

Second Review of egosphere-2025-262

Recommendation: Minor revision

I appreciate the efforts deployed by the authors to improve the paper. The changes include the addition of hazard and hazard driver definitions, the number of reviewed papers, as well as clarifications on the aim, preparedness, etc. Moreover, almost all figures were edited and greatly improved in terms of expression capacity and readability. All of these additions or clarifications enhance the quality of this study.

However, there are still some issues to be addressed (the lines refer to the clean manuscript, not the one with track changes):

- Line 9: river discharge is not a hazard driver (river flow is, not the discharge itself), and storm surges are hazards themselves. Please rephrase.

- Line 27: I do not see the point of adding this (—often exceeding existing response capacities (Simpson et al., 2023)) to the end of the phrase. It creates confusion.

- Lines 49-53 (The interplay among these components can result in compound risks, arising from single extremes or co-occurring events affecting critical systems or sectors (IPCC, 2023): the interplay of the stated elements makes up the risk, not the compounded risk. Compounded risks arise from multiple hazards (co-occurrent or sequential). Please read IPCC (2023) with greater attention and correct.

- Lines 90-95: The idea attributed to Armaş et al is not actually correct. Our study aims to analyse systemic vulnerability (not risk as indicated by the authors of the reviewed manuscript) using a new Systemic Vulnerability Model. The model relies on the Enhanced Impact Chains (EIC) introduced in Albulescu and Armaş (2024), so that the vulnerability dynamics tracked using the EICs are used as a key element of capturing systemic vulnerability. In short, I advise the author to cite both sources and modify the paragraph to really convey the results of the cited papers. Please see a suggestion below:

Systemic vulnerability refers to the susceptibility of interdependent systems—such as infrastructure networks, governance structures, or social services—to suffer disruption under external stress, due to the cascading effects that arise from their internal linkages (Weir et al., 2024). A recently proposed definition of systemic vulnerability is that related to the persistent core of vulnerability that endures over time despite mitigation efforts, societal and technological progress, leading to reinforced impacts (Armaş et al., 2025). This core can be depicted only by studying vulnerability dynamics across space and time, using new operational tools that can trace this dynamics (Enhanced Impact Chains, as proposed by Albulescu and Armaş, 2024). Systemic risk, in turn, captures the potential for these disruptions to propagate across sectors and scales [find proper citation here], resulting in widespread and often unforeseen consequences (Armaş et al., 2025). ~~This can further exacerbate systemic vulnerability as a persistent condition that can amplify future impacts or obstruct adaptive responses, even in the presence of mitigation efforts.~~ Such a perspective situates compound risk within the broader dynamics of interdependence, where systemic conditions shape not only the onset of these impacts but their amplification and persistence.

If the authors do not wish to address these issues on the topic of systemic vulnerability, I kindly ask them to not refer to such concepts at all.

- I appreciate the detailed answer to this question in my first review report (What were the relevant and irrelevant records that served as the foundation for training the first machine learning model?). Your approach is indeed robust, but the manuscript's text does not leave the reader with this

impression. Please add more details from this answer into the methodology section in order to ensure clarity.

- Please check Table 2 and delete the extra commas .
- Line 703: delete the extra) .
- I recommend including the Limitations as a subsection of the Discussion.

Finally, I commend the authors on their work. If the editor considers that I should review the implementation of the minor revision, I am happy to do so.