



CARIBE WAVE 20

2nd Webinar

Dr. Elizabeth Vanacore
Seismologist, Puerto Rico Seismic Network
ICG CARIBE EWS CARIBE WAVE TT Chair

Christa G. von Hillebrandt-Andrade
NOAA NWS Caribbean Tsunami Warning Program- Manager
ICG CARIBE EWS WG IV Chair
February 26, 2020

Objectives

Emphasize the importance of:

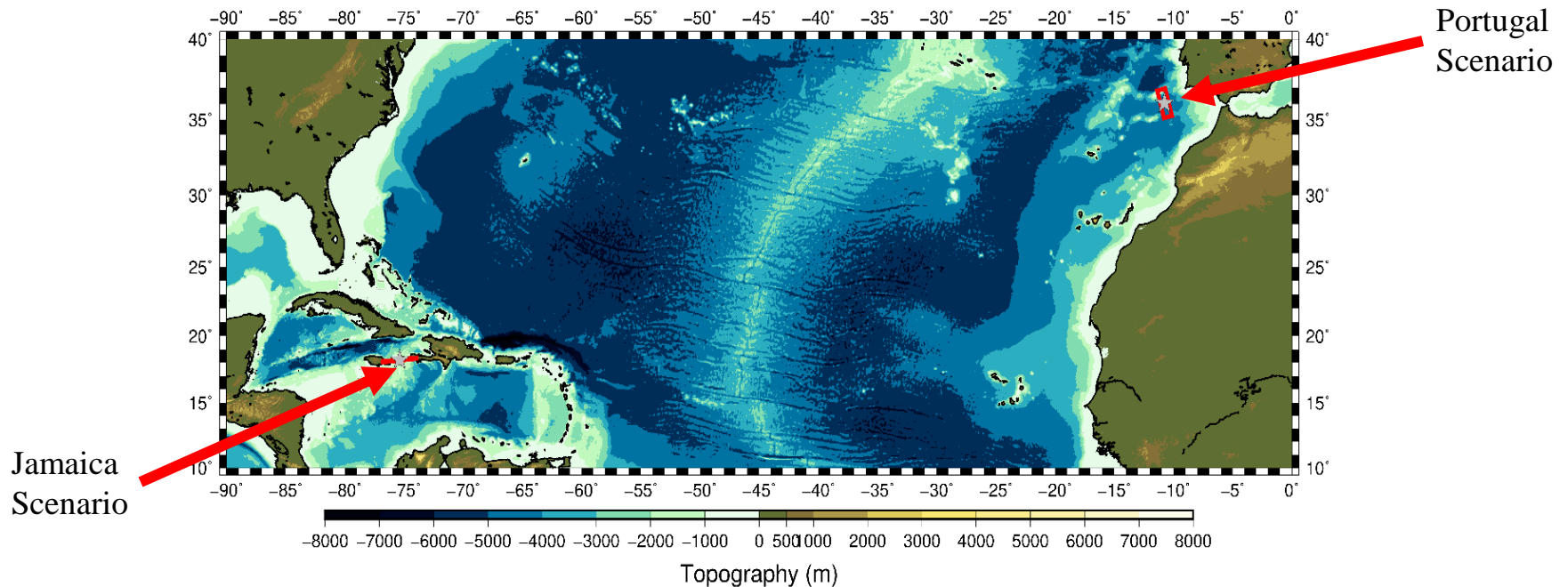
- Communication Systems
- Exercise evaluation

Goals / Metrics

Goals	2013 Results	2014 Results	2015 Results	2016 Results	2017 Results	2018 Metric	2018 Results	2019 Metric	2019 Results	2020 Metric
TWFP receive the dummy message	98%	94%	90%	84%	95%	100%	100%	100%	89%	100%
Participation of Member States of ICG CARIBE EWS with designated focal warning point	94%	98% (including two MS/Territory unofficial)	100%	100%	100%	100%	97%	100%	100%	100%
Community involvement (beyond TWFP)	75%	75%	66%	73%	82%	95%	77%	95%	66%	95%
Number of participants	44,000	191,000	191,420	332,812	679,985	+10%	643,403	+10%	793,353	+10%
Countries who participate submit exercise questionnaire	90%	100%	91%	100%	100%	100%	91%	100%	82%	100%
Members State and territories are satisfied with exercise									82%	100%

CARIBE WAVE 20

Earthquake and Tsunami Scenarios



Scenario	Origin Time	Mw	Epicenter
Jamaica	14:00:00 UTC	8.0	18.2°N, 75.3°W
Portugal	March 19, 2020	8.5	36.0°N, 10.7°W

Start of Exercise Caribe Wave 20

- Regarding the Portugal scenario, the tsunami waves are expected to reach the Caribbean as of 2105 UTC.
- Participating countries have the discretion to adjust the times according to their needs in the communities since PTWC messaging can run separately from the exercise.

PTWC products for Caribe Wave 20:

- The initial dummy message for the two scenarios will be issued on March 19, 2020 at 1400 UTC and disseminated over all its standard broadcast channels.

