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Re-Evaluations of Seismic Hazard of Syria

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ABSTRACT

Seismic Hazard analysis requires geologic, seismologic and geophysical data to be applied in a certain area. There are several studies were established to estimate the seismic hazard of Syria. In this study, the authors integrated the historical, instrumental seismological data, the structural-geological data of Syria and the subsurface tectonic map of Syria to re-evaluate the seismic hazard of Syria. The current research introduces new seismic source models which were not used before. The source models were chosen according to the structural and tectonic setting of the study area. The recurrence relationship was applied for each source for obtaining the regression coefficients related to each seismic source. Finally, the seismic hazard maps were plotted for (50, 100, 200, 475, and 1000) return periods by using Poisson probabilistic method. Regarding with theses resulted maps, there is obvious increase of the seismicity from the eastern parts of Syria to the western parts which reaches to its maximum value in El-Ghab region.

KEYWORDS

Earthquake Seismology; Engineering Seismology

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