

Interactive comment on “Brief communication: simple-INSYDE, development of a new tool for flood damage evaluation from an existing synthetic model” by Marta Galliani et al.

Anonymous Referee #3

Received and published: 1 June 2020

The manuscript describes a new and simpler version of a the flood damage model INSYDE, recently proposed by Dottori et al. (2016). The content of the document and the model will be of interest for the community of the Journal.

Hereafter some comments that I hope could be helpful to the Authors to further improve the manuscript.

- Introduction: I guess one of the limitation of the original version of the model (INSYDE) might be related to availability of all required data. If this is the case, it could be worth mentioning it in the text. Also, please provide more details regarding difficulties with GIS application.

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- Introduction, L19-21: the presentation of the limitations that inspired the new version is quite general. Can you better specify them?

- Table 1: table caption should also include the simple-INSYDE. Also, referring to simple-INSYDE, it might be helpful distinguishing independent hazardous variables respect to variable representative of the exposure. Please, specify the meaning of x used in table 1.

- Some of the variables assumed with a fix value in simple-INSYDE were constant also in the original model (see e.g. IH, BH, GL). What is the difference compare to INSYDE? What are the fixed values adopted for simple-INSYDE?

- Apart from a contained complexity, are there advantages on using a fixed values for same variables that can be directly estimated from other required in any case by the simple version? I am thinking for example to IA or EP, which depend on FA that is still necessary for the application of simple-INSYDE. Also in this case, how did you define those default values? Are they based on observations or assumptions?

L51: footprint area in table 1 is indicated as FA, not A. Also check Table 2.

L53: wouldn't be more correct saying "flood affected storeys"?

L55: wouldn't be more precise saying "independent hazardous variables"?

L62: I suggest providing more details on these values. This would help the possibility to, eventually, apply the model elsewhere.

L73-76: honestly, these steps are not clear to me. If you can extend the explanation, or provide an example, it would be much easier to understand the procedure.

Eq. 3): what happen in case LM is medium?

Table 2: in order to make the model transferability easier it would be worth reporting in table 2 the range of the values considered for all the variables.

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Interactive comment on Nat. Hazards Earth Syst. Sci. Discuss., <https://doi.org/10.5194/nhess-2020-76>, 2020.

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