Center	WMO ID	AWIPS ID	NWWS	GTS/ WIS/ WMO	EMWI N	AISR	Fax	Email
PTWC	WECA41 PHEB	TSUCAX	Yes	Yes	Yes	Yes	Yes	Yes

- To verify the current list as of January 2020 of officially designated UNESCO IOC CARIBE-EWS TWFP and NTWC check out:

http://www.ioc-tsunami.org/index.php?option=com_content&view=article&id=6&Itemid=22&lang=en

- **Username:** tsunami **Password:** bigwave
- For changes, email: **b.aliaga@unesco.org**

Appendix E. TWC Dummy (Start of Exercise) Message

PTWC ← Center

WECA41 PHEB 191400 ← WMO ID

TSUCAX ← AWIPS ID

TEST...INITIAL DUMMY START OF EXERCISE MESSAGE...TEST
NWS PACIFIC TSUNAMI WARNING CENTER/NOAA/NWS
ISSUED AT 1400Z 19 MAR 2020

...TEST...CARIBE WAVE 20 TSUNAMI EXERCISE DUMMY MESSAGE.
REFER TO THE EXERCISE HANDBOOK. THIS IS AN EXERCISE ONLY...TEST...

THIS MESSAGE IS BEING USED TO START THE CARIBE WAVE 20 TSUNAMI EXERCISE AND TEST COMMUNICATIONS WITH UNESCO IOC CARIBE EWS NTWCS AND TWFPS. THIS WILL BE THE ONLY EXERCISE MESSAGE BROADCAST FROM THE PACIFIC TSUNAMI WARNING CENTER EXCLUDING SPECIAL EMAIL MESSAGES DISCUSSED IN THE HANDBOOK. THE HANDBOOK IS AVAILABLE AT THE WEB SITE CARIBEWAVE.INFO. THE EXERCISE PURPOSE IS TO EXERCISE AND EVALUATE THE CARIBE EWS TSUNAMI WARNING SYSTEM.

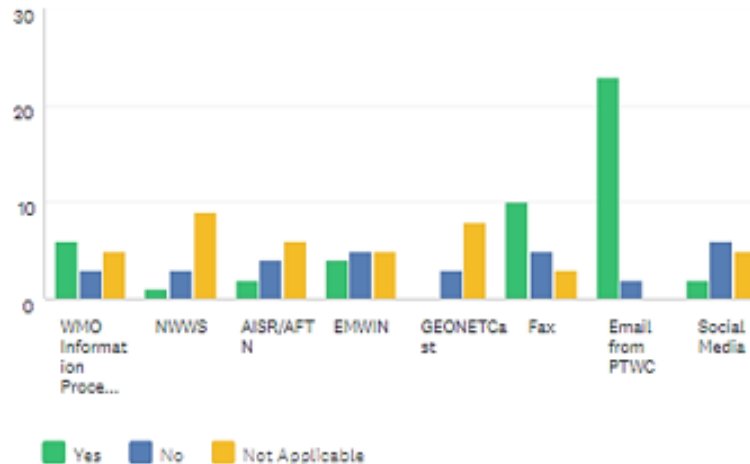
THIS IS ONLY AN EXERCISE.

\$\$

Results of Comms Portion of CARIBE WAVE 19

Q5: The PTWC issued the CARIBE WAVE 19 initial Dummy Message by several methods. Please check all methods through which the message was received by the TWFP/NTWC.

Answered: 27 Skipped: 1



**MS indicating they used WMO
WIS/GTS:
Barbados, Curacao,
Grenada, Haiti,
Netherlands
(Bonaire, Saba, Sint
Eustatius)**

WMO has expressed their concern about the low numbers of TWFP/NTWCs using GTS/WIS – it is important to verify with the Met Services that they are using these systems for the receipt of tsunami messages.

Dummy (Start of Exercise) Message

Start of exercise messages will also be sent out by PTWC twitter accounts.

“This is a test message for the CARIBEWAVE20 tsunami exercise #CaribeWave”
(Will be issued at 14h00 UTC to NWS_PTWC and NWS_CTWP
accounts/subscribers.)

Simulated Tsunami Messages

As of 1407 UTC, PTWC emails will be sent with all the simulated products to the designated CARIBE-EWS, TWFP and NTWC for one of the scenarios.

- By 6 March 2020, each Member State needs to select one scenario and must complete the following survey (<https://forms.gle/7iEBp187x1UXaXYy6>) to select the scenario their country will use for the exercise. If the Member State does not inform the PTWC and CTWP, the organizers will decide for which scenario the PTWC will send the products.
- Each country and territory will choose one scenario and decide if and how to disseminate messages within its area of responsibility.

