

EXERCISE CARIBE WAVE 20

A Caribbean and Adjacent Regions Tsunami Warning Exercise

19 March 2020

(Jamaica and Portugal Scenarios)

Volume 1

Participant Handbook

EXERCISE CARIBE WAVE 20

A Caribbean and Adjacent Regions Tsunami Warning Exercise

19 March 2020

(Jamaica and Portugal Scenarios)

Volume 1

Participant Handbook



UNESCO 2019

IOC Technical Series, 151 (volume 1)
Paris, December 2019
English only

The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of the Secretariats of UNESCO and IOC concerning the legal status of any country or territory, or its authorities, or concerning the delimitation of the frontiers of any country or territory.

NOTE: The United Nations Educational, Scientific and Cultural Organization (UNESCO) and the Intergovernmental Oceanographic Commission (IOC) pattern the contents of this handbook after the CARIBE WAVE [2011](#), [2013](#), [2014](#), [2015](#), [2016](#), [2017](#), [2018](#) and [2019](#) Exercises. Each of these exercises has a handbook published as IOC Technical Series. These CARIBE WAVE exercises followed the Pacific Wave exercises which commenced in 2008 with manual published by the Intergovernmental Oceanographic Commission (Exercise Pacific Wave 08: A Pacific-wide Tsunami Warning and Communication Exercise, 28–30 October 2008, [IOC Technical Series, 82](#), Paris, UNESCO 2008). The UNESCO How to Plan, Conduct and Evaluate Tsunami Wave Exercises, [IOC Manuals and Guides, 58 rev.](#), Paris, UNESCO 2013 (English and Spanish) is another important reference.

For bibliographic purposes, this document should be cited as follows:

UNESCO/IOC. 2019. *Exercise CARIBE WAVE 20. Tsunami Warning Exercise, 19 March 2020* (Jamaica and Portugal). *Volume 1: Participant Handbook*. Paris, UNESCO, IOC Technical Series No. 151, Vol.1. (English only).

Report prepared by: Intergovernmental Coordination Group for the Tsunami and other Coastal Hazards Warning System for the Caribbean and Adjacent Regions (ICG/CARIBE-EWS)

Published in 2019
by United Nations Educational, Scientific
and Cultural Organization
7, Place de Fontenoy, 75352 Paris 07 SP

© UNESCO 2019

TABLE OF CONTENTS

Summary.....	(i)
1. BACKGROUND.....	1
1.1 EXERCISE JUSTIFICATION AND FRAMEWORK.....	1
1.2 EXERCISE EARTHQUAKE AND TSUNAMI SCENARIOS	2
1.2.1 Jamaica Scenario	3
1.2.2 Portugal Scenario	4
1.2.3 Earthquake impact.....	4
2. EXERCISE CONCEPT	4
2.1 PURPOSE	4
2.2 OBJECTIVES	5
2.3 TYPE OF EXERCISE	5
2.4 TIMELINE	7
3. PTWC PRODUCTS	8
4. EXERCISE OUTLINE	8
4.1 GENERAL	8
4.2 MASTER SCHEDULE (EXERCISE SCRIPT)	10
4.2.1 Jamaica Scenario	10
4.2.2 Portugal Scenario	10
4.3 ACTIONS IN CASE OF EMERGENCY	12
4.4 RESOURCES	12
4.5 COMMUNITY REGISTRATION	12
4.6 MEDIA ARRANGEMENTS	12
4.7 PROCEDURE FOR FALSE ALARM	13
5. POST-EXERCISE EVALUATION	14
6. REFERENCES	14

ANNEXES

I.	STANDARD OPERATING PROCEDURES
II.	GUIDELINES: HOW TO PREPARE, CONDUCT AND EVALUATE A COMMUNITY-BASED TSUNAMI RESPONSE EXERCISE
III.	TSUNAMI SOURCE SCENARIOS DESCRIPTION
IV.	EARTHQUAKE IMPACT SCENARIOS
V.	TWC DUMMY (START OF EXERCISE) MESSAGES
VI.	TWC EXERCISE MESSAGES
VII.	SAMPLE PRESS RELEASE FOR LOCAL MEDIA
VIII.	LIST OF ACRONYMS

Summary

The Intergovernmental Coordination Group for the Tsunami and other Coastal Hazards Warning System for the Caribbean and Adjacent Regions ([ICG/CARIBE-EWS](#)) of the Intergovernmental Oceanographic Commission ([IOC](#)) of the United Nations Educational, Scientific and Cultural Organization ([UNESCO](#)) will be conducting a tsunami exercise on 19 March 2020. This exercise will be coordinated together with the U.S. National Oceanic and Atmospheric Administration ([NOAA](#)) and the Caribbean regional emergency management stakeholders ([CEPREDENAC](#) [Coordination Centre for the Prevention of Natural Disasters in Central America], [CDEMA](#) [Caribbean Disaster Emergency Management Agency], and EMIZA [État-major interministériel de la zone de défense et de sécurité Antilles]). The purpose of this exercise is to advance tsunami preparedness efforts in the Caribbean and adjacent regions.

Two exercise scenarios have been planned for this exercise. The first scenario described in this handbook simulates a tsunami generated by a magnitude 8.0 earthquake located along the Enriquillo-Plantain Garden Fault Zone (EPGFZ). The second scenario is a tsunami generated by a magnitude 8.5 earthquake located approximately 270 km off the Portugal coast.

The Pacific Tsunami Warning Center (PTWC), the CARIBE-EWS Tsunami Service Provider, will issue the initial dummy message for the two scenarios on 19 March 2020 at 1400 UTC, and will disseminate it over all its standard broadcast channels. The dummy message is issued to test communications between the PTWC and the officially designated Tsunami Warning Focal Points (TWFPs) and National Tsunami Warning Centres (NTWCs), and to start the exercise. As of 1407 UTC, the PTWC will send by email the simulated tsunami products to officially designated TWFPs and NTWCs. Each country and territory will choose one scenario and decide if and how to disseminate messages within its area of responsibility (AoR).

The manual includes the tsunami and earthquake scenarios information, timelines, PTWC dummy message and simulated exercise messages. High levels of vulnerability and risk to life and livelihoods from tsunamis along the coasts of the Caribbean and adjacent regions should provide a strong incentive for countries and local jurisdictions to prepare for a tsunami and participate in this exercise.

