



PacWave 2024

Co-Chairs:

Margarita Martinez, ONEMI, Chile

Laitia Fifita, Meteorological Services, Tonga

Assistance:

Laura Kong, International Tsunami Information Center

Task Team on PacWave Exercises



PacWave Exercises Task Team



- ❑ Organize Exercises
- ❑ Members invited from ICG/PTWS Member States and Regional Working Groups, SPC, PTWC, NWPTAC, SCSTAC and CATAAC.
- ❑ Task Team co-chairs to be elected by ICG.

Co-Chairs

- ❑ Margarita Martinez – Chile
- ❑ Laitia Fifita – Tonga

Members (PacWave24)

- ❑ Chile, China, Colombia, Fiji, France-French Polynesia, France-New Caledonia, Guatemala, Indonesia, Japan, Republic of Korea, New Zealand, Panama, Solomon Islands, Tonga, USA (ITIC and PTWC), and Vanuatu

Also, Regional Exercises organized by Regional Working Groups

- ❑ Tsunami Warning and Mitigation System in the South China Sea Region
- ❑ Tsunami Warning and Mitigation System on the Central American Pacific Coast
- ❑ Tsunami Warning and Mitigation System in the Southeast Pacific Region
- ❑ Pacific Island Countries and Territories



Exercise Aim and Objectives (IOC Circular Letter No 2999)



PacWave24

- PacWave24 will test PTWS Tsunami Service Provider (TSP), and country operational plans and procedures to respond to a destructive tsunami. PacWave24 is the eleventh in a series of PacWave exercises that have been conducted biennially since 2006

- Steering Committee decided to provide special tsunami maritime safety products to NAVAREA coordinators through the NTWC from the PTWC, and further decided to conduct a trial dissemination of the dummy message from the PTWC to the NAVAREA coordinators through the NTWCs as part of Exercise Pacific Wave 2024.



Exercise Aim and Objectives (IOC Circular Letter No 2999)



PTWS Member States should choose to participate in all applicable modes of exercise outlined below:

- (i) One Live Communication Test from the PTWS TSPs to PTWS Member States on 5 of November 2024 at 0000UTC
- (ii) One NAVAREA Live Communication Test from PTWC to the NAVAREA Coordinators referred above through concerned NTWCs, or in the absence of an NTWC, upon request to the PTWS Technical Secretary, directly to the NAVAREA Coordinator, on 5 of November 2024 at 0100 UTC



The Exercise Manual (IOC Technical Series, 191)



PacWave24

- (iii) A national exercise from September to November 2024; and/or
- (iv) A regional exercise involving neighbouring Member States within a region, such as within the PTWS Regional Working Groups where applicable, with a common scenario.



Timeline Milestones (IOC Circular Letter No 2999)



KEY DATES

31 August 2024	Deadline for PTWS Regional Working Groups to inform TSPs if products needed, copied to ITIC
1 September – 30 November 2024	PacWave24 Member State national exercise
2 weeks before Regional Exercise (5 Nov.)	TSP products available on regional exercise webpage
5 November 2024 (0000 UTC)	Live TSP Communications Test
5 November 2024 (0100 UTC)	Live NAVAREA Coordinators Communication Test from PTWC through concerned NTWC
21 November 2024	PICT Regional Exercise



The Exercise Manual (IOC Technical Series, 191)



KEY DATES

15 December 2024	Deadline for Member States to complete and submit online PacWave24 Post-Exercise Evaluation Surveys for: <ul style="list-style-type: none">• Live TSP Communication Test• Live NAVAREA Coordinators Communication Test• National Exercise• Regional Exercise
15 December 2024	Deadline for Submission of Regional Exercise Reports. <ul style="list-style-type: none">• PICT Regional Exercise• SEP Regional Exercise
10 days prior to ICG/PTWS-XXXI (<i>April 2025, exact dates to be determined</i>)	Draft PacWave24 Summary Report shared with Member States
30 June 2025	Final PacWave24 Summary Report published and posted at http://www.pacwave.info/



The Exercise Manual (IOC Technical Series, 191)



