



EXTENSION OF THE ISC-GEM GLOBAL INSTRUMENTAL EARTHQUAKE CATALOGUE

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Improved seismic hazard studies necessitate that earthquake catalogues are homogeneous (to the largest extent possible) over time in their fundamental parameters, such as location and magnitude. After a 27-month project funded by GEM Foundation (www.globalquakemodel.org), we released in January 2013 the ISC-GEM Catalogue (1900-2009) (www.isc.ac.uk/iscgem/index.php) as a special product to use for seismic hazard studies (Storchak *et al.*, 2013).

Due to time and resource limitation, the ISC-GEM catalogue (1900-2009) included earthquakes in the following time-variable cut-off magnitudes: $M_s=7.5$ for earthquakes occurring before 1918; $M_s=6.25$ between 1918 and 1963; and $M_s=5.5$ from 1964 onwards. Because of the importance of having a reliable seismic input for seismic hazard studies, funding from GEM and two commercial companies in the US and UK allowed us to start working on the extension of the ISC-GEM catalogue both for earthquakes that occurred beyond 2009 and for earthquakes listed in the International Seismological Summary (ISS) which fell below the cut-off magnitude of 6.25. This extension is part of a four-year program that aims at including in the ISC-GEM catalogue large global earthquakes that occurred before the beginning of the ISC Bulletin in 1964. In this contribution we present the updated ISC-GEM catalogue, which will include about 500 earthquakes that occurred in 2010 and several hundreds more between 1950 and 1959. The extension of the ISC-GEM catalogue will also be helpful for regional cross border seismic hazard studies as the ISC-GEM catalogue should be used as basis for cross-checking the consistency in location and magnitude of those earthquakes listed both in the ISC-GEM global catalogue and regional catalogues.

REFERENCES

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