

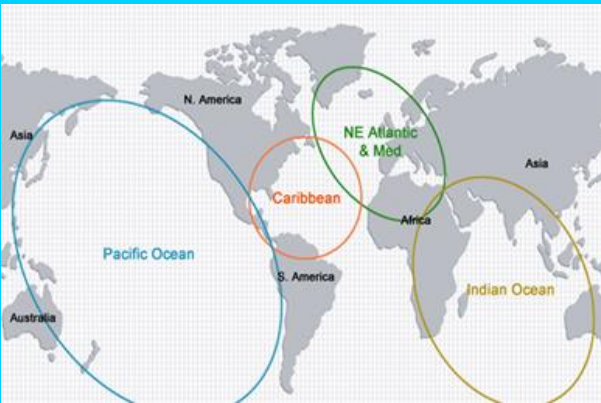


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# TSUNAMI READY PROGRAMME in the Caribbean and adjacent regions

Alison Brome, Programme Office for Coastal Hazards,  
UNESCO/IOC-CTIC



UNESCO/IOC coordinates international tsunami warning and mitigation activities. In our region, this is undertaken by the UNESCO/IOC-led Intergovernmental Coordination Group for the Tsunami and Other Coastal Hazards Warning System for the Caribbean and Adjacent Regions (ICG/CARIBE EWS)

Since 1842, almost 3,500 lives lost due to tsunamis in the region

# Tsunamis in the Caribbean



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## Caribbean Ocean Hazard & Vulnerability Context:

- Over 75 tsunamis with high validity observed in Caribbean in past 500 years
- Region accounts for approx 7–10 % of world's oceanic tsunamis
- Earthquake, landslide, and volcanic tsunami sources all impacted region
- Caribbean significantly impacted by storm surge, coastal erosion, sargassum, harmful algal blooms
- Approx. ¾ of Caribbean settlement pattern concentrated on coastline
- Deleterious impacts of tsunamis and other coastal hazards magnified by climate change, presenting greater challenge for SIDs with limited or emerging technical and financial capacities

## UNESCO/IOC Response:

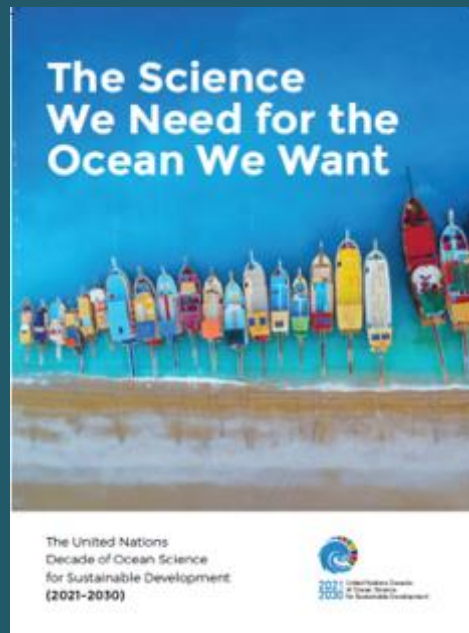
1. **ICG/CARIBE EWS**
2. IOC of UNESCO Sub-Commission for the Caribbean and Adjacent Regions (**IOCARIBE**)
3. **IOC membership in regional partner DRR initiatives** e.g. CDEMA-led – Regional Multi-Hazard Consortium
4. United Nations Decade of Ocean Science for Sustainable Development 2021 - 2030



2016-2017

2018-2019

2019-2020



**Vision:**  
*“The science we need for the ocean we want”*



2021 United Nations Decade  
2030 of Ocean Science  
for Sustainable Development

**Mission:**  
*Transformative Ocean Science solutions for sustainable development, connecting people and our ocean*

# UNESCO/IOC Tsunami Ready



# UNESCO/IOC ICG/CARIBE EWS Tsunami Ready Guideline Indicators



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## UNESCO IOC TSUNAMI READY GUIDELINES

