



**INTERGOVERNMENTAL COORDINATION GROUP
FOR THE TSUNAMI AND OTHER COASTAL HAZARDS WARNING SYSTEM
FOR THE CARIBBEAN AND ADJACENT REGIONS
(ICG/CARIBE-EWS)**

ORGANIZATIONAL STRUCTURE AND GOVERNANCE

1. ICG/CARIBE-EWS ORGANIZATIONAL STRUCTURE AND GOVERNANCE

The Intergovernmental Coordination Group for the Tsunami and Other Coastal Hazards Warning System for the Caribbean and Adjacent Regions (ICG/CARIBE-EWS) is a subsidiary body of the Intergovernmental Oceanographic Commission (IOC) of the United Nations Educational, Scientific, and Cultural Organization (UNESCO). It was established in 2005, and is currently comprised of 28 IOC Member States, 12 Territories, 7 Associate Member States of UNESCO and 1 Observer Member State in the Caribbean and Adjacent Regions (Annex 1). The CARIBE-EWS also has several Invited Observer Organizations (Annex 2). Each Member State is responsible for officially designating a Tsunami National Contact (TNC), a Tsunami Warning Focal Point (TWFP), as well as a National Tsunami Warning Center (NTWC).

The ICG/CARIBE-EWS coordinates international tsunami warning and mitigation activities including the issuance of timely and actionable tsunami bulletins in the Caribbean and comprehensive tsunami mitigation programmes which include complementary and sustained activities in tsunami hazard risk assessment, tsunami warning and emergency response, and preparedness, including the UNESCO-IOC Tsunami Ready Recognition Programme. Stakeholder involvement and coordination is essential, and community-based, people-centered mitigation activities will help to build tsunami resiliency.

More information on the ICG/CARIBE-EWS is available [here](#).

The following describes the various components of the ICG and how they work together to enable an effective international warning system.

1.1 Intergovernmental Coordination Group (ICG)

The ICG/CARIBE-EWS is an IOC subsidiary body that reports to the IOC Assembly or Executive Council. It was established by IOC Resolution XXIII-13 in 2005 as a regional international body and has met every year since 2006 (except for 2020 when just a virtual officers meeting was held due to the Pandemic situation).

Official delegates to the ICG/CARIBE-EWS represent member states' interests in the ICG/CARIBE-EWS. The ICG/CARIBE-EWS activities are member state driven according to the

needs of the region taking the advice of experts contributing to Working Groups and other tertiary bodies. As a regional subsidiary body, the ICG/CARIBE-EWS Terms of Reference specify that it is comprised of Member States in that region. Non-IOC Member States and countries outside the region, and organizations are considered Observers to the ICG/CARIBE-EWS.

In addition to the ICG/CARIBE-EWS, the ICG/PTWS was established by IOC in 1965 as a regional international body and has met every two years since 1968. In 2005 ICG's were also established for the Indian Ocean (ICG/IOTWMS), and Northeast Atlantic, Mediterranean and Connected Seas (ICG/NEAMTWS), and have met regularly starting in 2005. The development of these systems is based on a basin-focused strategy and approach that considers the characteristics of the region and the communities at risk. It acknowledges a region's unique oceanographic, geophysical, technical, educational, cultural, and political interests.

1.2 Officers

ICG/CARIBE-EWS leadership is guided by member state's elected Officers (Chairperson, 3 Vice-Chairpersons) along with the elected Officers (Chair, Vice Chairs and Co-Chairs) of the Working Groups and Task Teams. The Chairperson shall declare the opening and closing of each session, direct the discussions, ensure observance of the Rules of Procedure, accord the right to speak, put questions to the vote and announce decisions. He/She shall rule on points of order and, subject to the Rules of Procedures, shall control the proceedings and maintain order and shall strive to work by consensus. The Vice-Chairpersons shall be responsible for assisting the Chairperson, taking over from him/her in the event of his/her absence (from a meeting) or indisposition and by undertaking special tasks allocated to him/her by the Chairperson. The list of current officers can be found [here](#).

1.3 Steering Committee

The Steering Committee shall act in an advisory capacity to the Chair of the ICG/CARIBE-EWS during the inter-sessional period.

