

Interactive comment on “Regional Interaction Frameworks to Support Multi-Hazard Approaches to Disaster Risk Reduction (With an Application to Guatemala)” by Joel C. Gill et al.

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Received and published: 19 February 2019

Summary The paper deals with the development of regional interaction frameworks for Guatemala by utilizing literature reviews, field observations, interviews, and workshops. With the information thus gathered, a classification scheme of natural hazards is determined. Matrices were used to further determine hazard interactions, with a strong focus on the interaction (triggering or increasing the possibility) of two hazards.

Review summary

1. Does the paper address relevant scientific questions within the scope of NHES?

C1

The paper falls into the subject areas of NHES. It might fit the scope to understand the behaviour of hazardous natural events.

2. Does the paper present novel concepts, ideas, tools, or data? This remains rather unclear since the authors do not explicitly state the aims, research questions, hypotheses, and novelties of the paper.

3. Are the scientific methods and assumptions valid and clearly outlined? Assumptions are not made explicit. Methods are valid and transparently explained, but explanations would need streamlining and re-structuring.

4. Are the results sufficient to support the interpretations and conclusions? Yes, though the novelty of the results needs to be stressed. I have the feeling that there could be more to the paper than the authors actually delivered. It is difficult to review this paper because the authors leave it to the reader to “read between the lines” and to draw conclusions by herself/himself. In a nutshell, it remains somewhat unclear what we gain by the paper.

5. Do the authors give proper credit to related work and clearly indicate their own new/original contribution? Yes.

6. Does the title clearly reflect the contents of the paper? Yes.

7. Does the abstract provide a concise and complete summary? Yes. However, in the abstract research questions, hypotheses, aims, . . . are missing (as they are in the text).

8. Is the overall presentation well-structured and clear? No. Needs to be improved.

9. Is the language fluent and precise? Yes.

10. Are the number and quality of references appropriate? Yes.

Detailed review - specific comments

Main points

C2

Page 2

Line 3: The authors start very abruptly with the topic of regional interaction frameworks, without really framing their topic. They present the term “regional interaction framework” right at the beginning, whilst the definition of the term only comes one paragraph later.

Line 4: It remains unclear in how far your approach is interdisciplinary. Even more so, it remains unclear what “the approach” is that is being applied. I suggest that at least (!) a citation of the previous Gill and Malamud papers on this subject should be given here; it’d be even better to continue (after framing your topic) with briefly explaining what your approach is. In general, the writing style of section 1.1. is rather additive than providing an argument for why the study is relevant or in what context it is to be understood. The aim of the paper remains unclear as well as hypotheses, assumptions, and research questions.

Page 3:

Line 13: Is Table 2 necessary? Please consider deleting the table.

Line 20: Here, you distinguish between hazard interactions on the one hand and networks of interactions (cascades) on the other hand, whilst on page 2 you summarized all interrelated effects (including cascades) under the umbrella of the term hazard interactions. Please consider handling this coherently. To me, section 1 is rather over-structured. For example, section 1.3 consists of only three sentences. I’d suggest to re- and de-structure the section, including a better framing of the topic and to be less descriptive and additive, and to put up an argumentation.

Page 4

Line 12: Suggestion to delete table 4.

Page 5

C3

Line 30f: I’d also suggest deleting table 5.

Page 7

Line 6: Suggestion to delete Table 6

Page 8

Line 16: Here, and at quite a few instances before and afterwards, you refer to later sections in the paper. This makes reading rather difficult and raises the question whether the paper could be structured more coherently. If you discussed the workshops in section 2.6, why do you discuss their limitations so much later in the paper? As a rule of thumb references to content delivered later in a paper should be avoided.

Page 9-10

Lines 15ff: In the paper, comparatively long sections are dedicated to referencing to previous or later content. Suggestion to shorten and re-structure the paper.

Page 10

Line 8ff: this explanation of what is required for regional interaction frameworks comes at a rather late stage. Since you mention regional interaction frameworks so often on previous pages, I’d suggest to bring together issues that belong together. This would also decrease the amount of references to previous and later sections in the paper. The paper in its current stage is rather difficult to read and readers might easily lose track of what is the intention of the paper or a section in its own.

Line 19: this has been mentioned before (on page 2)

Page 12

Line 4: In table 8, A-E are named differently from what was proposed in the text.

Line 15: Figure 4: I am not sure that it is useful to have the same figure as in figure 3 repeated only to deliver the information of how many evidence sources were used.

C4

I think it is enough to deliver this information via text only (the number of figures and tables is really high for this paper, and not all of them seem to be necessary).

Page 13

Line 14: Figure 5 – again, I'd expect to get this information much earlier, e.g. in section 1.2. In table 9, evidence categories A-E differ again from text

Line 24: Figure 6 text is too small, rather impossible to read; is it upside down?

Page 14

Line 18ff: I cannot quite see the difference between example 1 and 4 (Table 10)? It would also be helpful if you explained what you mean by "linear event", "multi-branch event" etc. This again is some example for how you (superficially) describe rather than explain or argue.

Page 15

Line 13: In table 11, evidences A-E differ from text

Page 16

Line 1: It would be useful if you explained and/or detailed the "useful insights" that are generated. I really do like the way you collate information via different methods (literature, interviews, workshops etc.). But I think your paper stops when it gets most interesting, i.e. hazard cascades/networks and anthropogenic impacts on hazard interactions. Furthermore, since you do not explain what you gain aside from a visualisation and collection of (maybe more or less) known hazard interactions, this important aspect remains far too vague. This might also be because the reader doesn't know your aims, hypotheses, and research questions.

Line 10: This is another example that re-structuring the paper is necessary. The limitations and uncertainties should be mentioned where you present the respective method; here, you can then focus on the discussion.

C5

Line 29: I'm confused by the additional information about translators – have you used them? If not, why? If you did, this should be mentioned earlier.

Page 17

Line 25ff: Plus, if you use a pre-defined hazard scheme without the option to add other hazards and interactions, participants' knowledge might be missed out.

Page 18

Line 22: Table 9 – colour code and symbol code (legend) to be deleted

Page 19

Line 17: Why did you set these thresholds and not others? Explanation would be good.

Minor points

Page 1

Line 11: , and evidenced . . .

Line 15f: to reduce the number of parantheses, I'd suggest to re-write a part of the sentences as follows: (internationally accessible: 93 peer-review and 76 grey literature sources); (locally accessible civil protection bulletins: 267 bulletins from 11 June 2010 to 15 October 2010)

Page 2

Line 3: , and evidenced . . .

Line 13: Delete "Here, and"

Line 27: Put "and" in italics (two times)

Line 29: Consider rephrasing: . . ."that our approach also supports implementation"

Page 3

C6

Line 5: , and surface collapses

Line 7: , and cold spells

Line 23: for coherence, I'd suggest to change the heading to "... regional interaction framework"

Line 25: evidences

Page 4

Line 3: , and media reports (please check for "comma + and" throughout the document).

Line 6: consider rephrasing "an overview of Guatemala's hazard-forming"

Line 15: include is repetitive in the sentence

Line 17: verb missing?

Page 7

Line 2: helped identifying

Line 7: selected locations

Page 16

Line 9: Delete "."

Page 19

Line 2: "." is missing

Please also note the supplement to this comment:

<https://www.nat-hazards-earth-syst-sci-discuss.net/nhess-2018-363/nhess-2018-363-RC2-supplement.pdf>

C7

Interactive comment on Nat. Hazards Earth Syst. Sci. Discuss., <https://doi.org/10.5194/nhess-2018-363>, 2018.

C8