CARIBE WAVE 20 Scenarios by Member State/Territory

*scenarios decided by Caribe Wave organizers per Exercise Handbook

Jamaica	Portugal
Belize	Barbados
Colombia	Dominica
Dominican Republic	France Guadeloupe Martinique Saint Martin St. Barthelemy
Grenada	Netherlands (Bonaire, Saba, Sint Eustatius)
Haiti	United Kingdom Anguilla Bermuda
Honduras	Venezuela
Mexico	
Netherlands Aruba Curacao	
Nicaragua	
Panama	
United Kingdom Cayman Islands Turks and Caicos	
St. Kitts and Nevis	

*REMEMBER THAT THE DEADLINE IS: **March 6**

Message Chronology issued by the PTWC Jamaica

Date	Time (UTC)	PTWC	
		Type of Product	Transmission Method
3/19/20	1400	---- Earthquake Occurs ----	
3/19/20	1400	Dummy	NWWS, GTS, EMWIN, AISR, Fax, Email
3/19/20	1407	Tsunami Threat Message #1	Email
3/19/20	1415	Tsunami Threat Message #2	Email
3/19/20	1425	Tsunami Threat Message #3 and Graphic Enhanced Products	Email
3/19/20	1500	Tsunami Threat Message #4	Email
3/19/20	1600	Tsunami Threat Message #5	Email
3/19/20	1700	Tsunami Threat Message #6	Email
3/19/20	1800	Tsunami Threat Message #7	Email
3/19/20	1900	Tsunami Threat Message #8	Email
3/19/20	2000	Tsunami Threat Message #9	Email
3/19/20	2100	Tsunami Threat Message #10	Email
3/19/20	2200	Tsunami Threat Message #11	Email
3/19/20	2300	Final Tsunami Threat Message #12	Email

Message Chronology issued by the PTWC for Portugal

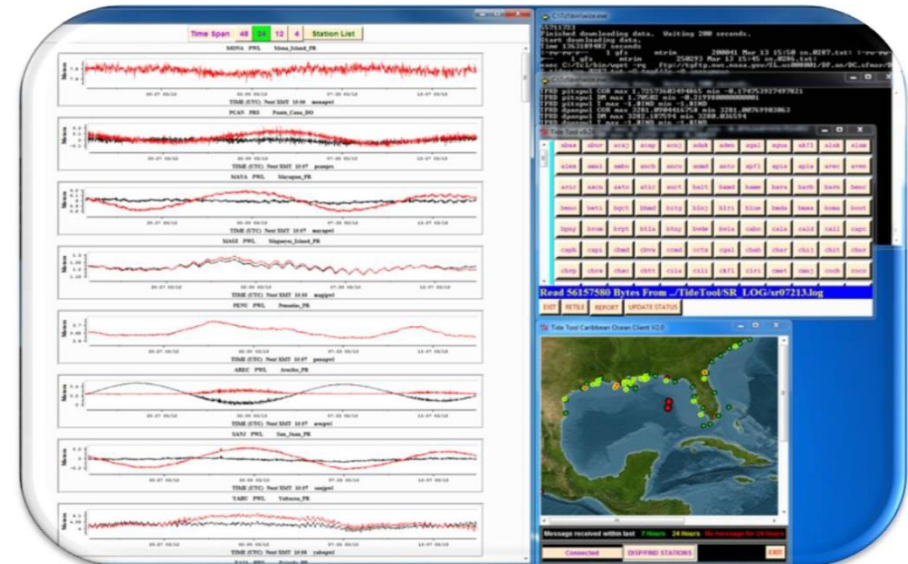
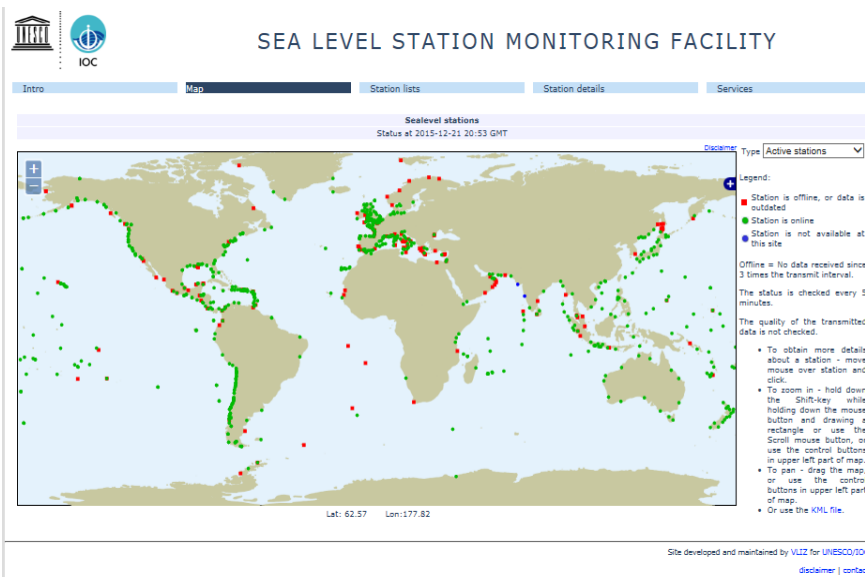
Date	Time (UTC)	PTWC	
		Type of Product	Transmission Method
3/19/20	1400	---- Earthquake Occurs ----	
3/19/20	1400	Dummy	NWWS, GTS, EMWIN, AISR, Fax, Email
3/19/20	1407	Tsunami Threat Message #1	Email
3/19/20	1415	Tsunami Threat Message #2	Email
3/19/20	1425	Tsunami Threat Message #3 and Graphic Enhanced Product	Email
3/19/20	1500	Tsunami Threat Message #4	Email
3/19/20	1520	Tsunami Threat Message #5	Email
3/19/20	1600	Tsunami Threat Message #6	Email
3/19/20	1700	Tsunami Threat Message #7	Email
3/19/20	1800	Tsunami Threat Message #8	Email
3/19/20	1900	Tsunami Threat Message #9	Email
3/19/20	2000	Tsunami Threat Message #10	Email
3/19/20	2100	Tsunami Threat Message #11	Email
3/19/20	2200	Tsunami Threat Message #12	Email
3/19/20	2300	Tsunami Threat Message #13	Email
3/20/20	0000	Tsunami Threat Message #14	Email
3/20/20	0100	Tsunami Threat Message #15	Email
3/20/20	0200	Tsunami Threat Message #16	Email
3/20/20	0300	Tsunami Threat Message #17	Email
3/20/20	0400	Tsunami Threat Message #18	Email
3/20/20	0500	Tsunami Threat Message #19	Email
3/20/20	0600	Tsunami Threat Message #20	Email
3/20/20	0700	Tsunami Threat Message #21	Email
3/20/20	0800	Final Tsunami Threat Message #22	Email

