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Risk investigation of landslides at the center and southern mountain range of México

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"Risk investigation of landslides at the center and southern mountain range of México (Hidalgo, Puebla, state of México, Veracruz and Chiapas)"

The morphology of the Mexican territory is fundamentally mountainous type, originated by tectonic activity (converging of coconut plate with those of North America and the Caribbean). This landscape includes several orographic systems: *the Eastern and Western ridges, the Southern ridge and the Transverse volcanic system*; the latest crosses the center of the country from West to East and belongs to what it is known as Fire Belt of the Pacific, where the most important volcanic and seismic zone of the word is located.

In the last decade, heavy rainfall had caused floods and triggered landslides including: rotational and translational slope failures, flows of soils, fallen rocks and avalanches; besides several landslides had dammed rivers (Zempoala river in Puebla 1999 and recently Grijalba river in Chiapas 2007). Every year floods and landslides destroy roads, bridges, houses and burying crop fields and plantations, causing economical looses and pitiful deaths. In this paper a preliminary risk zone classification of landslides is presented since point of view geologic, topographic, climate and human activity factors such as cuts, overload, mining materials explorations and deforestation, among others.