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## INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION (Of UNESCO)

## FOR THE TSUNAMI AND OTHER COASTAL HAZARDS WARNING SYSTEM FOR THE CARIBBEAN AND ADJACENT REGIONS

5-7 and 9 May 2025 (online)

## **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 Tsunami and other Coastal Hazards Warning System for the Caribbean and Adjacent Regions is required to report to a governing body on its sessions.

The documentation and information for the session are available online.

The IOC Assembly at its 33rd session in June 2025 will be invited to consider this Executive Summary and the decisions it contains.

- 1. The Eighteenth Session of the UNESCO-IOC Intergovernmental Coordination Group for the Tsunami and Other Coastal Hazards Warning System for the Caribbean and Adjacent Regions (ICG/CARIBE EWS-XVIII) took place online on 5–7 and 9 May 2025, as no ICG/CARIBE-EWS Member State officially declared its availability to host the ICG/CARIBE-EWS-XVIII in-person. Fifty-eight (58) virtual participants from 19 Member States/Territories (Antigua and Barbuda, Brazil, Colombia, Costa Rica, Cuba, Dominica, France, Guatemala, Guyana, Honduras, Mexico, Curaçao (Kingdom of the Netherlands), Nicaragua, Panama, Saint Kitts and Nevis, Trinidad and Tobago, UK, USA and Venezuela) and 21 Observers from 12 Member States/Territories (Argentina, China, Colombia, Costa Rica, France, India, Italy, USA (including Puerto Rico and US Virgin Islands), Trinidad and Tobago, and Uruguay), including representatives of three observer organizations—the Puerto Rico Seismic Network (PRSN), the World Meteorological Organization (WMO) and UNDRR-Regional Office Regional Office for the Americas & the Caribbean attended the session.
- 2. **The ICG welcomed** the participation of Argentina and Uruguay as Observers to the ICG/CARIBE-EWS XVIII.
- 3. **The ICG noted** the cross-cutting elements of the ICG/CARIBE-EWS work programme closely linked to the UN Secretary-General's Early Warnings for All initiative (EW4All) and guided by strategic elements such as the UN Ocean Decade Tsunami Programme (ODTP) and the UNESCO-IOC Tsunami Ready Recognition Programme (TRRP).

- 4. **The ICG welcomed** the signing of the Memorandum of Understanding (MoU) between the United Nations Educational, Scientific and Cultural Organization (UNESCO) and the Caribbean Disaster Emergency Management Agency (CDEMA) to support and enhance disaster risk reduction (DRR) efforts in the Caribbean region.
- 5. **The ICG appreciated** that the U.S. National Weather Service through its Tsunami Warning Centres and International Tsunami Information Center (ITIC) is committed to continue to provide timely and effective tsunami services for the protection of life, livelihoods and economic prosperity in the U.S. and the Pacific and the Caribbean and adjacent regions.
- 6. **The ICG decided** on the continuation of the Working Group 1 on Risk Knowledge, Working Group 2 on Tsunami Detection, Analysis and Forecasting, Working Group 3 on Tsunami Warning Dissemination and Communication, Working Group 4 on Preparedness and Response Capabilities, Task Team on CARIBE WAVE and Task Team on Tsunami Ready.
- 7. **The ICG appreciated** that a Joint Expert Meeting on Seismic Sources in the Northwest Caribbean and on Non-Seismic Sources of Tsunamis for the Caribbean and Adjacent Regions was conducted on 3–5 December 2024 in Heredia (Costa-Rica), kindly hosted by SINAMOT. It **noted** the efforts of the Secretariat and Working Group 1 to conduct a regional Digital Elevation Model (DEM) Training tentatively in Q4 of 2025 or Q1 of 2026, including identification of its venue, experts, and the tools to be used for this training (open-source software vs license-based software), and **encouraged** Working Group 1 and the Secretariat to consider organizing an Expert Meeting on Seismic and Non-Seismic Probabilistic Tsunami Hazard Assessment (PTHA) in the Caribbean and its Adjacent Regions.
- 8. **The ICG requested** that regional webinars be organised to address the requirements of the 'Monitoring and warning for tsunamis generated by volcanoes' (<u>IOC Technical Series No. 183</u>), and **encouraged** the Secretariat, in close collaboration with the ICG/CARIBE-EWS Working Groups, to organize a workshop dedicated on the development of SOPs between Volcano Observatories in the Caribbean and the ICG CARIBE-EWS TSPs and NTWCs.
- 9. **The ICG took note** of the instructions given by the IOC Working Group on Tsunamis and Other Hazards related to Sea-Level Warning and Mitigation Systems (TOWS-WG) at its 18<sup>th</sup> meeting to its Task Team on Tsunami Watch Operations (TT-TWO) to include tsunamis generated by the submarine and subaerial landslides in its work programme and to collaborate with the scientific and operational community specializing on landslide hazards and early warning and operational response in order to meet the requirements of the first objective of the ODTP, which is to develop the capability of warning systems to issue actionable and timely tsunami warnings for all tsunamis from all identified sources for 100% of at-risk coastlines, and **requested** that Working Group 1, in collaboration with Working Group 2, conduct a literature review on real-time detection of submarine landslides to support this effort.
- 10. **The ICG encouraged** the Secretariat, in collaboration with Working Group 2, to continue its efforts to organize sea level training courses in English and Spanish every two years with the support of NOAA and the Secretariat, and in close collaboration with the International Hydrographic Organization (IHO) and the International Maritime Organization (IMO).
- 11. **The ICG noted** that a high percentage of the stations in the CARIBE-EWS sea level network and seismic network are currently non-operational and therefore can delay the proper assessment of tsunami events and the issuance of timely and accurate tsunami alerts. It **urged** Member States and operators of seismic and sea-level stations contributing to CARIBE-EWS to maintain their stations in an operational status and to regularly review and update the status of their stations in the IOC <u>Sea Level Monitoring Facility</u> and with the Pacific Tsunami Warning Center (PTWC).
- 12. **The ICG acknowledged** the updates to the CARIBE-EWS Inventory of Tsunami Warning Dissemination and Communication Methods for the Caribbean and Adjacent Regions and

