



**IOC Circular Letter N° 3020**  
(Available in English only)

IOC/VH/BA/ah  
19 December 2024

To: Chairperson of TOWS-WG  
Chairpersons of ICG/CARIBE-EWS, ICG/IOTWMS, ICG/NEAMTWS, ICG/PTWS  
Chairpersons of GOOS, JCB and IODE  
Tsunami National Contacts in Chile  
Tsunami National Contacts in the United States of America  
Organizations cooperating with UNESCO-IOC in the field of tsunami warning systems:  
CTBTO, FDSN/GSN, GEBCO, IHO, IMO, UNDRR, WMO

Cc: Chairpersons of Inter-ICG Task Teams  
IOC Officers

**Subject: Eighteenth Meeting of the Working Group on Tsunamis and Other Hazards related to Sea Level Warning and Mitigation Systems (TOWS-WG-XVIII), 24–25 February 2025, UNESCO Headquarters, Paris**

Through Resolution XXIV-14, the IOC Assembly at its 24th session (2007) decided on the establishment of a Working Group on Tsunamis and Other Hazards Related to Sea-Level Warning and Mitigation Systems (TOWS-WG). The group is tasked primarily to advise the IOC Governing Bodies on coordinated development and implementation activities of warning and mitigation systems for tsunamis and other hazards related to sea level of common priority to all Intergovernmental Coordination Groups of Regional Tsunami Warning and Mitigation Systems.

By its Decision EC-57/3.2.1 on Warning and Mitigation Systems for Ocean Hazards, the IOC Executive Council in June 2024 reaffirmed the need for continued inter-ICG coordination through TOWS-WG and extended the tenure of the TOWS-WG and its Task Teams on: (i) Disaster Management & Preparedness (TTDMP), and (ii) Tsunami Watch Operations (TTTWO). Both task teams will meet prior to TOWS-WG-XVIII on 20–21 February 2025 and report to it on 24–25 February. Finally, the TOWS-WG will report to the next IOC Assembly in June 2025. Agendas for the two Task Team meetings will be sent out separately to Task Team members.

TOWS-WG-XVIII will meet in room VIII at UNESCO Headquarters on Monday 24 and Friday 25 February 2025 from 9:00 to 17:00 (Paris time). The working language of the meeting will be English.

Further information and documents will be made available online via the TOWS-WG-XVIII meeting webpage: <https://oceanexpert.org/event/4652>.

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**Executive Secretary**

Mr Vidar HELGESEN  
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You are invited to communicate your availability to attend TOWS-WG-XVIII by 10 January 2025 to the IOC Secretariat (attention of [a.haidar@unesco.org](mailto:a.haidar@unesco.org) and cc: [b.aliaga@unesco.org](mailto:b.aliaga@unesco.org)).

With the assurances of my highest consideration, I remain,

Yours sincerely,

*[signed]*

Vidar Helgesen  
Executive Secretary

Enclosures (2): 1/ IOC Decision EC-57/3.2.1. on Warning and Mitigation Systems for Ocean Hazards  
2/ TOWS-WG-XVIII Provisional Agenda

Decision EC-57/3.2.1.

**Warning and Mitigation Systems for Ocean Hazards**

The Executive Council,

Having examined the executive summary reports of the recent sessions of the Tsunami and Other Coastal Hazards Warning System for the Caribbean and Adjacent Regions (ICG/CARIBE-EWS-XVII/3s), the Intergovernmental Coordination Group for the North-Eastern Atlantic, the Mediterranean and Connected Seas (ICG/NEAMTWS-XVII/3s), the Intergovernmental Coordination Group for the Pacific Tsunami Warning and Mitigation System (ICG/PTWS-XXX/3s) and the report of the Working Group on Tsunamis and Other Hazards Related to Sea-Level Warning and Mitigation Systems (TOWS-WG-XVII),

Expresses solidarity with those affected by the 2024 Noto Peninsula Earthquake and tsunami, in Japan, on 1 January 2024;

Accepts the reports by the IOC/ICGs and TOWS-WG;

Notes with satisfaction the progress made during the intersessional period, including:

- (i) exercises conducted in 2022 from October to December (Exercise Pacific Wave), in 2023 in the Caribbean on 23 March (CARIBE WAVE 23), the Indian Ocean on 4, 11, 18, and 25 October (IOWave23) and the North-eastern Atlantic, the Mediterranean, and connected seas on 6–7 November (NEAMWave 23), as well as in 2024 in the Caribbean on 21 March (CARIBE WAVE 24);
- (ii) the continuing work of the Ocean Decade Tsunami Programme Scientific Committee (ODTP-SC);
- (iii) the publication of the Research, Development and Implementation Plan for the Ocean Decade Tsunami Programme (ODTP-RDIP) (IOC/2023/TS/180);
- (iv) the publication of the report on Monitoring and warning for tsunamis generated by volcanoes (IOC/2024/TS/183) prepared by the TT-TWO Ad Hoc Team on Tsunamis Generated by Volcanoes (TGV);
- (v) the update on the IUGG meetings organised in 2023–2024, including the participation of IUGG members on the ODTP-SC meeting on 25 January 2024, collaboration in organising the 8th IOC/ICG/PTWS–IUGG Joint Tsunami Commission (JTC) Technical Workshop on 11 September 2023 during ICG/PTWS-XXX on Understanding and Lessons Learned from Tsunami Generated by the Hunga Tonga - Hunga Ha’apai Volcano Eruption on 15 January 2022, expected participation in the UNESCO-IOC Second Global Tsunami Symposium on the Reflection of the Two Decades Indian Ocean Tsunami 2004 Commemoration, 11-14 November 2024, and its contributions towards several reports, including the report IOC/2024/TS/183;
- (vi) the work of ITIC and the ICG/PTWS in the development of a PTWS NTWC Competency Framework and the work of ITIC to develop and pilot the NTWC Minimum Competency training course;
- (vii) the extensive preparation work and the support of Meteorology, Climatology, and Geophysical Agency (BMKG) of Indonesia in hosting the UNESCO-IOC Second Global Tsunami Symposium, 11–14 November 2024 in Banda Aceh;
- (viii) the work of the TT-TWO in developing specialized TSP bulletins for the maritime community in consultation with the International Hydrographic Organisation (IHO) Sub-Committee on the World Wide Navigational Warning Service (WWNWS-SC);
- (ix) the role of the Tsunami Information Centres (TICs) in the efforts of the Task Teams on Disaster Management Preparedness and Tsunami Watch Operations;

- (x) the roles of Tsunami Information Centres (TICs) in developing community awareness and preparedness in support of helping effective community responses to tsunami warnings, and the critical support provided to Member States in facilitating tsunami preparedness and resilience, and the advancement of the work programmes of the TOWS-WG and its Inter-ICG Task Teams;
- (xi) the continued progress in the implementation of UNESCO-IOC Tsunami Ready Recognition Programme (TRRP) in the Caribbean, Indian Ocean, Pacific region, and in the NEAM region, as well as the work of ITIC to host the TRRP website;
- (xii) Cannes Municipality (Alpes Maritimes), France, as the first UNESCO-IOC Tsunami Ready recognized community in France, the North-Eastern Atlantic, the Mediterranean, and the connected seas region, and new communities in Indonesia (Nagari Tapakih) in the Indian Ocean, Barbados (Christ Church West) and Saint James Central, Costa Rica (Cahuita), Dominica (Portsmouth), Guadeloupe (Deshaies), Saint Lucia (Laborie) and Saint Vincent and the Grenadines (Saint George) in the Caribbean, and Costa Rica (Dominical, Dominicalito and Barú; Playa Hermosa; Puerto Jiménez and Tivives), Fiji (Navuevu, Sila) and Federated States of Micronesia (Weno Municipality and Pohnpei State) in the Pacific;
- (xiii) the progress made by ICG/PTWS concerning exploring mechanisms of how to include national tsunami preparedness and readiness programmes and initiatives in the UN Ocean Decade Programme, and that Tsunami Ready Equivalency Approach framed under other similar initiatives seeks to enable reporting on tsunami preparedness in a manner compatible with the UNESCO-IOC Tsunami Ready Recognition Programme (TRRP), using existing national frameworks and requirements;
- (xiv) the continued collaboration between the UNDRR and UNESCO-IOC on the World Tsunami Awareness Day (WTAD) in 2023, and the success achieved in scaling up the #GetToHighGround Campaign mobilizing action globally;
- (xv) the work done in Indonesia on several types of critical infrastructures: (1) Yogyakarta International Airport Tsunami Ready, (2) Bali Tsunami Ready Hotel, and (3) the needs of Industrial Zone Ready for Tsunami learning from Cilegon Industrial Estate. These could form the basis for the development of guidelines for Tsunami Ready Critical Infrastructure, as an effort to achieve goal no 2 of ODTP on achieving 100% people at risk to be ready and resilient to tsunami by 2030;
- (xvi) progress and status of ISO 22328-3 in Indonesia (Community-based Early Warning Systems for Tsunamis) which is targeting the large-scale private sector to be Tsunami Ready;

