

ITIC

ICG/PTWS HTHH Interim Procedures and PTWS Products Informational Webinar

September 6th 2022
2200-2300 UTC

Logistics: Dr. Laura Kong, ITIC Director

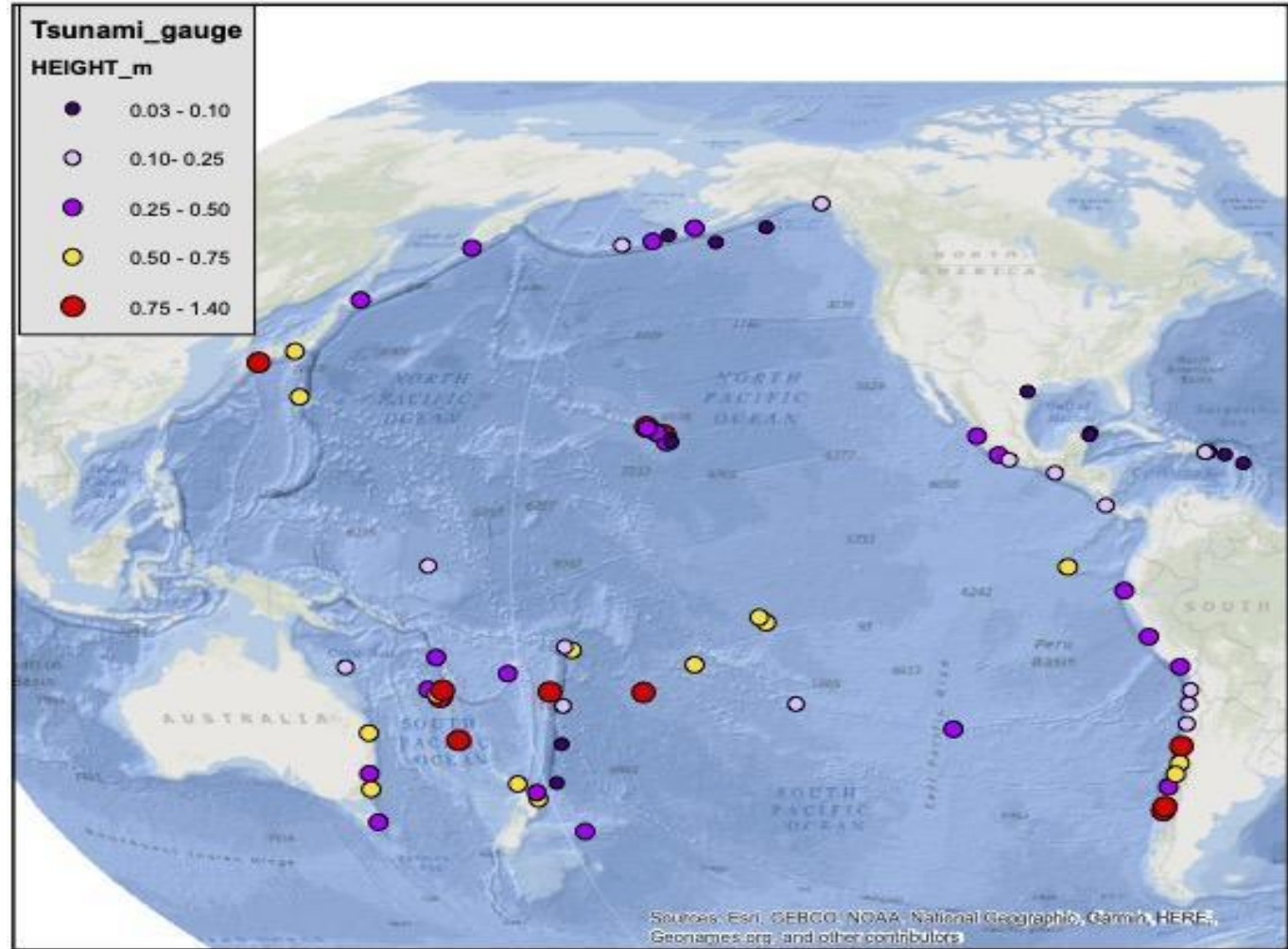
1. Welcome (5 min): Yuji Nishimae, PTWS Chair
2. Background (10 min): Francois Schindele, HTHH Task Team Chair
3. PTWS Interim Procedures and PTWC Products (20 min):
Dr. Chip McCreery, PTWC Director
4. Discussion (20 min): Moderator, Dr. Laura Kong, ITIC Director
5. Closing (5 min): Yuji Nishimae, PTWS Chair