1. BACKGROUND

1.1 EXERCISE JUSTIFICATION AND FRAMEWORK

This tsunami exercise is being conducted to assist tsunami preparedness efforts throughout the Caribbean and adjacent regions. Recent tsunamis, such as those in the Indian Ocean (2004, 2018), Samoa (2009), Haiti (2010), Chile (2010, 2014, 2015), Japan (2011), and Honduras and Sulawesi (2018), attest to the importance of proper planning for tsunami response.

Historical tsunami records from sources such as the NOAA National Centers for Environmental Information ([NCEI](#)) show that from the years 1530 to 2018 tsunamis from earthquake, landslide, and volcanic sources have all impacted the region ([Figure 1](#)). According to NCEI, in the past 500 years, over 105 tsunamis have been observed (7–10% world's oceanic tsunamis) and approximately 4,500 people have lost their lives due to tsunamis in the Caribbean and adjacent regions. Since the most recent devastating tsunami of 1946, there has been an explosive population growth and influx of tourists along the Caribbean and Western Atlantic coasts increasing the tsunami vulnerability of the region ([von Hillebrandt-Andrade, 2013](#)).

In addition to tsunamis, the region also has a long history of destructive earthquakes. Historical records show that major earthquakes have struck the Caribbean region once about every 50 years during the past five centuries. Within the region, there are multiple fault segments and submarine features that could be the source of earthquake and landslide generated tsunamis ([Figure 2](#)). No fewer than four major plates (North America, South America, Nazca, and Cocos) border the perimeter of the Caribbean plate. Subduction occurs along the Eastern and Northeastern Atlantic margins of the Caribbean plate. While the Northern and Southern Caribbean plate boundaries are characterized with a predominant strike-slip displacement, the Eastern and Western boundaries mark locations where oceanic crust subducts beneath Caribbean plate lithosphere ([Benz et al., 2011](#)). In addition to the local and regional earthquake sources, the region is also threatened by teletsunamis/transatlantic tsunamis, like the 1755 Portugal event. Furthermore, six confirmed volcano tsunami source events and two landslides generated from volcanos have affected the Caribbean and adjacent regions (International Tsunami Information Center [[ITIC](#)] and National Centers for Environmental Information [NCEI], 2018).

Tsunami services for the Caribbean and adjacent regions within the UNESCO/IOC CARIBE-EWS framework are currently provided by the PTWC in Hawaii. It issues its messages two to ten minutes after an earthquake's occurrence. The PTWC international products include tsunami information and threat messages. Primary recipients of the PTWC messages include TWFPs and NTWCs. These agencies are responsible to determine and issue the corresponding alerts within their area of responsibility according to established protocols.

Nearly 160 million people live in the Caribbean, Central America and Northern South America. The question is not if another major tsunami will happen, but when it happens, will the region be prepared for the impact? The risk of tsunamis in the Caribbean is real and should be taken seriously. Member States need to exercise their Standard Operational Procedures (SOPs) for tsunamis to ensure readiness for the next tsunami.

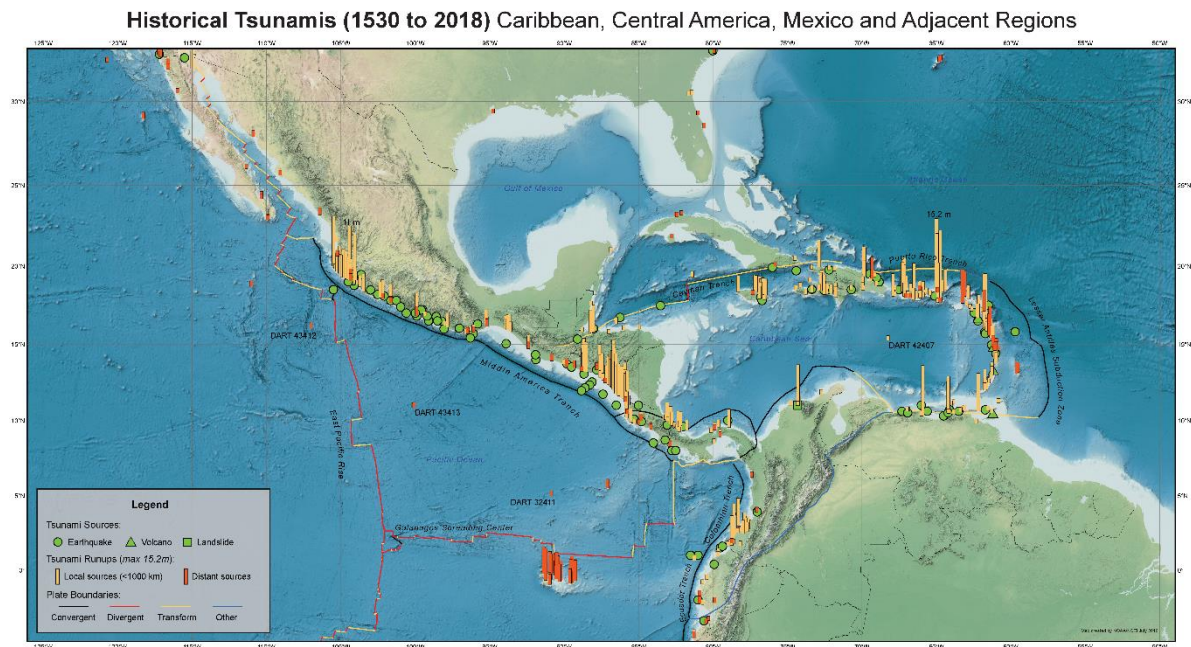


Figure 1. Map of historical tsunamis (1530 to 2018) in the Caribbean, Central America, Mexico and adjacent regions (National Centers for Environmental Information, <https://www.ngdc.noaa.gov/hazard/data/publications/CCAMAR-english.pdf>).

1.2 EXERCISE EARTHQUAKE AND TSUNAMI SCENARIOS

The exercise Caribe Wave 20 will provide simulated tsunami threat messages issued from the PTWC based on two hypothetical scenarios: a magnitude 8.0 earthquake located on the Enriquillo-Plantain Garden Fault Zone (EPGFZ) and a magnitude 8.5 earthquake located approximately 270 km off the Portugal coast ([Figure 2](#)). Below is a description of the proposed scenarios for the exercise.

