



**INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION
(of UNESCO)**

**Sixteenth Session of the Intergovernmental Coordination Group for the Tsunami and Other Coastal Hazards Warning System for the Caribbean and Adjacent Regions
(ICG/CARIBE EWS-XVI)
Costa Rica
25-28 April 2023**

Agenda Item 4.4

**Working Group 4 Preparedness, Readiness and Resilience
Progress Report**

This document presents the recommendations, conclusions and a proposed work plan of Working Group 4 "Preparedness, Readiness and Resilience". The ICG is requested to consider, comment and eventually endorse the recommendations issued by Working Group 4.

Introduction, Summary, Considerations/Challenges

1. Introduction – Terms of Reference

The Working Group was established in 2007 (ICG CARIBE EWS II). Its purpose is to advise and recommend to the ICG strategies to enhance public awareness, education and resilience capacities and to develop the necessary recommendations, tools and procedures. Its functions are:

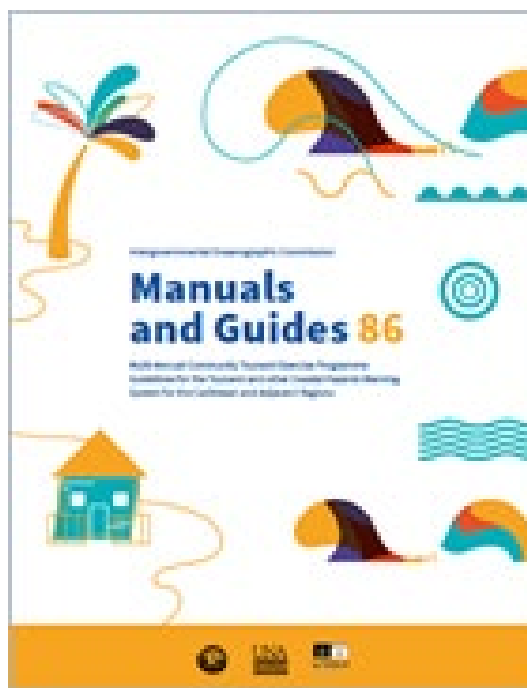
- Identify the public awareness and education strategies and tools that the Member States can integrate into their risk reduction and emergency management programs.
- Support the development of guidelines for preparedness, response and recovery plans for communities and local governments and organizations, which should include sharing of training and evacuation best practices.
- To closely cooperate with the Caribbean Tsunami Information Centre (CTIC) in carrying out its mandate and in the implementation of its program.













Currently the Working Group IV is chaired by Christa von Hillebrandt-Andrade and has two co-chairs, Mr. Patrick Tyburn (France, Guadeloupe) for Public Awareness and Mr. Antonio Aguilar (Venezuela) for Resilience. It has a total of 24 members, including 3 ex officio members. There were two virtual meetings, other business was done through email.

2. Summary of Activities 2021-2023

Over the intersessional period 2021-2023 the Working Group through its Members and Chairs and Co-Chairs in coordination with CTIC and the IOC Tsunami Secretariat and with the support of the International Tsunami Information Center Caribbean Office (ITIC-CAR, previously called Caribbean Tsunami Warning Program) focused on the development of reports and supporting tsunami preparedness, readiness and resilience actions, including the following:

- Finalization of UNESCO/IOC as Manual and Guide 86 “The Multi-Annual Community Tsunami Exercise Programme: Guidelines for the Tsunami and other Coastal Hazards Warning System for the Caribbean and Adjacent Regions. The National University of Costa Rica reformatted it into a style more appropriate for community engagement. MG 86 was made available and highlighted as a resource for the CARIBE WAVE 22 and 23 exercises. It was translated into French, the Spanish version is still pending. The document can be accessed at: http://itic.ioc-unesco.org/images/stories/tsunami_exercises/international_exercises/caribewave/caribewave23/Supporting_Documents/MG86_380540eng.pdf (English) and http://itic.ioc-unesco.org/images/stories/tsunami_exercises/international_exercises/caribewave/caribewave23/Supporting_Documents/MG86_380540fre.pdf (French)
- Updating the 2021 inventory of tsunami evacuations signs and symbols in 2023. It documents by Member State and Territory their signage, as well as other best practices in the Caribbean and around the world (“blue line”, murals). It has a reference document for Member States and Territories evaluating their tsunami signage programme with the aim of having greater consistency in the region. Currently signage for 66% of the MS/Territories is included (up from 50% in 2021)



