

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.

A comprehensive study on the impact of future land cover changes on flood inundation in northeast Indiana, US. The abstract effectively communicates a well-designed study that combines innovative methodologies to address a significant environmental issue.

- The abstract mentions an increase in potential flood extent and economic losses, but it does not elaborate on the potential implications of these findings for policy recommendations.
- The introduction part is well explained, though it does not cover the pertinent literature and fails to highlight the novelty of your study. The last two paragraphs need to be improved.
- Your method description is satisfactory, but still far from being clear to a broader audience.
- In the methodology section, it is unclear how specific parameters in the Cellular Automata Markov (CAM) model, such as the size of the spatial and temporal units, were determined. Providing information on these parameters would enhance the transparency of the modeling process.
- The methodology mentions generating future land use maps for every five years until 2051. Clarifying the rationale behind choosing this specific temporal resolution and addressing potential limitations associated with the assumption are important.
- The choice of a 24-hour design storm for a return period $T=50$ years is crucial. Justifying this selection and discussing potential implications on flood modeling results, especially in the context of changing land use patterns, would add depth to the methodology.
- The discussion section effectively outlines the purpose of the exercise.
- The discussion about the limitations of the CAM model in capturing spatial distribution is insightful. However, it could be further strengthened by providing specific examples of how spatial considerations, such as proximity to urban centers, could impact the model's predictions and why these considerations were omitted in the current study.
- The transition from discussing future research suggestions to the importance of reliable land use change models is somewhat abrupt.
- The quality of your figures is low.

