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ICG/PTWS activities  
from February 2022 to  
February 2023

NISHIMAE Yuji  
Chair, ICG/PTWS

# TSPs in the Pacific

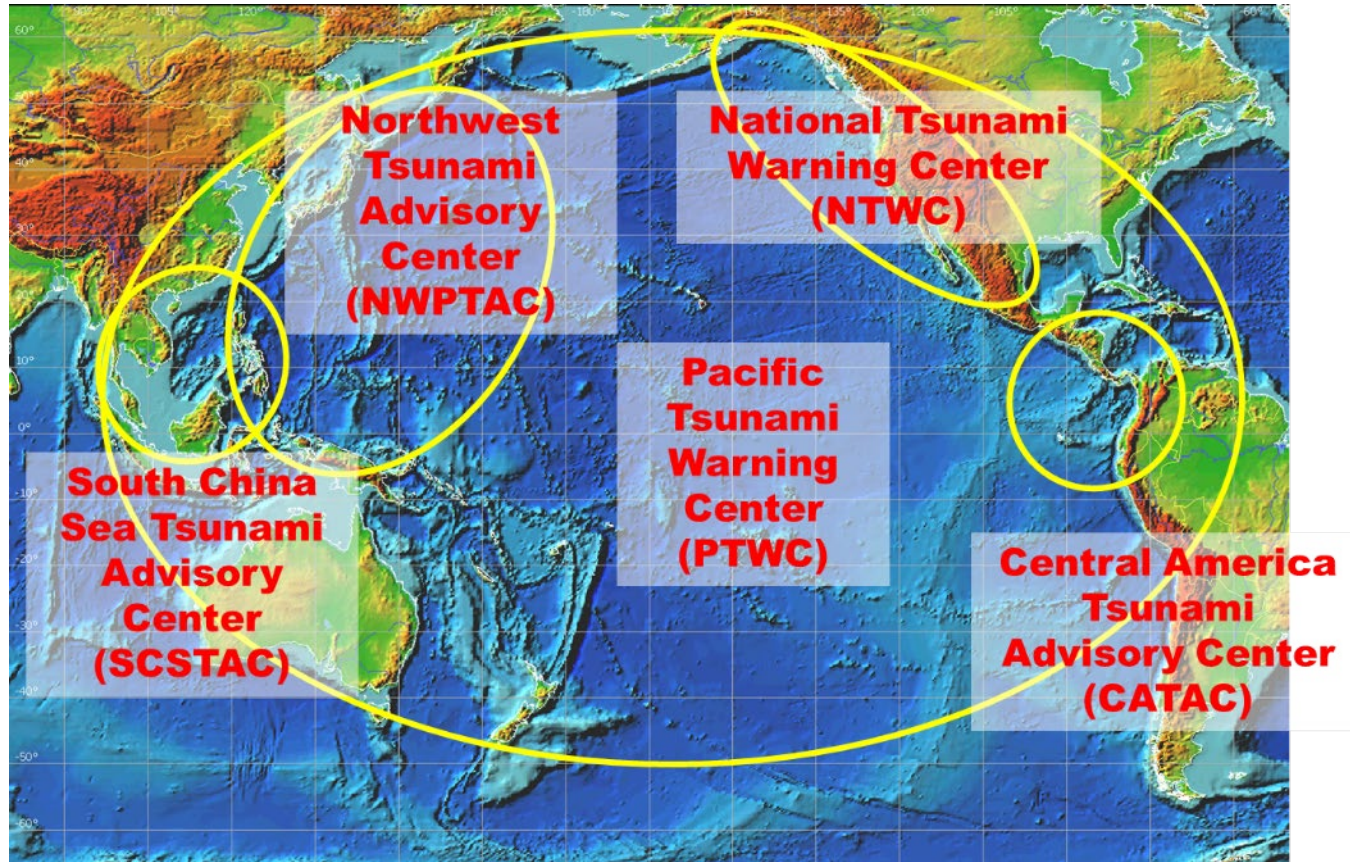


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## ➤ Five TSPs

- PTWC, NWPTAC, SCSTAC, CATAAC, and NTWC in the USA



# Significant Events from Feb.2022 to Feb. 2023( M>7.0)

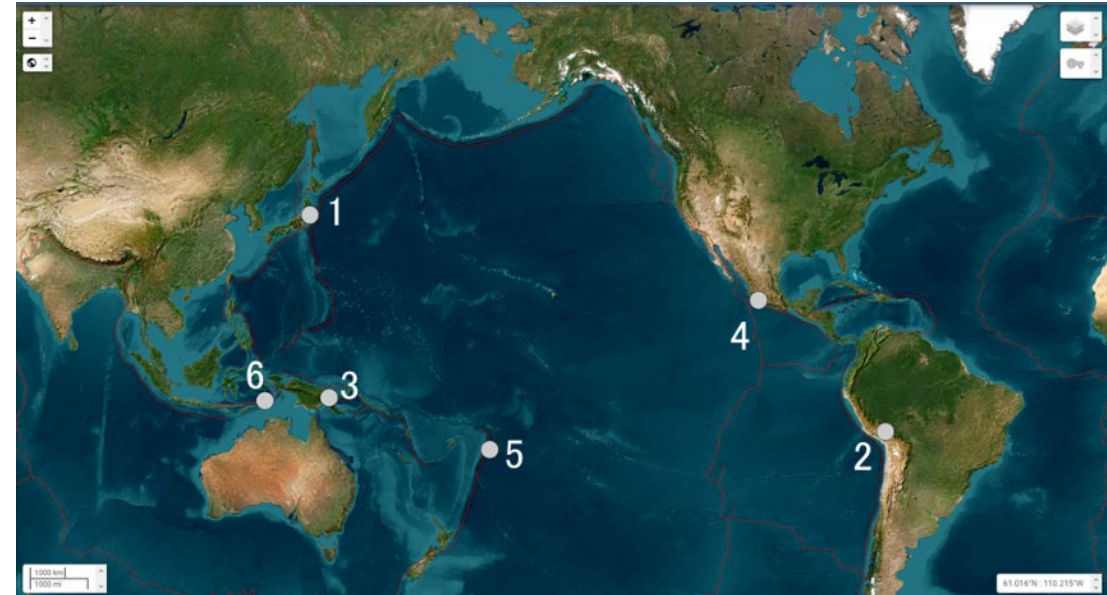


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No	Time	Latitude	Longitude	Depth (h)	Mag	Mag type	Max. tsunami height (m)
1	2022-03-16T14:36:30.997Z	37.71	141.58	41	7.3	mww	0.31**
2	2022-05-26T12:02:21.110Z	-14.91	-70.29	236	7.2	mww	no tsunami
3	2022-09-10T23:47:00.233Z	-6.29	146.50	116	7.6	mww	no tsunami
5	2022-09-19T18:05:08.217Z	18.46	-102.96	27	7.6	mww	0.79*
5	2022-11-11T10:48:46.710Z	-19.29	-172.15	37	7.3	mww	0.12*
