

Dear Reviewer#2,

Thank you for reviewing our manuscript and your valuable advice. We all agree with you completely. Based on the comments and suggestions, we have made extensive revisions to the original manuscript. A point-by-point response is presented below:

- **The title is ambiguous as the calculations are not merely based on a satellite image.**

Response:

Thanks for noting this. We took this title because the only after-landslide data we used in our me procedure is the remote sensing image. Your comment is right, beside satellite image, we also used some before-landslide data including the DEM data, the rough angle of repose of the soil. We just highlight the remote sensing image in the title for three main reasons. **Firstly**, a timely satellite image has a most significant influence on our method. **Secondly**, compared to other before-landslide data, we think access to satellite images is much more difficult, while other data have rather a reliable global product such as SRTM DEM or access to a rough estimation such as the repose angle. The required data for our process is shown in the following figure. **Last**, before our paper, the methods that offer prediction of the height of the landslide dam and the maximum volume of the lake usually require more than two visible spectral remote sensing images or a radar remote sensing image. The simple requirement of the application of our procedure is a great improvement. So, we aim to address this point in our title.

**Figure 1 the data required for completing this prediction.**

Data name	Whether timely	Access	Optional/necessary	Explain
Satellite image	Yes	Satellite or UAV	Necessary	In fact, this image is used to classify the land are in reality. Therefore, it is possible to make use of other kinds of satellite data to achieve this goal.
DEM	No	Historical data (SRTM DEM)	Necessary	As the elevation of the land surface does not vary greatly without geological disasters, so the

				historical data is used in this method.
Repose angle of soil	No	Historical recordings	Optional	This data is usually obtained through experiment in lab or field survey. If can not get this through historical recordings, it is also reasonable to use the data in other papers or cases. And the sensitive analysis is carried out to show the influence of this parameter.
Elevation of river bed	No	Historical recordings	Optional	This parameter can be obtained by historical recordings directly, but if it is missing we also provide a method to get a rough estimation. And the sensitive analysis is carried out to show the influence of this parameter.

These four kinds of data are required to complete the prediction. And the characteristic of them is shown above. In the consideration of this, we make the title. Although we agree with your comment. As a better choice is not found based on our discussion, we may keep this title in our manuscript. However, we will clarify this point in our revised manuscript.

- **Introduction should explain these parameters and also their connection with risk assessment.**

Response:

Thank you for your advice. We will clarify this point in the revised manuscript.

- **Most of the paper explains the long procedure with very short discussion and rapid hazard assessment section.**

Response:

Thank you for your advice. We will clarify this point in the revised manuscript. And we will add another case of landslide dam to verify our method. The discussion section will also be expended by the analysis of relevant rapid hazard assessment.

- **Rapid hazard assessment section needs more explanation.**

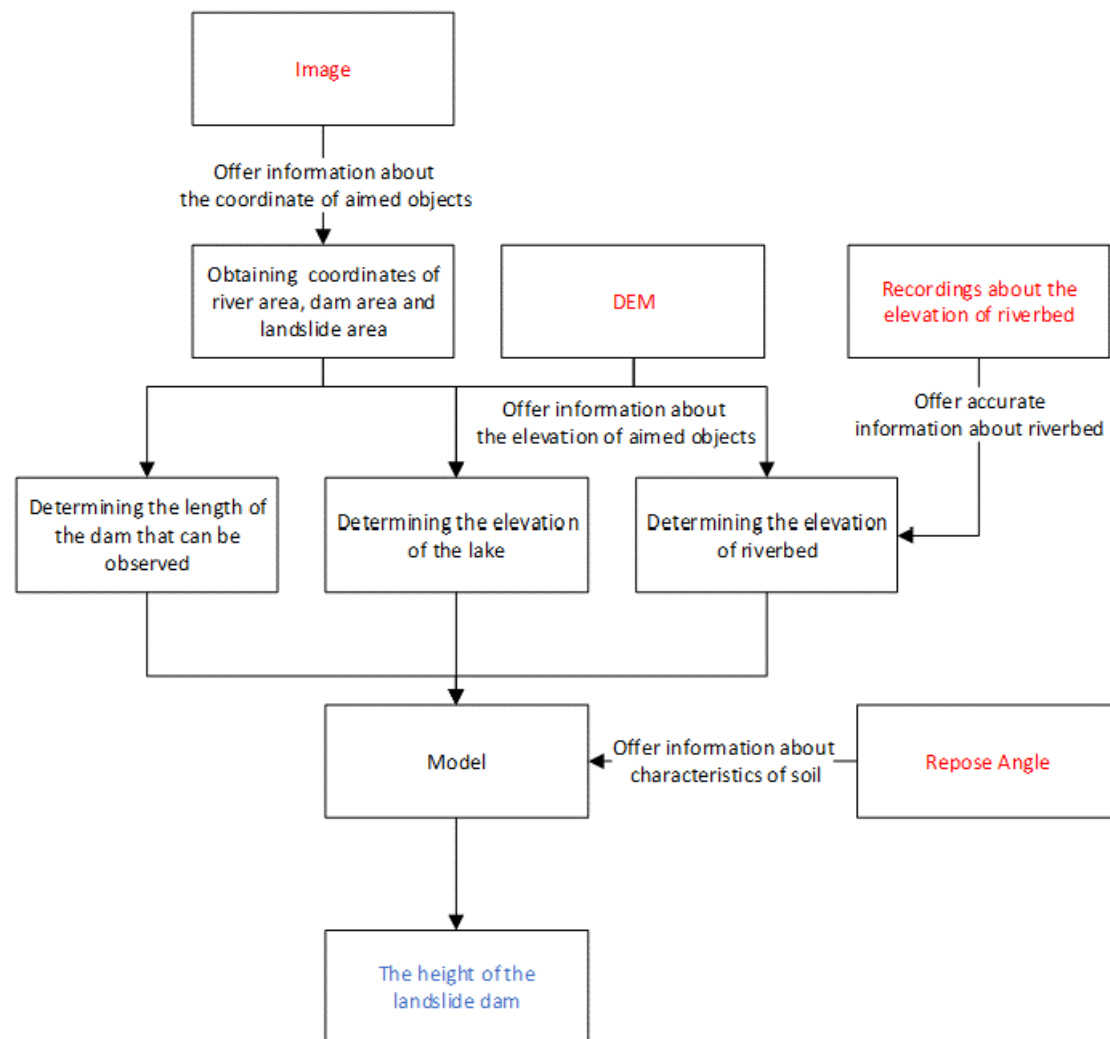
Response:

Thank you for your advice. We will give more explanation to Rapid hazard assessment in the revised manuscript.

- **The section should be supplemented with a figure, explaining the complete process of determination of parameters.**

Response:

Thank you for your advice. The rough figure that explains the process of determination of parameters is showed as following.



**Picture 1 the process of determination of parameters**

These words in red means the input data. The characteristics of them is shown in **Figure 1 before**. And we will give a more formular figure in our revised manuscript.

- **May I suggest to include another landslide dam for validation purpose**

Response:

Thank you for your reasonable advice. **And we will add another landslide dam in the manuscript for validation.**

We will revise our manuscript based on your helpful comments after interactive discussion.

Thanks again.

Weijie Zou on behalf of all co-authors