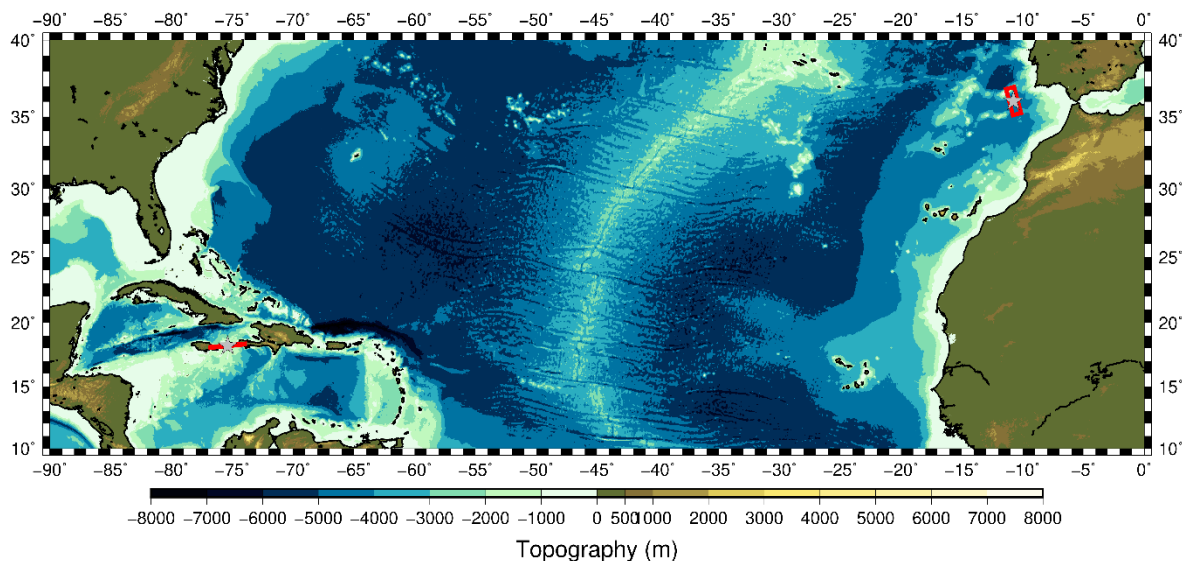


Figure 2. Map of the CARIBE WAVE 20 scenarios. Stars indicate epicentral locations and the red boxes indicate the map view of the ruptured fault segments. The figure is underlain by etopo1 model of [Amante and Eakins \(2009\)](#). This figure was generated using The Generic Mapping Tool (GMT) ([Wessel et al., 2013](#)).

1.2.1 Jamaica Scenario

Extensive diversity and complexity of tectonic regimes characterizes the perimeter of the Caribbean plate, involving no fewer than four major plates (North America, South America, Nazca, and Cocos). Northern and southern boundaries of the Caribbean are mostly characterized by strike-slip motion, whereas subduction zones occur at both eastern and western boundaries. Intermediate and deep earthquakes, Wadati-Benioff zones, ocean trenches, and arcs of volcanoes clearly indicate subduction of oceanic lithosphere along the Central American and Atlantic Ocean margins of the Caribbean plate. Along the north-eastern Caribbean plate boundary zone, from the Island of Hispaniola to the Island of Barbuda, relative motion between the North America plate and the Caribbean plate becomes increasingly complex and is partially accommodated by nearly arc-parallel subduction of the North America plate beneath the Caribbean plate ([Feuillet et al., 2002](#)). Moving east and south to the northern Lesser Antilles where the plate motion vector of the Caribbean plate relative to the North and South America plates is less oblique, resulting in active island-arc tectonics. The North and South America plates subduct towards the west beneath the Caribbean plate along the Lesser Antilles Trench at rates of approximately 20 mm/yr. ([DeMets et al., 2010](#)). As a result of this subduction, there exist both intermediate focus earthquakes within the subducted plates and a chain of active volcanoes along the island arc, data that has been used to divide the arc into a northern and southern arc. Along the southern Lesser Antilles trench, the accretionary prism is anomalously thick and wide, raising the earthquake and tsunami potential. Farther west, the Southern Caribbean Deformed Belt (SCDB) has been developed due to the southward-verging under-thrusting of Caribbean lithosphere beneath the northern coast of South America ([DeMets et al., 2010](#)). The following two sub-sections describe the Caribe Wave 20 scenarios and present a justification on their tsunamigenic potential regardless of their probability of occurrence.

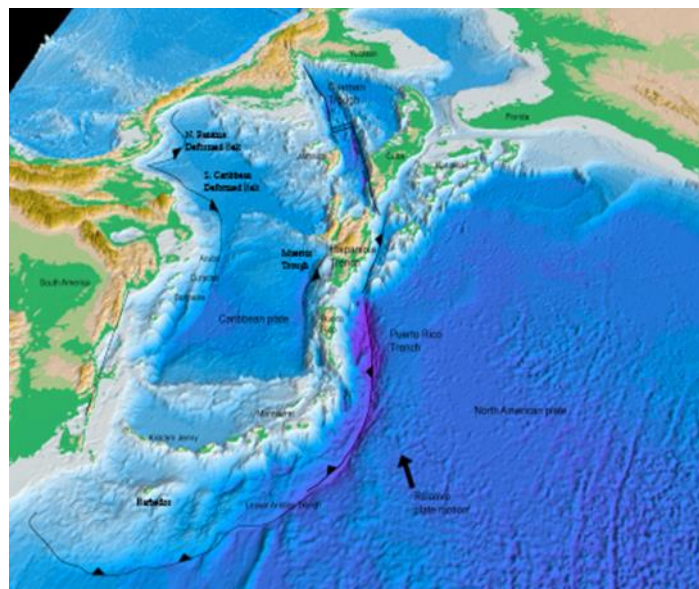


Figure 3. Major Tectonic features in the Caribbean ([ten Brink et al., 2008](#)).