The Steering Committee shall coordinate and integrate the work of ICG/CARIBE-EWS in the inter-sessional periods, as implemented through the various working groups and task teams, including but not limited to:

- Maintain the ICG/CARIBE-EWS Organizational Structure and Governance
- Monitor, maintain and update the CARIBE-EWS Implementation Plan
- Oversee the execution of the Decisions and Recommendations of the ICG
- Develop a Strategy for funding CARIBE-EWS activities
- Monitor performance and examine continuing compliance of Tsunami Service Providers (TSPs) with the adopted operational and organizational function and requirements
- Guide the work and direction of the CARIBE-EWS to help deliver the goals of the UN Ocean Decade Tsunami Programme (ODTP) in support of its 10-year Scientific Research Implementation and Development Plan (RDIP).
- Report ICG/CARIBE-EWS progress against the ODTP-RDIP KPIs
- Develop a strategy for effective coordination with IOCARIBE, UNDRR, WMO, and other regional stakeholders
- Revamp the Group of Experts (GoE) work and implementation plan to enhance the warning system by including other coastal hazards during the intersessional period in coordination with of the IOCARIBE Secretariat considering WMO and UNDRR EW4ALL,

- Provide oversight and strategic guidance to CTIC on its implementation of tsunami awareness and capacity building activities
- Organize events and other actions and activities associated with the occasion of the 20th anniversaries of the ICG/CARIBE-EWS.

The Steering Committee is composed of the ICG/CARIBE-EWS Officers (Chair and the Vice-Chairs), Chairs and Vice-Chairs of the Working Groups and Task Teams, Directors/Coordinators of the TSPs, CTIC, and other members by invitation of the Chair.

1.4 Working Groups

ICG/CARIBE-EWS work is enabled through Working Groups (WG). Intra-sessional (or sessional) WGs work during an ICG session and report back to the ICG session in which they were established. Inter-sessional WGs work between ICG sessions and report at the next ICG session. Inter-sessional WGs may decide to meet, or may carry their work out through e-mail, teleconferences, in-person meetings, or other means. Terms of Reference for WGs are stated through Recommendations endorsed by the ICG. The Recommendation may also state the WG members. A WG Chair may be designated by the ICG, whereas Vice and Co-Chairs may be agreed upon by the members of the WG during the intersessional period to be approved at the upcoming ICG. The Chair provides leadership for the WG and is responsible for annual written reports summarizing its work. Working Group members are nominated by Member States according to their individual abilities to contribute to the tasks of the WG. The nomination should be accompanied by a CV of the candidate. A WG should dissolve after its tasks have been completed. The ICG/CARIBE-EWS has the following four working groups:

WG1: Hazard Assessment

Purpose: To advise the ICG on the identification and characterization of coastal hazards, their assessment and the required modelling.

WG2: Tsunami Detection, Analysis and Forecasting

Purpose: To review and recommend to the ICG priorities and actions required to ensure and enhance existing capabilities as well as explore new technologies to improve tsunami detection and forecasting capability.

WG3: Tsunami Warning Dissemination and Communication

Purpose: To examine current and developing capacities and advise the ICG about the definition and composition of early warnings and tsunami products and the methods and best practices for effective end-to-end dissemination and communication.

WG4: Preparedness and Response Capabilities

Purpose: To advise and recommend to the ICG strategies to enhance awareness, education, preparedness, response capabilities and mitigation and to develop the necessary recommendations, tools and procedures.

1.5 Task Teams (TT)

Task teams are small ad hoc subsidiary bodies formed by the ICG/CARIBE-EWS to carry out specific tasks. Upon completion of the assigned tasks, the task team is disbanded. The Member States

concerned normally appoint the corresponding governmental experts. The ICG/CARIBE-EWS also nominates a Chairperson and a Vice-Chairperson. The members, chairs and vice chairs normally serve for one intersessional period, unless there is a decision for renewal. There are currently two task teams, one for CARIBE WAVE Exercises and another one for the Tsunami Ready.

Task Team on CARIBE WAVE Exercise:

Purpose: Coordinate planning, running, and follow-up of CARIBE WAVE Exercises.

Task Team on Tsunami Ready:

Purpose: To identify and employ strategies to ensure 100% of at-risk communities achieve UNESCO-IOC Tsunami Ready recognition.

