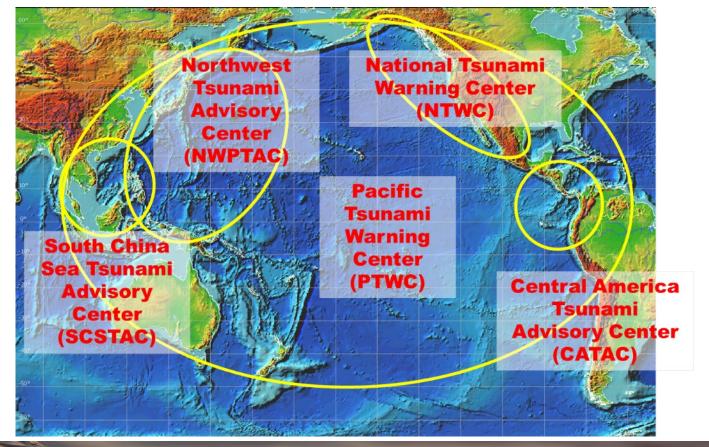


ICG/PTWS activities from February 2022 to February 2023

NISHIMAE Yuji Chair, ICG/PTWS

TSPs in the Pacific

- > Five TSPs
 - PTWC, NWPTAC, SCSTAC, CATAC, and NTWC in the USA





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



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ı	No	Time	Latitude	Longitude	Dept 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*

6 3 4 2 11215 2

Earthquake Source Parameters by USGS

Tsunami height by;

*: NGDC/WDS Global Historical

Tsunami Database

**: Japan Meteorological Agency

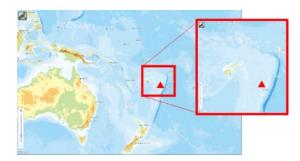


PTWS responses to 15 January 2022, Hunga-Tonga-Hunga-Ha'apai Volcanic Eruption and Tsunami Unesco

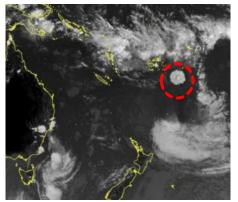
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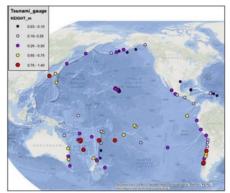
- Hunga-Tonga-Hunga-Ha'apai Volcano erupted on 15 January 2022.
- Tsunami waves were observed at not only near tide gauges but also distant tide gauges.- Larger than 1 meter in California of USA, Chile, Japan.
- PTWS held Debrief meetings three times; 20 January, 3, 10 February.
 - Objectives of the 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-



maximum tsunami amplitude reported by PTWC on 15 January



- 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)
- <u>6 September</u>: 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 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)



Intergovernmental Oceanographic Commission

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



- ➤ The Kingdom of Tonga offered the host country for the PTWS 30th session in September 2023.
- ➤ The PTWS-SC discussed "HTHH PTWC Interim Procedures and PTWS Products User's Guide".
 - ✓ User's Guide was published on 17th August 2022 (CL-2902)
 - ✓ Official endorsement in the PTWS 30th 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 6th March to 9th March.



IOC/UNESCO Tsunami Ready Recognition Program



- **≻**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

- 23rd June: PacWave 22 was announced (CL-2894).
- 31st August: PacWave 22 manual was distributed (CL-2904).
- <u>13th September</u>: Informational Webinar
- <u>13th October 0000</u> UTC: Live Communications Test was conducted by the TSPs

✓ PTWC, NWPTAC, SCSTAC and CATAC sent the test message.

➢PICT Regional Exercise

- 2nd 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
- 16th November: Exercise Pacific Wave 2022 Pacific Island Countries and Territories (PICT): Cold Wash and Debrief







INTERGOVERMMENTAL OCEANOGRAPHIC COMMISSION COMMISSION COEANOGRAPHIQUE RYTERGOLVERMENTALE COMISION OCEANOGRAPHIQUE RYTERGOLVERMENTAL ECOMISION OCEANOGRAPHICA INTERGUIERMMENTAL MERCHASHTERGOTERHAR OKEAHOTPARAN-ECKAP KOMMOCKR

UNESCO - 7 Place de Pontency - 75352 Plante Cedex ST SP, France

C Circular Letter Nº 2904

ICC/VR/BA/ct/sh

 ICG/PTWS Tsunami Warning Focal Points (TWFP) ICG/PTWS Tsunami National Contacts (TNC)

Contact Material Conceivaining Bodies for lassion with NCC (IOC homorer status). Personnent Designation Steven Helescore for UMBSIGO and Designation Steven Helescore for UMBSIGO and Designation Steven Helescore for UMBSIGO and IOC Regions Offices in the Assamantic Region Regions Regional Organizations coopporating with UMBSIGO and Designation Contacts. Particle Tauranti Warring Genter (PTWC). Descoto: Nothers Facility Townson Advisory Center (NMPTAC).
Descoto: Nothers Facility Townson Advisory Center (NMPTAC).

Forecasting Center and South China Sea Tsunami Advisory Center (SCSTA Coordinator, Central America Tsunami Advisory Center (CATAC)

Bubject: Exercise Pacific Wave 2022 (PsetWave22), including a live Taurami Service Providers Communication Test on 13 October 2022; publication of the Exercise Manual and invitation to an Informational Webiner on 13 September 2022

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The PastWave Exercise Manual (<u>DC. Technical Series</u>, <u>175</u>, <u>Vol.</u> 1) aliached herewith contains colains and guidance, and the post-exercise evaluation questionnaire. All exercise documents, including information on regional exercises, will be posted at PastWave22 website.



Activities of Working Groups and Task Teams

- 17th 19th October 2022: Seventh Meeting of Oceania Regional Seismic Network (ORSNET)
- 20th October 2022: Seventh Session of the ICG/PTWS Working Group 2 Task Team on Seismic Data Sharing in the Southwest Pacific
- 16th January 2023: ICG/PTWS WG2 Task Team on TSPs
 - PTWC, CATAC, NWPTAC,SCSTAC and ITIC
- 2nd to 3rd 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



- ➤ ICG/PTWS Steering Committee Meeting
 - Venue: IOC/UNESCO (Paris)
 - Date: 6th to 9th March, 2023
- ➤ ICG/PTWS 30th 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.