The Enriquillo-Plantain Garden fault zone (EPGFZ) is located along the complex boundary between the North American and Caribbean plates ([Prentice et al., 2010](#)). This major active left-lateral strike-slip fault system is hundreds of km long and extends from the countries of Jamaica, Haiti, and the Dominican Republic ([Koehler et al., 2013](#)). Historical records show at least the occurrence of one large earthquake greater than Mw 6 per century ([Wright, 2019](#)). Most tsunamis reported in Jamaica and Haiti have been caused by sediment failure processes with the occurrence of an earthquake greater than Mw 5 associated to the EPGFZ ([Wright,](#)

[2019](#)). The most recent tsunami event associated with this fault occurred on 12 January 2010 in Haiti and was generated by a Mw 7.0 earthquake that devastated the Port-au-Prince region ([Calais et al., 2010](#)). This event caused the death of approximately 200,000 people and billions of dollars in damages ([Calais et al., 2010](#)). Also, the magnitude 7.5 earthquake that occurred on 7 June 1692 in Jamaica is considered to be associated with the EPGFZ ([Lander et al., 2002](#)). This event caused a landslide that generated a tsunami leading to major damages at the town of Port Royal ([Lander et al., 2002](#)). It was reported that approximately 2,000 people were killed in the 1692 earthquake and tsunami ([Lander et al., 2002](#)). For this exercise, some fault properties such as mechanism and magnitude exaggeration have been made slightly unrealistic from a seismologist's perspective to ensure the generation of a significant tsunami to test the CARIBE-EWS systems and local responses.

1.2.2 Portugal Scenario

This exercise is based on a hypothetical tsunami scenario similar to The Great Lisbon earthquake that occurred on 1 November 1755. During this event an estimated Mw between 8.5 and 9.0 major earthquake in Lisbon, Portugal generated a transoceanic tsunami that reached the European and African coasts, islands in the Atlantic, and the Caribbean islands ([ten Brink et al., 2008](#)). Along the Portuguese and Moroccan coast, the run-up was reported to have reached up to 15 m causing the death of approximately 50,000 people ([Barkan et al., 2009](#)). The tsunami waves propagated to the Atlantic Ocean impacting significantly Madeira and Azores Archipelagos ([Roger et al., 2010](#)). This transoceanic tsunami reached the island of Antigua within 9.3 hours, and waves with estimated run-up height of 7 m were reported at Saba, Netherlands Antilles ([Lander et al., 2002](#)). This scenario is considered here because transoceanic tsunamis can cause damages and losses to the coast of the Caribbean Islands. Hazards and risk studies in this area are a priority for implementing tsunami warning systems in the most vulnerable territories.

1.2.3 Earthquake impact

In addition to knowing the potential impact from the tsunami, it is also important to consider the potential earthquake impact. This is especially important for those in the near field. In consideration of this, the United States Geological Survey (USGS) provided for Caribe Wave 20 the scenario outputs of their ShakeMap and the Prompt Assessment of Global Earthquakes for Response (PAGER) products. These results provide emergency responders, government, aid agencies and the media the scope of the potential earthquake related disaster. ShakeMap illustrates the ground shaking levels close to the earthquake source depending on a set of parameters such as distance to the source, rock and soil behavior, and seismic wave propagation through the crust (<https://earthquake.usgs.gov/data/shakemap/>). PAGER is based on the earthquake shaking (via ShakeMap) and analyses of the population exposed to each level of shaking intensity with models of economic and fatality losses based on past earthquakes in each country or region of the world (<https://earthquake.usgs.gov/data/pager/>). For the Caribe Wave 20 scenarios, USGS estimated that significant casualties and damage are likely from the earthquakes themselves, which would require regional or national level response. According to the PAGER results, the countries that are going to receive the greatest impact from the magnitude 8.0 earthquake are Jamaica and Haiti for the Jamaica scenario. Complete information about the PAGER output for the exercise scenario is available in the [Annex IV](#) of this handbook.

2. EXERCISE CONCEPT

2.1 PURPOSE

The purpose of the exercise is to improve Tsunami Warning System effectiveness in the Caribbean and adjacent regions. The exercise provides an opportunity for emergency

management organizations throughout the region to exercise their operational lines of communications, review their tsunami response procedures, and promote tsunami preparedness. Regular exercising of response plans is critical to maintain readiness for an emergency. This is particularly true for the Caribbean and adjacent regions, where tsunamis are infrequent but can be of very high impact. Every emergency management organization (EMO) are encouraged to participate.

2.2 OBJECTIVES

Each organization can develop its objectives for the exercise depending on its level of involvement in the scenario. The following are the exercise's overarching objectives to exercise and evaluate operations of the CARIBE-EWS Tsunami Warning System.

1. **Exercise and evaluate communications between Regional Tsunami Service Provider and Members States/Territories.**
 - A. Validate the **issuance** of tsunami products from the PTWC.
 - B. Validate the **receipt** of tsunami products by CARIBE-EWS Tsunami Warning Focal Points (TWFPs) and/or National Tsunami Warning Centres (NTWCs).
2. **Evaluate the tsunami procedures and programs within Members States/Territories.**
 - A. Validate **readiness** to respond to a tsunami.
 - B. Validate the **operational readiness** of the TWFPs/NTWCs and/or the National Disaster Management Office (NDMO).
 - C. Improve **operational readiness**. Before the exercise, ensure appropriate tools and response plan(s) have been developed, including public education materials.
 - D. Validate that the dissemination of warnings and information/advice by TWFPs and NTWCs, to relevant in-country agencies and the public is accurate and timely.
 - E. Evaluate the status of the implementation of the pilot CARIBE-EWS Tsunami Ready recognition program.

2.3 TYPE OF EXERCISE

The exercise should be carried out such that communications and decision making at various organizational levels are exercised and conducted without alarming the general public. Offices of Emergency Management (OEM) are, however, encouraged to exercise down to the level of testing local notification systems such as the Emergency Alert System (EAS), sirens, or loudspeakers.

Exercises stimulate the development, training, testing, and evaluation of Disaster Plans and Standard Operating Procedures (SOP). Most countries in the region have participated in SOP workshops in 2013, 2014, 2015 and 2017, and should use the materials and expertise acquired to help guide exercise preparation and conduct. [Annex I](#) gives an overview of SOPs. Exercise participants may use their own past multi-hazard drills (e.g. flood, hurricane, tsunami, earthquake, etc.) as a framework to conduct Caribe Wave 20.