6	2023-01-09T17:47:35.038Z	-7.07	130.00	105	7.6	mww	0.09*

Earthquake Source Parameters by USGS



Tsunami height by;  
\*: NGDC/WDS Global Historical  
Tsunami Database  
\*\*: Japan Meteorological Agency



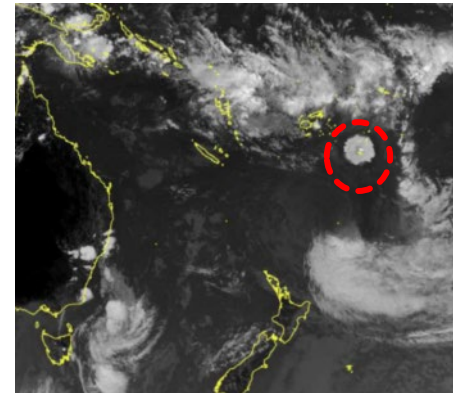


## PTWS responses to 15 January 2022, Hunga-Tonga-Hunga-Ha'apai Volcanic Eruption and Tsunami

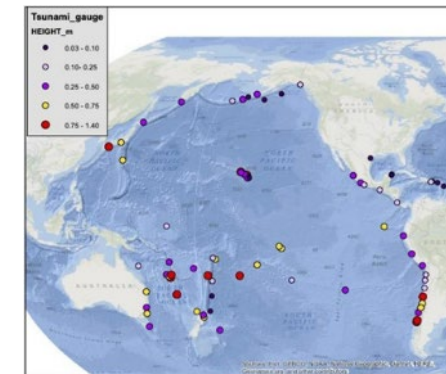
- Hunga-Tonga-Hunga-Ha'apai Volcano erupted on 15 January 2022.
- Tsunami waves were observed at not only near tide gauges but also distant tide gauges.- Larger than 1 meter in California of USA, Chile, Japan.
- PTWS held Debrief meetings three times; 20 January, 3, 10 February.
  - Objectives of the meeting
    - ✓ Interim Volcanic Tsunami SOP – What to do if it happens again.
    - ✓ Review what happened in TWCs – share experiences with TWCs : what was available, what was not



