

Interactive comment on “Sedimentation in the Three Gorges Dam and its impact on the sediment flux from the Changjiang (Yangtze River), China” by B. Q. Hu et al.

Anonymous Referee #2

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I think the content of the paper is an interesting topic to the readers of HESS.

The authors provide some important and new findings of the Three Gorges Dam. On the whole, this paper is well prepared, but it has some fundamental deficiencies. From the title we find that two key issues should be addressed in this paper, one is “Sedimentation in the Three Gorges Dam”, the other is “impact on the sediment flux from the Changjiang”. The authors give significant attention to the first issue but attach little importance to the second issue. So the title of this paper should be changed in order to match its contents. Otherwise, more discussions on the responses of the lower

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reaches and the impacts on the sediment flux should be added, by taking the possible impact factors such as reduction of the sedimentation of the linked lakes, channel erosion/accretion, sand dredging, water diversion, etc, into account.

Manuscript Evaluation

Scientific Significance: Good

Scientific Quality: Fair

RC: the authors fail to give detailed calculations/evaluations on how the lower reaches will response to sediment reduction which is fundamental to evaluate the “impacts” of the sedimentation of the TGD on the sediment flux of Changjiang.

Presentation Quality: Good

1. Does the paper address relevant scientific questions within the scope of HESS?

RC: Yes.

2. Does the paper present novel concepts, ideas, tools, or data?

RC: Yes.

3. Are substantial conclusions reached?

RC: No. The title should be changed.

4. Are the scientific methods and assumptions valid and clearly outlined?

RC: Yes.

5. Are the results sufficient to support the interpretations and conclusions?

RC: No.

6. Is the description of experiments and calculations sufficiently complete and precise to allow their reproduction by fellow scientists (traceability of results)?

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RC: Yes.

7. Do the authors give proper credit to related work and clearly indicate their own new/original contribution?

RC: Yes.

8. Does the title clearly reflect the contents of the paper?

RC: No. The title is "Sedimentation in the Three Gorges Dam and its impact on the sediment flux from the Changjiang (Yangtze River), China", but the discussions on the "impact" are insufficient. The title should be changed, for example "Sedimentation in the Three Gorges Dam and future trend of the sediment flux of Yichang or Changjiang (Yangtze River)".

9. Does the abstract provide a concise and complete summary?

RC: No. Readers could not get enough information barely from the abstract, such as, the objective of the paper, what has been done, and the main results.

10. Is the overall presentation well structured and clear?

RC: No. The authors mixed the results and discussions and creates some confusion about which are the results of this paper and which are the conclusions of the referenced article. For example, in section 4.3 (Page 5188 Line 19) the authors discussed the "third phase of the sediment reduction", but gave no further information about the word "third phase" which is from the referenced paper (Yang et al, 2006b).

11. Is the language fluent and precise?

RC: Yes.

12. Are mathematical formulae, symbols, abbreviations, and units correctly defined and used?

RC: Yes.

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13. Should any parts of the paper (text, formulae, figures, tables) be clarified, reduced, combined, or eliminated?

RC: Yes. Major revisions should be made. Two options are suggested: keep the title unchanged and add more discussions on the "impacts" or change the title and reorganize the whole paper.

14. Are the number and quality of references appropriate?

RC: Yes.

15. Is the amount and quality of supplementary material appropriate?

RC: no comments.

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 6, 5177, 2009.

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