

# Barbados Tsunami National Report 2024

August 25, 2024, Chile

Presented by

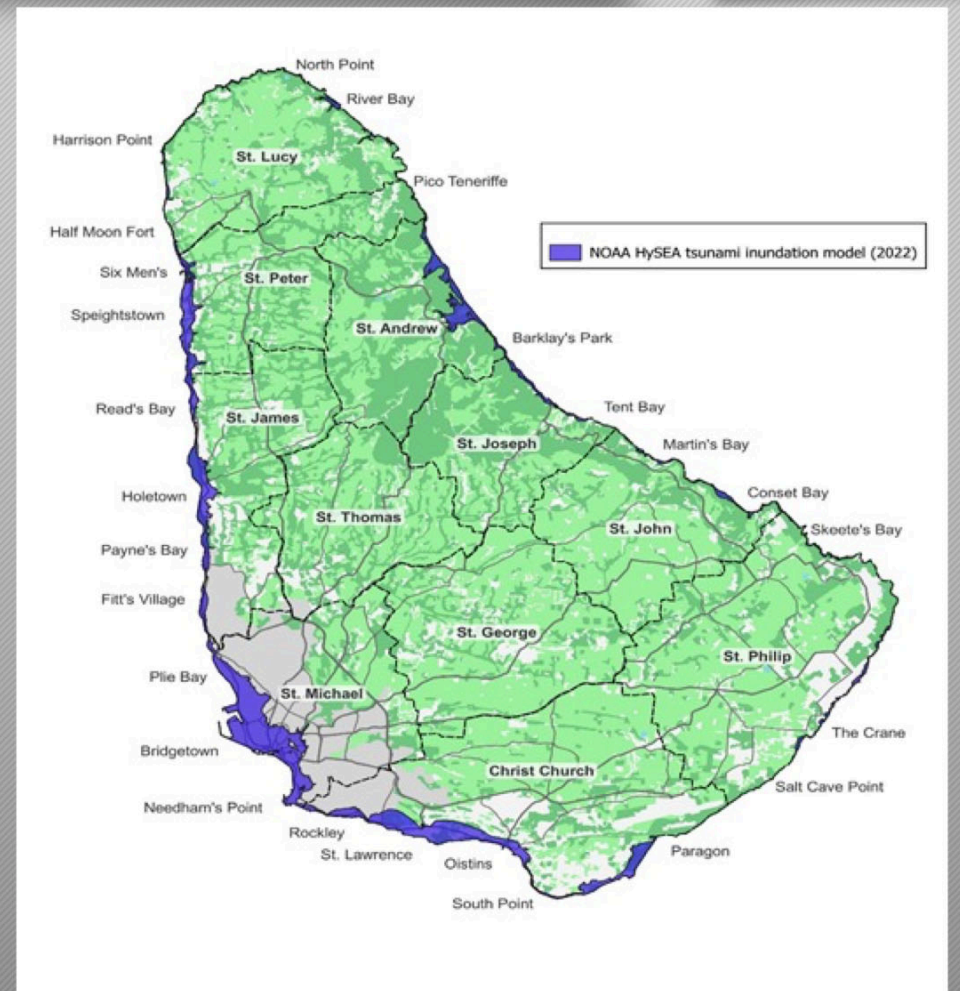
**Ms. Danielle Howell**

Research Officer- Coastal Zone Management Unit

# Barbados



13.1939° N, 59.5432° W



# Barbados Team



- Dr. Leo Brewster – Director of Coastal Zone Management Unit (CZMU) and Tsunami National Contact.



- Ms. Kerry Hinds – Director of the Department of Emergency Management (DEM) and Tsunami Advisor.



- Mr. Sabu Best – Director of Barbados Meteorological Services (BMS), Tsunami Warning Focal Point/Warning Centre.

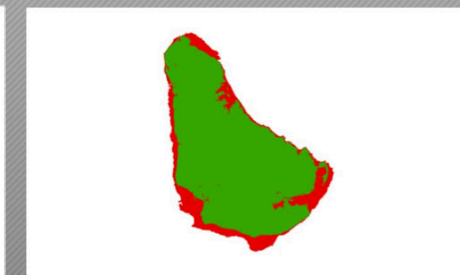
- Technical Standing Committee on Coastal Hazards (TSCCH) comprises of 29 entities. These include Barbados Light and Power (BL&P), Barbados Fire Service (BFS), Barbados Coast Guard (BCG), Ministry of Home Affairs (MHA), Caribbean Disaster Emergency Management Agency (CDEMA) etc.

