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ICG/PTWS Report

NISHIMAE Yuji, Chair of ICG/PTWS 15 June, 2022

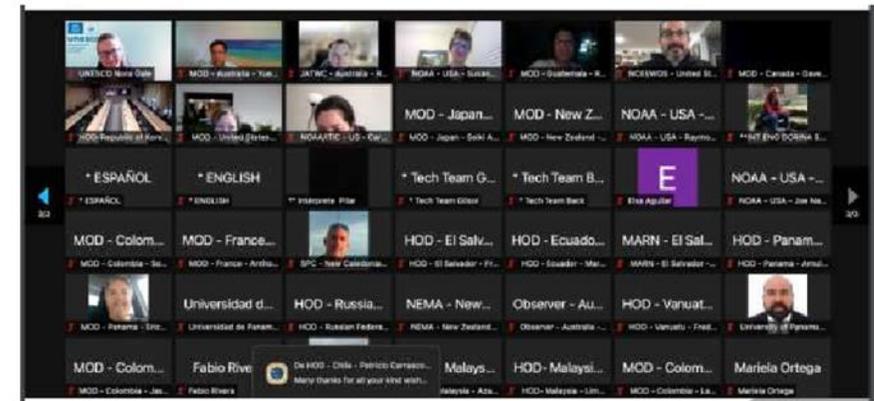
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- ▶ Report of the ICG/PTWS-XXIX Session (online)
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Participants of the ICG/PTWS-XXIX Session (online)

ICG/PTWS-XXIX Session (1)



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- ▶ Online meeting (1-2 and 7-8 December, 2021)
- ▶ 116 participants from 27 countries attended.
- ▶ Seven recommendations adopted
 - Recommendation ICG/PTWS-XXIX.1 ICG/PTWS Governance
 - Recommendation ICG/PTWS-XXIX.2 Understanding Tsunami Risk
 - Recommendation ICG/PTWS-XXIX.3 Tsunami Detection , Warning and Dissemination
 - Recommendation ICG/PTWS-XXIX.4 Disaster Risk Management and Preparedness
 - Recommendation ICG/PTWS-XXIX.5 Start of Operation of Central America Tsunami Advisory Center (CATAC)
 - Recommendation ICG/PTWS-XXIX.6 Task Team on Future Goals and Performance Monitoring
 - Recommendation ICG/PTWS-XXIX.7 UN Decade of Ocean Science for Sustainable Development (2021-2030)
- ▶ ICG/PTWS officers for the next term
 - Chair: Mr NISHIMAE Yuji (Japan)
 - Vice-Chair: Dr Wilfried STRAUCH (Nicaragua)
 - Vice-Chair: Mr. David COETZEE (New Zealand)





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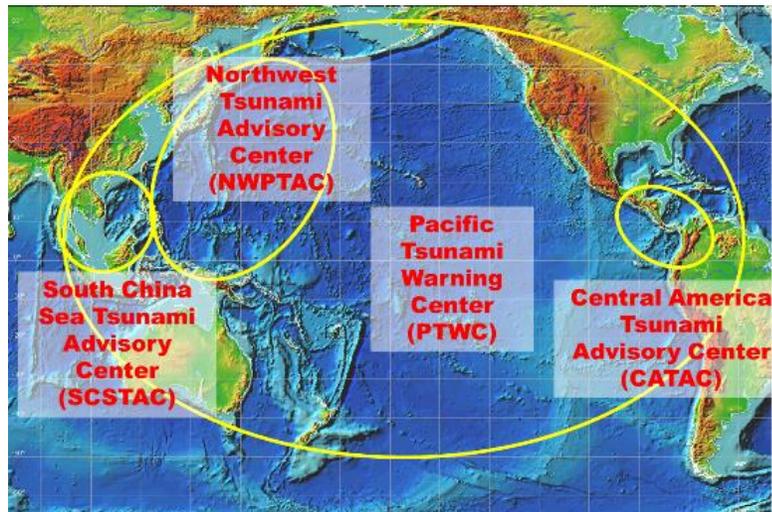
ICG/PTWS-XXIX Session (2)

