

Review of: "Exploring the Impact of Future Land Uses on Flood Risks and Ecosystem Services, With Limited Data: Coupling a Cellular Automata Markov (CAM) Model, With Hydraulic and Spatial Valuation Models"

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Potential competing interests: No potential competing interests to declare.

The manuscript attempts to explore the impact of future land uses on flood risks and ecosystem services. This work is of significant importance in managing human-environmental interactions and addressing potential environmental challenges. However, this manuscript requires considerable further improvement. There are some general comments below that aim to strengthen this work in the future.

- 1. The authors seem to focus on the usability of the methodological framework in the article, which is not reflected in the abstract. It is recommended to revise the abstract to include this aspect of the findings.
- "The results indicate that even slightly more urbanized and deforested areas can increase the potential flood extent".
 Drawing such conclusions from the current manuscript presentation is difficult, and the author should provide further explanation in the results and discussion.
- 3. The contents associated with related methods in the introduction should be simplified, and the focus should be on presenting the research progress and current issues related to the methodology.
- 4. Implications of the article should be mentioned in the discussion or conclusion section and not in the introduction. For example, the content "In this paper,..." and "Another contribution" should be replaced with the research purpose of this paper.
- 5. The implications of the article should be discussed in the conclusion rather than the introduction. For instance, paragraphs like "In this paper" and "Another contribution" should be revised to reflect the research purpose of the paper.
- 6. The land use data for 2006, 2011, 2016, and 2021 should include spatial resolution information.
- 7. The principle of the Cellular Automata Markov (CAM) model is currently unclear. It is also unclear what data is required to run the model and what data is validated by the model results. Furthermore, land use change is largely influenced by local human plans. It is important to consider whether this factor is taken into account in the projections in this paper. If not, the future land-use projections are hardly convincing.
- 8. Figure 2: The authors should output these maps and draw them according to the cartographic annotations.
- 9. Provide spatial resolution information for DEM data.
- 10. The authors should elaborate on the use of a significant amount of existing data in the method framework, particularly



- the ESV coefficients, as it may compromise the originality of the manuscript. The innovative aspects of the methodology in this paper are not clearly articulated.
- 11. "The predicted land uses show... (Figure 4)". The authors should clarify if the predictions align with local conditions. Furthermore, they can offer a more comprehensive analysis of the historical and future land use in the study area to enhance understanding of the effects of future land use on flooding and ecosystem services.