

Interactive comment on “Impacts of extreme weather events on transport infrastructure in Norway” by Regula Frauenfelder et al.

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This manuscript presents the work conducted during the infrarisk project, a project that investigated meteorological extreme events, avalanches, as well as mass-wasting events in the context of risk analysis of the Norwegian transport network. The paper offers an overview on the outcomes of the project and thus should take on the form of a review paper rather than a research paper. However, this distinction is not really clear from the structure and content of the manuscript. Rather, the paper follows the outline of a typical research paper (Introduction, Methods, Results, Discussion and summary, Conclusions) and thus suffers from being a rather hybrid form between a research and review paper without meeting the demands of any of the two.

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As a research paper, the manuscript presents insufficient novelty and originality as it largely iterates the research conducted during the project. As a review paper, it fails to cover the breadth and scope of the topic. Although I do not know the project very well, I know that some work - that was part of the project - has not been referenced although some of it is directly related to the topic of the paper (see Meyer et al. 2015 (of which I was a coauthor)). I am not demanding to be cited, but I find it too minimalistic for a review to base some of the results on mainly one research paper (Dyrddal et al. 2012).

I thus recommend to abandon the research-paper structure. The paper suffers anyway from not adhering to this formal structure. Many statements in the Results should better be placed in a Discussion (page 7, line 20f) or the Methods (page 7, line 27f).

A major benefit and novelty of this paper could be to detail how the results obtained in the project are now being used in policy and decision making. Rather than reading repetitive truisms such as "complete protection against natural hazards [...] is not possible", readers might want to know how the project's result have impacted policies towards the management of infrastructure-related risks. Since the project was finalized in 2013, such information may be readily available. As it stands, the manuscripts largely summarizes previously published results, and a clear added value is hard to discern.

I do not recommend to reject the paper, because I think that it potentially provides an insightful report of a large project on a timely and relevant issue in natural hazards and risk research. However, the manuscript requires substantial work and thus I recommend major revisions.

References

Meyer, N. K., Schwanghart, W., Korup, O. and Nadim, F.: Roads at risk: traffic detours from debris flows in southern Norway, Nat. Hazards Earth Syst. Sci., 15(5), 985–995, doi:10.5194/nhess-15-985-2015, 2015.

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