Exercises can be conducted at various scales of magnitude and sophistication. The following are examples of types of exercises conducted by EMOs:

1. **Orientation Exercise (Seminar):** An Orientation Exercise lays the groundwork for a comprehensive exercise program. It is a planned event, developed to bring together individuals and officials with a role or interest in multi-hazard response planning, problem solving, development of standard operational procedures (SOPs), and resource integration and coordination. An Orientation Exercise will have a specific goal and written objectives and result in an agreed upon Plan of Action.
2. **Drill:** The Drill is a planned activity that tests, develops, and/or maintains skills in a single or limited emergency response procedure. Drills generally involve operational response of single departments or agencies. Drills can involve internal notifications and/or field activities.
3. **Tabletop Exercise:** The Tabletop Exercise is a planned activity in which local officials, key staff, and organizations with disaster management responsibilities are presented with simulated emergency situations. It is usually informal, in a conference room environment, and is designed to elicit constructive discussion from the participants. Participants will examine and attempt to resolve problems, based on plans and procedures, if they exist. Individuals are encouraged to discuss decisions in depth with emphasis on slow-paced problem solving, rather than rapid, real time decision-making. A Tabletop Exercise should have specific goals, objectives, and a scenario narrative (see [Annex II](#) for a Sample Tabletop Exercise Guidelines).
4. **Functional Exercise:** A Functional Exercise is a planned activity designed to test and evaluate organizational capacities. It is also utilized to evaluate the capability of a community's emergency management system by testing the Emergency Operations Plan (EOP). It is based on a simulation of a realistic emergency situation that includes a description of the situation (narrative) with communications between players and simulators. The Functional Exercise gives the players (decision-makers) a fully simulated experience of being in a major disaster event. It should take place at the appropriate coordination location (i.e. emergency operations centre, emergency command centre, command post, master control centre, etc.) and involve all the appropriate members designated by the plan. Both internal and external agencies (government, private sector, and volunteer agencies) should be involved. It requires players, controllers, simulators, and evaluators. Message traffic will be simulated and inserted by the control team for player response/actions, under real time constraints. It may or may not include public evacuations. A Functional Exercise should have specific goals, objectives, and a scenario narrative.
5. **Full-scale Exercise:** A Full-scale Exercise is the culmination of a progressive exercise program that has grown with the capacity of the community to conduct exercises. A Full-Scale Exercise is a planned activity in a "challenging" environment that encompasses a majority of the emergency management functions. This type of exercise involves the actual mobilization and deployment of the appropriate personnel and resources needed to demonstrate operational capabilities. EOCs and other command centres are required to be activated. A Full-scale Exercise is the largest, costliest, and most complex exercise type. It may or may not include public evacuations.

Style	Planning Period	Duration	Comments
Orientation Exercise	2 weeks	Hours	Individual or mixed groups
Drill	2 months	1 day	Individual technical groups generally
Tabletop Exercise	1 month	1-3 days	Single or multiple agency
Functional Exercise	> 3 months	1-5 days	Multiple Agency participation
Full-scale Exercise	>6 months	1 day/ week	Multiple Agency participation

Table 1. Example Time Frames for Different Exercise Types

Another good resource for exercise planning and conduct is the document entitled *Methodological guidelines: How to prepare, conduct and evaluate a community-based tsunami response exercise (Annex II)*. This guide is recommended for Member States as it provides methodology and tools to conduct and evaluate a community based tsunami evacuation exercise.

2.4 TIMELINE

The process of planning Caribe Wave 20 takes more than a year; from the decision of the Intergovernmental Coordination Group (ICG) to conduct the exercise and the choice of the scenario(s) until the final reports are prepared and distributed. Listed below are the actions to be taken before, during and after Caribe Wave 20.

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
First Webinar CW	21 January 2020 - English 22 January 2020 - Spanish 23 January 2020 - French
Second 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
Final Draft Caribe Wave 20 Report	10 April 2020

Table 2. Actions to be taken before, during and after CARIBE WAVE 20¹

¹ Some dates may have changed.

3. PTWC PRODUCTS

On 1 March 2016, the Tsunami and other Coastal Hazards Warning System for the Caribbean and Adjacent Regions (CARIBE-EWS) fully transitioned to the PTWC Enhanced Products. The PTWC only issues Information and Threat messages for the Caribbean. While the first threat message is based on earthquake location, magnitude and travel time thresholds, as of the second threat message, for earthquake generated tsunamis, these products include wave forecasts. Several levels of tsunami threat have been established, and forecast threat levels are assigned to polygons representing segments of extended coastlines or to island groups. These improvements should greatly reduce the number of areas warned unnecessarily and provide some advance notice of the threat of potential local tsunamis. Details on the PTWC Enhanced Products for the CARIBE-EWS are provided in the *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)* ([IOC/2017/TS/135 Rev.](#)). For the Caribe Wave 20, threat messages and enhanced graphical products of the chosen scenario by each Member State and Territory will be disseminated by email to officially designated TWFPs and NTWCs. These products have also been included in [Annex III](#) and [VI](#). It is up to each country and territory to decide if and how to disseminate messages within its areas of responsibility.

4. EXERCISE OUTLINE

4.1 GENERAL

Tsunami messages for this exercise are issued by the PTWC based on two hypothetical earthquakes with the following hypocentre parameters:

Jamaica Earthquake Scenario:

Origin Time	14:00:00 UTC March 19, 2020
Latitude	18.2°N
Longitude	75.3°W
Magnitude	8.0 – Mw
Depth	25 km

Portugal Earthquake Scenario:

Origin Time	14:00:00 UTC March 19, 2020
Latitude	36.0°N
Longitude	10.7°W
Magnitude	8.5 – Mw
Depth	5 km

Expected impacts for these events are determined from pre-computed tsunami forecast models. The models indicate significant tsunamis along many coasts in the Caribbean Sea. [Annex III](#) provides the model results for the Jamaica and Portugal scenario.

