



TSUNAMI

Preparedness and Readiness in The Bahamas



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The Bahamas

Basic Facts about The Bahamas

Location: Northwestern Atlantic Ocean

Topography: Low-lying limestone islands

Capital: Nassau

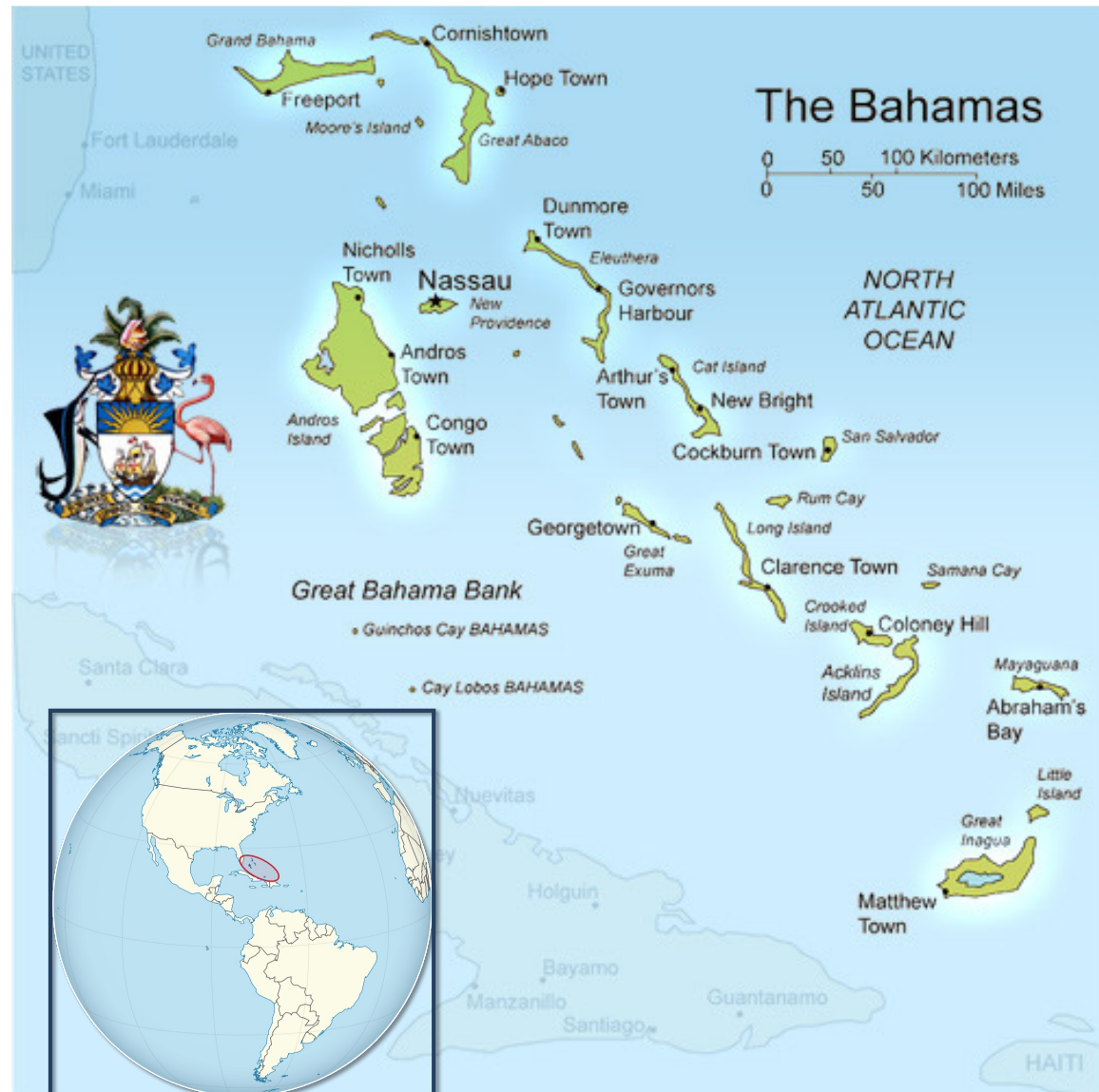
Population: 401,431

Size: 5,358 sq. mi
13,880 sq. km

Economy: Tourism



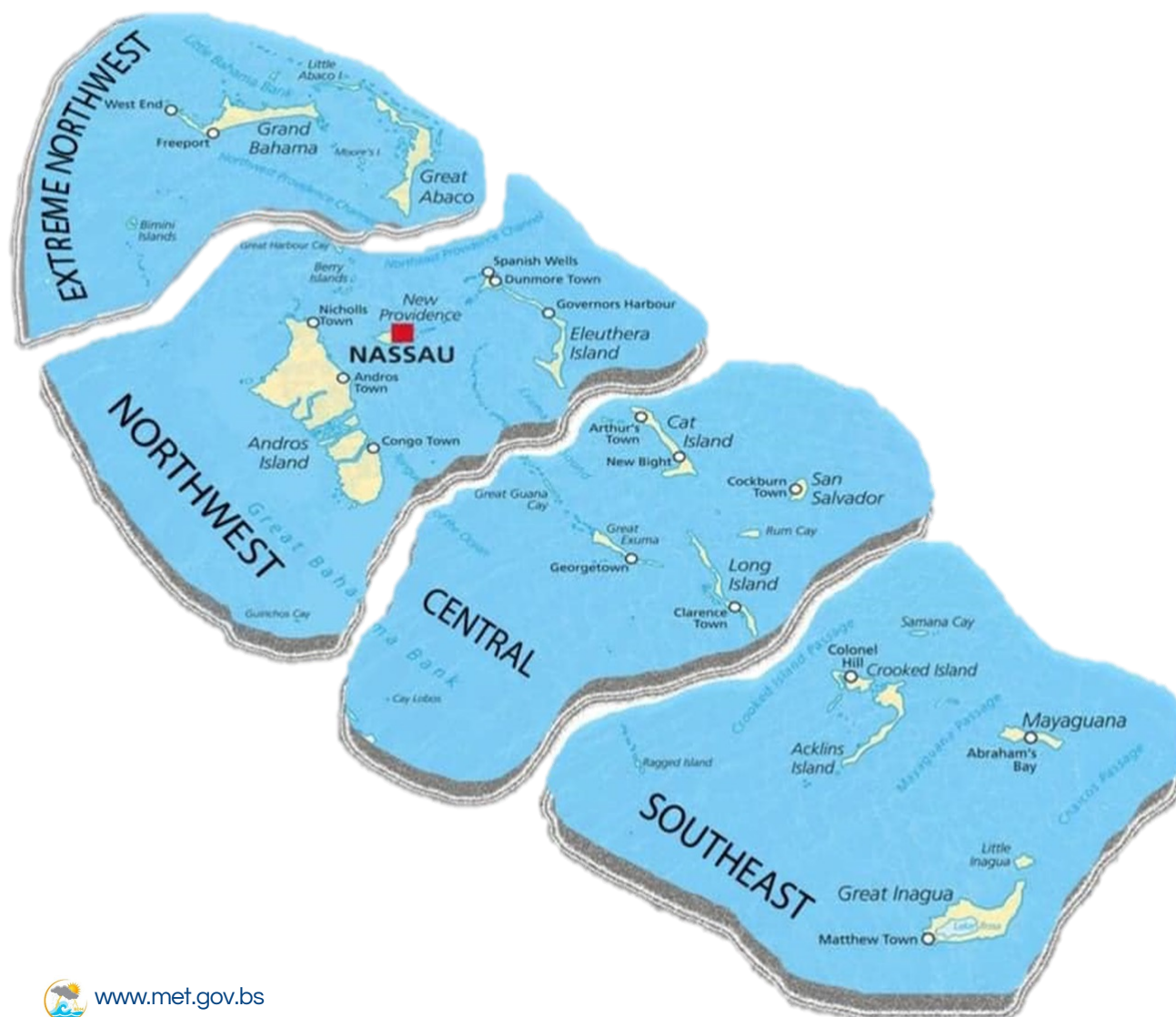
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Bahamas: Physical Characteristics

- Archipelago of 700 islands
- Highly vulnerable to coastal hazards
- Tsunami Risk – low to moderate, but high due to low elevation.
- Over 70% of total population live in coastal communities.
- Highest elevation is Mt. Alvernia on Cat Island, measured at approximately 206 feet or 63 meters.



