

Editorial Board  
Natural Hazards and Earth System Sciences (NHESS)  
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R.E Final Review for *An interdisciplinary approach to volcanic risk reduction under conditions of uncertainty: a case study of Tristan da Cunha*

Dear Editorial Board,

Many thanks for your invitation to review the revised version of this paper. Firstly I would like to commend the authors on the revisions following the preliminary review, as it is clear a lot of work has been done to strengthen the paper. This includes a more coherent structure, further details and data in the form of revised text and clearer tables, and generally the integration and flow between the materials is easier for the reader to grasp.

There is however, one point that could be further addressed. This paper covers a wide range of materials and many months of data collection that simply cannot be justified in this single paper. Four research papers are really needed to convey the specifics and details of this research (as outlined in the four aims) that could potentially provide great value. Indeed I see from the references that this appears to be already done or in progress. This leaves the question of what this paper has to offer as a significant contribution over and above the key research findings? To me, the title says this clearly: '*An interdisciplinary approach to volcanic risk reduction under conditions of uncertainty*', whereby this paper aims to demonstrate the value of adopting an interdisciplinary approach can have to hazard risk reduction, the impact it has on the communities involved, and what methodological tools can be adopted and how well they work/worked. This is where I feel the strength of this paper lies, as it is particularly challenging to provide such a broad summary of all the research presented.

The current structure still remains slightly at odds, with section 4 providing a summary of research relating to the volcanic events and expert judgment to quantify the uncertainties, and the social and cultural influences, which are rather descriptive, yet provide valuable contextual materials. Neither of these sections provide an in-depth analysis of what this data means and how it is applied in relation to the research question / aims of the paper outlined in section 1, but this can be easily addressed. In addition section 5 almost appears the 'core' of the paper, yet this section incorporates methodology aspects that may be better placed in the methodology section. Consequently, it reads that section 4 and 5 do not quite work together, as there is a strong distinction between these sections, methodologically and in terms of research findings. It is therefore suggested that rather than trying to cover too many things it may be worth returning to the title and reframing the paper as a case study to demonstrate how the approach adopted is of value, and if so, how? It appears most of the materials are already in the paper, it is simply that by reframing the materials it may help the reader to identify what the paper is trying to achieve, as well as form a stronger argument that is also more coherent and manageable within one publication.

There are a few smaller points, but these would fall in line should the above issue be resolved.

1. Abstract: would benefit from explicitly listing the findings / conclusions of the paper.
2. Section 4 – would be interesting to see at the end of each section further analysis and a summary that addresses the research aims outlined in section 1. In particular section 4.3 is very interesting, but what does this mean in relation to the research and the argument? This text could be used in a more compelling manner.

3. Section 5: More data to support statements would be useful, in addition quotations are used but not analysed. Quotes may also benefit from being formatted differently as it may be easier for the reader to follow, along with dates of the quote / event. It would also be beneficial to show how data described or collected relates to the argument or aims outlined.
4. Section 6: This section starts discussing communication strategies, but I do not recall reading about these before. Is the right term being used here, and if so there needs to be clarification of what is meant by communication strategies / challenges.
5. Conclusions: The conclusions could be shorter and punchier, with more analytical and critical reflections, returning to the aims and what the implications of the findings are for this study, and also in a broader hazard context. It would be good to explicitly address the coping mechanisms referred to.

More specific points:

P7780 line 16: do you mean ‘uncertainty’ rather than ‘information’

P7781 line 7-8 – can you provide any specific references and what has been learnt from these examples that support this research?

P7781 line 26 – could delete ‘for choosing’

P7784 line 14 – do you mean at risk from fire from lava flows?

P7785 - text in the first paragraph could be condensed

P7789 line 15 – it may be useful to present the research findings before stating where more further details can be found.

P7789-90 – hazards are not addressed specifically, but may be useful to address the types of hazards expected, for example pyroclastic flows from basaltic volcanic materials is probably not very common given its mineral structure and this could help identify some of the key most probable risks in terms of hazards faced by volcanic activity.

P7790 line 15 - may be useful to state what the ‘Classical Model’ is and who devised it.

P7795 line 27 – may make more sense to start the new paragraph with ‘Good communication’.

P7795 line 2 – what are the positive and negative impacts, could be more explicit here.

P7797 line 1 – what is meant by stocks of social capital?

P7797-p7798 lines 20-14 relates to methodological approaches

P7798 line 8 – use of ‘implemented’ instead of ‘included’.

P7799 line 29 – would like to see further evidence here to support this statement.

In summary and as mentioned previously, the research and subject is of significant interest and value, providing valuable insights into island communities dealing with volcanic hazards, and offering improved methodological approaches to conducting interdisciplinary research in this field. However, the paper would further benefit from some further consideration of what its overarching aim is, and to provide the appropriate framework in order to generate a more convincing and focused argument. I hope that some of the above suggestions may help this process.