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**IOC/ICG/PTWS-XXX/3s**

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**INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION  
(Of UNESCO)**

**THIERTIETH SESSION OF THE INTERGOVERNMENTAL COORDINATION GROUP  
FOR THE PACIFIC TSUNAMI WARNING AND MITIGATION SYSTEM**

11–15 September 2023, Nuku'alofa, Tonga

**EXECUTIVE SUMMARY**

In accordance with Rule 48.3 of the Rules of Procedure for the primary Subsidiary Bodies of the Commission, the Intergovernmental Coordination Group for the Pacific Tsunami Warning and Mitigation System is required to report to a governing body on its sessions. The documentation and information for the session are available [online](#).

The IOC Executive Council at its Fifty-seventh session will be invited to consider this Executive Summary and the recommendations it contains.

1. The Thirtieth Session of the UNESCO-IOC Intergovernmental Coordination Group for the Pacific Tsunami Warning and Mitigation System (ICG/PTWS) took place during 11–15 September in 2023 in Nuku'alofa, Tonga. The session was held in hybrid format (in-person and online) and was attended by 62 delegates from 17 Member States in the Pacific Ocean region (Australia, Canada, Chile, China, Ecuador, Fiji, France, Indonesia, Japan, Malaysia, New Zealand, Nicaragua, Republic of Korea, Solomon Islands, Tokelau, Tonga, and United States of America). Fifteen observers from 6 countries (Bangladesh, Fiji, France, India, Russian Federation and United States of America) also attended the session. The session was the first in-person session of the ICG/PTWS since 2021 and was therefore an essential opportunity to catalyse existing and new activities. Some of the key outcomes of the session included:

- (i) strengthening the mandate and the ability of the Steering Committee to deliver on the UN Ocean Decade goals;
- (ii) establishment of WG2 Task Team on Tsunami Generated by Volcanoes, WG2 Task Team on Forecasting from Ocean Observations, WG3 Task Team on Tsunami Ready and Pacific Island Countries and Territories Working Group Task Team on Information Sharing Platforms;
- (iii) establishment of a permanent Hunga Tonga-Hunga Ha'apai (HTHH) monitoring and warning procedures based on the products and methods in use by PTWC since March 2022;

- (iv) expansion of the PTWS Earthquake Source Zone to include an area from 63° to 52° S and from 72° to 18° W to include the Scotia Arc and its adjacent seismic zones, and consequently to update the PTWS Earthquake Source Zone map; and
- (iv) decision to admit the start of Central America Tsunami Advisory Centre's (CATAC) full functionality with a starting date to be agreed in coordination with the ICG/CARIBE-EWS (Intergovernmental Coordination Group for the Tsunami and other Coastal Hazards Warning System for the Caribbean and Adjacent Regions), to be approved by the IOC Executive Council in June 2024.

2. **The ICG decided** to continue: Working Group 1 Understanding Tsunami Risk; WG2 Tsunami Detection, Warning and Dissemination; WG2 Task Team on the Integrated PTWS Sensor Networks for Tsunami Detection and Characterisation; Task Team on Seismic Data Sharing in the Southwest Pacific under the Pacific Island Countries and Territories; Working Group on Tsunami Warning and Mitigation System; WG3 Disaster Risk Management and Preparedness; and Sub-Regional Working Groups (Regional Working Group on Tsunami Warning and Mitigation System in the South China Sea Region; Regional Working Group on Tsunami Warning and Mitigation System on the Central American Pacific Coast; Regional Working Group on Tsunami Warning and Mitigation System in the Southeast Pacific Region; Pacific Island Countries and Territories Working Group on Tsunami Warning and Mitigation System); and Task Teams (Task Team on Capacity Development and Services under the Regional Working Group on Tsunami Warning and Mitigation Systems in the South China Sea Region and Pacific Island Countries and Territories; Working Group Task Team on Capacity Development). (See [ICG/PTWS Organisational Structure](#) (15 September 2023))

3. **The ICG decided** to continue PTWS Steering Committee with revised Terms of Reference in order to strengthen its mandate and ability to deliver on the UN Ocean Decade goals.

4. **The ICG decided** to continue the Task Team on PacWave Exercises and Task Team of the Tsunami Service Providers (TSPs) under Working Group 2.

5. **The ICG decided** to dissolve the Task Team on UN Ocean Decade, the Task Team on Future Goals and Performance Monitoring, and WG2 Task Team on the Minimum Competency Levels for National Tsunami Warning Centre (NTWC) Operations Staff.

