

Paper Number: 1982

**Distribution regularities of co-seismic landslide triggered by Ludian earthquake**

Yu ZOU<sup>1,2</sup>, Shengwen QI<sup>1</sup>, Xingxing LI<sup>1,2</sup>, Songfeng GUO<sup>1</sup>

<sup>1</sup> Key Laboratory of Shale Gas and Geoengineering (KLSGG), Institute of Geology and Geophysics, Chinese Academy of Sciences.

<sup>2</sup> University of Chinese Academy of Sciences, Beijing, China

---

**Abstract:** 8:30 UTC on 3 August 2014, a MW 6.2 earthquake occurred in Ludian County, in southwest China. The hypocenter is located at 27.1°N, 103.3°E with a depth of 12km. It's a moderate intensive earthquake caused by the Baogunao-Xiaohe fault east of the Xianshuihe-Xiaojiang fault system between the Chuandian block. The causative fault is Baogunao-Xiaohe fault, a left-lateral strike-slip fault with NW direction, and cut through the Zhaotong-Lianfeng fault zone. Ludian earthquake caused hundreds of death and a large number of houses collapsed. 1170 landslides were triggered by this earthquake, and the distribution is mainly distributed in NW and NNE direction. The NW direction is mainly parallel to Baogunao-Xiaohe fault and the NNE direction is mainly parallel to the Zhaotong-Lianfeng fault. Co-seismic landslides of Ludian earthquake distributing along the Baogunao-Xiaohe fault and the Zhaotong-Lianfeng fault demonstrate that strike-slip seismic landslides distribution not only along the co-seismic fault but also the conjugate fault. What's more, landslide density is higher on the slopes of highway convince that slope cutting also have significant impact on the initiation of landslides.

**Keywords:** Distribution regularities; Co-seismic landslide; Co-seismic fault; Slope cutting

