Response to Thanh-Nhan-Duc Tran

Dear Thanh-Nhan-Duc Tran,

Thank you very much for your comments and suggestion. Your feedback has been immensely helpful in further improving the quality of our manuscript. In response to each of your points, we have provided a detailed reply. Your comments are presented in blue text, followed by our responses in black text.

Thanks for your suggestions again!

Best regards,

Kaiheng Hu on behalf of all co-authors

Thank you for revising the manuscript using my comments. There are a few more to revise (as minor revision) so please consider them.

Response: Thank you very much for your valuable comments and suggestions on the manuscript. We truly appreciate your efforts and insights. We have carefully considered the additional minor revisions you mentioned.

Q1. In supplementary, can the authors join all KMZ files into GIS geopackage or shapefile? and please keep the current individual KMZs.

Response: Thanks for your suggestion. We believe that the individual KMZ files currently provided are already adequate to meet the relevant requirements, and thus, there is no necessity to expend additional time and effort on further integration.

Q2. I found some dams are missing Lon Lat (https://zenodo.org/records/14766647)? E.g., She'er. Also, why do we have duplicated dams here (see Excel L250-253 for Minjiang). Please provide me clarification and carefully check if we have other duplicated reservoirs in the file too.

Response: Thank you for your comments!

1. In our dataset, there are 5 DFBDs that do not provide latitude and longitude information. This is mainly because the original data sources did not include the geographic coordinates of these DFBDs, and we were also unable to determine their exact locations using tools such as Google Earth.

2. Regarding the “duplicate” dams you mentioned in the dataset (see Excel L250-253 for Minjiang), these are actually not duplicates. The four dams represent four distinct DFBD events recorded in the literatures. Each event has its own unique context and characteristics, which is why they are recorded separately. We have carefully checked the dataset and found no other instances of duplicated dam records.

Q3. In conclusion, please try to numerically label the main findings, e.g., (1), (2), etc.

Response: Thank you very much for your suggestions. We have revised the “Conclusion” section in accordance with your guidance.

Q4. One last question: do the authors have plan(s) to update this dataset further (later)? While there are no dedicated debris-flow barrier dams explicitly mentioned in the Mekong River basin, the existing hydropower dams along the Mekong River can act as barriers to debris flow to a certain extent. This is my personal perspective so the authors can decide whether to incorporate it or not.

Response: Thank you for your comments!

1. We will continue to update this dataset over a long period in the future, as debris flow river blocking is a key research topic for our team.

2. Indeed, the existing hydropower dams along the Mekong River have played a significant role in regulating runoff, reducing sediment transport, and altering the river ecosystem. Therefore, in a sense, they may have partially blocked the direct pathways of debris flows into the river, thereby indirectly influencing the formation of DFBDs. This is indeed a very interesting research topic, and we are greatly inspired by you. We will take this factor into consideration in our future research and explore its potential impact on debris flow barrier dam events.