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Investigating Seismic Source Zones in Cameroon: A preliminary step for Seismic Hazard Assessment

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Permanent and temporary seismic arrays have been deployed in Cameroon since 1982. This has improved our knowledge on the seismicity of the area which, when combined to the tectonics and the results of structural studies helped in demarcating seismogenic zones in the country. We identified 6 main seismic sources. First and most active area is Mount Cameroon, the only active volcano. Second, the region located north of that volcano which has also experienced volcanism in the past and deadly CO₂ gas release in two crater lakes. The 3rd seismic source area is located in Kribi coastal region of Gulf of Guinea, while the 4th is the northern extension of Congo Craton border. The last two seismic sources are revealed by the activity of Central Cameroon Shear Zone (CCSZ) faults namely: the Fouban-Tibati Shear Zone (FTSZ), and the Sanaga Shear Zone (SSZ). Seismic sources are linked to either crustal thinning or active faults. The study of their characteristics is our first step for preliminary seismic hazard assessment.

Keywords: Mount Cameroon, Seismogenic Zones, Crustal Structure, Shear Zone