**recommended** that Working Group 3 collaborate with UNESCO-IOC Tsunami Resilience Section to publish and share the report and findings, and revise them as necessary.

- 13. **The ICG noted** the recommendation of the IOC Working Group on Tsunamis and Other Hazards related to Sea-Level Warning and Mitigation Systems (TOWS-WG) and the findings of the CARIBE-EWS survey on the need for training on the Common Alerting Protocol (CAP) and ongoing efforts under Early Warnings for All (EW4ALL) initiative, and **requested** that UNESCO-IOC Tsunami Resilience Section strengthen coordination, including training, with UNDRR, the International Telecommunications Union (ITU) and WMO on CAP and facilitate their participation in ICG/CARIBE-EWS meetings.
- 14. **The ICG took note** of the updates to the *User's Guide for PTWC Procedures and Products for the CARIBE-EWS* (IOC Technical Series, <u>135</u>), including the integration of the 2006 'PTWC Communications Plan for the CARIBE-EWS', and **recommended** the adoption of the 2025 'PTWC User's Guide' and the implementation of the new products by PTWC after notification to Member States three months in advance.
- The ICG greatly appreciated the report and technical and administrative progress made by 15. the Central America Tsunami Advisory Centre (CATAC) during the intersessional period, as well as the ongoing efforts by CATAC to further improve its seismological and information technology system, to be able to identify the source of tsunamis occurring in Central America and to disseminate actionable tsunami products in a timely manner, and to strengthen the capacity of its users and inform them about these potential events. It took note of the difficulties encountered by CATAC during the M7.6 event that occurred in the Western Caribbean on 8 February 2025, where only the initial message was disseminated by email due to server problems within CATAC. The ICG recommended the use of redundant and reliable methods for the transmission of CATAC products to its users. It was **recommended** that CATAC continues to operate fully on an interim basis in order to assist National Tsunami Warning Centres (NTWCs), Tsunami Warning Focal Points (TWFPs), and emergency management authorities of Central America to address these challenges. The ICG requested that CATAC submit to Working Group 3 an updated 'User's Guide for CATAC Procedures and Products for the CARIBE-EWS' by the end of 2025. It finally recommended that the Steering Committee work with CATAC and Member States to consider the possibility of CATAC becoming a TSP at its 19th meeting in 2026, so that the IOC Executive Council can consider CATAC's final admission as a TSP in June 2026.
- 16. **The ICG requested** PTWC and CATAC to coordinate with each other and conduct communication tests, which should begin after notification to Member States accompanied by instructions.
- 17. **The ICG noted** the Recommendation of <u>TOWS-WG-XVIII</u> to the IOC Assembly at its 33rd session in 2025, requesting the IOC Secretariat to develop a standard and improved methodology for the collection of TNC/TWFP/NTWC contact information, in close collaboration with its Task Team on Tsunami Watch Operations (TT-TWO) and Task Team on Disaster Management and Preparedness (TT-DMP), and to present its work at the next joint TT-DMP and TT-TWO meeting, **and requested** PTWC, CATAC, CTIC and ITIC-CAR to support the Secretariat in this effort.
- 18. **The ICG noted** that the dissemination of the specialized TSP bulletins for the maritime community was tested in the PTWS during the PacWave24 exercise on 5 November 2024. It **took note** of the recommendation of TOWS-WG-XVIII regarding the dissemination of the specialized TSP bulletins for the maritime community, which should be tested in CARIBE-EWS, IOTWMS and NEAMTWS by at least one Tsunami Service Provider either as part of planned communication tests or as part of tsunami exercises. The ICG **also noted** that the TOWS-WG-XVIII recommended that the full operational implementation of TSP bulletins for the maritime communities by at least one TSP in each ICG should take place in 2025 and **approved** the implementation by the PTWC of maritime products NAVAREA IV and V Coordinators of the World-Wide Navigational Warning Service. The PTWC was **asked** to create an annex to its 'User's Guide' containing a description of