HUNGA TONGA HUNGA HA'APAI EXPLOSION



15 January 2022

HUNGA TONGA HUNGA HA'APAI TSUNAMI



UNESCO/IOC - ICG/PTWS

DECISIONS and ACTIONS February 10th 2022 :

I Establishment of HTHH ad hoc task team on Volcano tsunami hazard Response (1/2)

This Task Team will focus only on the HTHH Interim Products and Procedures.

Terms of Reference of the TT HTHH Volcano Tsunami Hazard Response

1. Review and finalise the draft PTWS Interim Procedures Implementation Plan (draft 10 February 2022, presented at the PTWS Post-Event Brief III - 15 Jan 2022 HTHH Eruption and Tsunami).

- Consider and advise on the format, content including forecasts, and dissemination of the interim products*
- Consider and advise on the reach (target regions) of the interim products*

2. Review and provide feedback to the Pacific Tsunami Warning Centre (PTWC) during implementation and testing of the interim products

3. Review and provide feedback on the User's Guide for the interim products

UNESCO/IOC - ICG/PTWS

DECISIONS and ACTIONS February 10th 2022 :

I Establishment of HTHH ad hoc task team on Volcano tsunami hazard Response (2/2)

Membership: *Representatives of Member States of the ICG/PTWS representing at least one National Tsunami Warning Centre (NTWC) and National Disaster Management Office (NDMO), at least one Tsunami Service Provider (TSP), at least one Member State from the ICG/PTWS Pacific Island Countries and Territories (PICT) Working Group, ICG/PTWS Working Group 2 Chair, and ITIC ; with Chair elected by the ICG.*

Members :

Elected Chair : François Schindelé

NDMO : New-Zealand (David Coetzee, Ashleigh Fromont)

TSP: PTWC (Charles McCreery), NWPTAC (Yuji Nishimae)

PICT: Tonga ('Ofa Fa'anunu)

NTWC: Chile (SHOA, Carlos Zuñiga), France (TNC, Francois Schindelé)

ITIC: Laura Kong

WG2: Chair (Bill Fry)

UNESCO/IOC - ICG/PTWS

DECISIONS and ACTIONS March 16 2022

II PTWS Interim Procedures Implementation Plan



INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION
 COMMISSION Océanographique Intergouvernementale
 COMISIÓN OCEANOGRÁFICA INTERGUBERNAMENTAL
 МЕЖПРАВИТЕЛЬСТВЕННАЯ ОКЕАНОГРАФИЧЕСКАЯ КОМИССИЯ
 اللجنة الدولية الحكومية لعلوم المحيطات
 政府间海洋学委员会

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IOC Circular Letter No 2882
 (Available in English only)

IOC/VR/BA/ah
 16 March 2022

To : Tsunami National Contacts (TNCs),
 National Tsunami Warning Centres (NTWCs), and
 Tsunami Warning Focal Points (TWFs) of the Intergovernmental Coordination Group of
 the Pacific Tsunami Warning and Mitigation System (ICG/PTWS)

cc. : Official National Coordinating Bodies for liaison with the IOC,
 Permanent Delegates/Observer Missions to UNESCO, and
 National Commissions for UNESCO of IOC ICG/PTWS Member States
 Directors of UNESCO and IOC Regional Offices in the Asia/Pacific Region
 Permanent Observers to ICG/PTWS
 Director Pacific Tsunami Warning Center (PTWC)
 Director, Northwest Pacific Tsunami Advisory Center (NWPTAC)
 Director, South China Sea Tsunami Advisory Center (SCSTAC)
 Director, International Tsunami Information Center (ITIC)
 ICG/PTWS Officers

