

Dear Editors and Reviewers:

On behalf of my co-authors, we thank you very much for giving us an opportunity to revise our manuscript, we appreciate editor and reviewers very much for their positive and constructive comments and suggestions on our manuscript. We have studied the comments from editors, and we have tried our best to revise our manuscript according to the comments.

We have made the following major changes in this article:

First, the article was revised and supplemented based on the editor's suggestions. Second, minor errors in the text and figures were corrected without affecting the conclusions. Finally, minor grammatical errors were also addressed. Please review the manuscript with revision marks.

In addition, A clear PDF version of the images in the article has been uploaded as an attachment in the system.

The main corrections in the paper and the responds to the editor's comments are as flowing.

No.	Comments	Response
1	Providing more information about the model validation and performance, and at improving the section dedicated to the results	A comparison between the debris flow and dam-burst simulation results and the actual survey results has been added. For the debris flow, the simulated deposition area was compared with the actual deposition area. Additionally, two buildings were selected to compare the simulated maximum flow depth and the actual deposition height as follow(see <b>Figure 6, Figure 7, see P 11 and L. 238-243</b> ) <i>“The deposition area obtained from the simulation is 0.15 km<sup>2</sup>, which is close to the area measured from the UAV image, approximately 0.16 km<sup>2</sup>. The thickness of the sediment deposits ranged from 5 m to 15 m, with an average value of 7 m. Fig. 7 shows that the debris flow buried one floor of Building 3 and nearly two floors of Building 4 (locations indicated in Fig. 6). The simulated maximum depths at Buildings 3 and 4 are 3.2 m and 5.5 m, respectively, close to the actual deposition heights..”</i>

		<p>For dam-burst flood, the simulated flood area was compared with the actual inundation area. Additionally, two buildings were selected to compare the simulated maximum flow depth and the actual inundation height as follow(see <b>Figure 8, Figure 9, see P 12 and L. 267-274</b>)</p> <p><i>“The simulated inundation area of the outburst floor is 0.18 km<sup>2</sup>, which is consistent with the field investigation result with an error of 1.1%. The flood completely submerged all buildings on the left bank near the middle of the river channel, and the buildings on the river terrace on the right bank were strongly eroded. The maximum water depth and velocity of the dam-burst flood were 13.96 m and 8.24 m/s, respectively, which were 1.24 and 1.31 times higher than those of the ordinary flood, respectively. The maximum depth of the dam-burst flood at locations of Buildings 8 and 26 were 6.4 m and 3.7 m, respectively (Fig. 9) (building locations indicated in Fig. 8), which are close to the result obtained by field investigation.”</i></p>
2	<p>Before presenting the model results, a description of the damage from the event should be included.</p>	<p>First, an overview of the damage was added in the Introduce section as follow (see <b>P3 and L. 78-82</b>)</p> <p><i>“On August 30, 2020, a catastrophic debris flow and dam-burst flood occurred in the Niri River, Ganluo County, Sichuan Province, Southwest China. The debris flow-flash flood event killed 3 people and caused serious damages to local infrastructure, including the destruction of 110 buildings, the Chengdu-Kunming railway bridge near the gully mouth, 1.2 km national road, and 5 highway bridges along the main river.”</i></p> <p>Then, a detailed description of the damage was added in the hazard cascade section as follow (see <b>P8 and L. 213-218</b>)</p> <p><i>“The debris flow swept away the railway bridge that crossed the gully mouth and impacted the national road across the river. It also destroyed the buildings close to the gully mouth and those on the opposite bank of the main river. Approximately 40 minutes later, the debris flow dam was breached, triggering a high-magnitude flash flood that damaged the national road and buildings near the altered flooding path (Fig.3).”</i></p>