

Assessment of Seismic Hazard Potentials in Zimbabwe

A probabilistic seismic hazard assessment for Zimbabwe is analysed according to the data and statistics of the seismicity of Zimbabwe and sources of earthquakes around the country. Data from different sources were merged and duplicate earthquakes were removed. Data from IMS stations in Southern Africa, Zimbabwe included contributed to the catalogue from 2003. The catalogue was unified with all magnitude types converted to Mw. The “deductive” PSHA approach which integrates geological and geophysical information together with seismic event catalogs in the assessment of seismic hazards was used. In this study, seismic hazards maps are presented as maps showing peak ground acceleration (PGA) for Zimbabwe. The maps have a 10% probability of exceedance in 50 year period, and are prepared using a homogenized catalogue compiled for seismic moment magnitude. The highest levels of seismic hazards in Zimbabwe are in eastern border of the country with Mozambique, the Lake Kariba area and the mid Zambezi basin in the vicinity of the Save-Limpopo mobile belt.

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