Also notes with appreciation the work of the Japan International Cooperation Agency (JICA) on Disaster Risk Reduction (DRR) and Tsunami Early Warning and Mitigation systems and encourages closer collaboration with JICA;

Further notes with appreciation the important commitments of Barbados, Indonesia, and USA to host the CTIC, IOTIC, and the ITIC to support the ICGs, and Australia to host the ICG/IOTWMS Secretariat Office;

Welcomes the appointment of the new ICG/NEAMTWS and ICG/PTWS Officers for the biennium 2024–2025 and 2023–2025, respectively;

**Part I:**  
**Intergovernmental Coordination Group for the Tsunami  
and Other Coastal Hazards Warning System for the Caribbean and Adjacent Regions  
(ICG/CARIBE-EWS)**

Notes with appreciation:

- (i) the establishment of the ICG/CARIBE-EWS Steering Committee as an efficient instrument of results-based management, especially in providing an oversight in the

execution of its decisions and recommendations, also marking a step towards harmonization among the global ICG governance structures;

- (ii) the continued full functionality of the Central America Tsunami Advisory Centre (CATAC) on an interim basis and the review of CATAC as a Tsunami Service Provider (TSP) in its eighteenth session in 2025 to enable the IOC Assembly to consider the final admission of CATAC as TSP in June 2025;
- (iii) the planning of the CARIBE WAVE 2025;
- (iv) establishment of a Task Team dedicated to Tsunami Ready in recognition of the need to further focus on the identification and employing corresponding strategies in the Caribbean and adjacent regions to reach the second objective of the ODTP that 100% of communities at risk to be prepared and resilient to tsunamis by 2030 through efforts like the UNESCO-IOC Tsunami Ready Recognition Programme (TRRP);
- (v) the possibility to hold its future sessions from 2026 onwards in-person only every second year, and online every other years, noting that UNESCO aims to reduce its carbon footprint to meet its set target of reducing its emissions by 31% by 2030, in line with the goals of the Paris Agreement;

#### **Part II:**

#### **Intergovernmental Coordination Group for the North-Eastern Atlantic, the Mediterranean and Connected Seas (ICG/NEAMTWS)**

##### Notes with appreciation:

- (i) the positive results of the fifth tsunami exercise for the region, NEAMWave23 conducted on 6–7 November 2023;
- (ii) Cannes Municipality (Alpes Maritimes), France as the first UNESCO IOC Tsunami Ready Recognized Community in mainland France and North-eastern Atlantic, the Mediterranean, and the connected seas region, and the ceremony organized in Cannes on 19 January 2024;
- (iii) the recently new approved two-years DG-ECHO funded CoastWAVE Project – Phase II (CoastWAVE 2.0) project starting on 1 July 2024 on “Scaling-Up and Strengthening the Resilience of Coastal Communities in the North-Eastern Atlantic and Mediterranean Regions to the Impact of Tsunamis and Other Sea Level-Related Coastal Hazards”;
- (iv) the offer of Egypt to host ICG/NEAMTWS-XIX in October 2024 and Italy’s intention to host the ICG/NEAMTWS-XX session;

#### **Part III:**

#### **Intergovernmental Coordination Group for the Pacific Tsunami Warning and Mitigation (ICG/PTWS)**

##### Notes with appreciation:

- (i) the eleventh Exercise Pacific Wave in 2024 (PacWave 24) scheduled 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), as reflected in the Terms of Reference;
- (ii) the offer of China to host the 31st Session of the ICG/PTWS in April 2025 in Beijing and the offer of France to host the 32nd Session of the ICG/PTWS in 2027 in Nouméa, New Caledonia;
- (iii) the hosting by Vanuatu of the Expert Meeting on Tsunami Sources, Hazards, Risk and Uncertainties Associated with Vanuatu, San Cristobal and New Britain Subduction Zones, 14–17 May 2024;

