

## ***Interactive comment on “Going beyond the Flood Insurance Rate Map: insights from flood hazard map co-production” by Adam Luke et al.***

**S. Fuchs (Referee)**

sven.fuchs@boku.ac.at

Received and published: 4 November 2017

Review on nhess-2017-384 (Going beyond the Flood Insurance Rate Map: insights from flood hazard map co-production) by Luke et al.

Taking US flood risk maps as an example, the authors assess the need to deepen our understanding about factors that make such maps useful and understandable for local end-users, an emerging issue not only in the US but world-wide. Therefore, the topic is of considerable scientific interest and high practical relevance; a paper dealing with this topic is within the scope of NHESS and shall definitely be published.

The article is generally well-written, methodological sound and the methods are accordingly mirrored by the results. I only have minor comments that should be ad-

C1

dressed by the authors:

- On page 2, lines 2 ff. the authors state that “Insured losses from natural disasters have been increasing globally (Munich Re, 2005), largely from the growing exposure and value of vulnerable assets (Bouwer, 2011).” – The authors should be aware that this is generally undoubtable, however, exposure (and associated vulnerability) is subject to considerable spatial (and temporal) variation, as for example shown for European mountain regions by Fuchs et al. (2015; 2017) [and please be aware that I am not providing these sources to press you for more citations, which would be against good scientific practice and is not in line with the rules of NHESS]. From my point of view it is just important to be a bit careful with these general statements since the question of growing exposure is a tricky one in areas with limited development space, and given certain political incentives for land development.

- The authors may wish to access the EU flood directive in more detail. As stated on page 2, lines 20 ff., they argue that “In the European Union (EU), member countries are under a mandate to develop national flood hazard maps, and general guidelines for meeting enduser needs have been developed based on participatory processes”. In contrast, the EU Floods Directive explicitly focuses on flood RISK maps (on various scales and focusing on different hazard scenarios), leading finally to flood risk management plans. Therefore, it is not only the hazard information that should be communicated, but information on risk. The Directive is attached as a supplement.

- Authors should carefully check their reference list; multiple-author sources are cited differently.

In general, the results are in line with those from European studies, and again show how challenging the topic is. I encourage the authors to further develop their studies, and as these have significant potential to support an expanded portfolio of flood risk maps.

References:

C2

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., Keiler, M., and Zischg, A.: A spatiotemporal multi-hazard exposure assessment based on property data, *Natural Hazards and Earth System Sciences*, 15, 2127-2142, 2015.

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.

Please also note the supplement to this comment:

<https://www.nat-hazards-earth-syst-sci-discuss.net/nhess-2017-384/nhess-2017-384-RC1-supplement.pdf>

---

Interactive comment on *Nat. Hazards Earth Syst. Sci. Discuss.*, <https://doi.org/10.5194/nhess-2017-384>, 2017.