Response to Referee Tristian Stolte

Thank you very much for taking the time to carefully review our revised manuscript and for your valuable and constructive feedback. We are also grateful for your recognition of the improvements made during the previous revision process.

Introduction

- *L32: Although the definition of vulnerability now comes at a more timely moment in the introduction than in the first manuscript, it does come a bit out of the blue (i.e., the reader may ask why hazard and exposure are not defined?). I would suggest to put a bridge in between the definition of risk and the definition of vulnerability where the authors explain that this research focusses on vulnerability.*
  - Thank you for pointing this out. We have adjusted it accordingly.

- *L65: Similar to the previous point, the remark about Drakes & Tate (2022) and Simpson et al. (2021) feels a bit out of place. I would suggest the authors to rephrase this as: "Although Simpson et al. (2021) and Drakes & Tate (2022) discuss hazard dynamics for social vulnerability, this has not been included – to our knowledge – in physical vulnerability assessments so far."*
  - Thanks, we have incorporated the comment as suggested.

Methods

- *L246: This sentence is hard to follow and possibly incomplete: "Using a daily scale even, if the pre-event and the event are more than one season apart lead to problems in the model approach, because of the gap between two winter seasons"*
  - Yes, you're right. We have revised it to improve clarity.

- *L237: In a comment from the previous round I mentioned 'spatial' resolution and scale where I should have written 'temporal' (as the authors rightly pointed out). Regardless, the revised text makes it much clearer and easier to follow.*
  - Thank you for addressing this once again.

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Results

- *For conciseness, the authors could consider to make one plot with subplots from Figures 7-9 and one for Figures 10-12, reducing the number of plots overall.*
  - We agree with your opinion and have made the corresponding adjustments. In the first round of reviews, the second referee requested that the plots be made more readable, so we have split them into individual plots. We hope that we have now found a good balance between size, clarity, and readability.

Discussion/Conclusion
Although the discussion and conclusion are now more coherent and with a more logical flow of information than in the previous manuscript, I would still like to point out some possibilities for improvement:

- *The discussion is mostly very critical on the work, which takes away from the main message and the (seemingly) large amount of work that has been done. The points mentioned are*

worth mentioning, but lack a positive counter part in the form of the strengths of the approach.

- Thank you for acknowledging the strengths of this paper and the approach. We have made efforts to emphasize these more clearly.

- *This may be a style preference, but the hypotheses that follow from the results are currently presented in the conclusion, whereas this may sit better in the discussion. This also helps balance the currently negative connotation in the discussion towards a more neutral perspective on the work. For instance, I would expect a section like the following in the discussion: "Our results showed that vulnerability reduced with increasing pre-event loss ratios. We hypothesize that this happens because XXX. Looking at the data, we should also consider that this result can be influence by YYY. Given the model that we used, it is likely that ZZZ."*
  - This is an important point. Thank you for your observation. We have removed part of the conclusion/summary, have integrated it into a new subsection within the discussion and included parts of your remarks

- *The authors, in their hypotheses following the results, focus mainly on reconstruction timing. Although this is a valid point to consider, I was also wondering if the loss ratio can be affected by a loss in damageable structures? For instance, a window that is broken, or a tile that is blown off cannot be damaged again before it is repaired. Given the data and modelling approach, would the authors say that this is a point worth mentioning in the discussion/conclusion?*
  - This is an important point. You are correct that broken windows or fallen roof tiles cannot break a second time, which would reduce the vulnerability. However, damages within the house, such as those caused by rain entering through broken windows or similar, are more likely. We have incorporated this into the discussion. Thank you for the valuable suggestion.