### MITIGATION (MIT)

**MIT-1. Have designated & mapped tsunami hazard zones**

**MIT-2. Have a public display of tsunami information**

### PREPAREDNESS (PREP)

**PREP-1. Have a tsunami evacuation map developed in collaboration with communities and local authorities**

**PREP-2. Develop and distribute outreach and public education materials**

**PREP-3. Hold at least three outreach or educational activities annually**

**PREP-4: Conduct an annual tsunami community exercise**

### RESPONSE (RESP)

**RESP-1. Address tsunami hazards in the community's emergency operations / response plan**

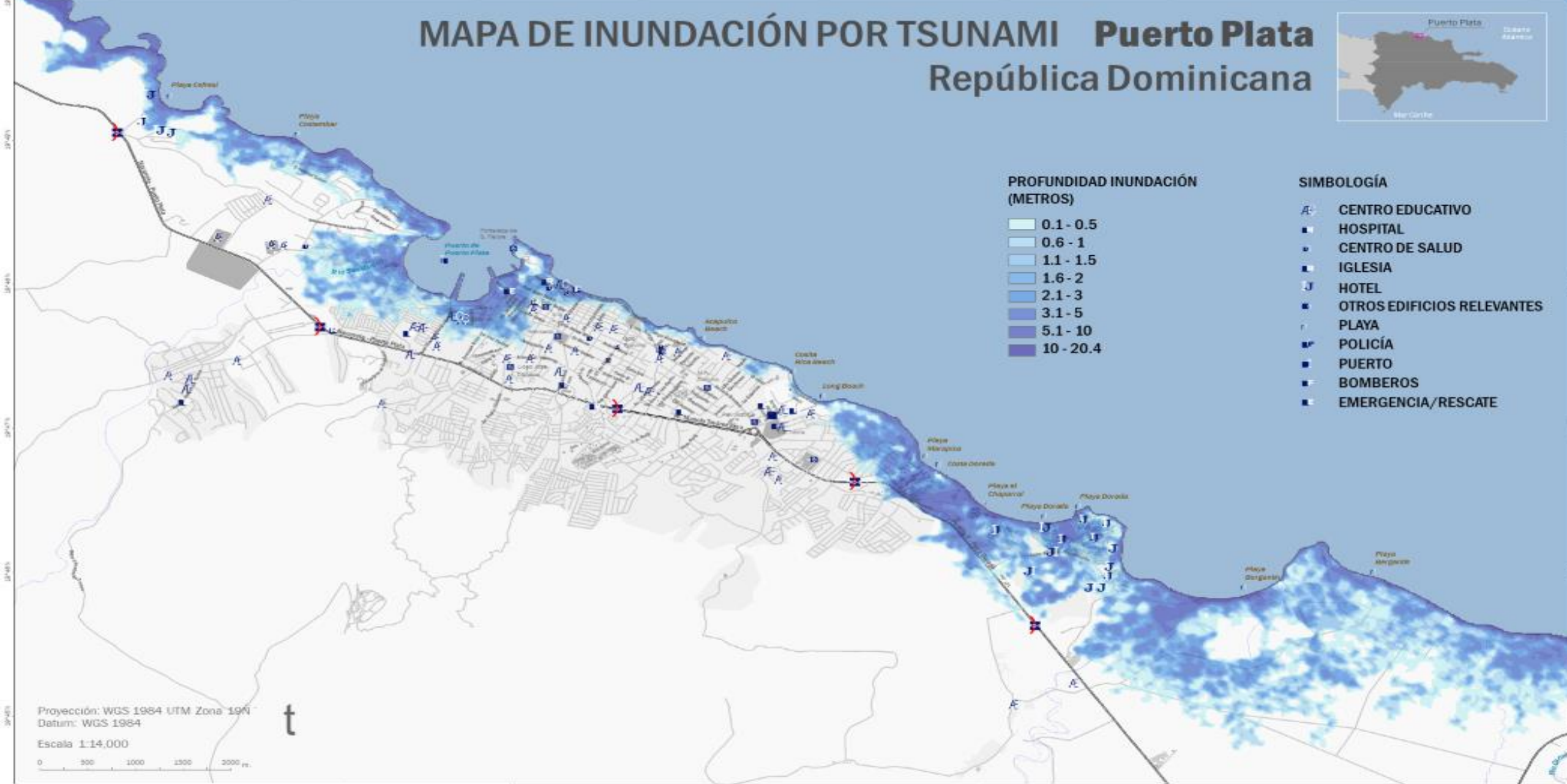
**RESP-2. Have the capacity to manage emergency response operations during a tsunami**

**RESP-3. Have redundant and reliable means to receive official tsunami warnings 24x7**

**RESP-4. Have redundant and reliable means to disseminate official tsunami warnings and information to the public 24x7**



# MAPA DE INUNDACIÓN POR TSUNAMI Puerto Plata República Dominicana



**MIT 1 - Tsunami hazard zones must be designated and mapped**

Elaborado por:

Financiado por:

Socios nacionales:

**Descargo de responsabilidad**  
Este mapa se basa en datos proporcionados por las agencias nacionales. El área inundada ha sido calculada utilizando el modelo numérico HySea, considerando las fuentes sísmicas tsunamigénicas proporcionadas por UNESDO-COI y NOAA (CATSAM), principalmente la fuente utilizada en el ejercicio CaribeWave16. Mapa elaborado en febrero de 2020.