# Tsunami Warning Center

- The BMS is the focal point/warning center for tsunamis in Barbados, who receives messages from PTWC.
- The tsunami bulletins issued by the BMS follow the Impact Based Forecasting (IBF) which was introduced in 2020 – tsunamis were added in 2021. A transition from text based alerts to the hazard impacts and respective responses.
- These bulletins include tsunami information statement (GREEN), tsunami advisory (YELLOW), tsunami watch (ORANGE), tsunami warning (RED) and discontinuation (GREEN).
- With the aid of high resolution lidar contour data from CZMU warning maps were constructed.



Image Showing the BMS.



Images showing IBF colours for none, 10m, 20m and 30m contour

# Tsunami Warning Center

- At the BMS in 2021, a Tsunami Bot was introduced to improve some weakness with associated with time of dissemination along with the lack of impacts and response language in the bulletins.
- The BMS created a bot which scans the USGS web server every minute for earthquakes with magnitude greater than 6.5 between the bounding box 5N to 20N and 50W to 70W.
- The bot follows the SOP and would disseminate the appropriate message within 2 minutes of the actual earthquake. (There still exist the ability to disseminate messages outside the assistance of the bot)
- The bot will disseminate threat messages automatically.



Image showing  
100 km radius  
around Barbados

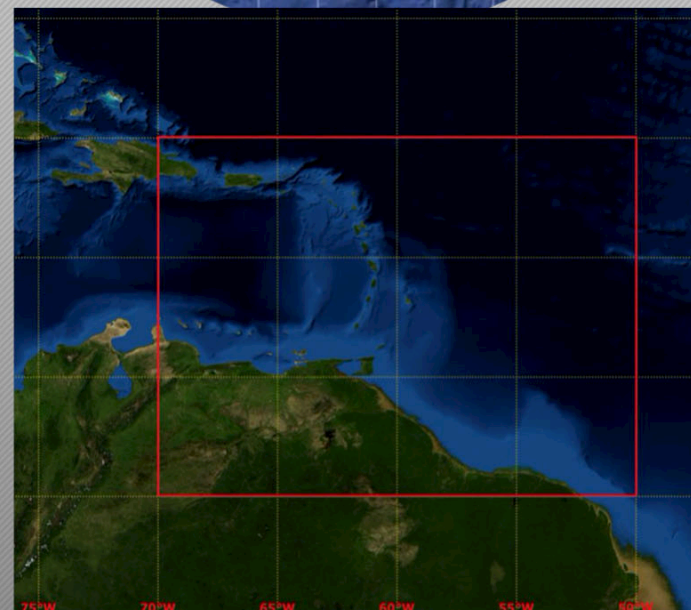


Image showing a  
regional tsunami  
bounding box.

# National Sea Level Network

<u>Station Name</u>	<u>Location</u>	<u>Owner</u>
Port St. Charles	St. Peter	CZMU
Speightstown	St. Peter	BMS
Bridgetown	St. Michael	BMS
Oistins	Christ Church	BMS
Barbados Coast Guard	St. Michael	BMS & CZMU
Consett Bay	St. John	BMS



