

## ***Interactive comment on* “Comparison of the impacts of urban development and climate change in exposing European cities to pluvial flooding” by Per Skougaard Kaspersen et al.**

**Per Skougaard Kaspersen et al.**

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The authors thank the reviewer for the positive and constructive comments, which will assist us to further improve the paper. Find the author responses to the specific review comments in the following.

1. Page 12: when describing the changes in imperviousness, it should be expressed as x% points, not just x%. They talk about the changes in values expressed as percent, so x% points are appropriate.

Author response: This will be changed accordingly

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2. Page 12 line 25: "for some areas, few models project a decrease in the intensity of extreme precipitation." → you could make it more specific.

Author response: This will be clarified following the reviewer's recommendation. The following text will be added to Page 12, line 24 in a revised version of the manuscript: For Vienna and Odense, few models project a decrease in the intensity of extreme precipitation (CFs < 1) for the RCP 4.5 scenario.

3. Page 15 line 12-13: "The impacts of uncertainties....(i.e. urban development)" → I had a hard time figuring out.

Author response: We thank the reviewer for pointing out that this sentence is a bit unclear. What is meant here is that the impact of uncertainties in urban development on flooding, that is, changes in impervious surfaces, is quantified by simulating the occurrence of the precipitation events using different assumptions about soil infiltration rates. In practice, we are using three different estimates of soil infiltration rates (average/low/high) for the individual cities as a means to visualize the potential uncertainty of soil sealing (i.e. in the context of this paper urban development is defined as changes in impervious surfaces). The text will be modified in a revised version of the manuscript to make this clearer.

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