

Dear Editor and Reviewers:

We sincerely appreciate your efforts in processing our manuscript. In this round of minor revision, we addressed the reviewer comments point-by-point. Additionally, we also re-checked and corrected the grammar, expression, and formatting issues throughout the manuscript.

Below is our point-by-point response to each of your comments. To facilitate the re-review process, we have presented the comments in **Bold and Black text** and our responses in **Blue plain text**. Additionally, we have provided the revised manuscript with all changes highlighted in **Red text** for easy reference. Please note that the line numbers in our responses refer to those in the revised manuscript, whereas the line numbers in the comments correspond to the original manuscript. Look forward to your decision.

Best regards,

Qiumei Ma on behalf of all coauthors

Reviewer #1:

The revised manuscript has addressed all my questions from the original version. The clarity, logical rigor, and the inter-sentence cohesion within sections have now been significantly improved. While several minor issues remain, I recommend Minor Revision for this version. The detailed comments are as follows.

Response: Thank you very much for reviewing our revised manuscript again and for providing us with additional valuable comments, which have been instrumental in further improving our manuscript. We hope that our responses and revisions meet your expectations.

Comment 1. Variables in the manuscript, such as “Z*” and “γ”, should be italicized consistently like other variables.

Response: Thanks for your detailed comment. We have reviewed the entire manuscript to ensure that variables such as “Z*” and “γ” are italicized consistently with other variables.

Comment 2. The usage of the hyphens “-” and en dashes “—” is mixed throughout the manuscript and should be standardized.

Response: Thanks for your detailed comment. We have checked the entire manuscript to ensure that both hyphens “-” and en dashes “—” are used correctly.

Comment 3. The symbol “Te” is used in Table 3, while “Tei” is used in Table 4. These should be made consistent.

Response: Thanks for your detailed comment. All relevant notations in the manuscript have been unified to “ Te_i ”, for example in Lines 343–354.

Comment 4. In Lines 554 – 572 of Section 5.2, the logical flow could be strengthened. Please consider revising for better connection and clarity.

Response: Thanks for your detailed comment. We have revised the transitional words in that paragraph to improve its coherence and logical clarity. We first highlight the general suggestion like strengthen sediment accumulation monitoring and conduct periodic recalibrations of WLSV curves, then moves to specific operational strategies for different sedimentation scenarios—first for reservoirs with severe capacity loss, and second for those where sediment accumulation is coarse and difficult to scour. The revisions better emphasize this logical progression from general policy to tailored measures. Please see Lines 577–574 in the revised manuscript.

Comment 5. For Lines 161 – 165, please add appropriate references.

Response: Thanks for your detailed comment. We have added the corresponding references. Please see Lines 165 in the revised manuscript.

Newly cited references (highlighted in red in the revised manuscript):

Yuan, J. and Xu, Q.: Sediment trapping effect by reservoirs in the Jinsha River basin, *Advances in Water Science*, 29, 482–491, <https://doi.org/DOI:10.14042/j.cnki.32.1309.2018.04.004>, 2018.