ISLAND	ELEVATIO N (M)	ELEVATI ON (FT.)	Pop.
Abaco	41	134	16,695
Acklins	36	119	676
Andros	20	65	7,695
Berry Islands	7	23	1,002
Bimini	9	30	2,361
<u>Cat Island</u>	63	206	1,570
Crooked Island	35	115	293
Eleuthera	51	167	12,400
Exuma	39	128	7,287
Grand Bahama	12	40	46,740
Great Inagua	37	121	831
Long Island	57	177	2,718
Mayaguana	40	131	831
New Providence	37	123	296,732
Rum Cay	37	120	87
Ragged Island	35	116	56
San Salvador	37	123	819



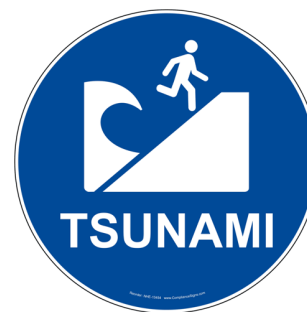
Disasters in The Bahamas

6 Natural Disasters in The Bahamas

Minor Earthquakes



Rare Tsunamis





Picture of Mt. Alvernia, Cat Island

Tsunami Warning System in The Bahamas

Member of:

- Caribbean Tsunami Warning Program
- CARIBE EWS - Intergovernmental Coordination Group for the Tsunami and other Coastal Systems for the Caribbean Region
- Pacific Tsunami Warning Center (PTWC)
- Disaster Risk Management (DRM) Authority .



The Bahamas Key Tsunami Contacts and Roles

Tsunami National Contacts



Jeffrey Simmons
Director Bahamas Dept. of
Meteorology (BDM)
Tsunami National Contact
TNC

- Receives warning and information related to tsunami and other life threatening events



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Aarone Sargent
Managing Director
Disaster Risk Management
(DRM) Authority
TNC
Alternate

- Prepares and coordinates response activities between ESF's and private stakeholders