Location of Hunga-Tonga Hunga-Ha'apai volcano



Ash cloud detected by the meteorological satellite Himawari-8



maximum tsunami amplitude reported by PTWC on 15 January



# PTWS Interim Procedures Implementation Plan & Users Guide

- Preparation for the future event – What to do if the event happens again.
- Small temporary task team was established to work for implementation plan.
- Tsunami amplitudes are forecasted by scaling observed maximum amplitudes observed across the Pacific from the January 15 event with observed amplitudes for any future event, starting with the observed amplitudes at Nuku`alofa and the NZG DART.
- PTWC provides special products for a HTHH volcano generated tsunami.
- 17 August : User's Guide Published (CL-2902)
- 6 September : ICG/PTWS HTHH Interim Procedures and PTWS Products Informational Webinar
- PICT drill in the PacWave 2022 to test interim procedures

HTHH Volcanic Tsunami Hazard Response:  
ICG/PTWS PTWC Interim Procedures and PTWS Products User's Guide, V1.3

## Hunga Tonga – Hunga Ha`apai Volcanic Tsunami Hazard Response

### Intergovernmental Coordination Group for Pacific Tsunami Warning and Mitigation System (ICG/PTWS) PTWC Interim Procedures and PTWS Products User's Guide Version 1.3, 25 July 2022

Due to the potential for another Hunga Tonga–Hunga Ha`apai volcanic eruption and tsunami, immediate development of an Intergovernmental Coordination Group for Pacific Tsunami Warning and Mitigation System (ICG/PTWS) Interim Procedures Implementation Plan for the Hunga Tonga–Hunga Ha`apai Volcanic Tsunami Hazard Response was initiated. This followed the proposal presented to Member States, their feedback, and agreed upon 'Actions Forward' concluded from the PTWS Post-Event Brief I: 15 January 2022: Hunga Tonga–Hunga Ha`apai Volcanic Eruption and Tsunami held on 20 January 2022. Further Member State feedback was provided during PTWS Post-Event Brief II on 3 February 2022 and PTWS Post-Event Brief III on 10 February 2022.

To facilitate implementation of the PTWS Interim Volcano Tsunami Alert Products and Procedures, the ICG/PTWS established a Task Team on the HTHH Volcanic Tsunami Hazard Response. The Task Team finalised the Implementation Plan and it was endorsed by the ICG/PTWS Steering Committee on 1 March 2022 (v1.1).

This document now details the ICG/PTWS PTWC Interim Procedures and PTWS Products User's Guide, which was developed by the Task Team, reviewed in consensus by the ICG/PTWS Steering Committee and subsequently approved by the Chair of ICG/PTWS on 25 July 2022 (v1.3)

