

Utilizing Remote Sensing to Estimate Seismic Hazards within the Panama Region

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Abstract

Previous studies and research indicates that the Panama Canal Zone may be subject to large earthquakes, yet little is known about the hazard. Large earthquakes occurring near the Canal Zone could lead to catastrophic damages and long-term shutdown of the canal. This would have world-wide economic impact. Using remote sensing data, earthquake hazards are estimated within the Panama Canal Zone by generating earthquake strong motion modeling. Possible fault lineaments are mapped using a satellite radar image and the effects of strong earthquakes are modeled using strong-motion software. The results are then mapped using Google Earth and the structures of the area are identified. The technique is also tested and applied on Jogjakarta, an area that has suffered a large earthquake on May 2006. The findings and techniques are also compared to similar researches.