

Interactive comment on “Water-level attenuation in broad-scale assessments of exposure to coastal flooding: a sensitivity analysis” by Athanasios T. Vafeidis et al.

Anonymous Referee #2

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The manuscript presents results from the first global analysis on the effect of including water level attenuation into broad-scale coastal impact models. The key message is a very important one, namely that uncertainties from ignoring water level attenuation can be as large as from the expected sea level rise itself by the end of the century. The paper is very well written and structured and I enjoyed reading it. I feel that the authors are honest about limitations that are inherently associated with the type of global model that is used here. But even though one can express doubts regarding the absolute numbers presented, the conclusions drawn from the analysis are sound and, as mentioned above, very important to get across to the scientific community. I have no objection against the paper being published with NHESS after the minor comments

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below have been addressed.

I. 204 Is this constant sea level rise? If so it should be explicitly mentioned and briefly explained why regional projections weren't used instead. I think for this type of sensitivity analysis it might actually be better to use constant values because otherwise it would be hard to disentangle what drives higher/lower attenuation rates in different regions. Nevertheless, I think it's worth mentioning.

I. 206 I think it should be “quantile”

I. 215 What is the rationale of running the no-dike scenario? Is there one?

Tab. 4 I was wondering if an additional map that shows country-by-country results (maybe only for a medium attenuation rate) would be nice to really showcase the spatial variability. The three selected countries can still be highlighted in the table.

Fig. 5. I was a bit puzzled by the change in formatting between Figs. 3&4 and Figs. 5&6. Why is the temporal evolution (more) relevant for assets and flood damage compared to population and area in the flood plain?

I. 294 Why the switch to “reduction rates”?

Interactive comment on Nat. Hazards Earth Syst. Sci. Discuss., <https://doi.org/10.5194/nhess-2018-359>, 2018.

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