

عنوان مقاله:

ESTIMATION OF SEISMIC RISK IN TEHRAN METROPOLITAN

محل انتشار:

هفتمین کنفرانس بین المللی زلزله شناسی و مهندسی زلزله (سال: 1394)

تعداد صفحات اصل مقاله: 7

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خلاصه مقاله:

In this paper a new methodology is presented for comprehensive assessment of the seismic risk in urban areas. In this method, the seismic risk is characterized by definition of physical, human life and socio-economic risk indices. Each of the risk indices are estimated in relative scheme through weighted combination of its sub indicators. Moreover, new hazard factors are defined to make a better interpretation of risk as a combination of the vulnerability and hazard. The response capacity of each urban zone is also measured by indicators of planning, resource, accessibility and evacuation capacity. The overall relative seismic risk index (RSRi) is then defined as a function of the three risk indices as well as response capacity index. The proposed method is applied to assess the risk at 22 municipal districts of Tehran in case of North Tehran Fault Scenario Earthquake. The results show that physical and human life risk indices in district 4 of the city are greater than the others. Meanwhile, in socio-economic aspects, district 6 is the highest and district 15 has relatively the maximum overall risk among others. Finally, comparison of the results with JICA study is performed to show the benefits and efficiency of the model.

کلمات کلیدی:

Seismic Risk Index, Physical Risk, Socio-Economic Risk, Response Capacity, Tehran

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<https://civilica.com/doc/1132582>

