



Supplement of

Transformations in exposure to debris flows in post-earthquake Sichuan, China

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This supplementary material provides additional visual and methodological support for the damage assessment discussed in the main manuscript (lines 375 to 401). It includes six satellite images, two for each of the three study catchments, capturing the landscape before and after major debris flow events. Each image pair highlights the spatial extent of inundation and damage to the built environment. Inundated zones are shaded in brown, and image annotations include notable infrastructure – infrastructure, hydrological receptors, sediment deposition etc. These supplementary figures and methods are intended to enhance the transparency and reproducibility of the analysis presented in Figure 5 of the manuscript.

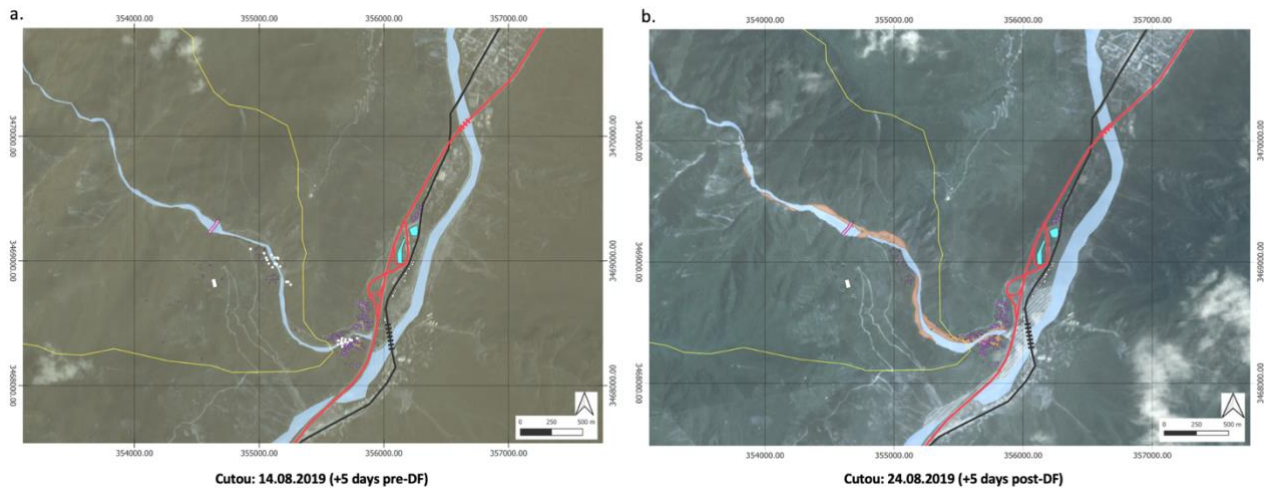


Figure S1. Pre- and post-debris flow event satellite imagery of Cutou Gully (© Google Earth 2019).

Satellite images showing the catchment area of Cutou Gully (i) before and (ii) after the debris flow event of 2019. Areas of debris flow inundation are highlighted in brown. Notable features include damage to built structures, scarring and erosion within the channel, and sediment deposition. Image interpretation supported the classification of affected areas as damaged, reconstructed, or newly developed, as outlined in the methodology and aided Figures 5 and 6 of manuscript. Satellite data sourced from Google Earth (2023).

