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Natural Hazards and Earth System Sciences
Discussions

Interactive comment on "Identification and classification of urban micro-vulnerabilities in tsunami evacuation routes for the city of Iquique, Chile" *by* Gonzalo Álvarez et al.

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We thank Dr. González-Riancho Calzada for providing feedback for improving our manuscript. Regarding her specific comments:

1) She points out that "The titles of the various sections in the method chapter would give a clearer idea of the work if they mention the method steps instead of generic terms valid for any scientific study as "fieldwork" and "data analysis"". We agree with this comment. The improved version of the manuscript will include more accurate titles for each section, as it is currently the case of section 4.3: "Evacuation route obstruction level".

2) Dr. González-Riancho Calzada also underlines that, regarding previous publication by León and March (2016), "It is crucial that the authors clarify which parts from their work are original and which ones are not. The main differences between the two works carried out in Iquique should be clarified to better understand if there are scientific innovations in this work or if it is a case study applying the method from Leon and March (2016)". We agree that this work is referenced several times throughout the new manuscript (which may confuse some readers about the the originality of this). However, we also point out that León and March's document introduce a more qualitative approach to the diagnosis of evacuation routes and classification of micro vulnerabilities. Indeed, León and March (2016) underline the need for a more quantitative analysis for these issues, which is the starting point of this new manuscript. We will clarify this issue on the improved version of our manuscript. We also attach here León and March (2016) original paper.

3) The reviewer also points out that "In the Data analysis Section, two different classifications of the elements found in the evacuation routes are described. The first classification, based on (i) blockages, (ii) level changes, and (iii) surface roughness, seems a bit disconnected to the method described in pages 8-9. Only after reading the next section on friction rates (pages 10-11) the role of this classification is understood. It would be advisable to mention in page 8, lines 5-7, that this classification is used later for the calculation of the friction rates". We agree with this comment. Content of page 9 is focused on introducing a classification scheme according to each micro-vulnerability's cause, not necessarily related to the characteristics of the micro-vulnerability itself (which in turn are the inputs for friction rates). We will clarify this issue in the improved version of our manuscript.

Again, we thank Dr. González-Riancho Calzada for her comments, and we believe that the new version of our manuscript will be a significantly improved one and more readable for broader audiences.

Please also note the supplement to this comment:
https://www.nat-hazards-earth-syst-sci-discuss.net/nhess-2017-458/nhess-2017-458-SC1-supplement.pdf

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