Subject: Interim Volcano-generated Tsunami Alert Products and Procedures
 of the Pacific Tsunami Warning and Mitigation System

The massive explosion on the volcanic island of Hunga Tonga-Hunga Ha'apai (HTHH), about 30 km (19 mi) south-southeast of Fonuafo'ou island in Tonga, on 15 January 2022 at about 4:14 UTC, generated a tsunami that caused damages locally, regionally, and across the Pacific.

This was the first time that the Pacific Tsunami Warning Center (PTWC) had to respond to such an event since its system is primarily focused on earthquake-generated tsunamis representing nearly 90% of the past cases of tsunamis in the world.

Following this event and with reference to the information provided in the IOC [Circular Letter 2877](#) regarding the launch of an IOC Post-Event Assessment for the HTHH volcanic eruption and tsunami, several responses have been received. I am pleased to reconfirm that the results of this assessment will be published by 1 April 2022.

In response to the HTHH volcanic explosion and tsunami, the Intergovernmental Coordination Group (ICG) for the Pacific Tsunami Warning and Mitigation System (PTWS) established a Task Team on Tsunami Hazard Response and requested it to prepare a PTWS HTHH Interim Volcano Tsunami Procedures Implementation Plan. By way of this letter, please find attached the Hunga Tonga–

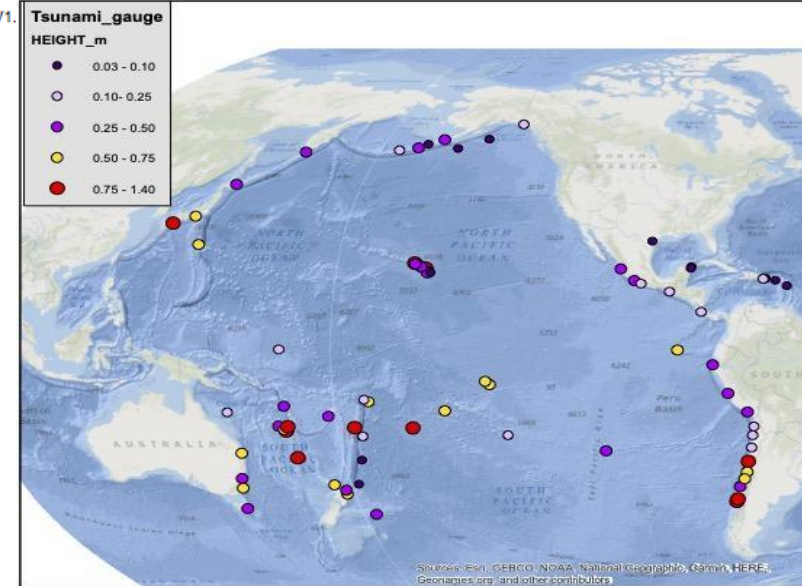
ICG/PTWS HTHH Interim Procedures Implementation Plan, V1.

Hunga Tonga – Hunga Ha'apai Volcanic Tsunami Hazard Response

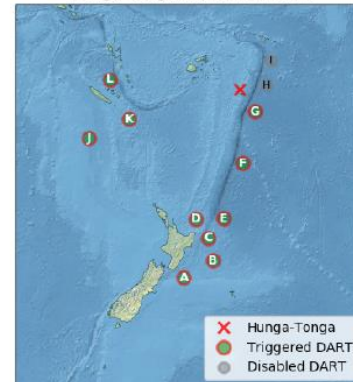
PTWS Interim Procedures Implementation Plan Version 1.1, 1 March 2022

Due to the potential for another Hunga Tonga–Hunga Ha'apai volcanic eruption and tsunami, immediate implementation of this Plan was begun following the proposal presentation 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.

This document presents the ICG/PTWS Interim Procedures Implementation Plan for the Hunga Tonga–Hunga Ha'apai Volcanic Tsunami Hazard Response for urgent consideration and adoption by the ICG/PTWS Steering Committee.

