

Expert Meeting of UNESCO-IOC Expert Meeting on Tsunami Sources Associated with Hellenic Arc and Azores-Gibraltar Fault Zone in the North-Eastern Atlantic, the Mediterranean, and Connected Seas (NEAM) Region



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Intergovernmental
Oceanographic
Commission

Tsunami Hazard and Risk Assessment

Tsunami Sources

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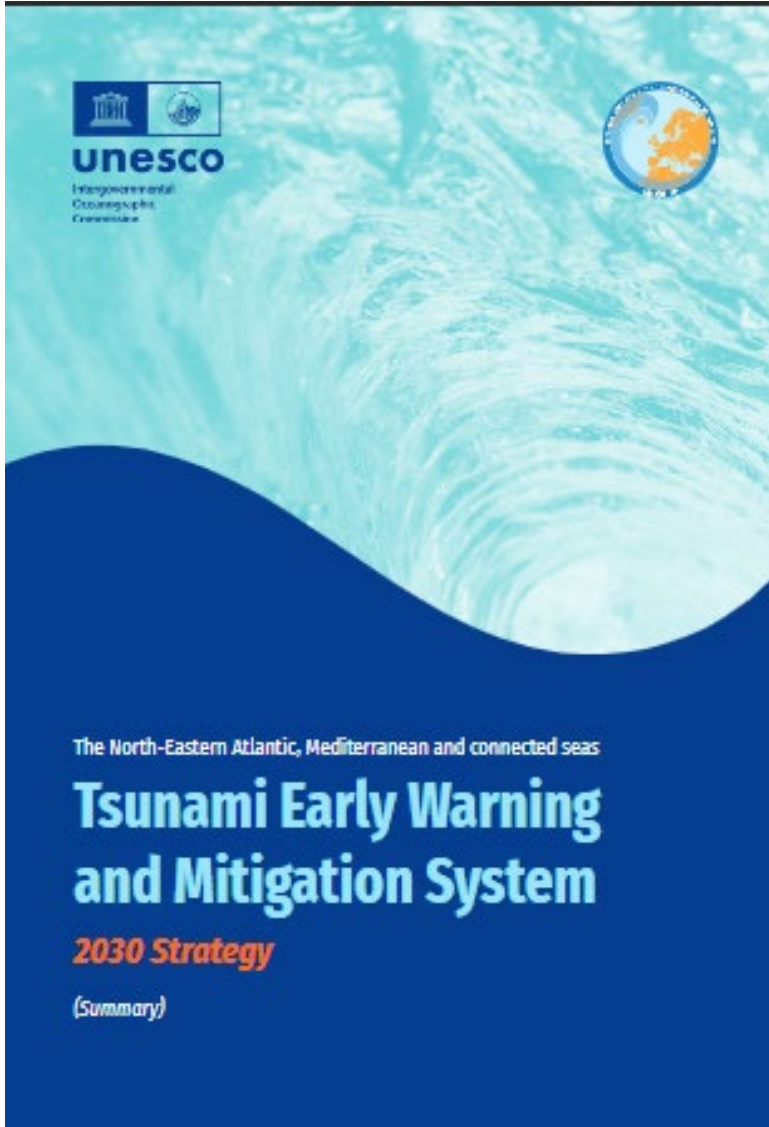
Team on Disaster Management and Preparedness

ODTP Focal Point

CoastWAVE Project Responsible Officer

Tsunami Resilience Section

UNESCO IOC



NEAMTWS 2030 Strategy



PILLAR 1 TSUNAMI HAZARD AND RISK ASSESSMENT

Objective 1.1 Implementation of probabilistic methodologies in tsunami hazard and risk assessment

Objective 1.2 **Member States to develop specific tsunami hazard and risk assessments for vulnerable national sub-regions**

Objective 1.3 Develop regional hazard assessment for landslide-generated tsunamis

Objective 1.4 **Multi-source tsunami hazard assessment**

**Research, Development and
Implementation Plan for the
Ocean Decade Tsunami Programme**

EXECUTIVE SUMMARY

Approved by the thirty-second Session of the IOC Assembly, UNESCO, 21-30 June 2023

**OCEAN DECADE
TSUNAMI PROGRAMME**

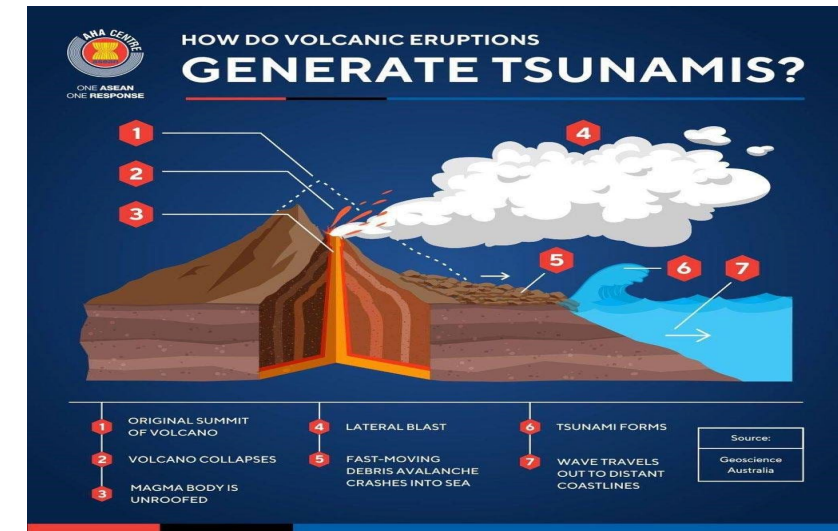
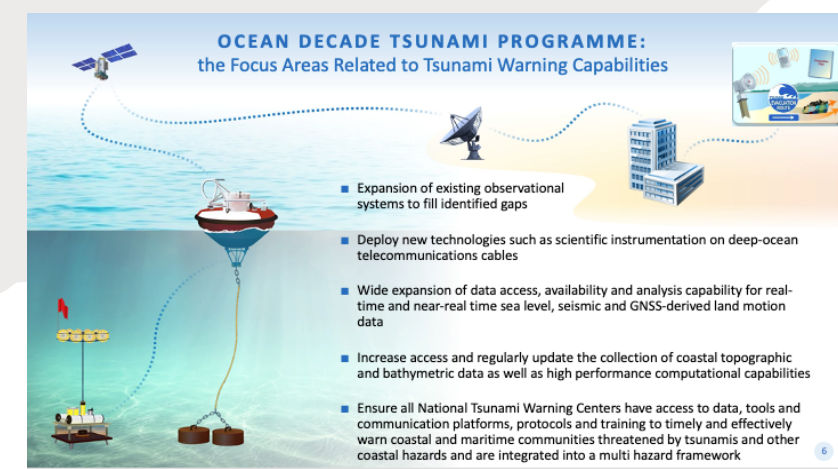
AN OCEAN DECADE ACTION