Barbados		Costa Rica	
Signage Art/Photo	Signage Type	Signage Art/Photo	Signage Type
	Tsunami Hazard Zone		Tsunami Hazard Zone
	Width/Height (ft):		Width/Height (ft):
	Materials (e.g. aluminum, plastic, or fiber glass):		Materials (e.g. aluminum, plastic, or fiber glass):
	Number of signs installed:		Number of signs installed:
	Entering/Leaving Tsunami Hazard Zone		Entering/Leaving Tsunami Hazard Zone
	Width/Height (ft):		Width/Height (ft):
	Materials (e.g. aluminum, plastic, or fiber glass):		Materials (e.g. aluminum, plastic, or fiber glass):
	Number of signs installed:		Number of signs installed:
	Tsunami Evacuation Route		Tsunami Evacuation Route
	Width/Height (ft):		Width/Height (ft):
	Materials (e.g. aluminum, plastic, or fiber glass):		Materials (e.g. aluminum, plastic, or fiber glass):
	Number of signs installed:		Number of signs installed:
	Tsunami Assembly Point		Tsunami Assembly Point
	Width/Height (ft):		Width/Height (ft):
	Materials (e.g. aluminum, plastic, or fiber glass):		Materials (e.g. aluminum, plastic, or fiber glass):
	Number of signs installed:		Number of signs installed:
	Tsunami Evacuation Map		Tsunami Evacuation Map
	Width/Height (ft):		Width/Height (ft):
	Materials (e.g. aluminum, plastic, or fiber glass):		Materials (e.g. aluminum, plastic, or fiber glass):
	Number of signs installed:		Number of signs installed:
	Tsunami Ready Recognition		Tsunami Ready Recognition
	Width/Height (ft):		Width/Height (ft):
	Materials (e.g. aluminum, plastic, or fiber glass):		Materials (e.g. aluminum, plastic, or fiber glass):
	Number of signs installed:		Number of signs installed:

- Promoting and supporting the World Tsunami Awareness Day (WTAD) which is held annually on November 5. The theme for WTAD 2021 was related to the Target F of the SFDRR: Substantially enhance international cooperation to developing countries through adequate and sustainable support to complement their national actions for implementation of this framework by 2030. For 2022, World Tsunami Awareness Day promoted Target (g) of the "Sendai Seven Campaign" which calls for Substantially increasing the availability of and access to multi-hazard early warning systems and disaster risk information and assessments to the people by 2030. In 2023 the focus will be on vulnerable populations, including people with disabilities. CTIC is the lead for the CARIBE EWS, but Chair and members of WG also participated in local and regional events. For more information and access to videos, ITIC has stood up the following page http://itic.ioc-unesco.org/index.php?option=com_content&view=category&layout=blog&id=2262&Itemid=2782 Note that the logo for WTAD has also changed.