- ▶ PacWave 20
 - PacWave20 period: September through November 2020
 - Live communication test on 5 November 2020
 - Regional exercise for Central America to test and validate provisional CATAC services
- ▶ PacWave 22
 - PacWave22 period: September through November 2022
 - ✓ Regional and country activities from September through November
 - ✓ Live communication tests on 13 October 2022
- ▶ ICG/PTWS medium term strategy 2022-2030
 - Four Strategic Objectives
 - ✓ Understanding and Managing Tsunami Hazard Risk
 - ✓ Tsunami Detection, Warning & Dissemination
 - ✓ Enhancing tsunami preparedness for effective community response
 - ✓ International Coordination and Cooperation and Partnerships

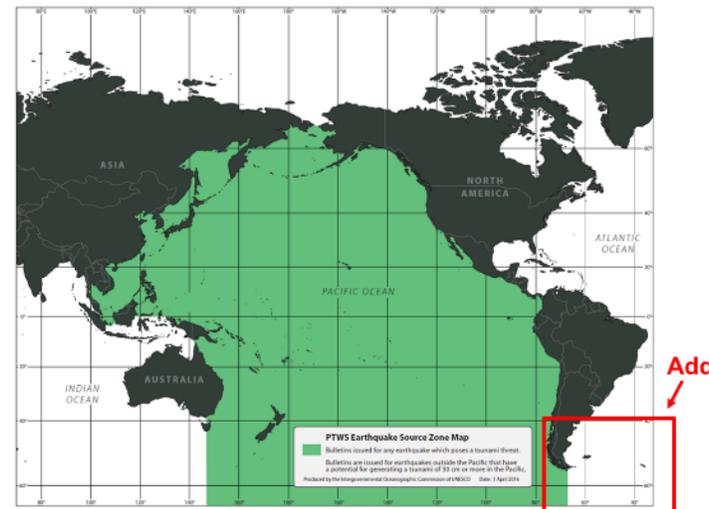


ICG/PTWS-XXIX Session (3)

- ▶ UN Decade of Ocean Science for Sustainable Development (2021-2030)
 - Establishment of Task Team on the Ocean Decade under the PTWS SC
- ▶ Central America Tsunami Advisory Center (CATAC)
 - PTWS decided to admit the start of CATAC's full functionality on the interim service in January 2022.
- ▶ Change of the Earthquake Source Zone of the PTWS
 - Expansion of ESZ of the PTWS to the southernmost Atlantic including the South Sandwich Islands



Tsunami Service Providers in the Pacific



Expansion of ESZ of the PTWS



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ICG/PTWS-XXIX Session (4)

▶ Established Task Teams

- Task Team on UN Ocean Decade
- Task Team on PacWave Exercises
- Task Team of the Tsunami Service Providers (TSPs) under WG2
- Task Team on Capacity Development and Services under the Regional WG in the South China Sea Region

