

## **New Probabilistic Seismic Hazard Models of Myanmar**

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### **ABSTRACT**

The probabilistic seismic hazard maps of Myanmar were developed in 2012. After nearly 5 years, those seismic hazard models are being updated by modifying some of the seismic sources. The areal seismic sources for the subduction zone of the Indian-Australia Plate beneath the Eurasia Plate, in the west of country and for the collision zone of Indian-Australia Plate and Eurasia Plate, in the northwest are re-identified and re-characterised in the new model. Moreover, the eastern Shan Plateau region is also modeled as the areal seismic sources in the 2012 seismic hazard model of Myanmar due to the unavailability of the sufficient fault parameters of several strike-slip faults in that region (e.g. Moemeik Fault, Nampon Fault, Shweli Fault, Kyaukme Fault, and Nam Ma Fault, etc.). However, some works on those faults have been carried out to delineate the geological parameters of some of the faults and the obtained data can be applied to model as fault specific seismic sources (e.g. Soe Thura Tun et al., 2012; Wang Yu et al., 2014). Therefore, we re-modeled the areal seismic sources from the eastern Shan Plateau as the fault specific seismic sources. We modify the hazard maps of Myanmar, 2012 by using the same methodology of probabilistic seismic hazard assessment. From the new seismic hazard assessment the seismic hazard maps for 10% probability of exceedances in 50 years, in terms of peak ground acceleration (PGA) maps, spectral acceleration (SA) maps for the period 0.2 s and 1.0 s are developed. In the seismic sources modelling for the Subduction zone of Indian-Australia Plate beneath Eurasia Plate and the collision zone of Indian Plate and Eurasia Plate, the available data is still limited until now. Especially the Burma Arc, from the northern continuation of Sumatra Trench through the transition of Subduction to Collision of India Plate and Eurasia Plate to the north-east is still poorly understood. We need to carry out the detailed research works to evaluate the configuration of those subduction and subduction-collision transition characteristics in the west of Myanmar. This is the urgent need for this region and by understanding those characteristics and by obtaining more geological information from these tectonic domain the more reliable seismic hazard models of Myanmar and its neighbours will be reached in the near future, especially for mitigation of earthquake disasters.