Sea Level Monitoring

As good practice for the exercise, corresponding authorities are encouraged to check out sea level readings in real time on the IOC Sea Level Monitoring Facility and Tide Tool which can also be run with the earthquake parameters.

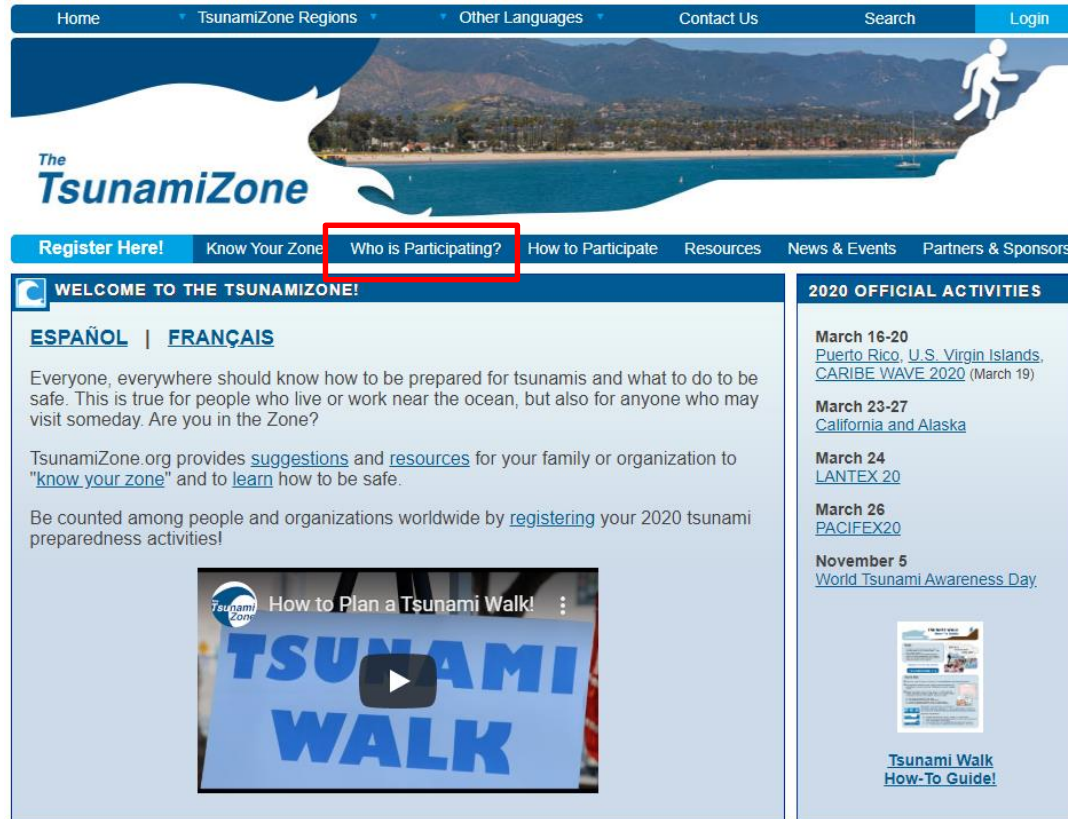
IOC Sea Level Monitoring Facility
<http://www.ioc-sealevelmonitoring.org/>

Tide Tool
stuart.weinstein@noaa.gov



Member State Participation The *TsunamiZone* Registration

Member States establish their own national task teams to determine the scope of their national participation and testing.



