

Underestimation of Seismic Hazard in Intra-Plate Regions: Examples of Some Earthquake Cases in China

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In the estimation of seismic hazard, earthquake history plays an important role. Limited length of instrumental observation data as well as historical recordings causes significant limitation of the application of earthquake history to seismic hazard estimation. Intra-plate regions with low seismic activities are often subject to such a limitation. We collect some of the earthquake cases in continental China, from the 1976 Tangshan earthquake occurred 30 years ago to the recent earthquake in 2005 in Jiujiang, China, to demonstrate this complicated problem. The unexpected occurrence of these events caused significant disasters, challenged the conventional understandings of earthquake hazard, and raised interesting scientific problems in seismic hazard study.