

Preliminary study of seismic hazard along the Cameroon Volcanic Line (CVL)

Earthquakes frequently occur along the Cameroon Volcanic Line (CVL), with magnitude ranging between 2 and 6. These events are from tectonics and volcanic origins. An experiment called Cameroon Broadband Seismic Experiment (CBSE) was conducted in the country between 2005 and 2007. These data collected was used in this work to compute the seismic hazard and therefore highlight the most risky areas around the CVL. On these data, we applied a pass band filter with frequency ranging from 1 to 5 Hz, then we did the picking of the P and S first arrivals. This allows to locate earthquakes. The located events were distributed along the Congo Craton margin. This gives an updated view of the Cameroon neoseismicity. From the seismicity map and seismic hazard computation, we distinguished four risky areas: The mount Cameroon area, considered like the most seismically active; Then the southern Cameroon area its seismicity is associated to the Kribi-Campo fault and also the presence of Congo Craton known for its high magnitude tectonic activity; The area along the Sanaga fault is the third risk zone; and the last one is the western Cameroon characterized by a large fault network.

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