

Interactive comment on “Communicating Disaster Risk? An Evaluation of the Availability and Quality of Flood Maps” by Daniel Henstra et al.

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Using Canada as a case study, the authors evaluated the availability and the quality of flood maps, in a first attempt to classify them and suggest possible improvements for better communicating the risk to stakeholders and citizens. As pointed out by other studies worldwide, there are several issues related to flood maps, spanning from their design to their accessibility, and therefore any research in this sense is meaningful, and shall definitely be published in NHESS.

The literature review is very good, especially as Canada is concerned, and I have only a few hints to improve it. Firstly, additional insights on the use of flood hazard maps in the US and in Europe are discussed, as an example, by Luke et al. (2018), Albano et

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al. (2017) and Nones (2017), pointing out a generalized lack of consistency and the urgency in moving towards a new approach in communicating flood risk. Moreover, as for improving the discussion about the impact of floods on critical infrastructures and how to communicate risks not easily catchable by citizens, I would like to suggest the recent work made by Serre and Heinzlief (2018) on urban environments.

As for the methods, I clearly understand why the authors focussed on only 369 FDPR communities, but I am wondering if studying 1/3 of all the communities could lead to some biases. I do not see any discussion on this assumption along the manuscript, therefore I recommend adding some comments. In this context, there is a project to extend the analysis to the whole of Canada? Could be a huge work, but definitely worth of meaning for addressing the challenge of risk communication.

I can imagine that the searching for the maps, their comparison and their evaluation lasted several months. You said that the search was “concluded on July, 25 2018” [page 8, line 15], but you are not saying when it started. In other words, could be the time an important factor in such studies? Are you sure that “inaccessible” maps at the beginning of the search were still inaccessible in July? Probably yes, but a discussion in this sense can be helpful

Under a general point of view, the results reported here are very interesting and in line with other studies, showing how challenging the topic is. I encourage the authors to further develop the research, given that has the potential to become fundamental in addressing the topic of risk flood communication.

A few additional minor comments and technical corrections:

Table 1 and Table 2 can be combined, showing the percentage of each FDPR communities analysed in each territory.

Table 3: change the caption to something like “map assessment criteria and sources”.

As for Figure 3, stay with the percentage of municipalities instead of the number, to be

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consistent with Figure 1.

References

Albano R., Mancusi L., Abbate A. (2017). Improving flood risk analysis for effectively supporting the implementation of flood risk management plans: The case study of “Serio” Valley. *Environmental Science & Policy* 75, 158-172. doi: 10.1016/j.envsci.2017.05.017

Luke A., Sanders B.F., Goodrich K.A., Feldman D.L., Boudreau D., Eguiarte A., Serrano K., Reyes A., Schubert J.E., AghaKouchak A., Basolo V., Matthew R.A. (2018). Going beyond the flood insurance rate map: insights from flood hazard map co-production. *Nat. Hazards Earth Syst. Sci.*, 18, 1097-1120. doi: 10.5194/nhess-18-1097-2018

Nones M. (2017). Flood hazard maps in the European context. *Water International* 42(3), 324-332. doi: 10.1080/02508060.2016.1269282

Serre D., Heinzlef C. (2018). Assessing and mapping urban resilience to floods with respect to cascading effects through critical infrastructure networks. *Int. Journal of Disaster Risk Reduction* 30(B), 235-243. doi: 10.1016/j.ijdr.2018.02.018

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