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Natural Hazards and Earth System Sciences
Discussions
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Interactive comment on "Reporting flood damages: a model for consistent, complete and multi-purpose scenarios" *by* Scira Menoni et al.

Anonymous Referee #2

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In this paper the authors describe the need for the development of post-flood damage and losses assessments which are multisector, address the spatial scale that are relevant to the need of the flood damage assessment, allows for the evaluation of the impact flood damages over time (i.e., to the end of recovery), and allows for the understanding of the principal causes of the flood damage. The authors propose a model of flood damage assessment which organizes available knowledge into five axes: exposed sectors, types of damage, spatial scales of analysis, temporal scale of analysis and explicative damage variables. They describe the application and benefits of their damage assessment model to the November 2012 Flood in the Umbria Region of Italy. The novel contribution of this work is a flood damage assessment model which meets the needs of a wider variety of stakeholder needs which are currently not meet by other post-flood damage assessment methods/models.

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General Comments:

I agree with the anonymous reviewer number 1 on their four major points:

1. The article would benefit from a better explanation who is the ultimate audience for this model; 2. the need for some more discussion of how the practitioner(s) should achieve the desired outcome of consistency and comparability between flood damage assessments; 3. a short discussion on the need for a more robust distinction between what the model actually can do itself and how it complements other modeling approaches; and 4. clarify if and how this model is capable of identifying the root causes of the flood damages.

In addition to these points, the paper would also be improved if the authors also address the following issues:

1. It is not explicitly stated what the flood magnitude(s) the proposed modeling framework is supposed to address. Reading between the lines suggests the modeling framework is intended for flood events which reach the level of a regional disaster resulting in the need for external assistance from national government and / or international entity(ies). It would be useful for the authors to discuss if their post-flood damage assessment model's is applicable to damaging flood events which do not reach or exceed the magnitude of a regional disaster.

2. The authors should clarify how they are quantifying "flood damages" between "exposed sectors". In particular, a more salient description of Figure 2 is needed. Figure 2 is described as the comparison of damages based on full damage reported from initial surveys and declarations of impacted municipalities, industries, and life line providers. However, what is not clear is how one can determine the percentage of flood "damage" between desperate sectors, such as civil protection, cultural heritage, infrastructure, and industries or residential, without a common reference unit like monetary values.

Specific Comments:

Line 299- 300 – Do the authors mean surveyed businesses instead of interviewed entrepreneurs? Not all businesses are run by entrepreneurs.

In the Table 3 description “users” should likely either be customers or units.

In the legend of Figure 6, the description could be worded more clearly. For example, Commercial and industrial facilities inundated or impacted by the November 2012 flood.

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