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Analysis of Tsunami Hazard Potential in North Bali due to The Flores Back Arc Thrust Earthquake Using TOAST

LIGHTNING TALK

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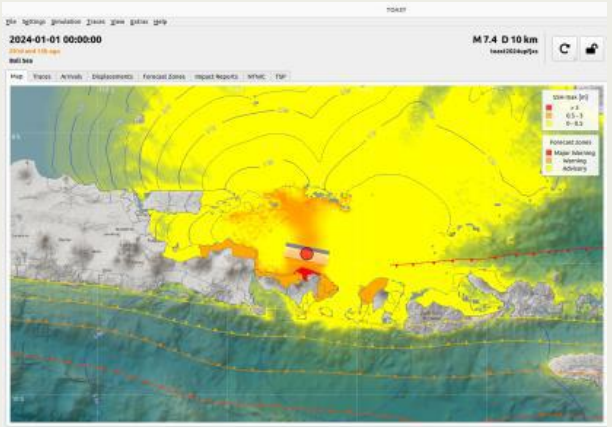
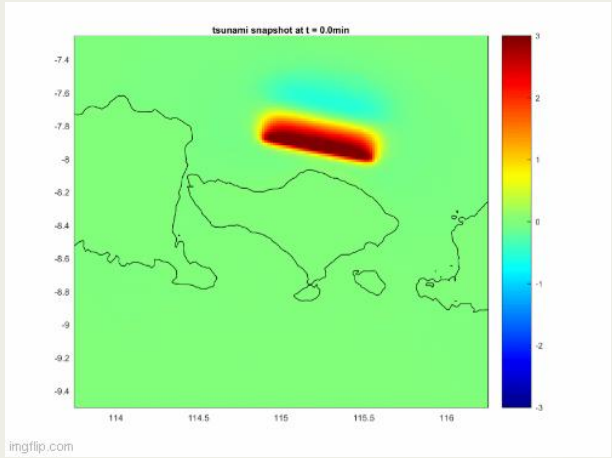


We examine the potential tsunami hazard in North Bali that could result from an earthquake along the Flores Back-Arc Thrust.

Although North Bali has experienced destructive tsunamis in the past—including the catastrophic 1815 event that claimed more than 10,000 lives—the region remains insufficiently studied.

To address this gap, we employed the TOAST framework with EasyWave simulations to model a worst-case scenario earthquake of magnitude 7.4 and its resulting tsunami.



Findings

The simulations indicate that tsunami waves exceeding 3.4 meters could strike the eastern coast of Buleleng within one minute, placing more than 387,000 residents at risk.

Implications

Our study highlights the importance of real-time modeling tools such as TOAST in enhancing tsunami preparedness and strengthening community-level resilience.

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