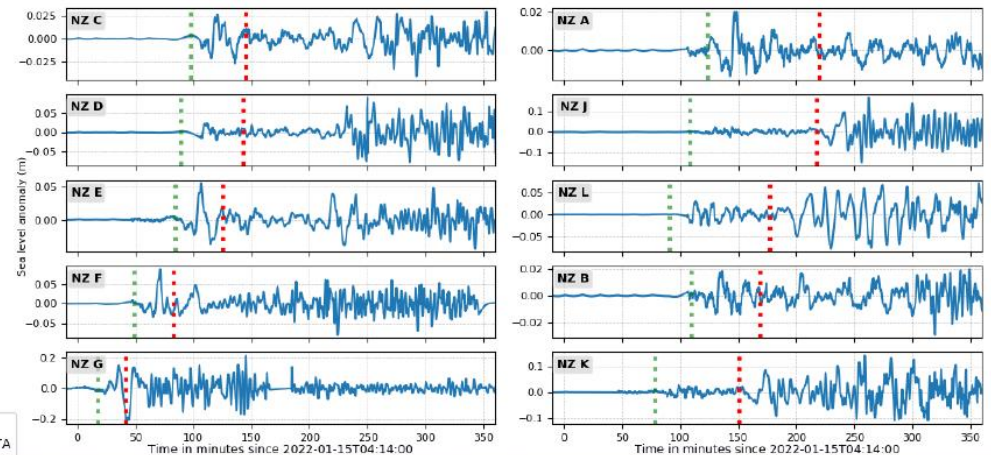


NZ DART Network
 Hunga-Tonga tsunami records



GNS/GEONET - CEA - A.Jamelet

●●● Tsu. ETA
 ●●● Shock. ETA



II PTWC Interim Procedures and PTWS Products User's Guide

SPECIFIC TEXT MESSAGES



INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION
COMMISSION OCÉANOGRAPHIQUE INTERGOUVERNEMENTALE
COMISIÓN OCEANOGRÁFICA INTERGUBERNAMENTAL
МЕЖПРАВИТЕЛЬСТВЕННАЯ ОКЕАНОГРАФИЧЕСКАЯ КОМИССИЯ

اللجنة الدولية الحكومية لعلوم المحيطات
政府间海洋学委员会

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IOC Circular Letter No 2902
(Available in English only)

IOC/VR/BA/ah/RB
17 August 2022

To : Tsunami National Contacts (TNCs),
National Tsunami Warning Centres (NTWCs), and
Tsunami Warning Focal Points (TWFPs) of the Intergovernmental Coordination Group of
the Pacific Tsunami Warning and Mitigation System (ICG/PTWS)

cc. : Official National Coordinating Bodies for liaison with the IOC,
Permanent Delegates/Observer Missions to UNESCO, and
National Commissions for UNESCO of IOC ICG/PTWS Member States
Directors of UNESCO and IOC Regional Offices in the Asia/Pacific Region
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Director Pacific Tsunami Warning Center (PTWC)
Director, Northwest Pacific Tsunami Advisory Center (NWPTAC)
Director, South China Sea Tsunami Advisory Center (SCSTAC)
Director, International Tsunami Information Center (ITIC)
ICG/PTWS Officers
ICG/PTWS Steering Committee

Subject: PTWC Interim Procedures and PTWS products for Tsunamis developed
after the Hunga Tonga Hunga Ha'apai Volcano event (User's Guide and
informational webinar on 6 September 2022)

The massive explosion on the volcanic island of Hunga Tonga-Hunga Ha'apai (HTHH), about 30 km
(19 mi) south-southeast of Fonuafo'u island in Tonga, on 15 January 2022 at about 4:14 UTC,
generated a tsunami that caused damages locally, regionally, and across the Pacific.

This was the first time that the Pacific Tsunami Warning Center (PTWC) had to respond to such an
event, since its system is primarily focused on earthquake-generated tsunamis representing nearly
90% of the past cases of tsunamis in the world.