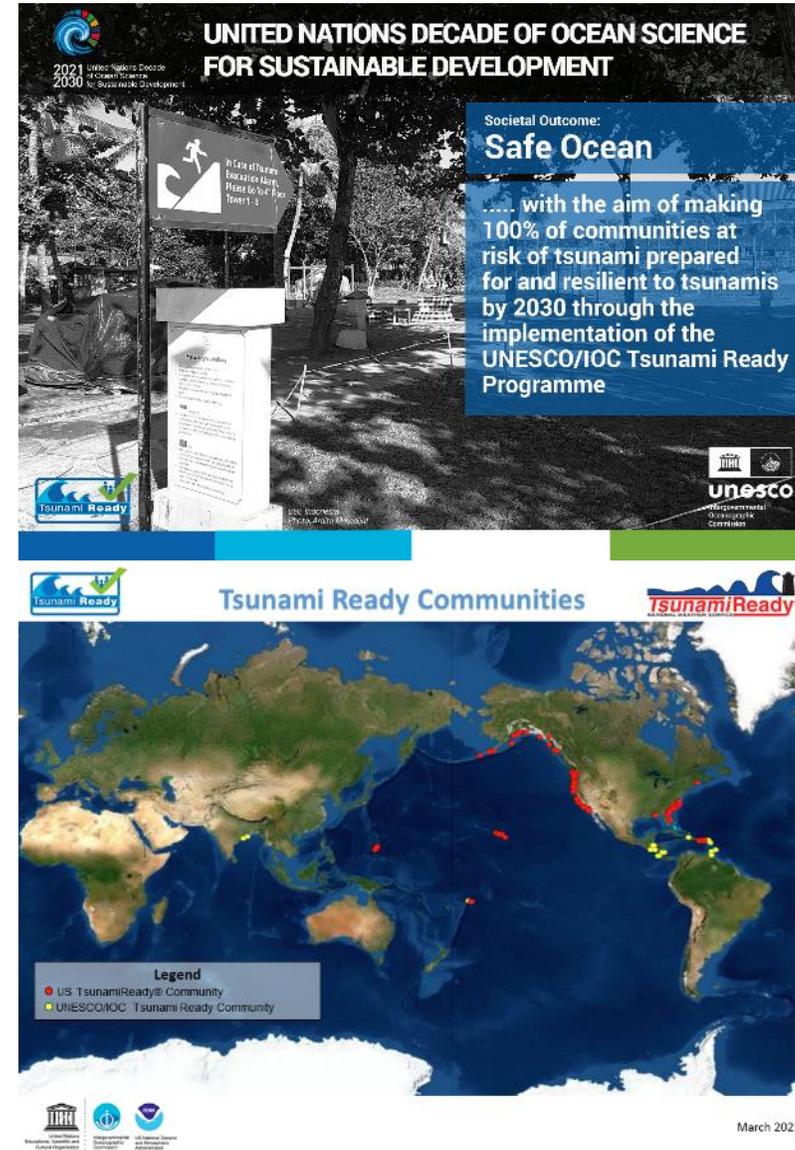
▶ Dissolved Task Teams

- Task Team on PacWave20 Exercises upon publication of the report
- Task Team on Establishment of a South China Sea Tsunami Advisory Center under the Regional WG in the South China Sea Region



Tsunami Ready in the Pacific

- ▶ As of June 2022,
 - 10 communities recognized in five countries (Costa Rica, El Salvador, Guatemala, Honduras, Samoa)
 - Additional 30 communities in 10 countries are in process
- ▶ IOC Ocean Teacher Global Academy (OTGA) online training courses to support Tsunami Ready
 - ITIC (US NOAA) (OTGA Specialized Training Center)
 - ✓ Tsunami Awareness available in July 2022
 - ✓ Tsunami Early Warning Systems planned for January 2023
 - Indonesia BMKG (OTGA Specialized Training Center) with IOC IOTIC
 - ✓ Tsunami Awareness available in July 2022
 - ✓ Tsunami Early Warning Systems planned for January 202



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



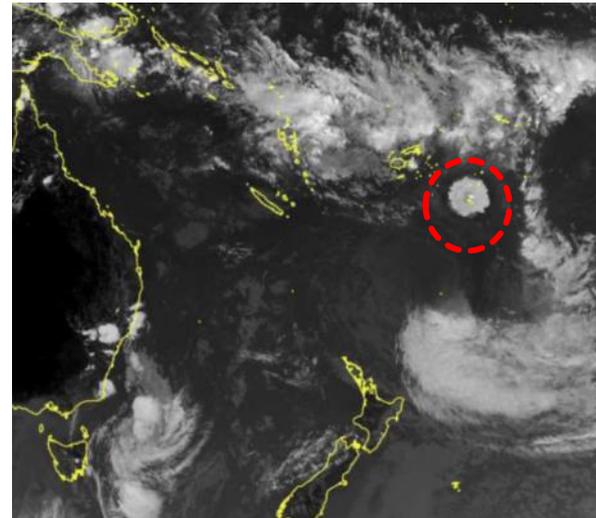
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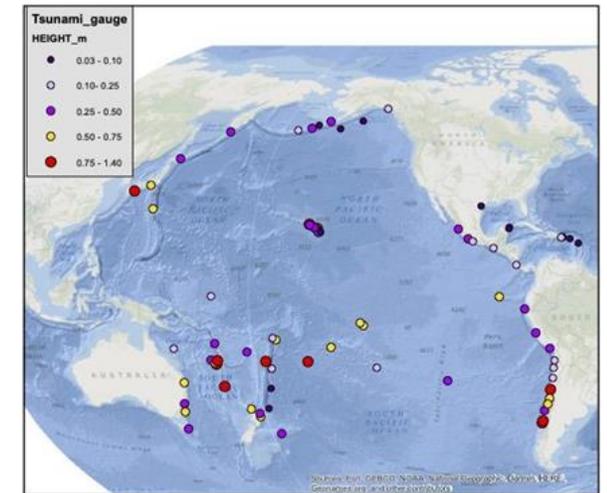
- ▶ Hunga-Tonga-Hunga-Ha'apai Volcano erupted on 15 January 2022.
- ▶ Tsunami waves were observed at not only near tide gauges but also distant tide gauges.- Larger than 1 meter in California of USA, Chile, Japan.
- ▶ PTWS held Debrief meetings three times; 20 January, 3, 10 February.
 - Objectives of 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-8



