



Earthquake Hazard and Risk in Sub-Saharan Africa: current status of the Global Earthquake model (GEM) initiative in the region

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Large magnitude earthquakes have been observed in Sub-Saharan Africa in the recent past, such as the Machaze event of 2006 (Mw, 7.0) in Mozambique and the 2009 Karonga earthquake (Mw 6.2) in Malawi. The December 13, 1910 earthquake (Ms = 7.3) in the Rukwa rift (Tanzania) is the largest of all instrumentally recorded events known to have occurred in East Africa. The overall earthquake hazard in the region is on the lower side compared to other earthquake prone areas in the globe. However, the risk level is high enough for it to receive attention of the African governments and the donor community.

The latest earthquake hazard map for the sub-Saharan Africa was done in 1999 and updating is long overdue as several development activities in the construction industry is booming allover sub-Saharan Africa. To this effect, regional seismologists are working together under the GEM (Global Earthquake Model) framework to improve incomplete, inhomogeneous and uncertain catalogues. The working group is also contributing to the UNESCO-IGCP (SIDA) 601 project and assessing all possible sources of data for the catalogue as well as for the seismotectonic characteristics that will help to develop a reasonable hazard model in the region. In the current progress, it is noted that the region is more seismically active than we thought. This demands the coordinated effort of the regional experts to systematically compile all available information for a better output so as to mitigate earthquake risk in the sub-Saharan Africa.