



Mapping landslide processes in the North Tanganyika – Lake Kivu rift zones: towards a regional hazard assessment

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The mountainous environments of the North Tanganyika – Lake Kivu rift zones are part of the West branch of the East African Rift. In this area, natural triggering and environmental factors such as heavy rainfalls, earthquake occurrences and steep topographies favour the concentration of mass movement processes. In addition anthropogenic factors such as rapid land use changes and urban expansion increase the sensibility to slope instability. Until very recently few landslide data was available for the area. Now, through the initiation of several research projects and the setting-up of a methodology for data collection adapted to this data-poor environment, it becomes possible to draw a first regional picture of the landslide hazard. Landslides include a wide range of ground movements such as rock falls, deep failure of slopes and shallow debris flows. Landslides are possibly the most important geohazard in the region in terms of recurring impact on the populations, causing fatalities every year. Many landslides are observed each year in the whole region, and their occurrence is clearly linked to complex topographic, lithological and vegetation signatures coupled with heavy rainfall events, which is the main triggering factor. Here we present the current knowledge of the various slope processes present in these equatorial environments. A particular attention is given to urban areas such as Bukavu and Bujumbura where landslide threat is particularly acute. Results and research perspectives on landslide inventorying, monitoring, and susceptibility and hazard assessment are presented.