

Propose of Indonesia Seismic Hazard Deaggregation Maps for Sumatera, Indonesia

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ABSTRACT

The new method for determining ground-motion parameters in the Indonesian Earthquake Resistant Building Code SNI 03-1726-2012, has significant changes than the previous code. The maps of mean and modal of magnitude and distance presented here are intended to convey information about the distribution of probabilistic seismic sources and to provide prescriptions or suggestions for seismic sources to use in developing artificial ground motion in building design or retrofit projects. This paper presents deaggregation of Indonesia Seismic Hazard Map 2010 for Sumatera. Deaggregation for 0.2-sec and 1.0-sec pseudo spectral acceleration (SA) is performed for 10% probability of exceedance (PE) in 50 yr (475-yr mean return period) and 2% PE in 50 yr (2475-yr mean return period). The information of deaggregation analysis can and perhaps should be considered in a complex seismic-resistant design decision-making environment.

KEYWORDS: seismic hazard deaggregation, 3D seismic sources, seismic sources contribution, Indonesia building code