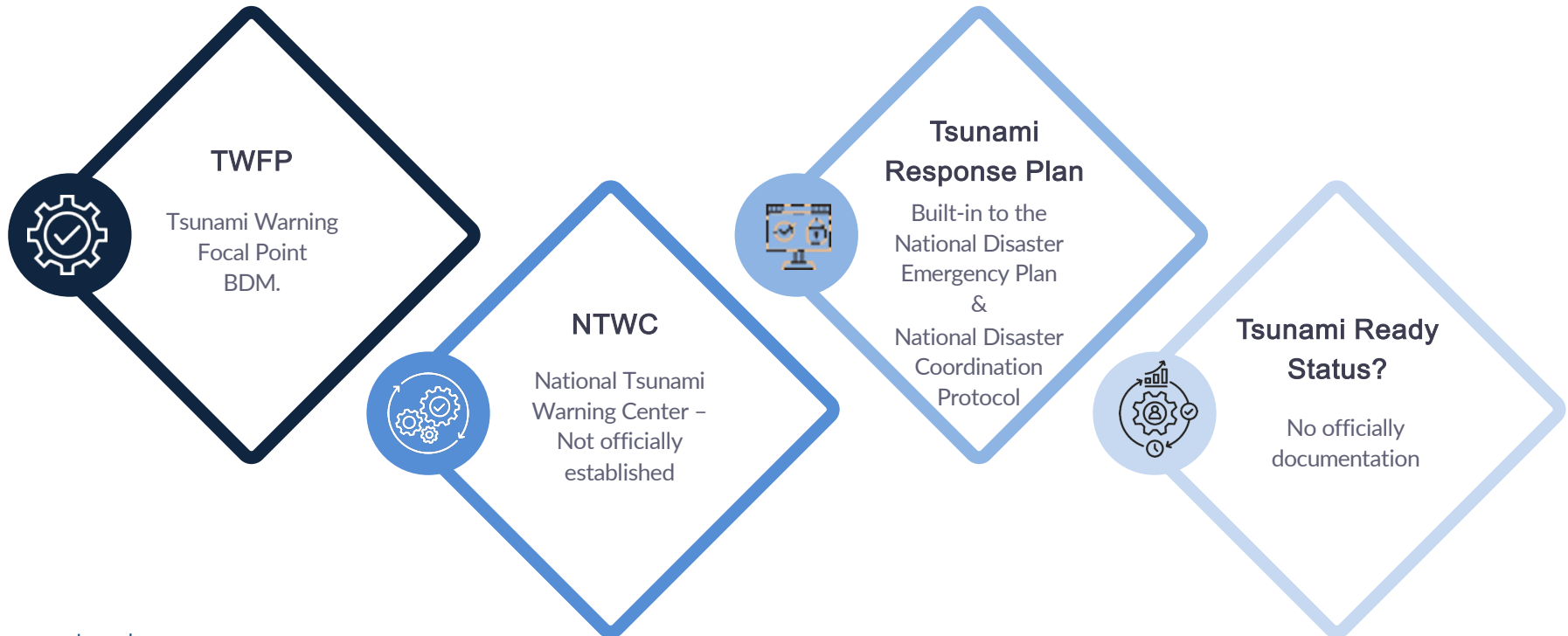
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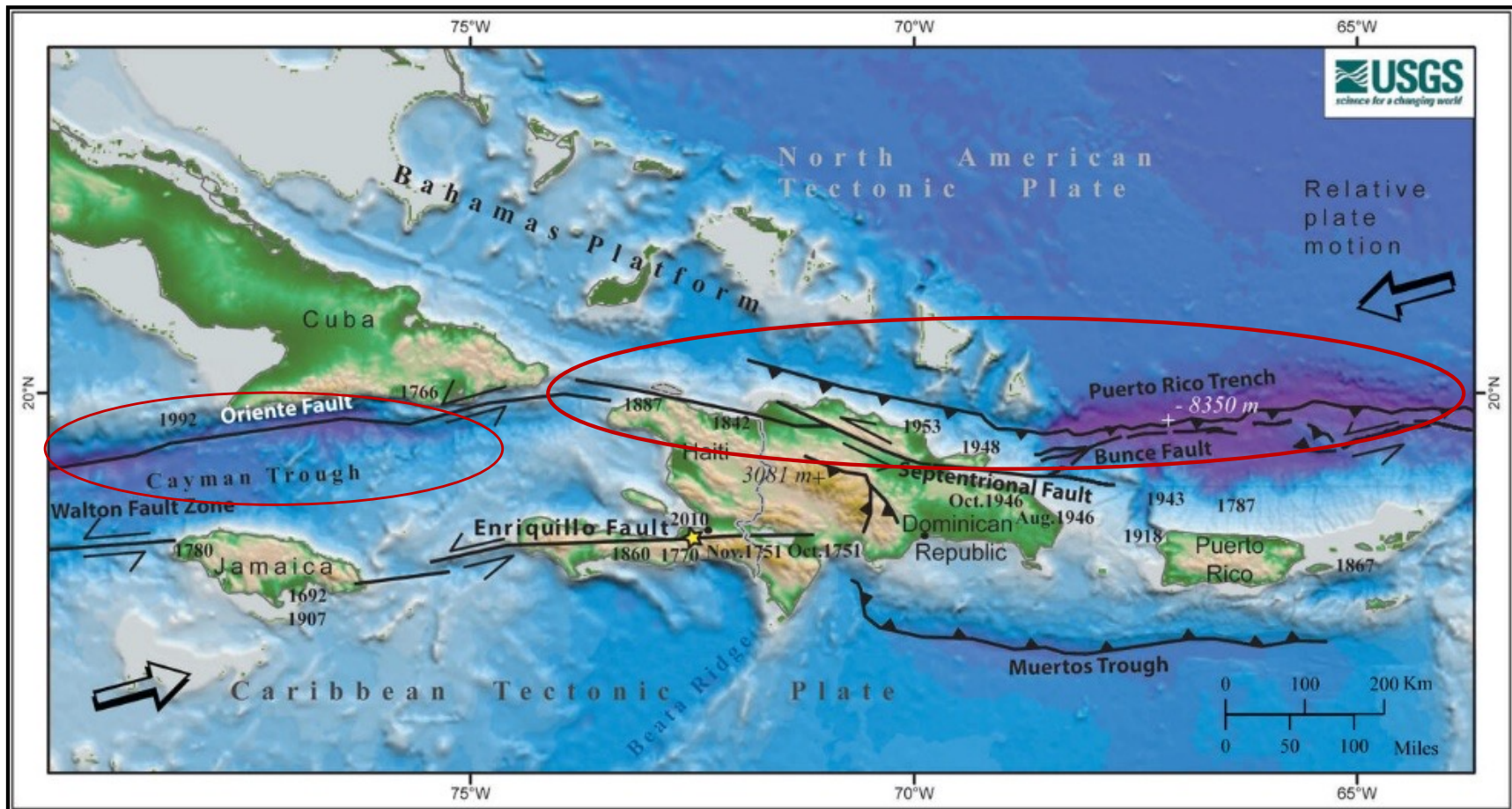
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Tsunami Readiness in The Bahamas

Tsunami Readiness in The Bahamas is by the Department of Meteorology (warning focal point) and (public alerts & preparedness), working within the Caribbean Tsunami Warning Program framework.



