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Field investigations of landslides triggered by the 20 April 2013 Mw 6.6 Lushan earthquake of China

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On April 20, 2013, a Mw 6.6 earthquake struck Lushan of Sichuan Province, China, about 80 km southwest of the epicenter of the 12 May 2008 Wenchuan Mw 7.9 event. It triggered a large number of landslides in a broad area, causing causality and injuries, and damages to roads, drains, dwellings and infrastructures. This paper presents field investigations of these landslides, which can be classified into two main categories of disrupted landslides and coherent landslides, constituting seven types. The disrupted landslides include five types: rock falls, rock slides, rock avalanches, soil falls, and soil slides; and the coherent landslides have two types: soil slumps and slow earth flows. All of the seven types of landslides can be observed in many field photos, aerial photographs, or (and) satellite images. Among them, seven typical large-scale landslides, distributed in a northeast trending line consistent with the Shuangshi-Dachuan fault, which is presumably related with the earthquake, are described in detail. These observational data allow us to make subsequent compiling of a detailed landslide inventory by visual interpretation of remote sensing images as well as further studies of co-seismic landslides produced by the Lushan earthquake.
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