The first simulated tsunami threat message issued by PTWC is based on the earthquake magnitude and location and the tsunami travel times. As of the second message is based on tsunami wave forecasts. Tsunami threat forecasts indicate the levels of threat that have been forecast and to which countries or places they apply. The levels are tsunami heights of 0.3–1 meter, 1–3 meters, and greater than 3 meters above the normal tide level are determined. The

threat information is updated usually within an hour. All simulated products (text and graphical) for the scenario chosen by the country will be disseminated through email to the corresponding TWFPs and NTWCs. Further dissemination will be the responsibility of the corresponding national and local authorities.

The PTWC will not issue live messages over broadcast dissemination channels other than to issue initial dummy message to start the exercise the 19 March 2020 at 1400 UTC. The initial dummy message will be disseminated over all standard PTWC broadcast channels. The World Meteorological Organization (WMO) and Advanced Weather Interactive Processing System (AWIPS) headers to be used in the dummy message are listed in [Table 3](#). Please note that the PTWC dummy messages are being issued with the WMO/AWIPS IDs WECA41 PHEB/TSUCAX. These are being issued to test communications with TWFPs and NTWCs, and to start the exercise. The content of the dummy messages is given in [Annex V](#).

For Caribe Wave 20, each Member State needs to select one scenario. By 6 March 2020, they 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. For the exercise, the TWPF/ NTWC will receive only the simulated product for that scenario.

Centre	WMO ID	AWIPS ID	NWWS	GTS	EMWIN	AISR	Fax	Email
PTWC	WECA41 PHEB	TSUCAX	Yes	Yes	Yes	Yes	Yes	Yes

NWWS	NOAA Weather Wire Service
GTS	Global Telecommunications System
EMWIN	Emergency Managers Weather Information Network
AISR	Aeronautical Information System Replacement

Table 3. Product Types Issued for Dummy Message with Transmission Methods

Participants should follow the schedule in [Tables 4](#) and [5](#) for each scenario, to look at new messages. Those tables include the timelines for when messages would be issued by the PTWC if this were a real event and can be used by EMOs to drive the exercise timing. The messages (as shown in [Annex V](#)) cover a period of time between 5 minutes and 7-hours from earthquake origin time, however in an actual event messages would likely continue for a much longer period of time.

Participants may elect to exercise using their own timelines in order to achieve their particular objectives. For example, a particular EMO's Exercise Controller may choose to feed the TWC bulletins into the exercise at times of their own choosing, or alternatively put them in envelopes with the time they must be opened written on each, with each key participant agency having their own set of envelopes. The messages, provided in [Annex VI](#), will facilitate this approach.

EMOs can modify estimated arrival times and/or wave amplitudes to suit their exercise, for example, to have the tsunami arrive sooner and with larger amplitude. Other exercise injects, such as tsunami damage reports, are also encouraged.

4.2 MASTER SCHEDULE (EXERCISE SCRIPT)

4.2.1 Jamaica Scenario

Tsunami generated by a magnitude 8.0 earthquake with epicentre at 18.203°N, 75.376°W occurring the 19 March 2020 at 1400 UTC. The initial alert is disseminated at 1407 UTC.

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

Table 4. Timeline Messages issued by PTWC

4.2.2 Portugal Scenario

Tsunami generated by a magnitude 8.5 earthquake with epicentre at 36.0°N, 10.7°W occurring the 19 March 2020 at 1400 UTC. The initial alert is disseminated at 1407 UTC.

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	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

Table 5. Timeline Messages issued by PTWC

4.3 ACTIONS IN CASE OF EMERGENCY

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**”.

4.4 RESOURCES

Although EMOs will have advance notice of the exercise and may elect to stand up a special dedicated shift to allow normal core business to continue uninterrupted, it is requested that realistic resource levels be deployed in order to reflect some of the issues that are likely to be faced in a real event. Questions on the exercise can be addressed to the members of the Caribe Wave 20 Task Team ([Table 6](#)).

4.5 COMMUNITY REGISTRATION

For Caribe Wave 20, the ICG/CARIBE-EWS has teamed up with TsunamiZone.org for online registration. Under the Caribbean Zone Region tab, participants will be able to sign up and choose among the following community categories: individuals, businesses, schools, faith-based organizations, community groups, government agencies, individuals. The link for registration is the following: <http://tsunamizone.org/caribbean>. After registering, the participant will receive a confirmation email. If desired, participants can also opt to be listed in the “Who is participating?” section of the TsunamiZone website, along with participants in tsunami preparedness activities worldwide. The EMOs will thus have real time access to the status of registration of participants within their areas of responsibility. EMOs are encouraged to promote this registration system.

4.6 MEDIA ARRANGEMENTS

One advantage in conducting exercises is that it provides a venue to promote tsunami awareness. Many residents along the CARIBE-EWS coast may not realize that a regional tsunami warning system exists, nor that national authorities have protocols in place to issue tsunami alerts, let alone the proper response for individuals. Therefore, communities may wish to invite their local media to the exercise and to promote the awareness of the local tsunami hazard and protocols. Within all Member States, the media can also provide support in building awareness leading up to the exercise and avoid false alarms. Media should be provided with available informational brochures prepared by the local, regional and international agencies. It is also a good opportunity to distribute or prepare Media guides like that of the Puerto Rico Seismic Network (PRSN) (<http://www.prsn.uprm.edu/mediakit/en/index.php>) and the Seismic Research Centre (SRC) (<http://www.uwiseismic.com>) as additional guidance. [Annex VII](#) contains a sample press release, which can be adapted as necessary.

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

Person	Telephone #	Email
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 Ivan Wong Matt Hornbach 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 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 Programme Officer for Coastal Hazards and CTIC	246-243-7626	a.brome@unesco.org

Table 6. Members of the CARIBE WAVE 20 Task Team

Social media has been recognized as a very important means for disseminating tsunami information and products. CARIBE-EWS countries and territories are encouraged to share information on the exercise Caribe Wave 20 through this medium. Furthermore, it is requested that the hashtag **#CARIBEWAVE**, be used by the participants before and during the exercise.

4.7 PROCEDURE 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.

5. POST-EXERCISE EVALUATION

Each ICG/CARIBE-EWS Member State and territory is requested to provide feedback on the exercise. This feedback will assist the evaluation of Caribe Wave 20 and the development of subsequent exercises. It will also help response agencies to document lessons learned and lead to improvements of the national systems. 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**.