- (iv) the ICG/PTWS decision to start official full functional operations of Central America Tsunami Advisory Centre (CATAC), with the specific starting date to be decided after the coordination with the ICG/CARIBE-EWS;
- (v) the approval of the PTWS National Tsunami Warning Centre competencies, framework, and training requirements, as described in IOC/ICG/PTWS-XXX Working document: *Report from the Task Team on the Minimum Competency Levels for National Tsunami Warning Centre (NTWC) Operational Staff*;

Notes:

- (i) the concerns of ICG/PTWS regarding the seismic activity in the Scotia Arc region as reflected in the Executive Summary of the ICG/PTWS-XXX (IOC/ICG/PTWS-XXX/3s);
- (ii) that tsunami bulletins are issued by the PTWC for the ICG/CARIBE-EWS and ICG/PTWS for earthquakes in the Scotia Arc and its adjacent seismic zones for events fulfilling certain criteria as reflected in the IOC Technical Series, 130, 'Tsunami Watch Operations-Global Service Definition Document';
- (iii) the need for the active engagement of Argentina with the ICG/CARIBE-EWS and ICG/PTWS regarding Argentinian Search and Rescue (SAR) and NAVAREA VI coordination responsibilities;

Requests 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;

**Part IV:  
Working Group on Tsunamis and Other Hazards related to Sea Level Warning  
and Mitigation Systems (TOWS-WG)**

Decides that IOC should collaborate more closely with the WMO to connect tsunami activities with the Multi Hazard Early Warning Systems (MHEWS) and UN Secretary General Early Warning for All Initiative (EW4All), such as the WMO Coastal Inundation Forecasting Initiative (CIFI) that is an example of a multi-activity addressing coastal inundation, no matter the source of the coastal inundation;

Acknowledges the WMO request to the WMO-IOC Joint Collaborative Board to review tsunami issues as they relate to meteotsunamis, to clarify the roles and responsibilities for the WMO and UNESCO-IOC, and to determine how best to strengthen collaboration in support of Member States;

Instructs the regional Intergovernmental Coordination Groups (ICGs) to:

- (i) consider performing exercises outside of working hours, in particular during the night, but being careful to take into consideration difficulties and possible issues of involving the public in night-time drills;
- (ii) consider whether Tsunami Service Providers (TSPs) may also need to provide services where volcano generated tsunamis may impact several Member States;
- (iii) utilise exercises and communication tests as an opportunity to simultaneously monitor data availability and quality;
- (iv) utilise and promote the use of multi-purpose sea level monitoring stations in support of MHEWS to enhance data coverage and reduce costs;
- (v) share information and procedures on deployments of new technologies to monitor sea level variations used for tsunami warning purposes, such as the ongoing project of the CAM SMART cable off Portugal, TAM TAM SMART cable between New Caledonia and Vanuatu, undersea cable installations being deployed by Indonesia and India, and the InSEA Wet Demo smart cable in the Ionian Sea offshore Sicily;

- (vi) TSPs identified for each ICG to trial dissemination of maritime bulletins to respective NAVAREA operators in their Area of Service (AoS) in the second half of 2024 for full operational implementation where possible in 2025;
- (vii) ICG/PTWS Task Team Tsunami Ready to share the ICG/PTWS guidance on Tsunami Ready Equivalency for further consideration by TT-DMP, as a potential mechanism for reporting toward this goal;
- (viii) ICG/IOTWMS WG1 and WG3 to develop and share guidelines for Tsunami Ready Critical Infrastructure;

Encourage Member States to provide voluntary financial contributions to the IOC special account and in-kind contributions to support the Ocean Decade Tsunami Programme and UNESCO-IOC Tsunami Ready Recognition Programme;

Recommends for locations that will not feel the earthquake, the use of the standard text in the UNESCO-IOC Tsunami Ready signage such as *"In case of any official tsunami message, go to high ground or inland"* as an alternative to *"In case of a strong or long (duration) earthquake, or any official message, go to high ground or inland"*;

Requests the IOC Secretariat to:

