

Interactive comment on “Design of parametric risk transfer solutions for volcanic eruptions: an application to Japanese volcanoes” by Delioma Oramas-Dorta et al.

Anonymous Referee #2

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In this paper, a novel method is developed to design a parametric risk transfer mechanism to offset losses from large, ash fall-producing volcanic eruptions. An application is shown for the case of Mount Fuji in Japan. The approach taken is novel and provides interesting advances scientifically and potentially for practice. The manuscript is very well written and the language of a high quality. My review focuses mainly on the methodological aspects and discussion of the results. In terms of volcanic eruptions per se, this is outside my own role of expertise. However, I discussed also this aspect with a volcano-specialist, whose opinion is that the main points related to that aspect have already been raised by reviewer 1. Overall, I believe that the paper could be accepted subject to several minor revisions. Specific review points can be found

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below.

Introduction gives a clear introduction to the kinds of parametric insurance being covered in the paper, which is useful for the non-specialist reader. Also the description of the parametric insurance and selected triggers is very clear.

Some of the arguments in the introduction should be more clearly supported by evidence from the literature. For example, on line 100-102, provide literature to support the statement about the proper choice of parameters.

Wet version: on lines 165-171, the authors describe how they developed the “wet version” of the scenarios. They refer to a paper by Macedonio and Costa (2012) for the approach. Whilst this is fine, a short overview of this methods should also be summarized in this paper to give the reader an overall understanding of how it works (referring the reader to the paper for the details of course).

Vulnerability functions: Figure 2 gives a clear example of two vulnerability curves. However, for reproducibility, have the authors considered providing all curves, for example in a supplementary dataset?

BE module: please provide more information on how this is done – for example, how does the assignment on the probabilistic basis work?

Parts of the current conclusion would better split out into a separate discussion section. In particular, the parts discussing the limitations and challenges, as well as applicability elsewhere. This would give the opportunity to slightly expand these aspects, with reference to key literature. For example, given the topic of the special issue, one of two extra paragraphs describing key challenges for upscaling globally would be useful (there is some reasoning along this line but it is very short). The conclusion could then be kept shorter and more succinct.

Interactive comment on Nat. Hazards Earth Syst. Sci. Discuss., <https://doi.org/10.5194/nhess-2019-41>, 2019.