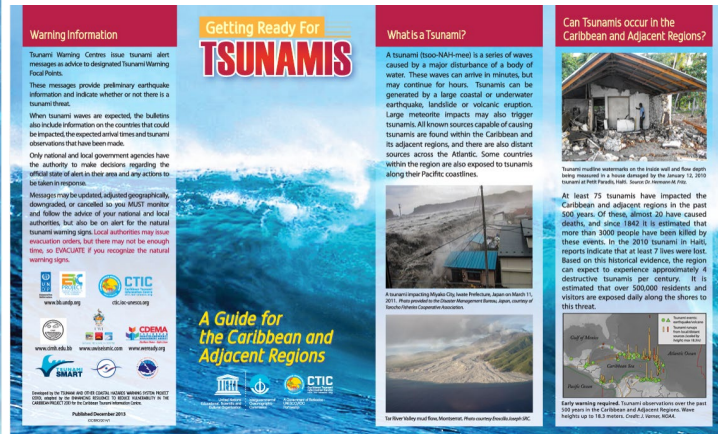


- Supported the planning, conduct and evaluation of the CARIBE WAVE 2022 and 2023. The WG IV may consider using the completed evaluation questionnaires for a gap analysis of the Tsunami Preparedness, Readiness and Resilience in the CARIBE EWS.
- Engaged in the planning for the UN Decade of Ocean Science for Sustainable Development. Members of WG 4 participated in the 2021 and 2022 IOCARIBE Tropical Americas and Caribbean planning events, as well as the Ocean Decade Safe Ocean Laboratory. Some are members of the TAC Safe Ocean Working Group. The Project Integrating Coastal Hazards Early Warning System for the Tropical Americas and Caribbean was submitted and endorsed under the Ocean Decade Programme Coast Predict.
- Updating the Article Database on the Social Dimension of Disaster Risk Reduction with the support of the ITIC-CAR. The purpose is to facilitate a higher priority to social science goals in the CARIBE-EWS Implementation Plan
- Representing (Alison Brome and Christa von Hillebrandt) in the CARIBE EWS TOWS Task Team on Disaster Management and Preparedness in February 2022 and 2023. In this meeting an update was provided on the efforts of the Indian Ocean Tsunami Information Centre (IOTIC) and International Tsunami Information Centre (ITIC) in preparing Tsunami Awareness, UNESCO/IOC Tsunami Ready and Tsunami Evacuation Maps, Plans and Procedures (TEMPP) training through the Ocean Teacher Global Academy (OTGA) platform and hybrid training workshops and training videos. TOWS has requested the IOC Tsunami Secretariat to facilitate the finalization of the OTGA basic tsunami training

materials as soon as possible. Once the modules are available, the WG 4 could help facilitate the testing and use of the trainings.



- Development of a Google Form for CARIBE EWS Member States and Territories to order tsunami education and outreach materials from ITIC/CTWP and CTIC.
- Updated the Tsunami Rules (English and Spanish) and in process of updating the Tsunami Flyer.



3. The Key considerations/challenges/opportunities

- The Member States of the Caribbean and Adjacent Regions are still being impacted by the consequences of COVID 19, especially funding and human resources of the Disaster Risk Management Offices
- Impacts and risks of other hazards on coastal communities – hurricanes, storm surges, sargassum, volcanic eruptions, floods, etc. These events and hazards compete with resources for Tsunami.
- Lack of financial and human resources to implement actions of the WG 4
- Limited engagement of members in WG activities
- Tsunamis are low frequency events which leads to complacency
- Lack of availability of ITIC educational and outreach materials in languages other than Spanish and English, noting French, Dutch and other languages in the Caribbean
- Maximize the opportunities provided by the Ocean Decade Tsunami Programme and other actions, CARIBE WAVE, WTAD and Tsunami Ready as well as and other relevant decade actions, the Regional Action Plan for the Implementation of the Sendai Framework for Disaster Risk Reduction 2015-2030 in the Americas and the Caribbean and the UN Early Warnings for All Initiative (EW4ALL)

Recommendations for ICG/CARIBE EWS XVI

Recognizes the actions of the Working Group IV towards the advancement of tsunami preparedness, response and resilience.

Highlights the importance of the active participation of all its members and

Invites Member States to nominate members to actively engage in the Working Group.

Notes the endorsement and draft implementation plan of the UN Ocean Decade Tsunami Programme Research, Development and Implementation Plan and its Objective 2: 100 Percent of communities at risk to be prepared for and resilient to tsunamis by 2030 through the UNESCO/IOC Tsunami Ready Programme and other like initiatives.