2. TSUNAMI WARNING

2.1 Pacific Tsunami Warning Center (PTWC)

The [Pacific Tsunami Warning Center](#) (PTWC) serves as the Tsunami Service Provider for the ICG/CARIBE-EWS. The US National Tsunami Warning Center serves as a backup to the PTWC. The TSP issues tsunami information statements and alerts to designated national authorities in support of their responsibilities to inform and protect their populations.

2.2 PTWC Communication Plan for the Interim Tsunami Advisory Information Service to the Caribbean Sea and Adjacent Regions (2006)

The [document](#) describe in further detail the criteria for issuance of tsunami products, the general content of the products, how products are disseminated, and recommended procedures for acting on the products as of 2006. It also includes a list of Tsunami forecast points in the region. Many of the sections of this document have been superseded by the 2017 User's Guide for the Pacific Tsunami Warning Center Enhanced Products for the CARIBE-EWS. There are plans to combine the Communication Plan and User's Guide.

2.3 User's Guide for the Pacific Tsunami Warning Center Enhanced Products for the CARIBE EWS

The [User's Guide](#) is intended for use by National Tsunami Warning Focal Points and National Tsunami Warning Centres as customers receiving the tsunami services from the PTWC as the ICG/CARIBE-EWS Tsunami Service Provider. It includes a summary of the operational procedures, instrument networks used, criteria for the reporting and issuing of tsunami alerts, recipients of the information, and the methods for message transmission, as well as a number of Annexes that provide explanatory and background information on technical evaluation methods and other guidance in order to assist customers in understanding the products that are issued. The User's Guide was published in [2017](#).

2.4 ICG/CARIBE-EWS Tsunami Service Model

At ICG XI the Logistical and Administrative Requirements of a Regional Tsunami Service Provider for the Caribe-EWS was approved. It was published as Annex IV to the ICG XI report and can be accessed at <https://oceanexpert.org/document/17364>. A revision is in progress.

3. ROLES AND RESPONSIBILITIES

3.1 National Tsunami Warning Centre (NTWC)

A centre officially designated by a government to monitor and issue tsunami warnings and other related statements within their country according to established National Standard Operating Procedures.

3.2 Tsunami National Contact (TNC)

The person designated by an ICG Member State government to represent his/her country in the coordination of international tsunami warning and mitigation activities. The person is part of the main stakeholders of the national tsunami warning and mitigation system program.

3.3 Tsunami Warning Focal Point (TWFP)

A 24 x 7 point of contact (office, operational unit or position, not a person) officially designated by the NTWC or the government to receive and disseminate tsunami information from an ICG Tsunami Service Provider according to established National Standard Operating Procedures. The TWFP may or not be the NTWC.

3.4 Tsunami Service Provider (TSP)

A Tsunami Service Provider (TSP) is a Centre that monitors seismic and sea level activity and issues timely tsunami threat information within an ICG framework to National Tsunami Warning Centres/Tsunami Warning Focal Points and other TSPs operating within an ocean basin. The NTWCs/TWFPs may use these products to develop and issue tsunami warning for their countries. TSPs may also issue public messages for an ocean basin and act as National Tsunami Warning Centres providing tsunami warnings for their own countries. Several ICG Tsunami Service Providers have been established.

Bi-lateral, multi-lateral and subregional arrangements may also exist to provide products for a subset of Member States within an ICG. The criteria may or may not be established by the ICG.

In the case of the ICG/CARIBE-EWS, at its Eleventh Session in Cartagena de Indias, Colombia in 2016, it recommended the Technical, Logistical and Administrative Requirements of a Regional Tsunami Service Provider. The CARIBE-EWS TSP is the US Pacific Tsunami Warning Center (PTWC). A sub regional TSP, the Central America Tsunami Advisory Center (CATAC), hosted by Nicaragua is currently operating in Experimental Mode.

3.5 Invited Observer Organizations

Observer organizations can be a UN or non-UN regional and international organizations contributing significantly to the ICG/CARIBE-EWS. These organizations include technical and scientific bodies, as well as emergency and disaster management organizations. Annex 2 has a list of these organizations.

3.6 Tsunami Resilience Section (TSR) - IOC Secretariat

The [IOC Tsunami Resilience Section \(TSR\)](#) presently coordinates the four tsunami warning and mitigation systems around the globe and works to identify the commonalities in terms of specifications, guidelines, standards, procedures and processes including developing synergies with existing technical groups dealing with related matters. The TSR as part of the IOC Secretariat is located through several offices including at UNESCO Headquarters in Paris, France, and UNESCO Office in Jakarta, Indonesia and through hosting arrangements in Perth, Australia Suva, Fiji and Bridgetown, Barbados. It is composed of the Section Head, the Secretariats of the ICGs, and technical and professional staff. The TSR provides guidance for the final integration of ICG's basin-driven work that occurs at the IOC Governing Bodies level.