- (i) advise all Member States via Circular Letter (CL) that TSP fax transmissions of tsunami information products will cease from 6 months of CL date, unless Member States advise within three months that fax transmissions of tsunami information products is essential for National Tsunami Warning Centre (NTWC) functions and there is no other back-up;
- (ii) develop a reporting mechanism to allow ICGs to report progress on related projects within the Ocean Decade and against the ODPD-RDIP KPIs, aligning this with the proposed Global KPI Framework for the UNESCO-IOC Tsunami Programme;
- (iii) distribute the report on *Monitoring and warning for tsunamis generated by volcanoes* (IOC/2024/TS/183), including the List of Tsunamigenic Volcanoes, to Volcano Observatories and UNESCO-IOC Member States;
- (iv) organise online webinars for each ICG involving relevant Volcano Observatories and Volcanic Ash Advisory Centers (VAACs) to:
  - (a) brief on the report on *Monitoring and warning for tsunamis generated by volcanoes* (IOC/2024/TS/183) and its recommendations,
  - (b) highlight the hazard and vulnerable Member States,
  - (c) initiate the required partnerships between NTWCs and Volcano Observatories and VAACs,
  - (d) Initiate consideration of whether TSPs may also need to provide services where tsunami generated by volcanoes may impact several Member States;
- (v) organise in 2024 webinars in coordination with IHO for the NAVAREA operators and back-up METAREA operators to introduce the new service and products for the maritime community, and obtain and advise TSPs of the contact information for their respective NAVAREA and METAREA operators to disseminate the new maritime bulletins;
- (vi) with TICs' lead, develop and share a Tsunami Ready Toolkit to assist Member States in implementing the TRRP. The toolkit may include a standard and clear procedure, format, and method for submitting the Tsunami Ready application and its supporting documentation, including clarification on the definition of community in the frame of the UNESCO-IOC Tsunami Ready Recognition Programme;
- (vii) inform Member States on the Tsunami Ready Toolkit's availability via IOC Circular Letter to the Tsunami National Contacts, National Tsunami Ready Boards, and widely through attaching this as an appendix of the Standard guidelines for the Tsunami Ready Recognition Programme (IOC/2022/MG/74);

Extends the tenure of the Working Group on Tsunamis and Other Hazards related to Sea-Level Warning and Mitigation Systems and its Task Teams on: (i) Disaster Management & Preparedness (TTDMP), and (ii) Tsunami Watch Operations (TTTWO), with terms of reference as given in IOC Resolution XXIV-14 [for TOWS-WG], report IOC/TOWS-WG-VI/3, Annex II [for TTDMP] and report IOC/TOWS-WG-X/3, Annex II (Appendix 1) [for TTTWO];

Notes that TOWS-WG will review and revise the TT-DMP and TT-TWO Terms of Reference for adoption at the next IOC Assembly in 2025;

Also notes that the regular budget for these activities will be identified as part of the overall Resolution on Governance, Programming and Budgeting matters of the Commission.



**Eighteenth Meeting of the Working Group on Tsunamis and Other Hazards related  
to Sea Level Warning and Mitigation Systems (TOWS-WG-XVIII)**

24–25 February 2025

**PROVISIONAL AGENDA**

**1. OPENING AND WELCOME**

- 1.1 OPENING
- 1.2 ADOPTION OF AGENDA
- 1.3 WORKING ARRANGEMENTS

**2. REPORTS FROM PARTICIPANT BODIES**

- 2.1 REPORT FROM IOC BODIES 2.2 REPORT OF NON-IOC BODIES
  - 2.2.1 World Tsunami Awareness Day (UNDRR)
  - 2.2.2 World Meteorological Organization (WMO)

**3. REVIEW OF PROGRESS**

- 3.1 STATUS OF IMPLEMENTATION OF IOC DECISION EC-57/3.2.1

**4. REPORTS OF THE INTER-ICG TASK TEAMS**

- 4.1 INTER-ICG TASK TEAM ON DISASTER MANAGEMENT AND PREPAREDNESS
- 4.2 INTER-ICG TASK TEAM ON TSUNAMI WATCH OPERATIONS

**5. UN OCEAN DECADE TSUNAMI PROGRAMME**

- 5.1 REPORT OF THE OCEAN DECADE TSUNAMI PROGRAMME SCIENTIFIC COMMITTEE (ODTP-SC)
- 5.2 PROGRESS REPORT OF THE SPECIAL TSUNAMI COALITION
- 5.3 REPORT OF THE 2ND IOC UNESCO SCIENCE SYMPOSIUM ON ADVANCES IN TSUNAMI WARNING TO ENHANCE COMMUNITY RESPONSES

**6. OTHER ISSUES**

**7. DATE AND PLACE OF THE NEXT MEETING**

**8. CLOSURE**