Nearest Tsunami Threats to The Bahamas





SUMMARY VERSION

The National Disaster Emergency Plan of the Commonwealth of The Bahamas

2025 Edition



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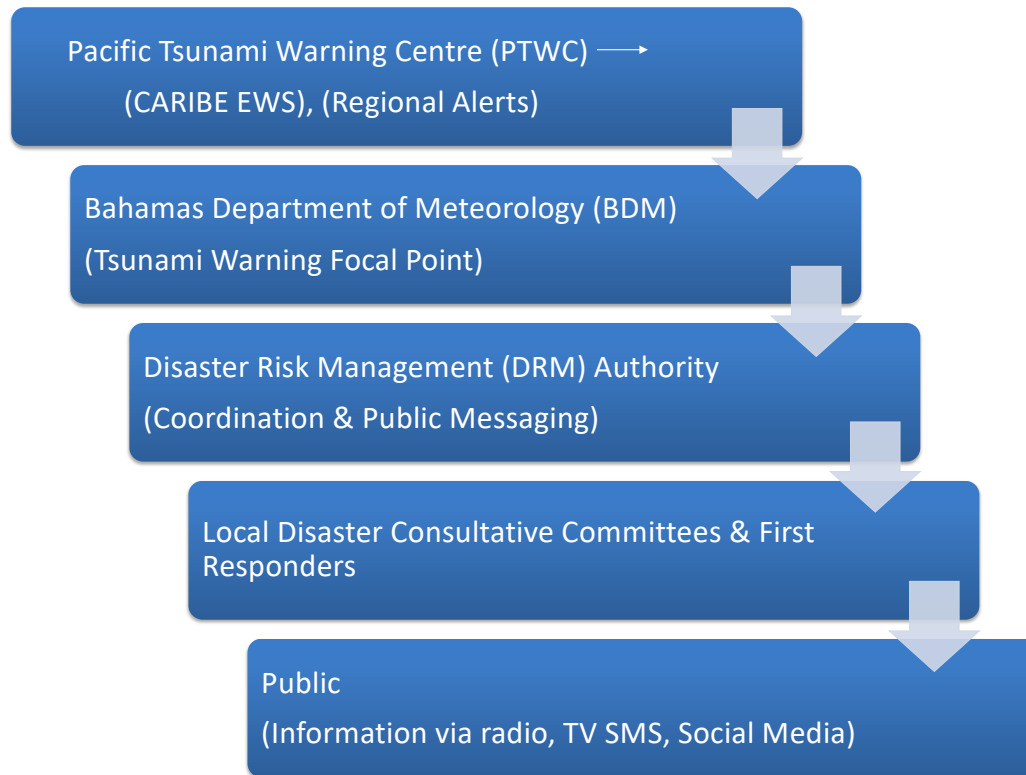
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The Bahamas National Disaster Plan

Fig 4.2B: Early Warning Code System for Multiple Natural Hazards

Type of Hazard	Code Green	Code Yellow	Code Orange	Code Red
General	An event could impact an area within a 49-72-hour period	An event can occur within a 37-48-hour period	An event can occur within a 25-36-hour period	The event is imminent and may occur within a 6-24-hour period
Storm Surges	Surges in excess of 3 – 6 feet	Surges in excess of 7 – 10 feet	Surges in excess of 11 – 14 feet	Surges in excess of 15 – 20 feet
Wildfires	No forest fire has been identified; however, drought conditions in dry, forested areas mean a heightened risk exists. .	A forest fire has been identified, but can be contained within a 36-hour period.	A forest fire has been identified, cannot be contained within a 36-hour period but is not likely to impact a community.	A forest fire is out of control and its impact on a community is imminent.
Flash floods	Rainfall levels in the range of 3 – 6 inches per hour	Rainfall levels in the range of 7 – 12 inches per hour	Rainfall levels in the range of 13 – 18 inches per hour	Rainfall levels in excess of 19 inches per hour
Tsunami	Tsunami waves may impact your sector within 12-24 hours	Tsunami waves may impact your sector within 7 – 12 hours	Tsunami waves will impact your sector within 1 – 6 hours	Tsunami waves will impact your sector within 60 minutes

The Bahamas Tsunami Alert Communicating Flow



The most recent tsunami advisory was in February 2025 for the region after a 7.6 magnitude earthquake near the Cayman Islands.

