

We thank the editor and the reviewers once again for their responses. We have addressed the comments as follows:

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L25: Correlation with what? I guess you mean, minimize the misfit between measured and modelled erosion rate? Please, clarify.

We have now clarified that we are minimizing the misfit between models and observations in the abstract

L37: In your previous version, you stated „most erodible“. I would change it back to that because the actual erosion rate would mainly depend on the distribution of climate zones in respect to tectonic uplift.

Done

L376: word missing.

Fixed

Section 4.3: I would guess that the range of erodibilities is also related to the spatial scale of the analysis.

That is true, here we have clarified on line 448 that these differences may be due in part to scale.

Fig. 7: I really appreciate adding this figure. Can you please use the actual drainage areas on the x-axis tick marks. It's tough for a reader to convert the log back to the actual number (also not knowing if this is referring to the natural logarithm or log10).

Done

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Maybe one last suggestion would be to remind briefly in the conclusion that the study optimises parameter values at global scales and that these can significantly vary locally. I know by experience that providing global-scale compilations of values for parameters can sometimes lead future studies to overlook the details of its variations and focus on the best-fit - however I leave that choice to the authors.

Good point, we have added this line to the conclusions:

“At the local and regional scale, optimised values will differ from what we have inferred here, but future studies may use these parameter ranges as a baseline to inform large-scale landscape evolution studies.”