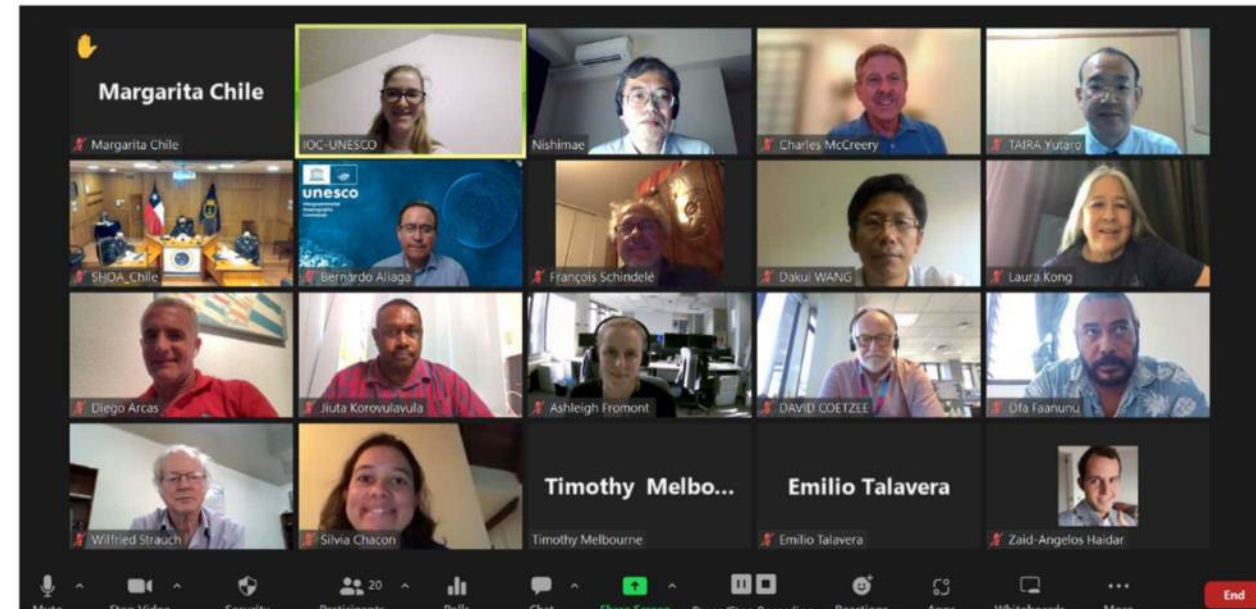
# PTWS Steering Committee (online) (July 12, 2022)



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- The Kingdom of Tonga offered the host country for the PTWS 30<sup>th</sup> session in September 2023.
- The PTWS-SC discussed “HTHH PTWC Interim Procedures and PTWS Products – User’s Guide”.
  - ✓ User’s Guide was published on 17<sup>th</sup> August 2022 (CL-2902)
  - ✓ Official endorsement in the PTWS 30<sup>th</sup> Session
- The PTWS-SC decided the next PTWS-SC will be held back-to-back with the next TOWS-WG.
  - ✓ The next PTWS-SC meeting will be held from 6<sup>th</sup> March to 9<sup>th</sup> March.





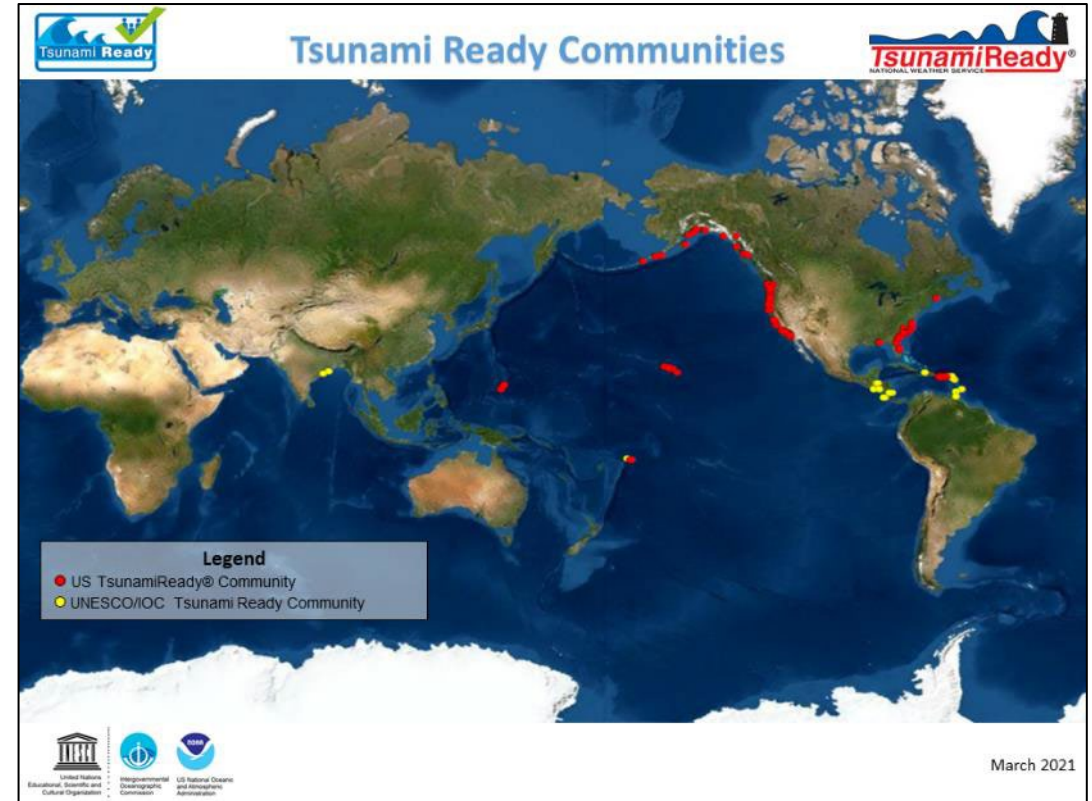
# IOC/UNESCO Tsunami Ready Recognition Program