6. **The ICG decided** to establish a WG2 Task Team on Tsunami Generated by Volcanoes (TGV, a WG2 Task Team on Forecasting from Ocean Observations (TT-FOO), a WG3 Task Team on Tsunami Ready and a Pacific Island Countries and Territories Working Group Task Team on Information Sharing Platforms.

7. **The ICG decided** to carry out an eleventh Pacific Wave Exercise in 2024 (PacWave 24) in the months of September through to November 2024 to support International Disaster Risk Reduction Day (13 October) and World Tsunami Awareness Day (5 November).

8. **The ICG accepted with appreciation** the kind offer of China to host the 31<sup>st</sup> Session of the ICG/PTWS in Beijing in April 2025.

9. **The ICG agreed** to support a scientific meeting of experts on the New Hebrides Trench; a meeting of Scientific Experts on the New Hebrides Trench would allow better assessment of uncertainties in tsunami hazard associated with this Subduction Zone and Back Arc.

10. **The ICG requested** WG1 to continue to support Tsunami Hazard Assessment (THA) studies in the Pacific as part of comprehensive risk assessment, consistent with the first objective of the UN Ocean Decade Tsunami Programme (UN ODTP), to achieve 100% coverage for coasts at risk of tsunamis and **encouraged** use of THA results for use in various IOC programmes such as ITIC training, Tsunami Ready Program, IOC/ICG/PTWS WG2 and WG3 activities and UN Ocean Decade Tsunami Programme.

11. **The ICG decided** to establish permanent HTHH monitoring and warning procedures based on the products and methods in use by PTWC since March 2022 and presented in IOC Circular Letters [2882](#) and [2902](#).
12. **The ICG considered** that the seismic zone in the Scotia Arc region is very active and have produced 33 earthquakes of magnitude 6.5 or greater since the year 2000, 13 of which were magnitude 7.0 or greater. It **decided** to expand the PTWS Earthquake Source Zone to include an area from 63° to 52° south latitude and from 72° to 18° west longitude to include the Scotia Arc and its adjacent seismic zones, and **requested** the IOC to change the PTWS Earthquake Source Zone map in IOC Technical Series [130](#) (*Tsunami watch operations: global service definition document*), accordingly.
13. **The ICG noted** advances in SMART Cable efforts in the Pacific and globally; **further noted** the advances in GNSS instrumentation and real-time processing and noting the possibility of these advances to contribute to PTWS Tsunami Early Warning goals; **recommended** WG2 continue to work closely with the Joint Task Force (JTF) for SMART Cables and the IUGG GTEWS\_Oceania project to utilize monitoring data from these efforts when they become available.
14. **The ICG noted** the challenges of telefaxing messages and the request from Task Team Tsunami Service Providers presented in the WG2 report to ICG/PTWS-XXX; **requested** the Secretariat to write to Member States to request feedback on the proposed changes to Telefax messaging, and also to request Member States to indicate whether the proposed changes pose an unacceptable risk to their respective National Tsunami Warning Centres and, if so, to recommend those Member States to work with their Tsunami Service Provider (TSP) to identify alternative methods for receiving TSP messages.
15. **The ICG noted** recommendations arising from the TT Minimum Competencies, and noting the submission of a Minimum Competency Framework to the IOC for consideration, and in anticipation that conditions around assessment of efficacy have been met, and **further noted** the instruction of the Working Group on Tsunamis and Other Hazards related to Sea-Level Warning and Mitigation Systems (TOWS-WG) at its 16<sup>th</sup> meeting in 2023 to the regional ICG, notably the PTWS, and the ITIC to pilot the PTWS National Tsunami Warning Centre (NTWC) Competency Framework for endorsement by ICG/PTWS with the goal to develop a global framework for all ICGs to use.
16. **The ICG approved** the PTWS National Tsunami Warning Centre competencies framework, and training requirements, and **welcomed** the ITIC proposal to pilot the PTWS Minimum NTWC Competency Framework through the development and conduct of a training course during the intersessional period, and report back on its outcome to the ICG/PTWS at its 31st session.
17. **The ICG noted** the vast amount and variable nature of non-earthquake tsunami sources in the historical record, and the challenge of forecasting most non-earthquake tsunamis; and **decided** to establish: (i) a WG2 TT on Tsunami Forecasting from Ocean Observations (TT-FOO) to investigate the use of TEW strategies based on direct ocean observations from available and emerging technologies; (ii) a WG2 TT to explore options for developing alternative warning strategies for tsunamis generated by volcanoes (TT-TGV).
18. **The ICG noted** that the PTWC proposed some changes to its text product and **agreed** that PTWC implement these changes following notification to Member States by circular letter three months in advance in accordance with the change process put in place by the ICG/PTWS in 2015.
19. **The ICG recalled** the TOWS-WG approved the proposal on TSP Messages for the Maritime Community and requested the Intergovernmental Coordination Groups to consider the proposal for implementation in their respective basins in the TOWS-WG-XII meeting.
20. **The ICG further recalled** IOC Assembly instructed the regional Intergovernmental Coordination Groups (ICGs) TSPs in collaboration with NAVAREA operators of the International

