Reply to review #1

Dear reviewer,

We deeply thank you for the careful review. According to your comments, we have done some modifications with item to item explanation as following.

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1. p.371 L17 The authors state that the total projection area of the dam is 80 000 square meters and the total volume is 12 000 000 cubic meters in line 18, that means the average depth of the dam is around 150 meters. On the other hand, on p.369 line 7, the hight of the dam is mentioned to be 120 meters. I suggest authors check these figures.
Answer: After checking, the updated data is: the planar area which is bounded in the red line in the Figure 5 is around of 280,000 m^2, the total volume is of 10,000,000 m^3, the **highest** part of the dam is 120 m.
P368, L4, 1200 m^3->10,000,000 m^3
P369, L7, 1200 m^3->10,000,000 m^3
P371, L18, 1200 m^3->10,000,000 m^3
P378, L15, 1200 m^3->10,000,000 m^3

2. Figure 3 The name of the river may be "Niulanjiang River".
Answer: The name of the river is corrected as "Niulanjiang River" in Figure 3.

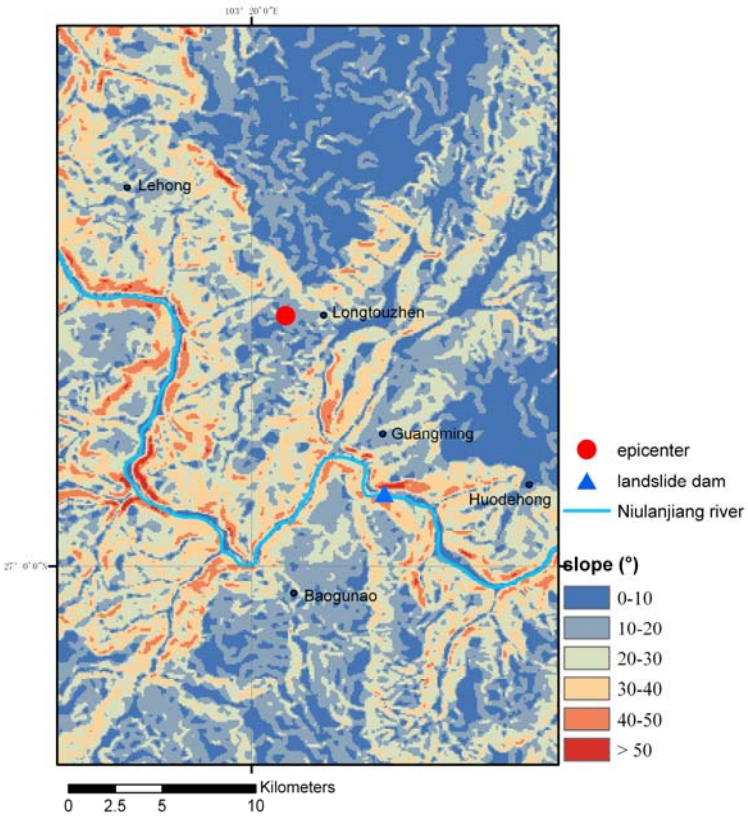

Figure 3. Map showing slope angles in the Ludian seismic area

3. p.372 L12 There is no information of the old landslide on the left bank in figure 5. C31
Answer: This error is corrected. Figure 5 is about the dam, not about the old landslide on the left bank.

4. Figure 6 An explanation is needed for figure 6 in body text.
Answer: The explanation of Figure 6 is added in body text. P372, L12.

5. Section 5 On p.377 L1, authors state that initial Fs of the slope is 1.450. To evaluate validity of the calculation, further information is needed, such as cohesion, internal friction angle, etc.
Answer: A table of the material used in the simulation is added in the body text.

Table 3 Slope material strength parameters for simulation

Rock type	c' (MPa)	φ' (°)	γ (kN m^{-3})
Bedrock (in blue color)	2.0	45	27.40
Weak layer (in grey color)	1.5	35	24.0

6. I assume that the case A calculates the Fs of the block above slip surface, and case B calculates the Fs of searched block whose Fs is smallest. On p.377 L6, authors state "if there was no existing slide plane, the scale of the seismic landslide would have been very small under the same seismic motion, at least not so large as the real case we see now". In order to prove this with slope stability analysis, the authors need to show that the Fs of yellow block of figure 14(a) is smaller than any other searched blocks.

Answer: Case A is the slope with existed slip surface; In case B, the slip surface is searched automatically by the GeoStudio software, the yellow block is the one with the smallest Fs which is decided by the software.

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Please let me know if you have any questions or further requirements.

Best regards.

Chen Xiaoli