Consett Bay,  
St. John

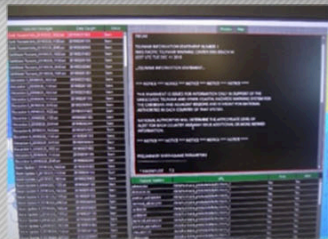
Radar  
Sensors  
Location



Barbados  
Coast Guard

Link: <http://3d-barbados.chordsrt.com:3000/d/CiqFumSMz/barbados-bms?orgId=1>

# Tsunami Standard Operation Procedure (SOP)

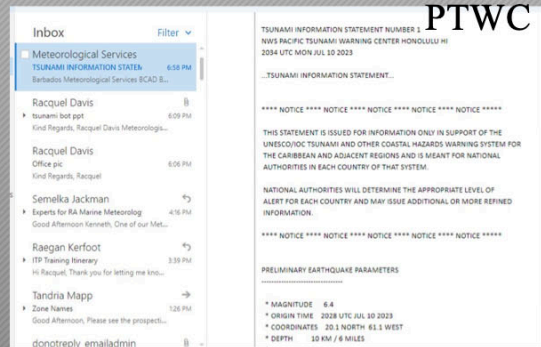


BMS Apparatus program receives message via GTS



CISN Display

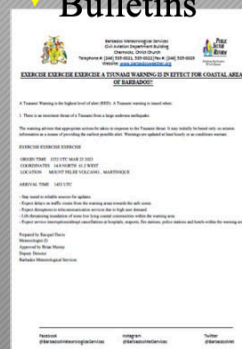
Email from PTWC



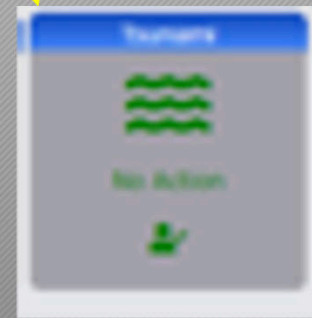
VHF Radio



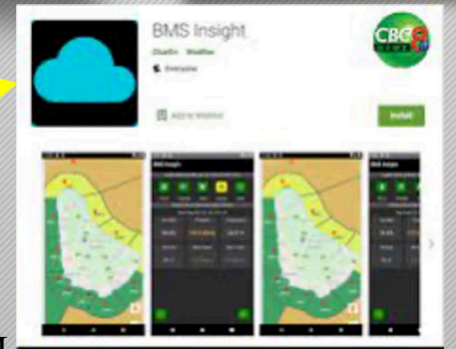
Template of Tsunami Bulletins



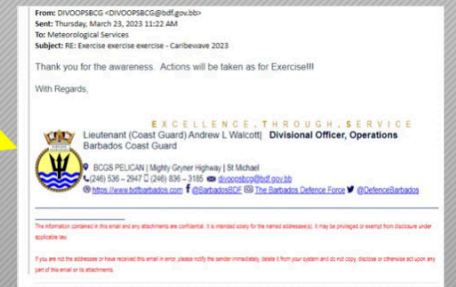
Tsunami icon on BMS website



BMS Insight Application



Email to DEM and 1st Responders



CAP.CAP application



# TWC Barbados Adapted Tsunami Protocol

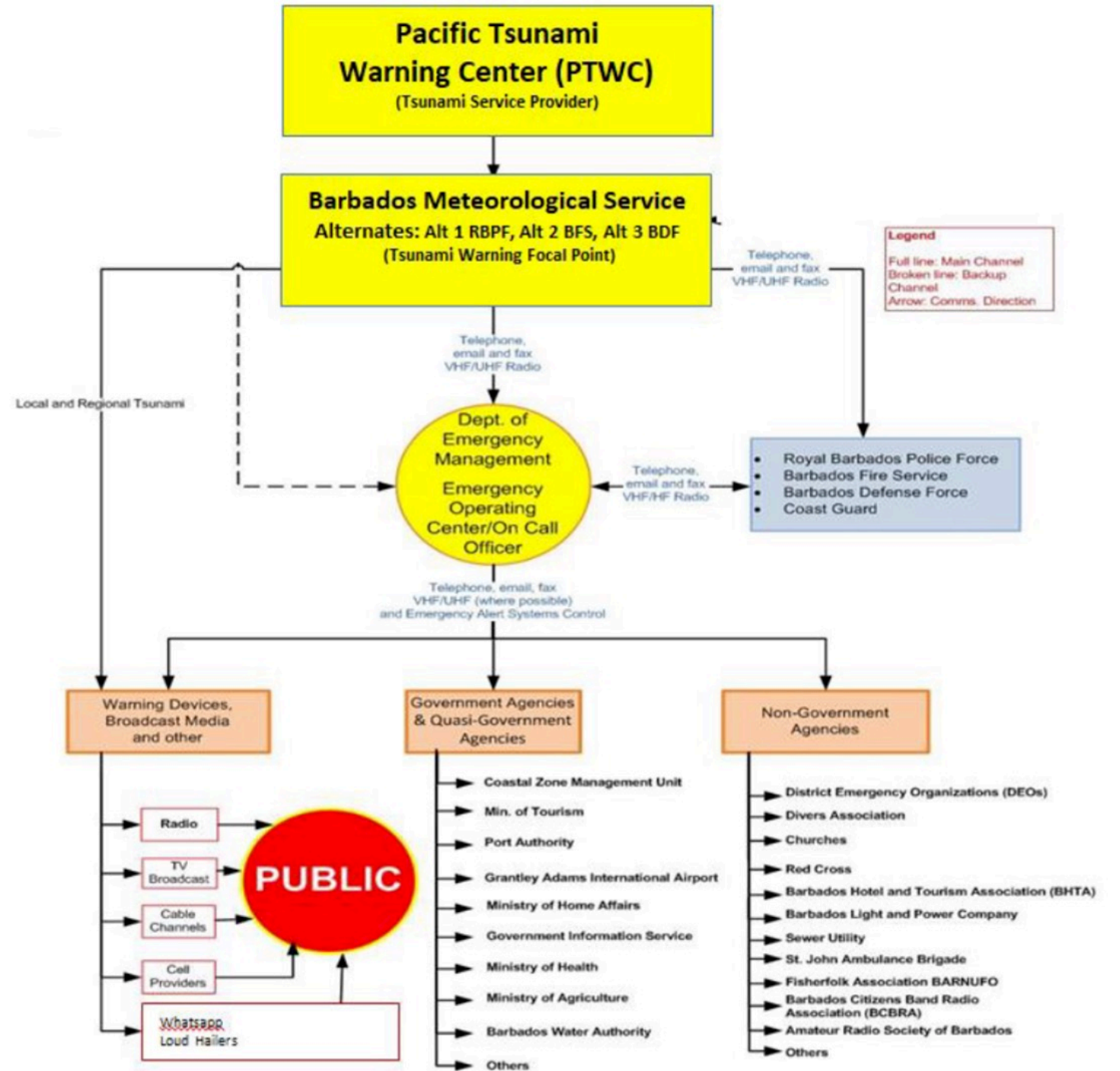


Figure 5: TWC Barbados Adapted Tsunami Protocol



# Tsunami Mitigation



- Members of the National Emergency Management System in the National Emergency Operations Centre responding to the Exercise tsunami threat. (Caribe Wave 2023)
