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 paper presents an interesting and novel assessment of how future land use will affect flood risk in an urban area. It combines analysis of past land use changes in order to predict the future changes. It then uses the predicted land use in a hydrodynamic model to study future flood risk and quantifies this using eco-system valuation methods.

The paper presents a comprehensive and informative literature review, but it lacks any perspectives on the limitations and dangers of eco-system valuation. There are some strong critiques of this concept which the paper should reflect.

Whilst the methodology is sound and interesting, the impact of the conclusions is limited by the fact that the reduction in the valuation is 1%, and many city planners might consider this a price worth paying to increase socio-economic benefits more broadly.

I would take issue with the phrase “Machine Learning can also assist in improving the prediction accuracy,” which is often written, but as here rarely justified. What machine learning methodology could be used, and what benefit would it bring?

Minor points are:

1. is the numerical simulation 1D or 2D? The discuss of “rain-on-grid” and a 2D DTM suggest 2D, but there is discussion of flow in channels which indicates 1D. A brief statement should clarify this.
2. Figure 6 needs more explanation in the key.