the Maritime Products, and **recommended** that it coordinates with NAVAREA on a start date for the implementation of the Maritime Products by the end of 2025 and also test them in CARIBE WAVE 26 exercise. The Secretariat was **requested** to inform the concerned NAVAREA IV and V Coordinators accordingly.

- 19. **The ICG** congratulated its 44 Member States and Territories that promoted and participated in the CARIBE WAVE 25 exercise, which brought together half a million participants, and **decided** that the CARIBE WAVE 26 exercise will take place on Thursday 19 March 2026, with the following scenarios: (i) Kick 'em Jenny Volcano and (ii) the Cayman Islands earthquake and tsunami, commencing at 15:00 UTC with one dummy message for the communication test from PTWC and CATAC to the Tsunami Warning Focal Points and National Tsunami Warning Centres, and the first message for the scenarios shortly thereafter, in accordance with procedures simulated PTWC and CATAC for their respective scenarios. Member States are encouraged to execute activities at times deemed convenient based on national procedures and circumstances.
- 20. **The ICG recommended** that further options be considered for organizing joint training on Manuals and Guides, <u>86</u>, *Multi-Annual Community Tsunami Exercise Programme Guidelines for the Tsunami and other Coastal Hazards Warning System for the Caribbean and Adjacent Regions* by the CARIBE WAVE Task Team, CTIC and ITIC-CAR, in coordination with Working Group 4 prior to the 19<sup>th</sup> session of ICG/CARIBE-EWS, and **encouraged** Member mobilising funds or partnering with the IOC Secretariat to support this training.
- 21. **The ICG congratulated** the communities of St. James Central (Barbados), Cahuita (Costa Rica), Portsmouth (Dominica) and Laborie (Saint Lucia) for their Tsunami Ready recognition in 2024, joining 19 other communities in the CARIBE-EWS region, and **requested** its Steering, in close collaboration with the Secretariat, CTIC and ITIC-CAR to develop a plan to ensure the sustainability of the implementation of the UNESCO-IOC Tsunami Ready Recognition Programme (TRRP) in the Caribbean and its Adjacent Regions.
- 22. **The ICG acknowledged** the funding provided by the United States Agency for International Development Bureau of Humanitarian Assistance (USAID/BHA), Australia, and Norway for the implementation of the Tsunami Ready programme, the ongoing support provided by the International Tsunami Information Center (ITIC) and its Caribbean Office, in particular to the Caribbean Tsunami Information Centre (CTIC), as well as the implementation of Tsunami Ready activities in Antigua and Barbuda, Belize, Dominica, Honduras, Saint Lucia and United Kingdom (Anguilla), while noting the current level of resources, the staffing, funding and administrative constraints faced by CTIC; it **recommended** that the IOC Secretariat and CTIC give priority to the completion of outstanding TRRP projects in Barbados, Grenada, Jamaica and Trinidad and Tobago before the next session of the ICG.
- 23. **The ICG noted** the difficulties encountered in contacting eligible respondents and obtaining comprehensive feedback **and suggested** that CTIC and ITIC-CAR implement an improved survey as soon as a community is recognised as 'Tsunami Ready'; that CTIC, in collaboration with ITIC-CAR, establish an annual reporting mechanism for all recognized communities, which would allow for the continuous collection of feedback, improvement and adaptation of guidelines, and maintenance of engagement with recognized communities; and that the Steering Committee assess the feasibility and desirability of establishing a National Tsunami Ready Focal Point, which could be the Chair of the National Tsunami Ready Board.
- 24. **The ICG invited** ICG/CARIBE-EWS Member States to actively support the Tsunami Ready Coalition, for which an implementation plan was recommended for approval by the TOWS-WG-XVIII.
- 25. **The ICG invited** all Member States to implement or support the implementation of the Tsunami Ready programme in their communities or those of another Member State, and **called upon** Member States and donors to provide funds to accelerate the implementation of the Tsunami Ready Programme in the Caribbean and Adjacent Regions.

