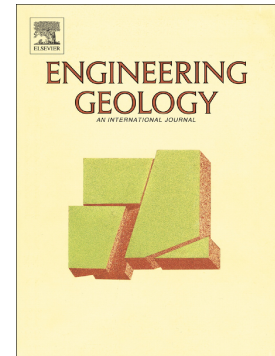


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What we have learned from the 2008 Wenchuan Earthquake and its aftermath: A decade of research and challenges

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Abstract

The 2008 M_w 7.9 Wenchuan Earthquake (Sichuan, China) was possibly the largest and most destructive recent earthquake as far as the geo-hazards are concerned. Of the nearly 200,000 landslides triggered originally, many remobilized within a few years after the initial event by rainfall, which often caused catastrophic debris flows. The cascades of geo-hazards related to the Wenchuan Earthquake motivated research worldwide to investigate the triggering and mechanisms of co-seismic landslides, their rainfall-induced remobilization, the generation of debris flows, the evolution of their controlling factors, and the long-term role of earthquakes in shaping the topography. On the eve of the 10th anniversary of the 2008 Wenchuan Earthquake, we present a short review of the recent advances in these topics, discuss the challenges faced in the earthquake-related geo-hazards mitigation practice, and suggest priorities and guidelines for future research.

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