Alert	Meaning	Action
Information Statement	Earthquake occurred but no Tsunami threat	For information only – no action needed
Advisory	A potential hazard exists where strong currents or unusual sea-level changes are expected	The public should stay away from beaches, harbors, and marinas. Mariners should remain alert
Watch	A tsunami is possible after a triggering event such as an earthquake. Confirmation is still pending. The Bahamas Department of Meteorology places coastal areas on standby, while DRMA prepares for possible evacuation	The public should monitor updates closely and be ready to move inland or to higher ground
Warning	A tsunami has been confirmed and is expected to cause dangerous flooding and strong currents. Immediate action is required. National alerts are issued, and NEMA coordinates evacuations for threatened coastal areas.	The public must move to higher ground or inland immediately.



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SPECIAL WEATHER STATEMENT: ADVISORY ON TSUNAMI THREAT FOR THE CARIBBEAN

Issued 7:45 PM EST, Saturday 8th February 2025

At 6:23 PM EST, a 7.6 magnitude earthquake occurred about 130 miles south-southwest of George Town, Cayman Islands. A tsunami threat has been issued by the NWS Pacific Tsunami Warning Center (Honolulu, Hawaii) for countries in the Caribbean, as well as eastern-Central and South America.

POTENTIAL IMPACTS:

The Bahamas Department of Meteorology advises that there is the **potential for elevated seas in the Southeast Bahamas** (Ragged Island, Crooked Island, Acklins, Mayaguana and Inagua), as well as the Turks and Caicos Islands between 7:30 pm and 9:30 pm, EST. Coastal residents living along the eastern and southern shorelines of these areas are advised to remain vigilant for possible changes in conditions.



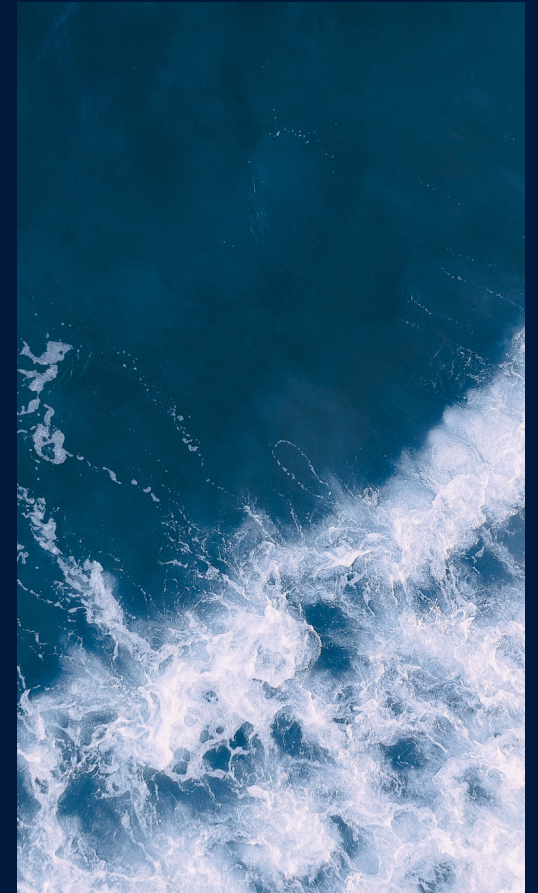
The Way Forward – Community Preparedness (Short Term)



- Begin Tsunami Ready recognition process for The Bahamas.
- Tsunami Champion – Identify and encourage persons in our Family Islands to lead education and evacuation in coastal communities.
- Develop SOP's specifically for tsunamis warning and evacuations
- Possible amend Disaster Management Act 2022.



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The Way Forward – Strengthening Early Warning Systems (Med – Long Term)

- Build Capacity - on available tsunami monitoring tools,
- Enhance real-time communication with the Pacific Tsunami Warning Center (PTWC).
- Installation of additional tide gauges and buoy to support current network
- Update topographic and local bathymetric data for better wave estimations





The Way Forward - Institutional & Regional Collaboration

- Strengthen coordination between DRM Authority, BDM regarding Tsunami Readiness preparedness and evacuations.
- Reflect Tsunami response in the NDP and DRM SOP documents.
- Increase training for Tsunami Warning Focal Point (TWFP) and National Tsunami Contact (TNC).
- Collaborate with regional partners (CARIBE-EWS, CDEMA) for knowledge sharing and support.





THANK
YOU