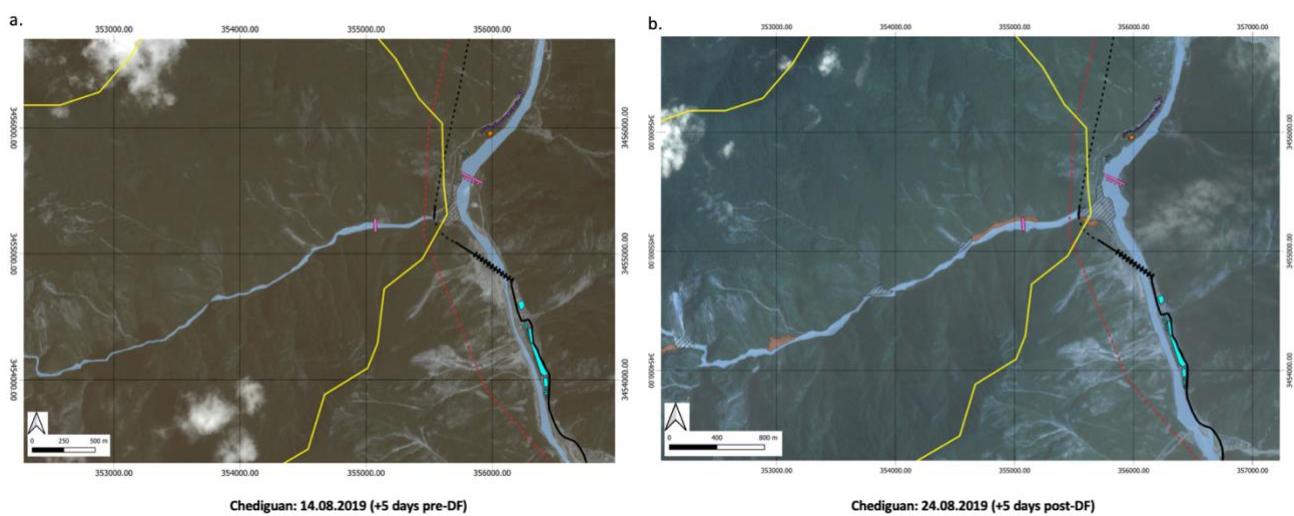


Figure S2. Pre- and post-debris flow event satellite imagery of Chediguan Gully (© Google Earth 2019).

Satellite images showing the catchment area of Chediguan Gully (i) before and (ii) after the debris flow event of 2019. Areas of debris flow inundation are highlighted in brown. Notable features include damage to built structures, scarring and erosion within the channel, and sediment deposition. Image interpretation supported the classification of affected areas as damaged, reconstructed, or newly developed, as outlined in the methodology and aided Figures 5 and 6 of manuscript. Satellite data sourced from Google Earth (2023).

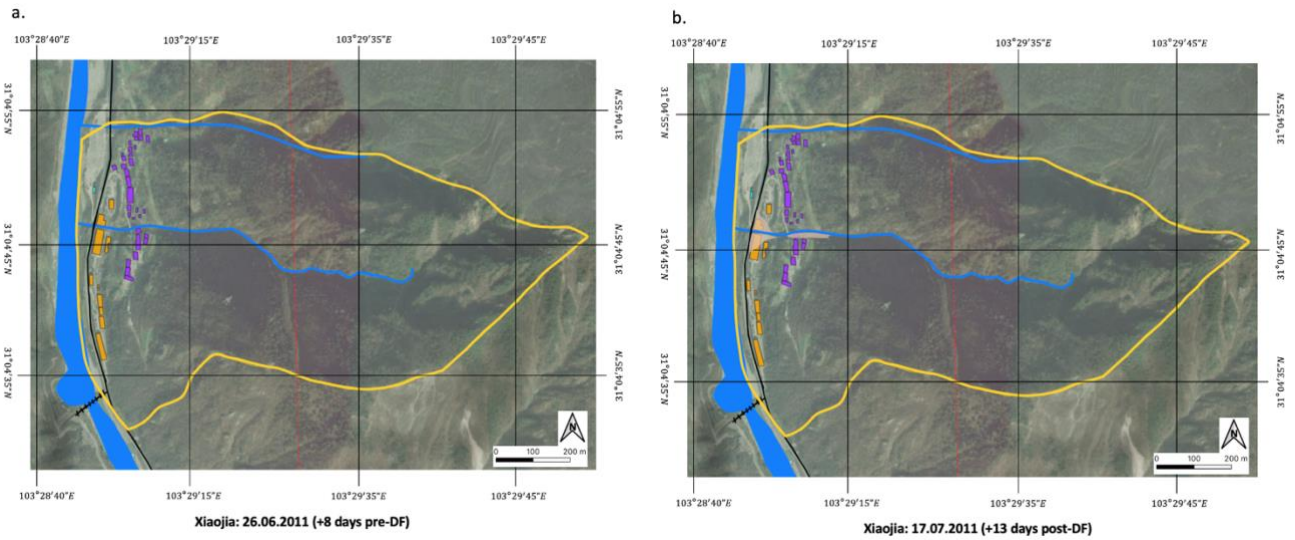


Figure S3. Pre- and post-debris flow event satellite imagery of Xiaojia Gully, (© Google Earth 2011).

Satellite images showing the catchment area of Xiaojia Gully (i) before and (ii) after the debris flow event of 2011. Areas of debris flow inundation are highlighted in brown. Notable features include damage to built structures, scarring and erosion within the channel, and sediment deposition. Image interpretation supported the classification of affected areas as damaged, reconstructed, or newly developed, as outlined in the methodology and aided Figures 5 and 6 of manuscript. Satellite data sourced from Google Earth (2023).