- Public education and awareness programme with focus on the involvement of coastal communities, the private sector - especially the Tourism sector, the disabled community and the youth population.

# Tsunami Ready Recognition in Barbados

- Tsunami Ready projects in Barbados are implemented in country by DEM and CZMU who are co-chairs of TSCCH.
- In 2020, Shermans, St. Lucy to Mullins, St. Peter Barbados, received recognition as Tsunami Ready under the pilot community Performance Based Tsunami Recognition Programme.
- The process was implemented by the DEOs from each area.
- \*DEO – Volunteer arm of the DEM “Eyes and Ears on the ground”

Map showing pilot area certification from Shermans, St. Lucy to Mullins St. Peter.



# Tsunami Ready Recognition in Barbados



Image showing DEO working in the satellite EOC

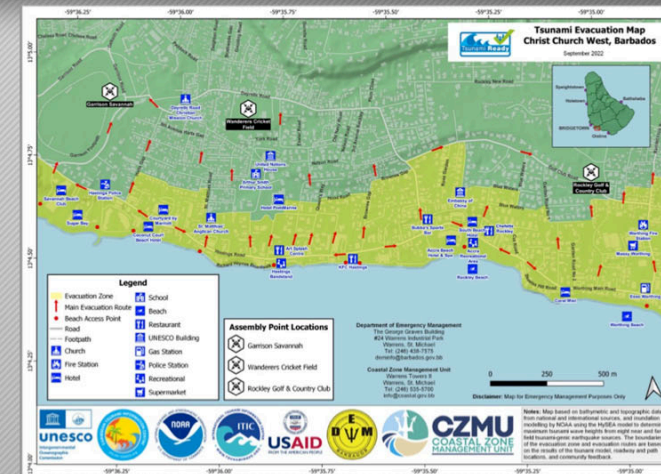


Images showing signage erected in Tsunami Recognition Zone - Shermans St. Lucy to Mullins to St. Peter

