

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

**S. Fuchs (Referee)**

sven.fuchs@boku.ac.at

Received and published: 15 November 2018

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

The authors assess the availability and quality of flood hazard and flood risk maps for communities in Canada, focusing explicitly on the communication to the general public. As such, the topic is in the scope of the target journal and of valuable importance also from a scientific point of view. The article is well-written, based on up-to-date research methods and through its structure also very accessible.

I only have some minor comments that may enrich the content in one or the other way:

- Page 3, lines 25 ff.: Quoting the paper of de Moel et al. the authors state that 29

[Printer-friendly version](#)

[Discussion paper](#)



European countries already have flood maps but only very few have produced flood risk maps that include information on the consequences of flooding. It may be worth to add here some sentences on the European Flood Directive and its implementation: Increasing flood losses throughout Europe have led the European Commission to issue the Directive on the Assessment and Management of Flood Risks (Commission of the European Communities, 2007) as one of the three components of the European Action Program on Flood Risk Management (Commission of the European Communities, 2004). This directive, defining flood hazard in the broadest terms as “the temporary covering by water of land not normally covered by water” requires the member states to establish flood risk maps and flood risk management plans based on a nationwide evaluation of hazard, exposure, and vulnerability (e.g., Fuchs et al., 2017). While in the early 21st century considerable efforts have been made toward flood risk maps (Meyer et al., 2012), less information is available so far on respective management plans (Hartmann and Spit, 2016). Moreover, there is a particular gap in risk maps and management plans for mountain hazards other than those of hydrological origin. Of particular importance seems to be the paradigm of public participation and societal adaptation in assessing local risks, and the legal and institutional settings necessary therefore (Hartmann and Driessen, 2017; Thaler et al., 2018).

- Figure 2: Please think about enlarging the Figure so that the readers can follow your arguments regarding “bad practice” and “good practice” – alternatively, you may wish to insert one “best practice” example in section 5.2.

- Page 14, lines 24 ff.:The mentioned shift towards more self-responsibility in mitigation and adaptation decisions is also because of a decreasing budget available for technical mitigation – you may wish to check (again with a focus on the European Alps) Holub and Fuchs (2009) how these issues can be put together so that the overall societal resilience is increased. Moreover, to show property-level flood risk publicly has been heavily debated in Europe because of protection of data privacy. As such, some European websites restrict the zoom function to a certain scale so that not everybody

[Printer-friendly version](#)[Discussion paper](#)

can precisely assess the hazard extent and match this information with the real estate extent (for an example of limited zoom possibilities, see <https://www.hora.gv.at/>).

References mentioned (for illustration purpose only, please note that it is up to the authors whether or not they wish to include them into their revised manuscript)

Commission of the European Communities: Communication from the Commission to the Council, the European Parliament, the European Economic and Social Committee and the Committee of the Regions - Flood risk management - Flood prevention, protection and mitigation, COM(2004) 472 final of 12.7.2004, 2004.

Commission of the European Communities: Directive 2007/60/EC of the European Parliament and of the Council of 23 October 2007 on the assessment and management of flood risks, Official Journal of the European Union, L 288, 27-34, 2007.

Fuchs, S., Röthlisberger, V., Thaler, T., Zischg, A., and Keiler, M.: Natural hazard management from a coevolutionary perspective: Exposure and policy response in the European Alps, *Annals of the American Association of Geographers*, 107, 382-392, 2017.

Hartmann, T., and Driessen, P. P.: The flood risk management plan: towards spatial water governance, *Journal of Flood Risk Management*, 10, 145-154, 2017.

Hartmann, T., and Spit, T.: Implementing the European flood risk management plan, *Journal of Environmental Planning and Management*, 59, 360-377, 2016.

Holub, M., and Fuchs, S.: Mitigating mountain hazards in Austria – Legislation, risk transfer, and awareness building, *Natural Hazards and Earth System Sciences*, 9, 523-537, 2009.

Meyer, V., Kuhlicke, C., Luther, J., Fuchs, S., Priest, S., Dorner, W., Serrhini, K., Pardoe, J., McCarthy, S., Seidel, J., Scheuer, S., Palka, G., Unnerstall, H., and Viavatenne, C.: Recommendations for the user-specific enhancement of flood maps, *Natural Hazards and Earth System Sciences*, 12, 1701-1716, 2012.

Printer-friendly version

Discussion paper



Thaler, T., Zischg, A., Keiler, M., and Fuchs, S.: Allocation of risk and benefits – distributional justices in mountain hazard management, *Regional Environmental Change*, 18, 353-365, 2018.

---

Interactive comment on *Nat. Hazards Earth Syst. Sci. Discuss.*, <https://doi.org/10.5194/nhess-2018-264>, 2018.

[Printer-friendly version](#)

[Discussion paper](#)