Transformation in the Global TEWS (2022)

Aim: To significantly enhance the existing Global Tsunami Warning System

ODTP -Objectives

1. To develop the warning systems' capability to issue actionable and timely (<10 min) tsunami warnings for tsunamis from all identified sources to 100% of coasts at risk
2. 100% of communities at risk be prepared and resilient to tsunamis by 2030 through programmes like the IOC-UNESCO Tsunami Ready Recognition Programme (TRRP)



CoastWAVE 2.0 Project

1. Through this Phase-II project proposal, new support received from EC DG ECHO to also build collective capacities in tsunami hazard and risk assessment.
2. **Component 1:** Build and strengthen tsunami hazard assessments, risk knowledge, risk communication, and decision-making capacities



Experts Meeting on Tsunami Sources : Tonga-Kermadec Subduction Zone

Summary

- **Experts reviewed** local tectonic knowledge to assess worst-case seismic scenarios (low, medium, high probability).
- **Acknowledged** non-seismic tsunami risks but lacked instrumentation to determine worst-case scenarios.
- **Identified gaps** in scientific knowledge

Shop Report No. 289



Experts Meeting on Tsunami Sources, Hazards, Risk and Uncertainties Associated with the Tonga-Kermadec Subduction Zone

Wellington, New Zealand
29 October–3 November 2018

Experts Meeting on Tsunami Sources....Vanuatu, Solomon and New Britain Subduction Zones

Intergovernmental Oceanographic Commission

Workshop Report No. 315



**Expert Meeting on Tsunami sources,
hazards, risk and uncertainties
associated with the Vanuatu,
Solomon and New Britain Subduction
Zones**

Port Vila, Vanuatu
14–17 May 2024

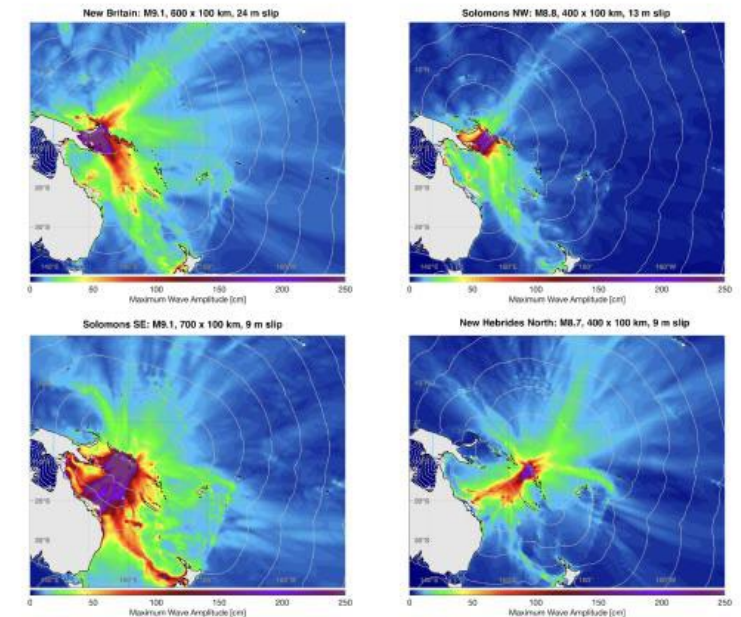
UNESCO

The Expert Meeting in Vanuatu aimed to assess earthquake sources capable of triggering tsunamis and support community hazard assessments and evacuation planning as part of the Tsunami Ready Recognition Programme in the Pacific Islands.

Main Outcome

Vanuatu Expert Meeting

- **Improved understanding** of regional tectonics, identifying both subduction and non-subduction tsunami sources.
- Recommendations included **updating earthquake magnitude limits** with recent data and reassessing maximum credible earthquakes in subduction zones.
- The 2012 GEM (Global EQ Model) Faulted Earth study was **endorsed with updates**.
- **A list of potential tsunami source scenarios** was provided to support tsunami modeling, preparedness, and evacuation planning



Maximum tsunami wave amplitude and hourly arrival time contours generated by the New Britain M9.1 segment (upper left), the Solomon Islands Northwest M8.8 segment (upper right), the Solomon Islands Southeast M9.1 segment (lower left), and the Vanuatu North M8.7 segment (lower right).

General Expectations

- As per expert meeting objectives, and in line with similar expert meetings outcomes in other ICGs
 - Follow up maybe needed
- Future expert meetings (other sources etc.)
 - ICG-NEAMTWS Technical Report

THANK YOU