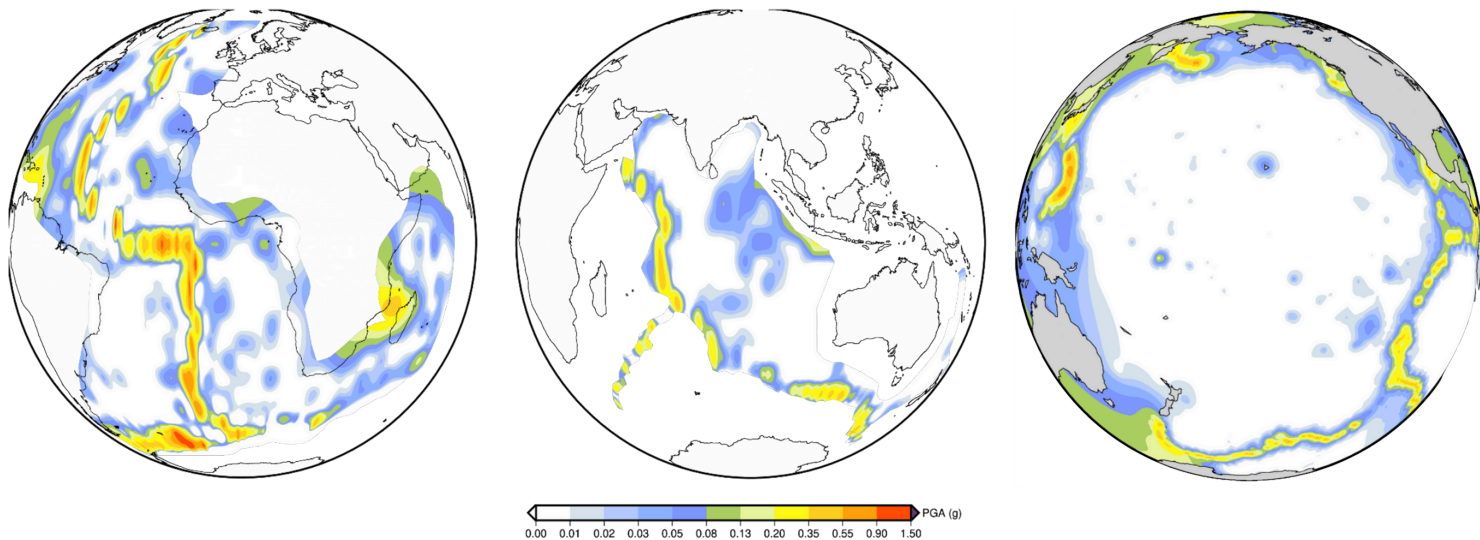# PSHA MODELS FOR THE OCEANS

Expanding GEM PSHA Models to Support Remote Communities in the Southwest Pacific

October 23, 2024 | 4-5 PM, Fiji | 6-7 AM, Italy | 12-1 AM, USA (East Coast)
Zoom webinar

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OVERVIEW

Overview of GEM's Global Seismic Hazard Mosaic

GEM's Global Seismic Hazard Mosaic is a database of probabilistic seismic hazard analysis (PSHA) models, originally developed with the intent to cover inland areas globally. The models come from national or regional programs, the literature or, where these are unavailable, are developed by GEM's seismic hazard team.

Development of the PAC Model and Expansion Plans

In 2018 the GEM hazard team developed a Southern Pacific Islands (PAC) model that covered the Solomon Islands, Vanuatu, New Caledonia, Fiji, Samoa/American Samoa, and Tonga. These islands lie in an area of complex subduction with high seismic hazard, and this model added invaluable coverage for the region. However, farther away from subduction zones, some populated islands were left uncovered by PAC. As part of the Forecasting and Communicating Earthquake Hazard and Risk (FORCE) project, we extended the coverage of the Mosaic to include the oceans, with the aim of providing PSHA models and results for some of the world's most remote communities. In the Southwest Pacific, this includes the islands of Palau, the Federated States of Micronesia, Kiribati, the Marshall Islands, the Cook Islands and French Polynesia.

OBJECTIVES

In this webinar, we will explore the key features of the Global Seismic Hazard Mosaic and the PAC model, with a special focus on the ocean models in the Southwest Pacific. We'll present GEM's approach to building PSHA models that span vast regions, even in data-scarce areas. Additionally, we will highlight seismic hazard trends across the region, including insights for key population centers.

PRESENTERS AND TOPICS (4PM Fiji | 6AM Italy | 12AM USA)

Kendra Johnson
Senior Seismic Hazard Scientist, GEM
- Overview of GEM's Global Seismic Hazard Mosaic
- Development of the Pacific Islands (PAC) Model

Kirsty Bayliss
Seismic Hazard Scientist, GEM
- Expansion plans under the FORCE project covering small island communities
- PSHA models for the oceans (Pacific Region)

ABOUT THE GEM FOUNDATION AND FORCE PROJECT

The Global Earthquake Model (GEM) Foundation is an international organization focused on enhancing the understanding and management of earthquake risk globally. The Forecasting and Communicating Earthquake Hazard and Risk (FORCE) Project, supported by USAID, is a key initiative within GEM aimed at improving earthquake forecasting and risk communication.

JOIN US FOR A FREE WEBINAR !

Learn how the Global Seismic Hazard Mosaic extends coverage to remote communities and see how advanced models are built, even with limited data.

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