6. REFERENCES

Amante, C. and Eakins B.W. 2009. *ETOPO1 1 Arc-Minute Global Relief Model: Procedures, Data Sources and Analysis*. NOAA Technical Memorandum NESDIS NGDC-24. National Geophysical Data Center, NOAA. doi:[10.7289/V5C8276M](https://doi.org/10.7289/V5C8276M)

Barkan, R., Uri, S., and J. Lin. 2009. Far field tsunami simulations of the 1755 Lisbon earthquake: Implications for a tsunami hazard to the US East Coast and the Caribbean. *Marine Geology*, 264(1-2), pp. 109-122.

Benz, H.M., Tarr, A.C., Hayes, G.P., Villaseñor, A., Furlong, K.P., Dart, R.L., and Rhea, S. 2011. Seismicity of the Earth 1900–2010 Caribbean plate and vicinity. U.S. *Geological Survey Open-File Report 2010–1083-A*, scale 1:8,000,000.

Calais, E., Freed, A., Mattiolo, G., Amelung, F., Jónsson, S., Jansma, P., Hong, S., Dixon, T., Prépetit, C., and Momplaisir, R. 2010. Transpressional rupture of an unmapped fault during the 2010 Haiti earthquake. *Nature Geoscience*, 3(11), pp. 794.

DeMets, C., Gordon R. G., and Argus D. F. 2010. Geologically current plate motions. *Geophysical Journal International*, Vol. 181, Issue 1, pp.1–80. (<https://doi.org/10.1111/j.1365-246X.2009.04491.x>)

Feuillet, N., Maniguet, I., Tapponnier, P., and Jacques, E. 2002. Arc parallel extension and localization of volcanic complexes in Guadeloupe, Lesser Antilles. *Journal of Geophysical Research: Solid Earth*, Vol. 107, Issue B12. ([Doi:10.1029/ 2001JB000308](https://doi.org/10.1029/2001JB000308).)

Intergovernmental Oceanographic Commission. 2013. *Exercise Caribe Wave/Lantex 14: A Caribbean and Northwestern Atlantic Tsunami Warning Exercise, 26 March 2014*, Volume 1: Participant Handbook. Paris, UNESCO, IOC Technical Series, No. 109 ([IOC/2013/TS/109VOL.1](https://doi.org/10.1017/9781107000000))

Intergovernmental Oceanographic Commission. 2018. *Exercise Caribe Wave 19: a Caribbean and adjacent region tsunami warning exercise, 14 March 2019 (Kick 'em Jenny and Panama Scenarios)*, Volume 1: Participant Handbook. Paris, UNESCO, IOC Technical Series, No. 140 ([IOC/2018/TS/141 VOL.1](https://doi.org/10.1017/9781107000000))

International Tsunami Information Center and National Centers for Environmental Information. 2018. *Historical Tsunamis (1530 to 2018) Caribbean, Central America, Mexico and Adjacent Regions*. <https://www.ngdc.noaa.gov/hazard/data/publications/CCAMAR-english.pdf>

Lander, J. F., Whiteside, L. S., and Lockridge, P.A. 2002. A brief history of tsunamis in the Caribbean Sea. *Science of Tsunami Hazards*, Vol. 20, No.2, pp.57–94.

Koehler, R. D., Mann, P., Prentice, C.S., Brown, L., Benford, B., and Wiggins-Grandison, M. 2013. Enriquillo-Plantain Garden fault zone in Jamaica: Paleoseismology and seismic hazard. *Bulletin of the Seismological Society of America*, Vol. 103 (2A), pp. 971–983.

National Centers for Environmental Information/World Data Service (NCEI/WDS) 2018. *NGDC/WDS Global Historical Tsunami Database*. [doi:10.7289/V5PN93H7](https://doi.org/10.7289/V5PN93H7). (Accessed October 2019.)

Prentice, C. S., Mann, P., Crone, A. J., Gold, R. D., Hudnut, K. W., Briggs, R. W., Koehler, R. D., and Jean, P. 2010. Seismic hazard of the Enriquillo-Plantain Garden fault in Haiti inferred from palaeoseismology. *Nature Geoscience*, Vol. 3(11), pp. 789–793.

Roger, J., Allgeyer, S., Hebert, H., Baptista, M. A., Loevenbruck, A., and Schindele, F. 2010. The 1755 Lisbon tsunami in Guadeloupe Archipelago: Source sensitivity and investigation of resonance effects. *The Open Oceanography Journal*, Vol. 4, pp. 58–70.

ten Brink, U., Twichell, D., Geist, E., Chaytor, J., Locat, J., Lee, H., Buczkowski, B., Barkan, R., Solow, A., Andrews, B., Parsons, T., Lynett, P., Lin, J., and Sansoucy, M. 2008. *Evaluation of tsunami sources with the potential to impact the U.S. Atlantic and Gulf coasts*. USGS Administrative report to the U.S. Nuclear Regulatory Commission, pp. 300.

von Hillebrandt-Andrade, C. 2013. Minimizing Caribbean Tsunami Risk. *Science*, Vol. 341, pp. 966–968.

Wessel, P., Smith, W. H. F., Scharroo, R., Luis, J. F. and Wobbe, F. 2013. Generic Mapping Tools: Improved version released. *EOS, Transactions, American Geophysical Union*, Vol. 94, Issue 45, pp. 409–410. <https://doi.org/10.1002/2013EO450001>

Wright, V. 2019. Assessing Quaternary Geohazards in Hispaniola and Jamaica Using Seismic, Remote Sensing and Sediment Core data. *Earth Sciences Theses and Dissertations*, 11.

ANNEX I

STANDARD OPERATING PROCEDURES

END-TO-END TSUNAMI WARNING for Tsunami Warning Focal Points and Tsunami Emergency Response Operations– AN OVERVIEW

September 2008 (updated 2012)

UNESCO/IOC Tsunami Unit (Paris) with ITIC (Hawaii)

This overview summarizes an end-to-end tsunami warning. In event time, it covers activities for monitoring, detection, threat evaluation and warning, alert dissemination, emergency response, and public action. An effective tsunami warning system is achieved when all people in vulnerable coastal communities are prepared to respond appropriately and in a timely manner upon recognizing that a potential destructive tsunami may be approaching. Meeting this challenge requires round-the-clock monitoring with real-time data streams and rapid alerting, as well as prepared communities, a strong emergency management system, and close and effective cooperation and coordination between all stakeholders. To warn without preparing, and further, to warn without providing a public safety message that is understandable to every person about what to do and where to go, is clearly useless. While alerts are the technical trigger for warning, any system will ultimately be judged by its ability to save lives, and by whether people move out of harm's way before a big tsunami hits. Towards these ends, education and awareness are clearly essential activities for successful early warning.

