

Report on the revised version of article “Phenomenological model of suspended sediment transport in a small tropical catchment” by Amande Roque-Bernard et al.

First, I congratulate the authors for the improvements made to this revised version and particularly concerning the introduction and discussion revisions. I also thank the authors for the detailed and convincing answers to my questions.

I still have a few small remaining comments:

Line 153: Why should you ignore the washload considering when considering the possible influence of grain-size on the concentration/turbidity relation?

Line 324: I am not familiar with this χ^2 measure of the quality of the fit. Could you clarify what it means when you say that $\chi^2 < 0.04$ for the top 25% of your adjustments? Does it mean that the remaining 75% of the adjustments are not significantly different from a random model?

Line 535: I am surprised to read that the model provides a better estimation of the sediment flux than a rating curve for cases with clockwise hysteresis. How was this rating curve calibrated? Was it based on turbidity and discharge measurements for the event only, or over the full year? Could this rating curve be biased by the fact there are more measurement points in the falling than in the rising part of the hysteresis?