

## ***Interactive comment on “Analysing the sensitivity of a flood risk assessment model towards its input data” by Hanne Glas et al.***

### **Anonymous Referee #1**

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The research article: "Analysing the sensitivity of a flood risk assessment model towards its input data" prepared by Hanne Glas, Philippe De Maeyer, Greet Deruyter presents flood damage assessment model that generates a damage map for the region of Annotto Bay, Jamaica. The referee comments are as follows: 1. Does the paper address relevant scientific and/or technical questions within the scope of NHESS? Yes 2. Does the paper present new data and/or novel concepts, ideas, tools, methods or results? Yes 3. Are these up to international standards? Yes 4. Are the scientific methods and assumptions valid and outlined clearly? Yes 5. Are the results sufficient to support the interpretations and the conclusions? Yes 6. Does the author reach substantial conclusions? Yes 7. Is the description of the data used, the methods used, the experiments and calculations made, and the results obtained sufficiently complete and accurate to allow their reproduction by fellow scientists (traceability of results)? I

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recommend some corrections. I recommend the section 1.1. Sensitivity analysis includes to chapter 2. Methods. It should be described more precisely how were stated the scenarios for sensitivity analysis. As well described more precisely how were stated total damage costs and total damage area. The authors used average values for the material cost and the building surface area – are these values market values in Jamaica? Or? How was state average maximum road damage? Also how was stated average cost of the crops? How the authors mean the expression in row 29 (chapter 2)... Eleven other scenarios, each with “less or less” detailed input.... Please express clearly (row 29, chapter 5) the resulted indication which data is indispensable and which data can be adopted, replaced or ignored in a risk assessment. Will these data be valid for Jamaica study only or generally? 8. Does the title clearly and unambiguously reflect the contents of the paper? Yes 9. Does the abstract provide a concise, complete and unambiguous summary of the work done and the results obtained? Yes 10. Are the title and the abstract pertinent, and easy to understand to a wide and diversified audience? Yes 11. Are mathematical formulae, symbols, abbreviations and units correctly defined and used? If the formulae, symbols or abbreviations are numerous, are there tables or appendixes listing them? Yes 12. Is the size, quality and readability of each figure adequate to the type and quantity of data presented? Yes. I recommend formal correction - in Fig 4 and Fig. 8 is missing marking S1, S11, S12. Another formal correction is in row 11 in chapter 4 – Figure 9. Formal correction – use jointly: benchmark or bench mark. 13. Does the author give proper credit to previous and/or related work, and does he/she indicate clearly his/her own contribution? Yes, although the newer investigations in the field of interests – flood risk assessment model should be presented in the paper (chapter 1). 14. Are the number and quality of the references appropriate? I recommend including more peer reviewed journals as reference in the Introduction section as well as in the Methodology section. 15. Are the references accessible by fellow scientists? Yes 16. Is the overall presentation well structured, clear and easy to understand by a wide and general audience? Yes, but see comment 7. 17. Is the length of the paper adequate, too long or too short? It is ade-

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quate, but see comment 7. 18. Is there any part of the paper (title, abstract, main text, formulae, symbols, figures and their captions, tables, list of references, appendixes) that needs to be clarified, reduced, added, combined, or eliminated? No 19. Is the technical language precise and understandable by fellow scientists? Yes 20. Is the English language of good quality, fluent, simple and easy to read and understand by a wide and diversified audience? Yes 21. Is the amount and quality of supplementary material (if any) appropriate? Yes

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