Intergovernmental Oceanographic Commission
Technical Series

191



EXERCISE PACIFIC WAVE 2024
September–November 2024

Volume 1 **Exercise Manual**

<https://tsunami.ioc.unesco.org/en/node/145>

UNESCO

TABLE OF CONTENT

	page
1. BACKGROUND	1
2. PACWAVE 24 EXERCISE	2
2.1. PURPOSE	2
2.2. OBJECTIVES	2
2.3. PARTICIPATION	3
2.4. TYPES OF EXERCISES AND DATES	4
2.4.1. Tsunami Service Provider	4
2.4.2. National Exercises	5
2.4.3. Regional Exercises	6
2.4.4. Trial Transmission of Maritime Safety Products from PTWC to NAVAREA Coordinators through NTWC	6
3. TOOLS MADE AVAILABLE	7
3.1. WEBINARS	7
3.2. TSUNAMI COASTAL ASSESSMENT TOOL (TsuCAT)	7
3.3. DOCUMENTATION	7
4. POST-EXERCISE PHASE	9
4.1. EVALUATION	9
4.2. DEBRIEFING	9
4.3. EXERCISE VALIDATION	10
4.3.1. Evaluation Criteria	10
4.3.2. Evaluators	10
4.3.3. Evaluation Tools	10
4.3.4. Exercise PACIFIC WAVE 2024 Summary Report	11
5. OBSERVERS	11
6. REAL EVENTS DURING EXERCISE PLAY	11
7. MEDIA ARRANGEMENTS	11
ANNEXES	
I. TSUNAMI SERVICE PROVIDER COMMUNICATIONS TEST MESSAGES	
Pacific Tsunami Warning Center (PTWC)	
Northwest Pacific Tsunami Advisory Center (NWPTAC)	
South China Sea Tsunami Advisory Center (SCSTAC)	
Central America Tsunami Advisory Center (CATAC)	





Exercise Types

**Scenarios: Up to country, region. Use past PacWave scenarios.
Use TsuCAT (PTWC msgs)**

**Be conducted to include exercise activities over and above a table-top exercise.
Consider variations:**

- Conducting in real time during daytime working hours with full staffing or simulating minimal staff during night-time or weekend hours.
- Testing country capability to carry out warning and response responsibilities for situation where one or more PTWS TSPs is not able to provide guidance in timely manner.
- Conducting exercise down to community level, incl extensive public awareness campaign.
- Consider conducting regional exercise to share national event / alert level information in timely manner with neighbouring countries to better inform tsunami threat decision-making.
- Consider Sendai Framework for Disaster Risk Reduction Global Sendai Framework for Disaster Risk Reduction 7 global targets and 4 priorities for action, World Tsunami Awareness Day and/or UNOD for Sustainable Development in designing exercise.



PacWave22 Post-Exercise findings - gaps

Objective 2: *National readiness within the country.*

Evacuation:

- 53% responded affirmatively that they have a **mass evacuation plan** for the coasts of their territories in the event of a tsunami whereas **47% claimed not have one** of these instruments.
- Most of the countries (**74%**) **participating in this questionnaire do not have elements of an evacuation system**, such as evacuation maps, signage, and assembly points. Only 26% respondents confirmed that all tsunami-vulnerable communities have tsunami evacuation maps, signage, and assembly points for evacuation.

Objective 3: *Regional communication and cooperation*

- 63% of respondents indicated that their countries engaged in **communication and cooperation with other countries** in region. **37% did not practice cooperation** with other states members.
- 50% (18) of respondents answered this question, half of them confirmed that NTWC shared information with other countries, while the other **50% (9/18) NTWC did not share information**.
- Only 11% (2/18) respondents indicated that the NDMO communicated with other countries during exercise. In contrast, **89% (16/18) respondents stated NDMO did not share information** with other countries. 3 countries skipped this question.
- **67% of respondents did not share national information** with other countries during exercise.



WG-PICT Task Team: Information Sharing Platforms



PacWave24

Co-Chairs (interim)

- Anthony Jamelot (France-French Polynesia, first term), Jonathan Tafiariki (Solomon Islands, first term)

Members (PacWave24)

- PICT, ITIC. Observers: Council of Regional Organizations in the Pacific (CROP) Agencies, WMO Regional Association V (RAV)

1. Propose a **WG-PICT regional PacWave24 objective**;
2. Based on Pacwave22 report, **re-evaluate early / anticipatory information to be shared** between NTWC and NDMO and **which platform** would be more adapted for each kind of information.
3. **WhatsApp Guidelines:**
 - Maintain mobile contact in order to keep the PICT PacWave22 group alive;
 - Obtain official mobile numbers of NTWC and NDMO
 - Develop a guideline for messages sent on WhatsApp
4. **HF-Radio Guidelines:**
 - Collect and collate feedback from monthly tests and recommend preliminary guidelines.
 - Membership of the task team is open to any technical communication expert on this platform
5. **Email Listserv Guidelines:**
 - Develop a guideline for messages shared by email (no acknowledgement, etc)
 - Update and add new e-mail into the Pacwave22 listserv handled by ITIC
6. **Identify and list new and relevant platform(s)** for Information Sharing
 - Other social media (e.g., Signal)
 - Mobile App Broadcast system
 - Dedicated (private) broadcasting information web-page

PacWave22 Feedback – Improvements, wishlist

What to improve?

- NDMOs were not involved in all countries.
- Improve and promote people evacuation.
- The [amount of] time for promotion of the event.
- Start planning earlier and notification for all focal points.
- Improve the continuity of the exercises for the preparation of national drills.
[not sure what meant – have regular exercises as part of national program of readiness?]
- Funding support.
- Always difficult to get the survey filled and return[ed] in time, any recommendations on improvements ?





PacWave 2024

Co-Chairs:

Margarita Martinez, ONEMI, Chile

Laitia Fifita, Meteorological Services, Tonga

Assistance:

Laura Kong, International Tsunami Information Center

Task Team on PacWave Exercises