- 26. **The ICG noted with appreciation** Panama's offer to host the Tsunami Ready Summit in 2025, except during the months of November or December, and **recommended** considering alternative dates in 2026, and **urged** Member States, observers and partners to consider mobilising funds or partnering with the IOC Secretariat to finance the Tsunami Ready Summit and/or Tsunami Ready workshops.
- 27. **The ICG welcomed** the continued support provided by ITIC and its Caribbean Office, as requested by CTIC; it **recalled** the expanding mandate of CTIC since its establishment and the new policy issues that have arisen, as well as the need to conduct a strategic review of the document ICG/CARIBE-EWS-II/12 of 8 March 2007 and to provide CTIC with the necessary human resources to enable it to carry out programmatic and project activities aimed at sustainably supporting the ICG/CARIBE-EWS and EW4All frameworks and; **urged** ICG/CARIBE-EWS Member States to make additional contributions to the IOC and to provide human resources through various arrangements, including long- and short-term internships, to support the work of CTIC.
- 28. **The ICG requested** Member States, CTIC and ITIC-CAR to continue supporting efforts to inform and include persons with disabilities.
- 29. **The ICG noted with appreciation** the intention expressed by Barbados at its previous session and by Curaçao at ICG/CARIBE EWS-XVIII to host the next ICG/CARIBE-EWS session in 2026; and **requested** that the Secretariat send a Circular Letter inviting Member States to host ICG/CARIBE-EWS-XIX session in 2026 and to formally communicate their availability by 30 September 2025, in the event that no official confirmation from the Governments of Barbados or Curaçao is communicated to the IOC Secretariat by 15 June 2025. It **further decided** to conduct ICG/CARIBE-EWS-XIX virtually if no official invitation is communicated to the Secretariat by 30 September 2025.
- 30. **The ICG took note** of the <u>UNESCO-IOC guidance on the frequency of IOC intergovernmental sessions of 2005</u>, which states that the frequency of sessions of Primary and secondary Subsidiary Bodies depends on several factors, including the stage of development of the activity with which the body is concerned, as it is usually desirable for meetings to be relatively more frequent in the early stages, the disposition of Member States (in terms of funding, scheduling, etc.) towards a given activity, and the workload and meeting schedule of the Secretariat. It **confirmed** its decision to consider, starting in 2026, holding its future sessions in-person every second year and online in the intervening ones, and **decided** that the 20<sup>th</sup> session of ICG/CARIBE-EWS would be tentatively held during the week of 26 April 2027.
- 31. **The ICG congratulated** the Chair, Mr Gérard Métayer (Haiti) and the Vice Chairs Dr Silvia Chacon Barrantes (Costa Rica), Marie-Noëlle Raveau (France-Martinique), and Ms Regina Browne (US Virgin Islands) on their election as officers of the CARIBE-EWS.