Modelling the vulnerability of urban settings to WUI fires in Chile.

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Responses to Comments from Referee Nº2.

We thank the referee for his revision, and have pondered his general comments. We’d like to note however that the PDF file submitted has highlighted paragraphs but does not include specific notes or comments, so we were unfortunately unable to respond to more specific concerns or suggestions you may have.

In the following response, we address each of your comments, identifying referee comments as “RC”, and authors’ comments as “AC”.

RC: The manuscript lacks novelty and originality. Novelty is the primary criterion that a manuscript should have in order to be published to a scientific journal. The specific manuscript is not presenting anything new except for conventional methods.

AC: We do believe that our paper contributes to an emerging field of research in wildfire risk reduction in WUI areas, which is the quantitative assessment (based on statistical analyses of post-disaster surveys) of detailed-scale physical characteristics of settlements and structures, and how these features contribute to the probability of loss. As authors like Dossi et al. (2022) and Papathoma-Köhle et al. (2022) point out, there is a lack of studies focusing on this topic. Moreover, we propose a sample size of 6,061 built units (collected across seven case studies and three years of work), significantly larger than most of the studies currently available in the literature. Also, unlike several articles that focus on one or two types of physical variables, we assess three types of them: those that characterize the built unit itself, those that address the relationship between this built unit and its immediate surroundings, and those that examine the location of the built unit in its larger neighbourhood context. Finally, it is worth pointing out that we deliver the first study of this type for Latin America and Chile, an area that is expected to be severely affected by climate change in the following, one of which consequences will be more frequent and severe wildfires. To make the novelty and contributions of our paper more clear to the reader, we have reworded and improved part of section 1.4.

RC:
The introduction should be more updated in the probabilistic assessment of vulnerability (see the references below).

AC:

Unfortunately the references suggested by the referee were not attached to his post, but we have taken into account his request to update the discussion of probabilistic vulnerability, and we do agree that some relevant works had been missed in our original version, in specific:


A critic revisit our of introduction, as well as some suggestions for Referee Nº1, lead us to rewrite paragraphs in section 1.2.