

## ***Interactive comment on* “Global scale benefit-cost analysis of coastal flood adaptation to different flood risk drivers” by Timothy Tiggeloven et al.**

### **Anonymous Referee #2**

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Overall this is an interesting paper. The approach undertaken is robust and I commend the authors for their nice study. The work builds on several previous assessments, and presents an incremental step forward, rather than a step change. However, I think it has some novel elements and is certainly worthy of publication in NHESS and results will be of interest to many. I have listed 5 modest corrections that I would like to see addressed and several minor ones.

#### Modest corrections:

In lines 50-55, you discuss the previous studies, and then go onto say what the objectives of your paper are. I think you need to make it clearer how your paper is distinct from these previous assessments. At the moment this does not come across strongly enough.

Please provide, on lines 94 to 99, more details of how exactly you have included the tropical cyclones. Over what period was this done? How did you convert along track data into spatially varying wind and pressure fields?

Lines 124 to 133: I am not clear if these subsidence rates include glacial isostatic adjustment or not. Do they? Can you make this clear. I assume you are accounting for these effects. If not, then it significantly undervalues your results.

Lines 172 – 185: I found the description of the protection standards confusing. Please can you improve this section. Has this approach been validated, in regions for example, where the protection standards are known exactly. How does this compare to what Hallegatte et al (2013) used in coastal cities? You cite the Netherlands as having a value of 1000. What are the units? Years? Please add these.

Why is your analysis based on 2080, and not 2100? To me, it would seem much more sensible to go to 2100?

Minor corrections:

Line 25 – I would maybe update to the special IPCC report in 2019, which is a bit more up to date.

Line 27 – there is an extra full stop after the Raftery reference.

Line 29 – you could add ‘and change in tides.’

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Interactive comment on Nat. Hazards Earth Syst. Sci. Discuss., <https://doi.org/10.5194/nhess-2019-330>, 2019.

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