



## The Seismotectonic Map of Africa

Mustapha Meghraoui and the IGCP-601 Working Group \* Team

We present the Seismotectonic Map of Africa based on a geological, geophysical and geodetic database including the instrumental seismicity and re-appraisal of large historical events with harmonization and homogenization of earthquake parameters in catalogues. Although the seismotectonic framework and mapping of the African continent is a difficult task, several previous and ongoing projects provide a wealth of data and outstanding results. The database of large and moderate earthquakes in different geological domains includes the coseismic and Quaternary faulting that reveals the complex nature of the active tectonics in Africa. The map also benefits from previous works on local and regional seismotectonic maps that needed to be integrated with the lithospheric and upper mantle structures from tomographic anisotropy and gravity anomaly into a continental framework. The synthesis of earthquake and volcanic studies with the analysis of long-term (late Quaternary) and short-term (last decades and centuries) active deformation observed with geodetic and other approaches presented along with the seismotectonic map serves as a basis for hazard calculations and the reduction of seismic risks. The map may also be very useful in the assessment of seismic hazard and mitigation of earthquake risk for significant infrastructures and their implications in the socio-economic impact in Africa. In addition, the constant population increase and infrastructure growth in the continent that exacerbate the earthquake risk justify the necessity for a continuous updating of the seismotectonic map.

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\* Mustapha Meghraoui (Coordinator) EOST – IPG Strasbourg CNRS-UMR 7516 (m.meghraoui@unistra.fr corresponding author).

Paulina Amponsah (AECG, Accra), Abdelhakim Ayadi (CRAAG, Algiers), Atalay Ayele (Univ. Addis Ababa), Ateba Bekoa (Bueah Univ. Yaounde), Abdunnur Bensuleman (Tripoli Univ.), Damien Delvaux (MRAC-Tervuren); Mohamed El Gabry (NRIAG, Cairo), Rui-Manuel Fernandes (Beira Univ.) ; Vunganai Midzi & Magda Roos (CGS, Pretoria), Youssef Timoulali (Univ. Mohamed V, Rabat).

Website:

<http://eost.u-strasbg.fr/igcp601/index.html>