3.7 Working Group on Tsunamis and Other Hazards Related to Sea-Level Warning and Mitigation Systems (TOWS-WG)

Through Resolution XXIV-14 the IOC Assembly at its 24th Session decided on the establishment of a Working Group on Tsunamis and Other Hazards Related to Sea-Level Warning and Mitigation Systems (TOWS-WG). It is tasked primarily to advise the IOC Governing Bodies on co-ordinated development and implementation activities on warning and mitigation systems for tsunamis and other hazards related to sea level of common priority to all Intergovernmental Coordination Groups for regional Tsunami Warning and Mitigation Systems (ICG/TWSs). The Chair of the ICG/CARIBE-EWS represents the ICG in the WG. The Working Group also has two task teams: Tsunami Watch Operations and Disaster Management and Preparedness. The Task Team members are nominated by the respective ICG Chairs and the Chair is appointed by the IOC Chairs.

3.8 ICG/CARIBE-EWS Secretariat

The IOC Executive Secretary provides, upon request by the IOC governing bodies, secretarial support for the ICG. The ICG/CARIBE-EWS Technical Secretary coordinates and facilitates the activities of the ICG, interacting directly with Member States and regional organizations. The Technical Secretary oversees in coordination with the ICG/CARIBE-EWS Officers the arrangement, conduct, and reporting of the ICG's sessions and other meetings. The Technical Secretary further facilitates the ICG's Action Plan working with Member State Tsunami National Contacts for overall international activities, with Tsunami Warning Focal Points for issues directly related to tsunami bulletins, and with the PTWC. The ICG/CARIBE-EWS Technical Secretary is part of the IOC's Tsunami Resilience Section.

3.9 Caribbean Tsunami Information Center (CTIC)

The [Caribbean Tsunami Information Centre \(CTIC\)](#) is a partnership initiative between the Government of Barbados and the Intergovernmental Oceanographic Commission of the United Nations Educational, Scientific and Cultural Organisation (UNESCO-IOC). This partnership was formalized with the signing of a Memorandum of Understanding (MOU) between the Government of Barbados and UNESCO-IOC in 2013 and renewed in 2017. The CTIC is established at the Coastal Zone Management Unit (CZMU), Barbados under the auspices of the Ministry. Its work is focused on four strategic areas:

- Tsunami knowledge, awareness and education in the Caribbean and adjacent regions is improved.
- A technical training programme for improving tsunami preparedness is established.

- Strategic partnerships and resources to advance the functions of CTIC are enhanced.
- An effective programme for monitoring the ICG/CARIBE-EWS system is established.

As of October 2018 a Programme Officer for Coastal Hazards and for the Caribbean Tsunami Information Center (CTIC), member of the IOC's Tsunami Resilience Section, is co-located with CZMU, in Barbados, in the framework of the above-indicated MOU.

The CTIC will benefit from partnership with regional organizations (SRC, CIMH, CCCCC, CRID, UNDRR) as well as draw on the support of regional disaster management organizations (CDEMA, CEPREDENAC and EMIZA). The [International Tsunami Information Center](#) (ITIC) and its [Caribbean Office](#) also supports CTIC upon request. The activities of the CTIC have been executed to date largely through funding received from an ERC Project, UNESCO-IOC and USAID/BHA, NORAD, Australian Aid. It also pursues partnerships with regional technical agencies, as well as financial support from donor agencies and contributions from ICG/CARIBE-EWS Member States.

3.10 International Tsunami Information Center – Caribbean Office

The International Tsunami Information Center – Caribbean Office (ITIC-CAR, previously known as the Caribbean Tsunami Warning Program, CTWP) was established by the US NOAA/NWS in Mayagüez, Puerto Rico in 2010. It supports the ICG/CARIBE-EWS and the Caribbean Tsunami Information Center. Activities include documenting the tsunami observational system and enhancement of tsunami national tsunami warning systems, outreach and education capacity, including the coordination of the annual CARIBE WAVE exercise and implementation of the TsunamiReady® and Tsunami Ready Programs. In addition to CTIC, the ITIC-CAR works closely with the seismic, sea level and GNSS station operators and the designated National Tsunami Warning Focal Points, National Tsunami Warning Centers and Tsunami National Contacts and the Pacific Tsunami Warning Center. For more information on ITIC-CAR, refer to its [website](#).

