

Interactive comment on “A 240 year History of Avalanche Risk in the Vosges Mountains from Nonconventional Sources” by Florie Giacona et al.

Anonymous Referee #1

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Dear Editor, dear Authors,

This contribution covers a very important and interesting topic, namely the search, analysis and exploitation of conventional and nonconventional information sources to establish and/or extend databases of past natural hazard events. The article points out the many challenges associated with data acquisition over a long study period during which information sources evolved substantially. The text is generally well illustrated and the overall structure of the manuscript is adequate.

Data on natural hazard processes (especially when destructive) are used by a wide variety of organisations (e.g. scientific institutes, private environment companies, insurance companies, governments). Such data are a very useful instrument in providing basic information for better hazard and risk assessment as well as decision-making. It

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is therefore important to promote and support studies such as the one presented in this manuscript.

The case study presented by the authors focuses on a single hazard type (snow avalanches) and on regional issues (Massif des Vosges). It is in many ways special which partly makes it even more valuable. Most importantly, (i) it covers a very long time frame, (ii) it covers an area not especially known for the hazard process of snow avalanches and (iii) it treats an area that has experienced fundamental turbulences in the past (e.g. several armed conflicts in the last 150 years; changes in official language etc.). These points reveal methodological research problems that one may not encounter in similar investigations elsewhere.

Given the importance of natural hazard event analyses and data sets, I think this valuable contribution should be published and I hope that it will motivate researches in other regions and dealing with other hazard processes to follow this (obviously quite demanding) path.

However (!), I see several substantial (mainly formal and structural) problems that need to be solved before this text is ready for publication in NHSS.

(i) First of all, the use of English language is not very good and needs to be substantially improved. In many places, the constructed sentences are much too long and contain too much information that make them often confusing and difficult to understand. The authors should try to formulate short, reader-friendly and clear sentences. I tried to make suggestions/corrections where possible. However, because I am not a native-English speaker my proof-reading is not at all complete. I am strongly convinced that the text would benefit from thorough editing by a native-English speaker.

(ii) Footnotes are used throughout the manuscript. I would strongly recommend to avoid the use of such footnotes. It is not, to the best of my knowledge, acceptable in this journal. The contents of many of these footnotes is not essential for the understanding of the text. They could e.g. be summarised in a supplementary file associated to the

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article or could partly be deleted. The most important contents should be incorporated in the main text or in figure captions.

(iii) In my opinion, the manuscript is currently too long. A lot of the issues addressed in the text are described in too much detail. In some parts (e.g. Discussion), the text is repetitive. I think it is crucial that the authors rework the manuscript, mainly sections 4 and 5, by carefully picking the main statements they want to make. According their decision, these issues and statements need to be accurately put to paper in simple but significant sentences (see also first point above).

(iv) Some key terms used throughout the manuscript should probably be introduced and precisely be defined in the Methods section. For example, the use of the term event (also source event, historical event, observed events, avalanche event etc.) is not clear and confusing at times. At page18/line15 the authors state that “it is not because an avalanche occurs that the event exists” and then produce a definition from literature. This is really complicated to understand and should (in my opinion) be clarified earlier in the text.

In summary, I do not think that this manuscript is ready for publication yet. I suggest the authors revise their text and solve the formal problems mentioned above. As regards content, the article is on a good level. However, the information the authors want to communicate in the latter sections of the manuscript should be reassessed, reorganized and if possible shortened. I do sincerely think that there is potential for an NHESS article in this manuscript. I thus recommend that the paper be accepted pending major revisions or that it be rejected with an invitation to re-submit when all formal aspects criticised are clarified. I provide a separate list of partly detailed comments specific to the different sections of the article as well as to the tables and figures produced by the authors. Additionally, I prepared a list of technical corrections for the authors (same separate document).

Please also note the supplement to this comment:

<http://www.nat-hazards-earth-syst-sci-discuss.net/nhess-2016-395/nhess-2016-395-RC1-supplement.pdf>

Interactive comment on Nat. Hazards Earth Syst. Sci. Discuss., doi:10.5194/nhess-2016-395, 2016.

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