

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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The article effectively outlines the problem statement and the methodology employed. It demonstrates a comprehensive approach by integrating land cover forecasting with hydrologic-hydraulic modeling and spatial ecosystem services valuation. This integration provides insights into future changes, associated risks, and potential economic losses due to land use changes, particularly in the context of flood inundation.

The study's use of a Cellular Automata Markov model combined with Geographic Information Systems (GIS) and Python showcases a robust methodology for predicting land cover changes. Additionally, employing a HEC-RAS hydraulic model to assess flood impacts under different scenarios adds depth to the analysis.

Furthermore, the inclusion of spatial ecosystem services valuation to quantify the monetary impacts of forecasted land cover changes is innovative. By assigning economic values to ecosystem services affected by land use changes, the study provides a holistic perspective on the potential costs associated with alterations in land cover.

While the study focuses on a specific case study in northeast Indiana, US, its methodology and findings could serve as a template for addressing similar issues in larger areas or utilizing additional factors to strengthen the analysis. Overall, the article appears ready for publication, as it effectively addresses its objectives and contributes to the understanding of the complex interactions between land use changes, hydrological processes, and flood risks.