4. GLOBAL FRAMEWORK

The CARIBE-EWS activities are closely linked with other UN initiatives including the Sendai Framework for Disaster Risk Reduction (2015-2030), the UN Decade of Ocean Science for Sustainable Development and the UN Early Warnings for All Initiative.

4.1 IOC Decisions on ICG/CARIBE-EWS

ICG/CARIBE-EWS Resolutions and Recommendations are developed by Member States in coordination with the Secretariat. These are reported to the next IOC Governing Body meeting for endorsement and official adoption

4.2 Cooperation with other organizations

The ICG/CARIBE-EWS, through CTIC, PTWC, ITIC-CAR and the ICG/CARIBE-EWS Secretariat, cooperates with international agencies in order to support, sustain, and coordinate its operational tsunami warning and mitigation system. The ICG/CARIBE-EWS's goal is to save lives, property and livelihood, and as such, seeks to work in partnership with all appropriate agencies. The IOC's United Nations partners include, for example, the IOC Sub-Commission for the Caribbean and Adjacent Regions ([IOCARIBE](#)), the UN Office for Disaster Risk Reduction ([UNDRR](#)), the United Nations Development Programme ([UNDP](#)), the World Meteorological Organization ([WMO](#)) and the Preparatory Commission for the Comprehensive Nuclear-Test-Ban Treaty Organization ([CTBTO](#)).

Specialized and regional organizations include the Central America Tsunami Advisory Center ([CATAC](#)), Incorporated Research Institutions for Seismology ([IRIS](#)), International Union of Geodesy and Geophysics – Joint Tsunami Commission ([IUGG-TC](#)), Non-profit university-governed consortium for geoscience research and education using geodesy ([UNAVCO](#)), the Caribbean Disaster and Emergency Management Agency ([CDEMA](#)), and Centro de Coordinación de la Prevención de Desastres Naturales en América Central ([CEPREDENAC](#)) and EMIZA (Emergency Management Agency French Antilles).

ANNEX 1

ICG/CARIBE-EWS MEMBER STATES

1. Bahamas
2. Barbados
3. Belize
4. Brazil
5. Colombia
6. Costa Rica
7. Cuba
8. Dominica
9. Dominican Republic
10. France (Guadeloupe, Guyane, Martinique, Saint Martin, St. Barthelemy)
11. Grenada
12. Guatemala
13. Guyana
14. Haiti
15. Honduras
16. Jamaica
17. Mexico
18. Netherlands (Aruba***, Bonaire, Curacao***, Saba, Sint Maarten***, Sint Eustaius).
19. Nicaragua
20. Panama
21. Saint Kitts and Nevis
22. Saint Lucia
23. Saint Vincent and the Grenadines
24. Suriname
25. Trinidad and Tobago
26. United Kingdom of Great Britain & Northern Ireland (Anguilla***, Bermuda, British Virgin Islands***, Cayman Islands***, Montserrat***, Turks and Caicos)
27. United States (Puerto Rico and US Virgin Islands)
28. Venezuela (Bolivarian Republic of)

***UNESCO Associate Member States participating in ICG/CARIBE-EWS

ICG/CARIBE-EWS Observer Member States

1. Antigua and Barbuda (UNESCO, but not IOC, Member State)
2. Canada
3. Peru

ANNEX 2**OBSERVER ORGANIZATIONS**

1. Caribbean Disaster and Emergency Management Agency (CDEMA)
2. Caribbean Institute of Meteorology and Hydrology (CIMH)
3. Coordination Centre for the Prevention of Natural Disasters in Central America (CEPREDENAC)
4. Puerto Rico Seismic Network, University of Puerto Rico, Mayagüez (PRSN)
5. Seismic Research Center, University of the West Indies, Trinidad and Tobago (SRC)
6. EarthScope Consortium., Non-profit university-governed consortium for geoscience research and education using geodesy and seismology
7. United Nations Development Program, Barbados and the OECS (UNDP)
8. World Meteorological Organization (WMO)