

# Distribution of landslides along the Andean active orogenic front (Argentinean Precordillera 31°-33° S)

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As one of the main environmental effects of earthquakes, the distribution of landslides could reflect regional neotectonic activity. To that end, we carried out an inventory of landslides along the Precordillera range (31°-33°S) comprising the most seismically active region of Argentina. Main Quaternary deformation is concentrated in this Western central part of the country associated with active faults linked to intense shallow seismic activity (<35 km depth). During the last 150 years, the region has suffered at least six major earthquakes with a magnitude greater than  $M_s \geq 7.0$ . The main focus of this research is to analyse the distribution of landslides along this Andean active orogenic front and characterize the response of collapses. We analysed morphological parameters of these landslides. According to our results, collapses match with traces of active Quaternary faults in this region. Landslides are clustered however, being more densely splayed in the centre of the study area and decreasing gradually towards the North and the South. We propose that the Juan Fernandez Ridge trace promotes a higher rate of deformation in this area, matching with higher historical seismicity and distribution of landslides.