Following this event and with reference to the information provided in the IOC [Circular Letter 2877](#)
regarding the launch of an IOC Post-Event Assessment for the HTHH volcanic eruption and tsunami,
we are pleased to confirm that nearly all Member States of the ICG/PTWS did respond to the online
survey. The results of this assessment will be published by 30 September 2022.

In response to the HTHH volcanic explosion and tsunami, the Intergovernmental Coordination Group
(ICG) for the Pacific Tsunami Warning and Mitigation System (PTWS) established a Task Team on
Tsunami Hazard Response and requested it to prepare a PTWS Interim Volcanic Tsunami Alert

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

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)

B) INITIAL TSUNAMI THREAT MESSAGE

The following is a sample initial Tsunami Threat Message that might be issued following the detection of potentially hazardous tsunami waves on the nearest sea level gauge(s) to HTHH. In this example, based upon the tsunami amplitude observed at Nuku'alofa, the forecast is for gauge amplitudes that are 0.5 times the size of the amplitudes observed on January 15, 2022. The initial areal extent of the threat has been limited to three hours of tsunami travel time from HTHH. Note that the "TEST" language sprinkled throughout the message would be absent in an actual product.
ZCZC WEP40 PHEB 041555
TSUPAC

TEST...TSUNAMI MESSAGE NUMBER 1...TEST
NWS PACIFIC TSUNAMI WARNING CENTER HONOLULU HI
1555 UTC FRI MAR 4 2022

...THIS MESSAGE IS FOR TEST PURPOSES ONLY...
...TEST PTWC TSUNAMI THREAT MESSAGE TEST...

**** NOTICE **** NOTICE **** NOTICE **** NOTICE **** NOTICE ****

THIS IS A TEST MESSAGE. THIS MESSAGE IS ISSUED FOR INFORMATION ONLY IN SUPPORT OF THE UNESCO/IOC PACIFIC TSUNAMI WARNING AND MITIGATION SYSTEM AND IS MEANT FOR NATIONAL AUTHORITIES IN EACH COUNTRY OF THAT SYSTEM.

THIS IS A TEST MESSAGE. NATIONAL AUTHORITIES WILL DETERMINE THE APPROPRIATE LEVEL OF ALERT FOR EACH COUNTRY AND MAY ISSUE ADDITIONAL OR MORE REFINED INFORMATION.

**** NOTICE **** NOTICE **** NOTICE **** NOTICE **** NOTICE ****

TEST... VOLCANIC ACTIVITY IN TONGA GENERATED A TSUNAMI ...TEST

TEST... PRELIMINARY VOLCANO PARAMETERS ...TEST

* ACTIVITY TIME 1530 UTC MAR 4 2022
* COORDINATES 20.5 SOUTH 175.4 WEST
* LOCATION TONGA

TEST... EVALUATION ...TEST

* THIS IS A TEST MESSAGE. VOLCANIC ACTIVITY OCCURRED IN THE TONGA ISLANDS AT 1530 UTC ON FRIDAY MARCH 4 2022.

TEST... TSUNAMI THREAT FORECAST ...TEST

UNESCO/IOC - ICG/PTWS

HTHH ad hoc task team Background and future activities

Terms of Reference of the TT HTHH Volcano Tsunami Hazard Response

1. Review and finalise the draft PTWS ***Interim Procedures Implementation Plan*** (draft 10 February 2022, presented at the PTWS Post-Event Brief III - 15 Jan 2022 HTHH Eruption and Tsunami). **Unesco/IOC CL-2882**

- Consider and advise on the format, content including forecasts, and dissemination of the interim products **Unesco/IOC CL-2882 and 2902**
- Consider and advise on the reach (target regions) of the interim products

2. Review and provide feedback to the Pacific Tsunami Warning Centre (PTWC) during implementation and testing of the interim products.

NEXT TASKS

3. Review and provide feedback on the ***User's Guide*** for the interim products

Unesco/IOC CL-2902