maximum tsunami amplitude reported by PTWC on 15 January

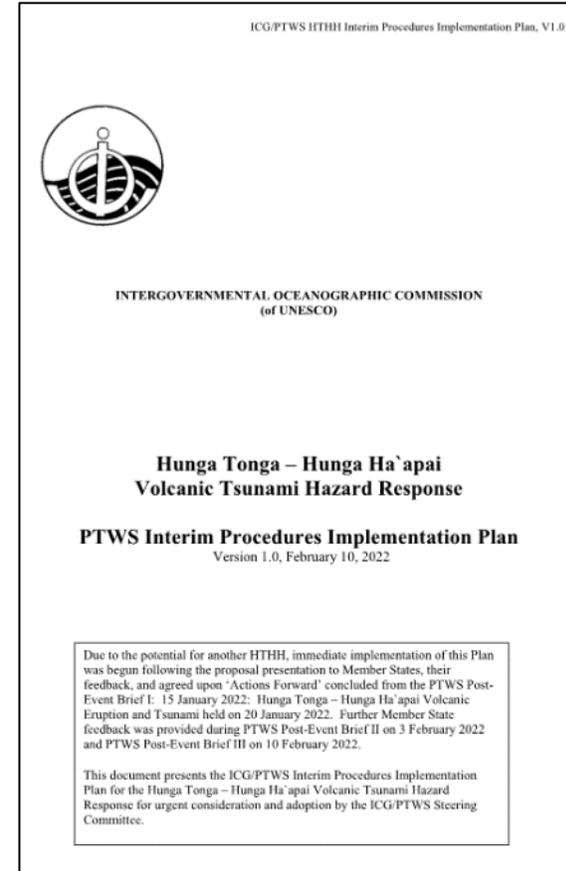
PTWS Interim Procedures Implementation Plan & Users Guide



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- ▶ 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.
- ▶ Users' Guide: to be finalized



Questionnaire for post-event assessment (CL-2877)

- ▶ Due Date: February 15, 2022
- ▶ Expected Publish: second half of 2022



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اللجنة الدولية الحكومية لعلوم المحيطات
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IOC Circular Letter No 2877
(Available in English only)

IOC/VR/BA/ah
31 January 2022

To : Tsunami National Contacts (TNCs),
National Tsunami Warning Centres (NTWCs),
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 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 Advisory Center (SCSTAC)
Director, International Tsunami Information Center (ITIC)
ICG/PTWS Officers

Subject: Post-event assessment of the Hunga-Tonga Hunga-Ha'apai volcanic eruption and tsunami of 15 January 2022

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

Upon detection of the explosion and the measures of coastal and deep-ocean sea level gauges, the Pacific Tsunami Warning and Mitigation System (PTWS) coordinated by UNESCO/IOC entered into action. Tonga National Tsunami Warning Centre (NTWC) hosted at the Tonga Meteorological Centre issued a tsunami warning at 4:24 UTC. Fiji, Vanuatu, New Zealand, and Samoa NTWCs issued



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HUNGA TONGA-HUNGA HA'APAI VOLCANIC ERUPTION AND TSUNAMI POST-EVENT ASSESSMENT QUESTIONNAIRE

PTWS TNCs, NTWCs and TWFs are kindly requested to provide one national consolidated response through this online questionnaire for their country by 15 February 2022. Responses will be compiled and a publication released by 1 April 2022.

If you have difficulty submitting online, you may submit your Questionnaire by email using a fillable-PDF form to the IOC PTWS Technical Secretary or the ITIC:

Bernardo Aliaga, PTWS Technical Secretary, b.aliaga@unesco.org
Laura Kong, Director, International Tsunami Information Center, laura.kong@noaa.gov



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THANK YOU

