

Probabilistic tsunami hazard analysis of the Pacific Coast of Mexico

*Takuya Miyashita¹, Nobuhito Mori¹

1. Disaster Prevention Research Institute, Kyoto University

This study develops a novel computational framework to carry out probabilistic tsunami hazard assessment for the Pacific coast of Mexico. The new approach enables the consideration of stochastic tsunami source scenarios having variable fault geometry and heterogeneous slip that are constrained by an extensive database of rupture models for historical earthquakes around the world. Numerous source scenarios of large subduction earthquakes are generated to assess the sensitivity and variability of tsunami inundation characteristics of the target region. The numerical results indicate a strong sensitivity of maximum tsunami height to major slip locations in the source, and indicate major uncertainty at the first peak of tsunami waves.

Keywords: Tsunami