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 paper is interesting and well written, and the author must be commended for making the processing software freely available.

However, there are a number of important questions that must be answered to make the proposed approach useful for decision-makers.

First, the use of cellular automata to interpret land use changes requires the definition of a transition rule between neighbouring cells. Without such a rule, the output of the matrix formulation in eqs. (1) and (2) cannot be assigned in space. Indeed, it seems from the maps in figs. 1, 3, and 7 that the computed cell classes have been spread on the catchment on a regular grid, but this is clearly a source of errors when the final aim is to compute the consequences of floods, which heavily depend on the territory configuration.

Second, the spatial discretization of the cellular automaton, which is another important parameter of the model, is not specified. The caption of fig. 2 reports a 50x50 mesh size, but it's unclear to what this refers since the computational mesh is irregular.

Third, the use of error metrics like MAE or RMSE when the cells' numerical values are qualitative indicators (i.e., they simply indicate the land use type) does not provide useful information.

Fourth, as it emerges from the results in fig. 6 and table 3, the projected land use changes in the CCW are minimal. A difference in the flood extent of less than 5% in 25 years or a change in the ESV of 0.7% are probably within the margin of uncertainty of the model and thus can well be considered irrelevant. Certainly, CCW is not a good example to demonstrate the potential of the suggested approach.

Anyway, it would be important to understand which data were used to calibrate the CAM model and on which data it was tested, i.e., to which year(s) the high performance shown after fig. 3 refers.

I also suggest using a real (or, even better, a few real) precipitation episode(s) to allow for an evaluation of the accuracy of the hydrologic model, instead of using a hypothetical unrealistic precipitation pattern.

Finally, it would be preferable to see Table 1 translated into international units instead of inches.