Response to Referee 1

Overall, the study is interesting using well approaches and written well, however, there is some flaws and questions from reviewer.

(1) What is the motivation of the present study? Which is lacking in the abstract, introduction, and even in methods. I am quite confuse to catching the flow in the text. Thus, the authors need to be specific and concentrate on research motivation.

Response:

Thanks a lot for the careful review on our manuscript. The motivation of the present manuscript is to present a comprehensive review of the influence of human activities on the environment, especially the change of downstream estuary before and after dam construction, so as to provide scientific basis for ecological environment protection. The research motivation is clearly emphasized in the **abstract**, **1. introduction**, and **2. Methods**.

(2) The abstract need the concluding remarks for the community and mitigation planning.

Response:

Thanks a lot for this good suggestion. We agree and therefore, performing community and mitigation planning before dam constructions is concluded in the **abstract** (line 12-15).

(3) The introduction need more discussion on expansions of dams, recent global warming, and changing climate further intensify the dam's failure processes over the diverse regions. Therefore, please have a look and extend the discussions of the recent global warming in term of temperature and precipitation, which are the important factors for exaggerating these natural phenomena. I recommend the (Iyakaremye et al., 2021a, 2021b) to read and make an argue. And for precipitation variability over Asia see Arshad et al., 2021. https://doi.org/10.1016/j.wace.2021.100373; https://doi.org/10.1002/joc.7485;
https://onlinelibrary.wiley.com/doi/10.1029/2021EF002240;
https://doi.org/10.1016/j.scitotenv.2021.148162.

Response:

Thanks very much for this suggestion. We agree and therefore, the discussions of the recent global warming in term of temperature and precipitation, which may exacerbate negative effects on the ecological environment by dam construction are added in the **1. introduction** (line 74-76).

(4) Method section: this section missing important explanation regarding structured and systematic approach. It is recommended to explain in detail and why the author choose instead of many other techniques. Check the novelty of these methods, and provide reasonable argue for the readers interest.

Response:

Thanks a lot for the careful review on our manuscript. We agree and therefore, the explanation regarding structured and systematic approach, as well as the novelty of these methods is concluded in the **2. method section** (line 95-101). Due to the high-quality and comprehensive records, the systematic bibliometric analyses were performed by ISI Web of Knowledge database.

(5) Finally, some lights on the physical mechanism on which these Hydrological cycle are increasing over the regions much be discussed-with the help of some recent literature. For detail see Ullah et al. 2021; Hina et al., 2021; Sein et al., 2021a,b,c. https://doi.org/10.1002/joc.7321; https://doi.org/10.1080/19475705.2021.1938703; https://www.mdpi.com/2073-4441/13/5/729; https://onlinelibrary.wiley.com/doi/10.1002/joc.7419.

Response:

Thanks a lot for this good suggestion. We agree and therefore, the physical mechanism of these hydrological cycles increasing over the regions is discussed, with the help of the recommended recent literatures in **3.1. section** (line 139-142).