

Interactive comment on “Difficulties in explaining complex issues with maps. Evaluating seismic hazard communication — the Swiss case” by Michèle Marti et al.

Michèle Marti et al.

michele.marti@sed.ethz.ch

Received and published: 30 July 2019

Dear Mr Wagner,

Thank you again for taking the time to comment our reply to your first comment.

We acknowledge your judgement of the “unnecessary complexity” of the products presented and the suggestion to simplify the design according to the danger zone plan, where the information is color coded and assigned to five categories. We agree that it would be a relevant research question to analyze if seismic hazard information integrated into such a format would be easier to understand and interpret for non-experts.

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We have added a listing of potential improvements (incl. the classification of data) to the conclusion section and pointed out that these would need to be tested first to prove their usefulness in a seismic hazard context. In addition, we added the recommendation to analyze whether such amended products meet users' needs.

Most similar to such danger zone plans, but depicting data continuously, are the effect maps implemented by the Swiss Seismological Service (SED). They would best allow to deduce information about the local impact of a specific event. As specified in its report about the updated seismic hazard model, the SED introduced this map type as well as the magnitude maps because users are commonly not interested in ground acceleration values. They rather want to know how often they have to expect a damaging event or a certain magnitude in a specific area. Our results now show that these maps are less well interpreted and understood compared to the seismic hazard map. We attribute this one hand to the poor implementation of best practices and on the other on the deficient understanding of intensity. Despite the assumed value of magnitude and effect maps for a better understanding of the strength and the impact an earthquake might have, they are less requested and almost never picked-up by the media. Of course, habit could also be part of the explanation. Previously, only hazard maps were published and people might just refer to what they are more familiar with without reflecting that another product could be of more value. We have further elaborated this issue in section 3.1 and 7.

We agree that novel forms of communicating seismic hazard should be taken into consideration and also discuss potential formats e.g. infographics. We added an additional reference (Dobson et al., 2018) showing that maps lead in a flood hazard context to the least accurate decision compared with tables and graphics. In addition, we suggest to reduce the information load and to probably introduce scenarios to initiate preparedness actions. However, our study also reveals that the seismic hazard map for a return period of 475 years is well understood. Despite depicting ground acceleration values, which are unknown to most non-experts. We tried to make these aspects clearer in the

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conclusion section and highlighted to increasingly evaluate users' needs.

Kind regards,

Michèle Marti (on behalf of the co-authors)

Please also note the supplement to this comment:

<https://www.nat-hazards-earth-syst-sci-discuss.net/nhess-2019-112/nhess-2019-112-AC3-supplement.pdf>

Interactive comment on Nat. Hazards Earth Syst. Sci. Discuss., <https://doi.org/10.5194/nhess-2019-112>, 2019.