# MIT 2 - Public Display of Tsunami Information



**Mesaj sounami pou Fò Libète**  
- Messages tsunامي pour Fort Liberté  
- Tsunami Messages for Fort Liberté

**Dansek / Danger / Danger!**  
Kouri monte pi wo / Courez vers les hauteurs / Run to higher ground!  
Rete tann otoutye yo / Attendez les instructions des autorités / Wait official clear

**Ka gen gwo kouvan / ki gen danje / De fòrts danjereux courants sont possibles / Possible strong and dangerous local currents**  
Soti nan lamè. Fimen plè. Rete branche / Hors de l'eau. Fermez les plages. Restez à l'écart. / Out of water. Stay tuned.

**Danje pwobab / Danger probable / Probable danger**  
Veye. Rete branche pou plus enfòmasyon / Surveillez. Restez à l'écoute pour plus d'informations / Watch. Stay tuned for more information

**Yon senp enfòmasyon / Declaration of Information / Information Statement**  
Pa gen danje. Ka gen danje you lot kote. / Pas de danger. Un bassin océanique distant peut être à risque / No danger. A distant ocean basin may be in danger

**Evakasyon / Evacuation Warning**

**Avètisman / Avertissement Advisory**

**Veye / Surveiller**

**Enfòmasyon / Information Info**

**istwa / Histoire / History**

Ayiti te afekte pou 300 ane ki pase yo pa omwen 5 tsunamis (1770, 1842, 1860, 1887, 2010). Tsunami ki pi resan an te fet 12 Janvye 2010, ak vag jiska 3 mètr. Evenman sa a te vèt nan yon tranblanmàn nan Magnitude 7.0 ki te detwi kapital Ayiti, Pòtoprens, touye plis pase 200,000 moun.

Haiti a été affectée au cours des 300 dernières années par au moins 5 tsunamis (1770, 1842, 1860, 1887, 2010). Le tsunami le plus récent s'est produit le 12 janvier 2010, avec des vagues jusqu'à 3 mètres. Cet événement a été provoqué par un tremblement de terre de magnitude 7,0 qui a détruit la capitale d'Haïti, Port-au-Prince, tuant plus de 200 000 personnes.

Haiti has been affected for the past 300 years by at least 5 tsunamis (1770, 1842, 1860, 1887, 2010). The most recent Tsunami occurred on January 12, 2010, with waves up to 3 meters. This event was originated by an earthquake of Magnitude 7.0 which destroyed the Capital of Haiti, Port au Prince, killing over 200,000 people.

**Ki sa pou li pandan yon tranblanmàn?**  
- Que faire lors d'un tremblement de terre?  
- What to do during an earthquake?

Chèche yon kote ki asire: Bese, Kouri tèt ou ak Kenbe yon bagay ki fèm. Siw bo lamè nan yon Zòn Evakasyon Sounami, retire kòw. Aktive plan ajans kay la, travay ak kominite a.

Recherchez un endroit sûr: Baissez, Couvrez et Tenez. Si vous vous trouvez dans une zone d'évacuation tsunami, évacuez immédiatement. Activez le plan d'urgence de votre maison / du lieu de travail et de la communauté.

Look for Safer Place: Drop, Cover and Hold on, if you are located within a Tsunami Evacuation Zone, evacuate immediately. Activate your home, workplace and/or community emergency plans.

**TSUNAMI HAZARD ZONE**  
**ZONE DE DANGER TSUNAMI**  
**SOUNAMI ZON DANJE**

**SI GEN GWO TRANBLEMANTE RETIRE KÒW BO LANME KOURI MONTE PIWO**

Tsunamis and Coastal Hazards | x +

**CARENAGE TSUNAMI EVACUATION MAP**

The Office of Disaster Preparedness and Management (ODPM) is pleased to launch the Tsunami Evacuation Map for the Carenage Community. This map forms part of the 'Strengthening Capacities of Early Warning and Response to Tsunamis and Other Coastal Hazards in the Caribbean Project' developed by UN-CARICOM.

The principal purpose of the project was to prepare the residents of Carenage to respond to a tsunami in the event such a hazard is experienced. This project was conducted in partnership with the UN-ESCR/UNEP/UNEP, the European Commission Overseas General for European Civil Protection and Humanitarian Aid Operations (ECHO) and its Department's Disaster Preparedness Programme (DPP/ECDC).