Further notes the endorsement of the IOCARIBE Ocean Decade Project Integrating Coastal Hazards Early Warning Systems in the Tropical Americas and Caribbean (iCHEWS).

Additionally notes the UN Early Warnings for All Initiative (EW4ALL) launched in November, 2022 and

Recalls the Regional Action Plan for the Implementation of the Sendai Framework for Disaster Risk Reduction 2015-2030 in the Americas and the Caribbean and the 2023 updates,

Urges the WG 4 and Member States to consider in its tsunami actions the UN Ocean Decade Tsunami Programme and other relevant Ocean Decade actions, the Regional Action Plan for the Implementation of the Sendai Framework for Disaster Risk Reduction 2015-2030 in the Americas and the Caribbean and the UN Early Warnings for All Initiative (EW4ALL),

Recommends the following changes in its terms of reference to align with the Ocean Decade, Sendai Framework and EW4All:

- Edit Name of WG to: Preparedness, Response and Resilience
- Edit Purpose: To advise and recommend to the ICG strategies to enhance awareness, education, preparedness, response and resilience capacities and to develop the necessary recommendations, tools and procedures.
- Add the following functions:
 - Consider UN Ocean Decade Tsunami Programme and other relevant decade actions, the Regional Action Plan for the Implementation of the Sendai Framework for Disaster Risk Reduction 2015-2030 in the Americas and the Caribbean and the UN Early Warnings for All Initiative (EW4ALL)

Acknowledges with appreciation France, the National University of Costa Rica and the International Tsunami Information Center Caribbean Office for their contributions to the finalization of the Manual and Guide 86 “The Multi-Annual Community Tsunami Exercise Programme: Guidelines for the Tsunami and other Coastal Hazards Warning System for the Caribbean and Adjacent Regions” and its translation into French.

Notes that a CARIBE EWS training on MG 86 is to be co-organized by CTIC and ITIC CAR in June 2023 in Barbados with funding from USAID/BHA as part of the Tsunami Ready projects,

Requests the IOC Tsunami Secretariat to finalize the translation of MG 86 into Spanish,

Notes the 2023 update of the Tsunami Signage and Public Displays employed in the region and its support to the implementation of the Tsunami Ready Recognition Program;

Notes that 32 of the 48 Member States and territories have contributed examples of the signage used;

Requests the Member States to review and provide updates to the International Tsunami Information Center Caribbean Office, including the location metadata, artwork and photographs of installed signs for inclusion in the signage database.

Reminds Member States on importance of developing and maintaining an inventory of the signage installed in the country in coordination with the relevant stakeholders and authorities.

Appreciates and requests the International Tsunami Information Center Caribbean Office to coordinate with IOC and CTIC the posting and distribution of the current version and provide an update of the Signage Inventory for the next ICG.

Acknowledges the leadership of CTIC and collaboration with the UNDRR leading to increasing participation and visibility of WTAD in 2021 and 2022

Notes that the focus for WTAD 2023 will be on vulnerable populations, including people with disabilities, which was also addressed in CARIBE WAVE 23.

Recommends CTIC to continue to engage with UNDRR, Working Group 4 and CARIBE EWS Member States to engage, plan and take action for the WTAD 2023.

Requests UNDRR to inform on the theme for WTAD at least a year in advance to also consider in the planning of CARIBE WAVE exercise and have the same annual theme for both events.

Recalls the initial work in identification of social science resources through the preparation of the social science database.

Recommends again for the WG 4 to engage social scientists for a tsunami risk perception study in the CARIBE EWS

Notes the efforts of the Indian Ocean Tsunami Information Centre (IOTIC) and International Tsunami Information Centre (ITIC) in preparing Tsunami Awareness, UNESCO/IOC Tsunami Ready and Tsunami Evacuation Maps, Plans and Procedures (TEMPP) training through the Ocean Teacher Global Academy (OTGA) platform and hybrid training workshops and training videos.