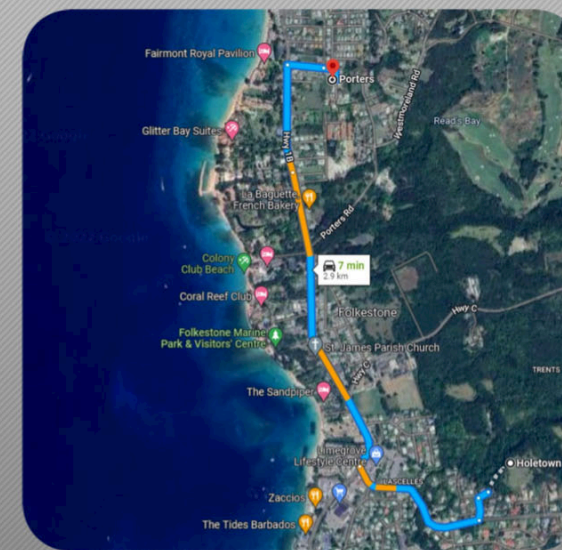


# Tsunami Ready Recognition in Barbados

- On May 13<sup>th</sup> 2022 Barbados launched the Tsunami Ready Recognition for two new communities:
  - Garrison to Rendezvous, Ch Ch. – This area is heavily populated with nightclubs, restaurants, bars and hotels also a major highway 7 runs through the area.
  - Porters to Holders Hill, St. James– located along this coast are luxury villas, hotel and a local marine park (Folkestone Marine Park).



Inundation maps of area from Garrison to Rendezvous, Ch. Ch.



Google map showing area from Porters to Holders Hill, St. James

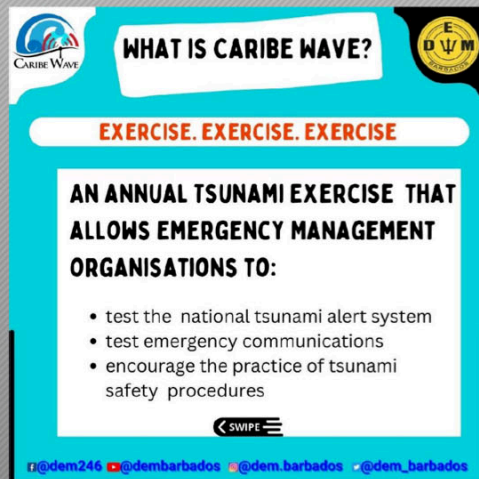
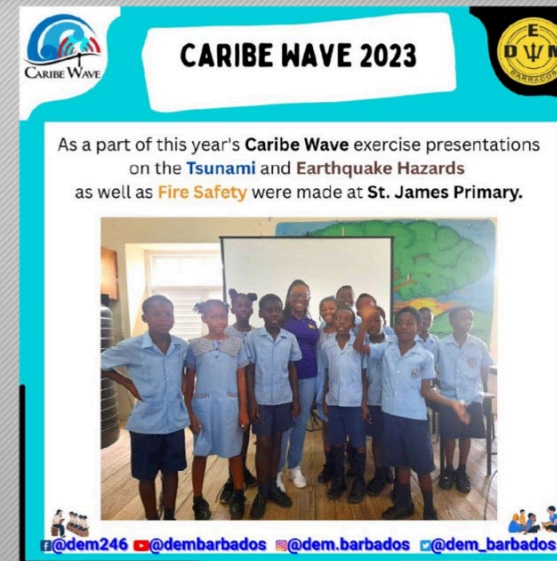
# Information On Tsunami Occurrence/Exercises

- The Barbados population has been informed on tsunami and other coastal hazards through public awareness and education activities which targets coastal communities, the Tourism Sector stakeholders, the disabled community, school population and the general public.



World Tsunami Awareness Day – community outreach – November 5<sup>th</sup>, 2022

# Activities relating to the National Tsunami Public Awareness Programme January 2022 - March 2024



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Thank You

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