat, the focal point of the manuscript should be the presentation of the dataset itself.

As we already commented on the other reviewer's observations, we added some more details on the collection of data (L165-175). Our focus was also on the modelling strategy, but just to highlight what can be produced in terms of multi-hazard cryospheric modelling if comprehensible inventories (like our case) are available. More details were added in L426-432, regarding the data collection and interpretation.