Further notes TOWS has recommended that the IOC Tsunami Secretariat to facilitate the finalization of the OTGA basic tsunami training materials as soon as possible.

Recommends that once the modules are available, the WG 4 to help facilitate the testing and use of the trainings.

Recognizes COVID 19, Climate Change as well as multiple recent, ongoing and future emergencies and disasters and their cascading effects as a manifestation of the systemic nature of risks, and its impact on human and financial resources for disaster risk reduction.

Urges the IOC Secretariat to work with the CARIBE EWS officers to develop a strategic plan to mobilize funding and in-kind support for Tsunami Preparedness, Response and Resilience Activities with a particular focus for LDC's and SIDS.

Working Group Internal Work Plan/Key Proposed Activities

Please provide short details (including timelines) of proposed activities/tasks to be implemented over the intersessional ICG/CARIBE EWS period.

ACTION	Lead	DEADLINE
Socialize new terms of reference of WGIV and Update Membership	Chair/Co-Chairs WG4	August 2023
Provide input and evaluate outcomes for the proposed regional workshop on MG 86 Methodological guidelines for community tsunami exercise planning.	WG4	ICG XVII
Update Tsunami Signage Database.	ITIC-CAR	ICG XVII
Develop a strategic plan to mobilize funding and in-kind support for Tsunami Preparedness, Response and Resilience Activities and the UN Decade Actions	CTIC CARIBE EWS Secretariat	ICG XVI
Provide recommendations to CTIC on how to increase awareness, and engagement of Member States for WTAD 2023	CTIC	November 2023
Review and provide recommendations on the regional implementation of the Tsunami Preparedness and Response element of the Ocean Decade Tsunami Programme	WG4	ICG XVII
Upon availability test and use of the OTGA tsunami modules by the Member States	WG IV	Upon availability of OTGA modules
Engage social scientists to study tsunami risk perception in the CARIBE EWS, include integration of results of CARIBE WAVE exercises and questionnaires used by other countries and regions.	WGIV CTIC ITIC-CAR	ICG XVII

Membership as of April 17, 2023:

1. Christa von Hillebrandt-Andrade, Puerto Rico, USA (Chair, 2018-2023)
2. Antonio Aguilar, FUNVISIS, Venezuela (Vice Chair, 2020-)
3. Patrick Tyburn, France (Vice Chair, 2018-2023)
4. Corinne Leysner, Curacao
5. John Kimbrough, USA
6. Juan Jose Reyes, COPECO, Honduras
7. Elizabeth Riley (or nominee), CDEMA
8. Raul Salazar (Jair Torres, Nominee), UN Office for Disaster Risk Reduction (UNDRR) Regional Office for the Americas and the Caribbean
9. Claudia Herrera Melgar (or nominee), CEPREDENAC
10. Stacey Edwards, Seismic Research Center, Trinidad and Tobago
11. Paul Martens, Sint Maarten
12. Wagner Rivera, ONAMET, Dominican Republic
13. Jasen Penn, British Virgin Islands, UK
14. Kerry Hinds, Department of Emergency Management, Barbados
15. Julia Rawlins-Bentham, Government Information Service, Barbados
16. Susan Hodge, Department of Disaster Management, Anguilla, UK
17. Fabio Rivera, Universidad Nacional, Costa Rica
18. Gregory Jabol, Collectivité Territoriale de Guyane, France (Pending Confirmation).
19. Marie-Noëlle Raveau, Collectivité Territoriale de Martinique, France
20. Stéphane NISSE, EMIZA, France (Martinique)
21. Mathieu Perroche, Université Paul-Valéry Montpellier 3, France
22. Alison Brome, CTIC (Ex-Officio)
23. Bernardo Aliaga, CARIBE EWS Technical Secretary, UNESCO-IOC (Ex-Officio)
24. Silvia Chacón, CARIBE EWS Chair (Ex-Officio)