The screenshot shows the homepage of The TsunamiZone. The navigation bar includes links for Home, TsunamiZone Regions, Other Languages, Contact Us, Search, and Login. Below the navigation bar is a banner image of a beach with mountains in the background and a person running. The main content area features a 'WELCOME TO THE TSUNAMIZONE!' section with links for 'ESPAÑOL' and 'FRANÇAIS'. A video player titled 'How to Plan a Tsunami Walk!' is visible. On the right, there is a '2020 OFFICIAL ACTIVITIES' section listing events such as 'March 16-20 Puerto Rico, U.S. Virgin Islands, CARIBE WAVE 2020' and 'November 5 World Tsunami Awareness Day'. The 'Who is Participating?' link in the navigation bar is highlighted with a red box.

TWFP and NTWC should register on TsunamiZone to be part of the statistical count. Independent of registering, they will receive the simulated bulletins from PTWC.

The TsunamiZone

[Register Here!](#)[Know Your Zone](#)[Who is Participating?](#)[How to Participate](#)[Resources](#)[News & Events](#)[Partners & Sponsors](#)**WELCOME TO THE TSUNAMIZONE!**[ESPAÑOL](#) | [FRANÇAIS](#)

Everyone, everywhere should know how to be prepared for tsunamis and what to do to be safe. This is true for people who live or work near the ocean, but also for anyone who may visit someday. Are you in the Zone?

TsunamiZone.org provides [suggestions](#) and [resources](#) for your family or organization to "[know your zone](#)" and to [learn](#) how to be safe.

Be counted among people and organizations worldwide by [registering](#) your 2020 tsunami preparedness activities!

**2020 OFFICIAL ACTIVITIES****March 16-20**[Puerto Rico, U.S. Virgin Islands, CARIBE WAVE 2020](#) (March 19)**March 23-27**[California and Alaska](#)**March 24**[LANTEX 20](#)**March 26**[PACIFEX20](#)**November 5**[World Tsunami Awareness Day](#)[Tsunami Walk How-To Guide!](#)

<https://www.tsunamizone.org/>

Countries can keep track of registration by clicking on « Who is Participating »

PARTICIPATION TOTALS

Click on a category name to see a list of who is participating. Click on a region name to see details of participation totals by area.

These totals are current as of 02/03/2020 3:25 AM PST.

Category	Participants	Participation totals for each area	Total
Total:	78,331		
Individuals/Families	374	Anguilla	1,250
Childcare and Pre-Schools	103	Antigua and Barbuda	0
K-12 Schools and Districts	13,414	Aruba	10
Colleges and Universities	8,186	Bahamas	5
Local Government	409	Barbados	1
State Government	13,349	Belize	0
Federal/National Government (Including Military)	8,329	Bermuda	1
Tribes/Indigenous Peoples	0	Bonaire	2
Businesses	944	Brazil	13
Hotels and Other Lodgings	53	British Virgin Islands	14
Healthcare	240	Cayman Islands	56
Senior Facilities/Communities	0	Colombia	3
Disability/AFN Organizations	0	Costa Rica	0
Non-Profit Organizations	145	Cuba	4
Neighborhood Groups	100	Curacao	22
Preparedness Organizations	31,934	Dominica	438
Faith-based Organizations	60	Dominican Republic	19
Museums, Libraries, Parks, etc.	15	France	1
Volunteer/Service Clubs	24	Grenada	21,115
Youth Organizations	0	Guadeloupe	0
Animal Shelter/Service Providers	0	Guatemala	0
Agriculture/Livestock Sector	0	Guyana	0
Volunteer Radio Groups	132	Guyane	0
Science/Engineering Organizations	140	Haiti	135
Media Organizations	0	Honduras	0
Other	380	Jamaica	1
		Martinique	589
		Mexico	1,001
		Montserrat	9
		Netherlands	0
		Nicaragua	0
		Panama	1
		Puerto Rico	2,046

Saba	3
Saint Barthelemy	0
Saint Kitts and Nevis	6,000
Saint Lucia	0
Saint Martin	40
Saint Vincent and the Grenadines	0
Sint Eustatius	0
Sint Maarten	0
Suriname	0
Trinidad and Tobago	0
Turks and Caicos Islands	1
US Virgin Islands	89
Venezuela	45,462

Example of Grenada

The TsunamiZone



[Register Here](#)
[Know Your Zone](#)
[Who is Participating?](#)
[How to Participate?](#)
[Resources](#)
[News & Events](#)
[Partners & Sponsors](#)

PARTICIPATION TOTALS

Click on a category name to see a list of who is participating. Click on a region name to see details of participation totals by area.

Participation totals for each county are [listed below](#).

These totals are current as of 02/03/2020 3:25 AM PST.