Hydrographic Organization (IHO) to test the tsunami maritime safety products in 2023/24, with a view to operationally implementing them in 2024–2025 (Decision A-32/3.4.1).

21. **The ICG recommended** the Pacific Tsunami Warning Center (PTWC) to finalize necessary preparations to provide special tsunami maritime safety products specifically for ships for all NAVAREA Coordinators in the Pacific and in the Southwest Atlantic (e.g. NAVAREAs VI, X, XI, XII, XIII, XIV, XV, and XVI) to transmit to the NTWCs to be forwarded to the NAVAREA Coordinators of their countries, or upon their request directly to the NAVAREA Coordinators in the absence of a NTWC.

22. **The ICG requested** the PTWS Steering Committee to finalise its decision at its next meeting on the provision of these products for a period of testing to be followed by a full operational implementation by the PTWC in 2024–2025.

23. **The ICG encourages** Member States to continue to share outcomes and progression towards 100% Tsunami Ready goal with WG3, including communities that are already considered compliant through national standards and **mandated** ITIC to continue to facilitate implementation and data collection regarding Tsunami Ready compliance in PTWS.

24. **The ICG recalled** the ICG/PTWS-XXIX.1 recommendation for WG3 to explore ways to recognize communities that choose not to implement the UNESCO-IOC Tsunami Ready Recognition Programme as compliant with the Tsunami Ready Indicators and **noted with appreciation** the work of WG3 through its Information Document *Recognition in Countries with existing Tsunami DRR Programmes*, proposing a Tsunami Ready Equivalency Approach that seeks to enable reporting of tsunami preparedness in a manner compatible with the UNESCO-IOC Tsunami Ready Recognition Programme, using existing national administrative frameworks and reporting requirements, and without requiring formal UNESCO-IOC recognition.

25. **The ICG endorsed** the proposed approach, **established** a Task Team for Tsunami Ready, and **recommended** WG3 to develop formal guidance for ICG/PTWS on the application of the proposed Tsunami Ready Equivalency Approach, led by WG3 TT on Tsunami Ready, in consultation with Regional Working Groups.

26. **The ICG decided** to support the efforts and progress made by Nicaragua in the creation of the Central America Tsunami Advisory Centre (CATAC), as a tsunami service provider (TSP) within the framework of the ICG/PTWS and **recalled** Recommendation ICG/PTWS-XXIX.5, which noted that the approval of both the ICG/CARIBE-EWS and IOC are necessary for the official full functional operations of CATAC.

27. **The ICG decided** to admit the start of the official full functional operations of CATAC, starting after the IOC Executive Council session in 2024, with the specific starting date to be **decided** after coordination with the ICG/CARIBE-EWS.

28. **The ICG noted** the need for coordination between the ICG/PTWS and its working groups in order to fulfil the UN ODTP goals for the PTWS, and **further noted** the strong leadership and strategic oversight required to implement the UN ODTP.

29. **The ICG recognised** that its Steering Committee has responsibility for strategic direction and coordination across all PTWS activities, including Ocean Decade, and **recommended** strengthening the mandate and ability of the Steering Committee to deliver on the Decade goals by modifying its Terms of Reference as contained in Appendix 1 to [Recommendation ICG/PTWS-XXX.1](#).

30. **The ICG recognised** the scope and scale of the tasks ahead, decided to increase the number of ICG/PTWS Vice-Chair positions to three, and elected Mr Yuji Nishimae (Japan) as the Chair, Mr Dakui Wang (China), Mr Wilfried Strauch (Nicaragua), and Mr 'Ofa Fa'anunu (Tonga) as the Vice-Chairs of the ICG/PTWS.