

For research article

Response to Reviewer 3 Comments

1. Summary

Thank you very much for taking the time to review this manuscript. Please find the detailed responses below and the corresponding revisions/corrections in the re-submitted files.

2. Questions for General Evaluation

Reviewer's Evaluation

Response and Revisions

Is the content succinctly described and contextualized with respect to previous and present theoretical background and empirical research (if applicable) on the topic?

Yes

Are the research design, questions, hypotheses and methods clearly stated?

Yes

Are the arguments and discussion of findings coherent, balanced and compelling?

Yes

For empirical research, are the results clearly presented?

Not applicable

Is the article adequately referenced?

Yes

Are the conclusions thoroughly supported by the results presented in the article or referenced in secondary literature?

Yes

3. Point-by-point response to Comments and Suggestions for Authors

Comments 1: Figures 2a, 2b: In the legend, it is more accurate to write "Yearly runoff" instead of "Year".

Response 1: Agree. The legends for Figures 2a and 2b have been updated. Lines 293-293.

Comments 2: Figure 4: (a) On the basis of which equation is SDR calculated? Equation (1) or Equation (2)? (b) On the basis of Figure 4, if $SDR > 1.0$, aggradation occurs, while if $SDR < 1.0$, erosion occurs. It is right?

Response 2: Agree. **SDR is determined using Equation (2). When SDR exceeds 1.0, aggradation occurs, and when it is below 1.0, erosion takes place.** Lines 231-233.

Comments 3: Lines 384 - 389: (a) How is the "incoming sediment coefficient" defined? (b) How do the units $kg.s/m^6$ result?

Response 3: Agree. The paper now includes the definition and calculation process of the incoming sediment coefficient. Lines 244-245.

Comments 4: Lines 401 και 402: How is the "runoff variation coefficient" defined?

Response 4: Agree. The definition of the runoff variation coefficient change has been included in the paper. Lines 251-252.

Comments 5: Lines 456 and 457: The "incoming sediment coefficient" should be defined at that point, where it first appears.

Response 5: Agree. The incoming sediment coefficient has been specified. Lines 244-245.

Comments 6: Table 2: The exponent $\alpha+\beta$ does not appear at any equation.

Response 6: Agree. This content has been relocated to the discussion section. Lines 675-689.

Comments 7: See annotated manuscript! For other comments on the paper manuscript, please refer to peer-review-48572449.v1. pdf

Response 7: Agree. Other comments in the manuscript have been revised.

4. Response to Comments on the Quality of English Language

Point 1: The English could be improved to more clearly express the research

Response 1: The language of the manuscript has been improved.