

Line 12: “retrospective and prospective analyses at various temporal resolutions” is repeated

Line 23: check formatting of citations

Line 42: check formatting of citation, and similar instances throughout the entire manuscript

Table 1: define units of each parameter and in the caption you need to explain the sensitivity scoring that you’ve provided

Figure 3: label axis using conventional methods e.g. Time (hr), Rainfall (mm), add scale bar to map, and provide legend for DEM values

Section 4.2: describe the DEM data. For example, how was the DEM acquired, what is the spatial resolution and accuracy (vertical and horizontal)

Line 255: need to state earlier in the methods that you will compare uncalibrated, manually calibrated, and automated calibration outputs because introducing this in the results is confusing. Okay, I see that you have introduced this explanation on lines 261-265, but consider providing this before you present the calibration results.

Table 2: erosion volume needs units and state time period of simulation in caption

Fig 5: overall the figure is not clear and contains redundancy. Improvement can be made by visualizing the DODs on top of a hillshade of the 2021 DEM and make topographic changes that are near zero transparent. To provide a fair comparison, make sure that the DOD values have the same range across all maps. Provide units for the legend and a scale bar for the maps. These maps will provide a spatial comparison across calibration methods. The 3D plots are very difficult to understand and should be omitted. Instead a quantitative analysis should be provided by comparing distributions (e.g. density plot) of topographic change per calibration method or another type of visualization (e.g. scatterplots). If you decide to keep the 3D plots, add axis labels and increase the font size of the tick labels. Also, max values on z-axis across all plots should be the same to aid comparison.

Table 3: parameters need units, also check if this table is mentioned in the text.

Line 264: w.r.t.?

Section 4.3.3.: explain in the text what you mean by justifiable landscape changes in the amount of time stated. In addition, state what rainfall are you using for the future, are you just repeating the rainfall file? Overall, I don’t understand what you are trying to prove by comparing the output from an uncalibrated and calibrated model. If you are trying to demonstrate that an IMC calibrated model can produce physically plausible predictions you will need observations in the future (e.g. 2023). Without this data your conclusions about the IMC calibrated future output

remain speculative and don't add useful information to the manuscript. Consider rewriting or removing this section.

Figure 6: max value on z-axis across all plots should be the same for a fair comparison. Z-axis needs labels and tick label font size should be larger.

Section 5: what is an ablation study?

Check if figure 7 is referenced in the text.

Figure 8: need labels and units on x-axis