**Further Reading:**  
National Geographic | Natural Disasters: Tsunamis  
San Diego County Office of Emergency Services - Tsunamis: Know What to Do! (video)

**CALENDAR** | **HAZARD MAPS** | **EMERGENCY CONTACTS**

WHO TO CONTACT IN AN EMERGENCY

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**¡Vamos! Este jueves 14 de marzo**

Te invitamos a vos y tu familia a un **SIMULACRO ANTE TSUNAMI** BLUEFIELDS, EL BLUFF Y CORN ISLAND.

**¿Qué es un Tsunami?**

Un tsunami es un tipo de ola que se genera por un terremoto submarino, un volcán submarino o un deslizamiento de tierra en el fondo del mar.

**SEÑALES DE UN TSUNAMI FUENTE: O AL MOMENTO DE LA VIBRACIÓN.**

- 1. Vibración
- 2. Cambio de nivel del mar
- 3. Cambio de color del agua
- 4. Cambio de temperatura del agua
- 5. Cambio de olor del agua
- 6. Cambio de sabor del agua
- 7. Cambio de textura del agua
- 8. Cambio de visibilidad del agua
- 9. Cambio de sonido del agua
- 10. Cambio de olor del agua

**ORGANISMO PARA LA PROMOCIÓN DEL TURISMO Y RECREACIÓN DE CAROLINA DEL NOROCCIDENTE SINAPRESTO**

**COBAPRESTO CORN ISLAND**





# PREP 2 & 3 - Outreach Materials and Public Education Activities



# PREP 4 - Community Exercise

## ICG/CARIBE EWS - Towards A Safe Ocean Societal Outcome in the Caribbean and Adjacent Regions

- CARIBE-EWS Communications Tests and Exercises to build tsunami awareness and capacity
  - Annual CARIBE WAVE Exercises developed and executed by ICG/CARIBE EWS in association with regional partners e.g. NOAA ITIC Caribbean Office, CDEMA
  - Provides MS with opportunity to validate tsunami response plans and educate on tsunamis, strong link with TR
  - 2019 - 793,353 participants registered
  - 2020 - 102,752 participants registered
  - 2021 - almost 350,000 participants registered
- \*COVID



2019



2021



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CARIBE WAVE

# RESP 1 & 2 - Emergency Operations Plan & EOC Management



United Nations  
Educational, Scientific and  
Cultural Organization



Intergovernmental  
Oceanographic  
Commission



CTIC  
Caribbean Tropical  
Information Centre  
1976-1999-2000-2001

A Government of Barbados -  
UNESCO/IOC  
Partnership



CDEMA  
CARIBBEAN  
DISASTER EMERGENCY  
MANAGEMENT AGENCY

Resilient States - Safer Lives



European Union  
Civil Protection and  
Humanitarian Aid

**Strengthening Capacities of Early Warning and Response  
for Tsunamis and Other Coastal Hazards in the Caribbean**

Saint Vincent and the Grenadines Tsunami Warning  
Information  
Dissemination Protocol and Standard Operating Procedures  
(SOPs)

# RESP 3 & 4 - Receipt & Dissemination of Tsunami Alerts & Warning Information



October 2021

# UN Ocean Decade

## UN Decade Societal Outcome 5:

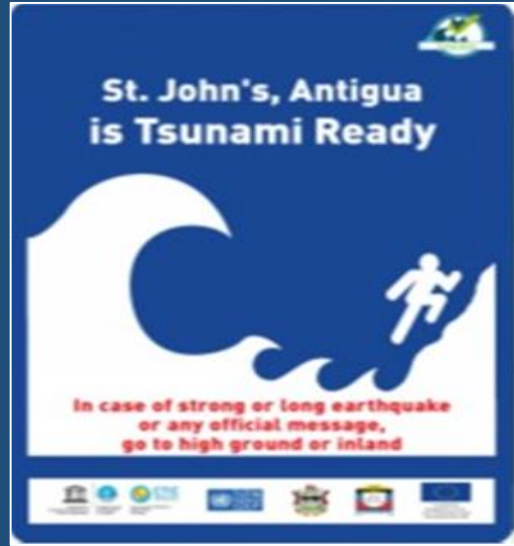
A Safe Ocean where Life and livelihoods are protected from ocean-related hazards



## UN Decade Goal - Tsunamis

To make 100% of communities at risk of tsunamis prepared for and resilient to tsunamis by 2030 through the implementation of the Tsunami Ready Programme and other initiatives

# Tsunami Ready Recognitions/Renewals



# Tsunami Ready – Inclusive – BE PART OF THE WAVE!!!

