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Natural Hazards and Earth System Sciences
Discussions

Interactive comment on "Tangjiaxi Landslide and Impulse Wave Analysis in Zhexi Reservoir of China by Granular Flow Coupling Model" *by* Bolin Huang et al.

Anonymous Referee #1

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Landslide-induced impulse wave is common geo-disaster in reservoir, river and sea. It has been done with formula, physical experiment method and numerical analysis method. This manuscript presents a case study of impulse wave analysis by granular flow coupling model. Further discussions on some important issues are necessary, as specified below in the comments.

1. Landslide moved velocity is very important to impulse wave, and the parameters for numerical simulation dominate the results right or not. What are the parameters for calculating the landslide moving velocity, and how to determine them? What about the parameters for fluid?

2. The run-up of the wave is shown in Fig.8. Please introduce the methods to obtain

the heights of wave and the wave kind.

3. The landslide dam shape formed in the numerical simulation is different from the actual situation (Page 13, Line 12) in Fig. 12 and Fig.13. Is it the main reason that the spherical solid gains with similar grain size? How about the influence of soil or rock parameters? Or the parameters in the manuscript were not reasonable?

4. The results in Table 2 have some differences between investigation and calculation. What are the reasons? Further discussions should be added to the results in the manuscript.

5. There are some spell mistakes in the manuscript, i.e. in Fig.1 the Tangyangguang landslide or Tangyanguan landslide.

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