

عنوان مقاله:

Updated Probabilistic Seismic Hazard Assessment for Iraq/2018

محل انتشار:

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خلاصه مقاله:

Recently, Iraq has experienced an unprecedented seismic activity, specifically, near the east boundary with Iran which reveals the need to re-evaluate the seismic hazard at this region. This study consists of two phases. The first is collecting the earthquake records covering the recent events till the end of November 2017 including the 12 November 2017 (7.3Mw) earthquake, and applying data processing to get the net data for independent events for the study area which were more than 4300 of net main earthquakes of $M_w \geq 4$ and were used in the second phase. The second phase is applying the PSHA method by dividing the study area into a grid of small cells of size $0.5 \times 0.5^\circ$ and the hazard parameters were calculated at the center of each of these grid cells then, converting the final results to contours over the study area. It is found that the values increases towards the east-northeast and north due to the continued tectonic boundary convergence between the Arabian, Iranian and Turkish plates which produces intense earthquake activity. The design spectral acceleration at 0.2 and 1.0 seconds found to be 0.33, 0.17, 0.47, 0.25, 0.71, 0.35 g for Basra, Baghdad and Erbil, respectively. The comparison between the PGA values from this study and from the seismic hazards maps from Iraqi seismic codes of 1989, 1997 and 2016, for return periods of 475 and 2475 years, reveals the continued increase with time which reveals the need to updating the seismic hazard maps continuously

کلمات کلیدی:

PSHA; Iraq; Main Earthquakes; PGA; Spectral Accelerations; Seismic Hazard

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