Category	Participants
Total:	21,115
Individuals/Families	175
Childcare and Pre-Schools	103
K-12 Schools and Districts	12,134
Colleges and Universities	8,186
Local Government	0
State Government	247
Federal/National Government (Including Military)	0
Tribes/Indigenous Peoples	0
Businesses	44
Hotels and Other Lodgings	0
Healthcare	56
Senior Facilities/Communities	0
Disability/AFN Organizations	0
Non-Profit Organizations	27
Neighborhood Groups	0
Preparedness Organizations	0
Faith-based Organizations	60
Museums, Libraries, Parks, etc.	0
Volunteer/Service Clubs	23
Youth Organizations	0
Animal Shelter/Service Providers	0
Agriculture/Livestock Sector	0
Volunteer Radio Groups	0
Science/Engineering Organizations	0
Media Organizations	0
Other	60

VOLUNTEER/SERVICE CLUBS REGISTERED IN 2020

IFRC

Grenada Red Cross Society, St. George's, Grenada

K-12 SCHOOLS AND DISTRICTS REGISTERED IN 2020

Public Schools:

Bonair Government School, St. Marks, Grenada
Happy Hill Primary, St. George, Grenada
Mc. Donald College, St. Patrick, Grenada
River Sallee Government School, St. Patrick, Grenada
Samaritan Presbyterian School, St. Patrick, Grenada
Seventh Day Adventist Comprehensive School, St. Patrick, Grenada
St. Rose Modern Secondary, St. John, Grenada
Wesley College, St. George, Grenada
Happy Hill Secondary School, St. George's, Grenada
Mt. Rose Primary School, St. Patrick, Grenada school
Happy Hill Secondary School, St. George's, Grenada
St. Patricks R.C. School, St. Patrick, Grenada

INDIVIDUALS OR FAMILIES REGISTERED IN 2020

Cheddi Blackman, St. John, Grenada
Roxanne Bonaparte, Cafe' St. George's, Grenada
Latisha Brown, St. George's, Grenada
Chloe Charles, St. George's, Grenada
Jameke T Charles, St. George's, Grenada
Tia Charles, St. George's, Grenada
Oslyn Crosby, St. GEORGE'S, Grenada
Simeon Granger, Grenada, Grenada
Abi McMeo, St. David, Grenada
Benedict Peters, Grenville, Grenada
Chery Anne Phillip, St. George's, Grenada
Abigail Telesford, St. George's, Grenada
Abi Telesford, St. David, Grenada

BUSINESSES REGISTERED IN 2020

Fletchers, Gouyave, Grenada
Jude Noel shop, St. John's, Grenada
Marcelle's Food Supply, St. John's, Grenada
National Lottery Authority, St. George's, Grenada

Media Arrangements

- PRSN Tsunami Media Guide (English and Spanish):

<http://www.prsn.uprm.edu/mediakit/>

- Seismic Research Unit Tsunami and other Coastal Hazards WS
Media Information Kit:

<http://www.uwiseismic.com>

- Handbook sample press release, which can be adapted as necessary.
- Social media: **#CaribeWave**

Actions in Case of a Real Event

- In the case of a real event occurring during the exercise, the PTWC will issue the corresponding messages for the event. Such messages will be given full priority and a decision will be made by the PTWC whether to issue the Caribe Wave 20 dummy messages and to send email messages to corresponding recipients.
- In the case of smaller earthquakes, PTWC will issue the corresponding Tsunami Information Statement and the exercise will not be disrupted.
- All documentation and correspondence relating to this exercise is to be clearly identified as “**CARIBE WAVE 20**” and “**Exercise.**”

Procedures for False Alarm

- Any time disaster response exercises are conducted; the potential exists for the public or media to interpret the event as real.
- Procedures should be set up by all participating entities to address public or media concerns involving this exercise in case of misinterpretation by media or the public.
- Recommended text in case of false alarm:

“There is NO TSUNAMI threat for [location]. We are aware of an erroneous tsunami [alert level] for our area. Please disregard; we have not issued a tsunami [alert level]. The annual CARIBE WAVE tsunami exercise is underway and communication systems are being tested. [Name of agency] is reviewing this incident.”

Post-Exercise Evaluation Form

- Each CARIBE-EWS member state and territory is requested to provide feedback on the exercise.
 - This feedback will assist the ICG/CARIBE-EWS in the evaluation of Caribe Wave 20 and the development of subsequent exercises, and help response agencies document lessons learned.
 - To facilitate feedback, the online evaluation survey can be accessed at the following link:

<https://www.surveymonkey.com/r/CaribeWave20>
 - The deadline for completing the evaluation is 3 April 2020.
 - 60 questions (83 questions in 2016, 64 questions in 2017, 66 questions in 2018, and 70 questions in 2019), 14 pages, should take no more than 30 minutes.

Post-Exercise Evaluation Form

Questionnaire

5. 1B.2:

The PTWC issued the CARIBE WAVE 20 initial **Dummy Message** by several methods. Please check all methods through which the message was received by the TWFP/NTWC.