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- Honduras
  - Cedeño
- Costa Rica
  - Ostional
  - Samara
  - Tamarindo
  - Playas El Coco
  - Quepos
  - Uvita-Bahía
- Samoa
  - Savaia, Upolu
- El Salvador
  - La Libertad
  - Tamanique
- Guatemala
  - San Jose
  - Sipacate
- Panama
  - Puerto Armuelles
- Ecuador
  - Galapagos

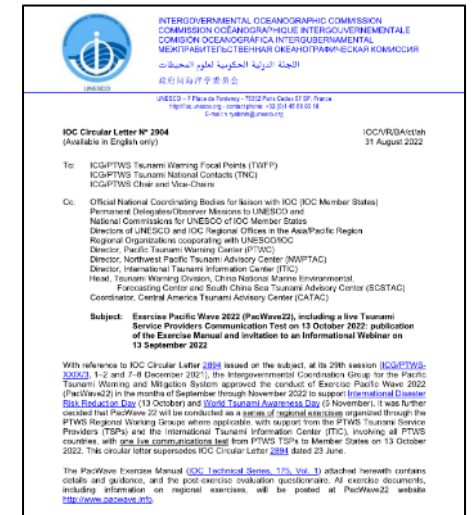


# Exercise Pacific Wave 2022

- 23<sup>rd</sup> June: PacWave 22 was announced (CL-2894).
- 31<sup>st</sup> August: PacWave 22 manual was distributed (CL-2904).
- 13<sup>th</sup> September: Informational Webinar
- 13<sup>th</sup> October 0000 UTC: Live Communications Test was conducted by the TSPs
  - ✓PTWC, NWPTAC, SCSTAC and CATAAC sent the test message.

## ➤ PICT Regional Exercise

- 2<sup>nd</sup> November: Exercise Pacific Wave 2022 - Pacific Island Countries and Territories (PICT) Informational Webinar
- 2300 UTC 9 Nov to 0100 UTC 10 November: PICT Regional Exercise
  - ✓ Exercise Scenario: HTHH eruption and tsunami on 15 January, 2022
- 16<sup>th</sup> November: Exercise Pacific Wave 2022 - Pacific Island Countries and Territories (PICT): Cold Wash and Debrief





# Activities of Working Groups and Task Teams

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- 17<sup>th</sup> – 19<sup>th</sup> October 2022: Seventh Meeting of Oceania Regional Seismic Network (ORSNET)
- 20<sup>th</sup> October 2022: Seventh Session of the ICG/PTWS Working Group 2 Task Team on Seismic Data Sharing in the Southwest Pacific
- 16<sup>th</sup> January 2023: ICG/PTWS WG2 Task Team on TSPs
  - PTWC, CATAC, NWPTAC, SCSTAC and ITIC
- 2<sup>nd</sup> to 3<sup>rd</sup> February 2023: Ninth Meeting of the ICG/PTWS Regional Working Group on Tsunami Warning and Mitigation for Pacific Island Countries and Territories, Nadi, Fiji



# Plans in ICG/PTWS

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- **ICG/PTWS Steering Committee Meeting**
  - Venue: IOC/UNESCO (Paris)
  - Date: 6th to 9th March, 2023
- **ICG/PTWS 30<sup>th</sup> Session**
  - Venue: Kingdom of Tonga
  - Date: middle of September, 2023
- **Scheduled and unscheduled communications test of TSPs**
- **Preparations for Exercise Pacific Wave 2024**





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**Thank you very much for  
your kind attention.**