	Yes	No	Not Applicable
WMO Information Process (e.g., GTS, WIS)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NWWS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
AISR/AFTN	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
EMWIN	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
GEONETCast	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fax	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Email from PTWC	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Social Media	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Other (please specify)

6. 1B.3:

The PTWC issued the CARIBE WAVE 20 initial **Dummy Message** by several methods. Please indicate the time at which the message was received by the TWFP/NTWC in the different systems.

	Hour	Minutes	Time Zone
WMO Information Process (e.g., GTS, WIS)	<input type="text"/>	<input type="text"/>	<input type="text"/>
AISR/AFTN	<input type="text"/>	<input type="text"/>	<input type="text"/>
EMWIN	<input type="text"/>	<input type="text"/>	<input type="text"/>
GEONETCast	<input type="text"/>	<input type="text"/>	<input type="text"/>
Fax	<input type="text"/>	<input type="text"/>	<input type="text"/>
Email from PTWC	<input type="text"/>	<input type="text"/>	<input type="text"/>
Social Media	<input type="text"/>	<input type="text"/>	<input type="text"/>
Other means	<input type="text"/>	<input type="text"/>	<input type="text"/>

Post-Exercise Evaluation Form

Questionnaire

7. 1B.4:

Were there any problems with the receipt of PTWC CARIBE WAVE 20 initial **Dummy (Start of Exercise) Message?**

- Yes
- No
- Not Applicable

Comments:

8. 1B.5:

Did your TWFP/NTWC receive by email from PTWC the **simulated exercise messages** (Jamaica or Portugal scenario) at the times specified in the Exercise Manual?

- Yes
- No
- Not Applicable

Comments:

Post-Exercise Evaluation Form

Questionnaire

* 39. 2E.1:

Is your country implementing the Community Performance Based Tsunami Recognition Program (TsunamiReady® or Tsunami Ready)?

Yes

No

Comments:

40. 2E.2:

Is your country interested in implementing the Community Performance Based Tsunami Recognition Program (TsunamiReady® or Tsunami Ready)?

Yes

No

Comments:

* 41. 2E.3:

How many communities in your country have already been designated as TsunamiReady® or Tsunami Ready?

Communities

42. 2E.4:

What is the target number of Tsunami Ready communities (including communities which have been recognized) in your country/territory are targeted for TsunamiReady® or Tsunami Ready recognition?

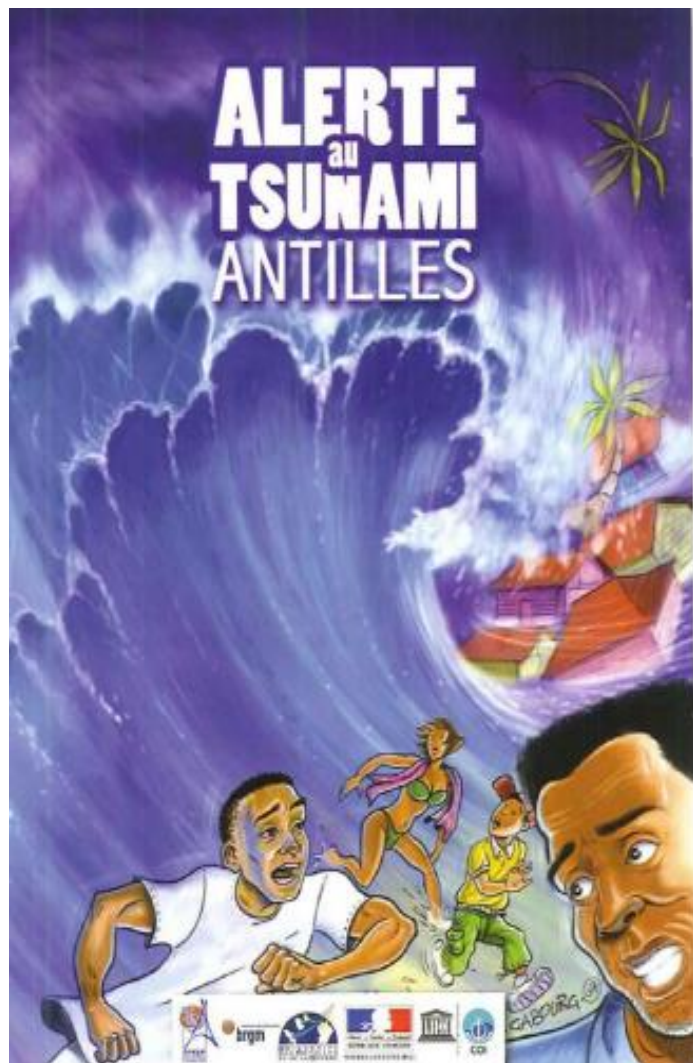
Communities

Comments

New in 2020

- As of 2018 each MS/Territory is asked to reconfirm the total number of participants.

Methodological Guidelines: How to prepare, conduct and evaluate a community-based tsunami response exercise



- This guide is recommended for Member States to consider Caribe Wave Exercises.
- Provides community leaders to conduct and evaluate a tsunami evacuation exercise with a methodology and tools.
- It is particularly relevant for bodies that would be directly exposed to the effects of a tsunami such as local government, schools, associations, and businesses.
- This guide aims to encourage a shared culture of exercises to develop between the municipal authorities tasked with ensuring the safety of those living in their area and community leaders – stakeholders in the social and economic life of the area.
- Guide available in English and French http://www.ioc-tsunami.org/index.php?option=com_oe&task=viewDocumentRecord&docID=19139

Recent Publications:

“A Reassessment of the Magnitude of the 1755 Lisbon Earthquake”

- This research paper published on February 2020 in *Bulletin of the Seismological Society of America (BSSA)* by Joao F. B. D. Fonseca, focuses on an analysis that leads to a much lower magnitude between 7.2 and 8.2 for the 1755 Lisbon earthquake.
- Early magnitude estimation was defined approximately 8.5 because of the overestimation of the felt area and are attributed to secondary onshore ruptures.
- The conclusion arise from macroseismic dataset observations related to a single offshore source.

*Officials interested in receiving this publication, please send a request to christa.vonh@noaa.gov

Resources

- IOC Manuals “[How to plan, conduct and evaluate tsunami exercises](#)” and “[Module on Tsunami Exercise](#)” are useful resources.
- CARIBE WAVE 2011 through 2020 Handbooks.
- CARIBE WAVE 2013 through 2019 Final and Media Report.
- User's guide for the Pacific Tsunami Warning Center Enhanced Products for the Tsunami and other Coastal Hazards Warning System for the Caribbean and Adjacent Regions (CARIBE-EWS). Available at www.caribewave.info
- Questions on the exercise can be addressed to the members of the Caribe Wave 20 Task Team.

CARIBE WAVE 20 Task Team

Person	Telephone #	Email
Elizabeth Vanacore, PRSN CARIBE WAVE Chair	1-787-833-8433	elizabeth.vanacore@upr.edu
Silvia Chacón-Barrantes, CARIBE EWS Chair; SINAMOT Costa Rica	506-830-96690	silviach@una.ac.cr
Dan McNamara Chair WG 1 Monitoring and Detection Systems	303-273-8550	mcnamara@usgs.gov
Nicolas Arcos Chair WG 2 Hazard Assessment	1-303-497-3158	nicolas.arcos@noaa.gov
Emilio Talavera Chair WG 3 Tsunami Related Services	505-224-92761 ext. 102	emilio.talavera@gf.ineter.gob.ni
Christa von Hillebrandt-Andrade Chair WG 4 Preparedness, Readiness and Resilience Manager NOAA/CTWP	1-787-249-8307	christa.vonh@noaa.gov
Alberto López, UPRM Ivan Wong, Matt Hornback, Richard D Koehler, Scientific Experts – Jamaica Scenario		alberto.lopez3@upr.edu wong@lettisci.com mhornback@smu.edu rkoehler@unr.edu
Maria Ana Viana Baptista Scientific Expert – Portugal Scenario		mavbaptista@gmail.com
Ronald Jackson Director CDEMA	246-425-0386	ronald.Jackson@cdema.org
Claudia Herrera Melgar Executive Secretary CEPREDENAC	502-2390-0200	iajche@cepredenac.org memendez@cepredenac.org
Major Roselly Pepin Deputy Chief EMIZ Antilles	596-59-05-81	roselly.pepin@martinique.pref.gouv.fr
Bernardo Aliaga Technical Secretary UNESCO	33-1-45683980	b.aliaga@unesco.org
Charles McCreery Cindi Preller Director PTWC	1-808-689-8207 1-808-725-6306	charles.mccreery@noaa.gov cindi.preller@noaa.gov
David Wald, USGS Scientific Expert – Earthquake Impact Products	1-303-273-8441	wald@usgs.gov
Alison Brome Director CTIC	246-243-7626	a.brome@unesco.org

Timeline

ACTION	DUE DATE
Circular Letter Issued by IOC to MS	✓September 2019
Handbook Draft Circulated among ICG CARIBE EWS TNC/TWFP and TT CARIBE WAVE 20	✓November 2019
Deadline for Comments	✓December 2019
Exercise Handbook Available Online	✓December 2019
1st Webinar CW	✓ 21 January 2020 – English ✓ 22 January 2020 – Spanish ✓ 23 January 2020 – French
2nd Webinar CW	✓ 26 February 2020 - English 27 February 2020 - Spanish 28 February 2020 – French
Countries Indicate Selected Scenario	6 March 2020
Exercise	19 March 2020
Exercise Evaluation Due	3 April 2020
<p style="text-align: center;">Final Draft CARIBE WAVE 20 10 April 2020</p>	

Questions, Comments

Thank you for participating

elizabeth.vanacore@upr.edu

christa.vonh@noaa.gov