An end-to-end tsunami warning involves a number of stakeholders who must be able to work together and with good understanding of each other's roles, responsibilities, authorities, and action during a tsunami event. Planning and preparedness, and practicing in advance of the real event, helps to familiarize agencies and their staff with the steps and decision-making that need to be carried out without hesitation in a real emergency. Tsunami resilience is built upon a community's preparedness in tsunami knowledge, planning, warning, and awareness. All responding stakeholders should have a basic understanding of earthquake and tsunami science, and be familiar with warning concepts, detection, threat evaluation, and alerting methods, and emergency response and evacuation operations. The key components, requirements, and operations to enable an effective and timely warning and evacuation are covered in the following topics of end to-end tsunami warning:

- Tsunami Science and Hazard Assessment,
- Tsunami Risk Reduction Strategy and community-based disaster risk management,
- Stakeholders, Roles & Responsibilities, and Standard Operating Procedures (SOPs) and their Linkages,
- End-to-end Tsunami Response and SOPs,
- Tsunami Warning Focal Point (TWFP) and National Tsunami Warning Centre (NTWC) operations,
- Tsunami Emergency Response (TER) operations,
- Public Alerting,
- The Role of Media,
- Evacuation and Signage,
- Use of Exercises to Build Preparedness,
- Awareness and Education.

To ensure the long-term sustainability of a tsunami warning system, it should be noted that:

- Tsunamis should be part of an all-hazards (natural and anthropogenic) strategy.
- System redundancy is required to ensure reliability.
- Clearly understood TWFP/TWC and TER public safety messages are essential. Media partnerships for warning, as well as preparedness, are important.
- Awareness must be continuous forever. Tsunamis are low frequency, high impact natural disasters that are also unpredictable.
- National, provincial, and local Tsunami Coordination Committees ensure stakeholder coordination and implementation of the end-to-end tsunami warning.

For specific details and algorithms and for actual descriptions of tsunami warning and emergency response operations, including data networks and data collection, methods of evaluation and criteria for action, products issued and methods of communication of alerts, and evacuation, original source references or plans should be consulted. These are the high-level system descriptions or concepts of operation, agency operations manuals, and user's guides of each regional and national system.

Basic references providing a comprehensive summary on tsunami warning centre and emergency response operations considerations are:

- ITIC IOC Manual on Tsunami Warning Centre Standard Operating Procedures (Guidance and Samples), version 2010 (distributed as part of 2013 SOP capacity building).
- ITIC IOC Manual on Tsunami Emergency Response Standard Operating Procedures (Guidance and Samples), version 2010 (distributed as part of 2013 SOP capacity building)

For a description of the Caribbean tsunami warning system, consult the 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) (version 2.0 October, 2017). This document is available at UNESDOC (<https://unesdoc.unesco.org/ark:/48223/pf0000259725>) and on the website of the CTWP (<http://caribewave.info>).

TRAINING

In order to assist countries in strengthening their warning systems, the IOC has compiled and developed a Training Manual in close partnership with ITIC. It contains references, best practices, decision support tools, and guidance materials summarizing key components, requirements, and operations to enable an effective and timely warning and evacuation against tsunamis.

The Manual includes session plans, lectures (in PowerPoint), exercises, and multimedia materials. Together, they represent part of the IOC's collaborative contribution to national capacity building and training on end-to-end tsunami warning and tsunami standard operating procedures to countries of the Indian Ocean, Pacific, Southeast Asia, and the Caribbean. For more information, please contact Laura Kong, Director of ITIC (laura.kong@noaa.gov), Bernardo Aliaga, Technical Secretary, UNESCO/IOC (b.aliaga@unesco.org), Christa von Hillebrandt, US NWS Caribbean Tsunami Warning Program (christa.vonh@noaa.gov), or Alison Brome, Programme Officer for Coastal Hazards and CTIC (a.brome@unesco.org). The tables presented below can be used as a guide for preparing the timeline for the exercise.

Tsunami Evacuation Responsibilities Checklist for Government Disaster Response Agencies		
This is a simple checklist to use when doing an evacuation. List the agency(ies) / department(s) responsible for actions and recommended number of minutes (e.g. +10 minutes) after earthquake origin time.	Earthquake Origin Time: <u>0000</u>	
	Agency(ies) / Department(s):	Time (mins):
Strong and/or long duration earthquake is felt (vary depending distance from source)	_____	± _____
Tsunami message received from tsunami service provider (NTWCs)	_____	± _____
Call in staff	_____	± _____
Activate emergency centers / Notify public safety agencies	_____	± _____
Coordinate sounding of public sirens and alarm notifications	_____	± _____
Initiate media notifications and evacuation announcements	_____	± _____
Initiate evacuation of people away from coast (Tsunami Evacuation Maps)	_____	± _____
Put boats/ships out to sea if wave impact time permits	_____	± _____
Setup road-blocks and evacuation routes	_____	± _____
Guide people through traffic points to shelter	_____	± _____
Initiate recall of disaster response workers	_____	± _____
Open and operate refuge centres	_____	± _____
Prepare to start electrical generators	_____	± _____
If your facility is located in a tsunami evacuation zone: -Prepare to shut off utilities (e.g. electrical, gas, water) -Protect key equipment (e.g. computers) -Remove key documents (e.g. financial, personal information)	_____	± _____
Determine if tsunami has caused coastal damage / injuries and the need to initiate search and rescue operations	_____	± _____
Determine when to declare the “all clear”	_____	± _____
Prepare for post tsunami impact operations	_____	± _____
Do roll call for workers ____ and volunteers	_____	± _____

Table I-1. Table to be used as a guide the timing, actions, authority, communication means and target audiences for a tsunami event.

ANNEX II

**GUIDELINES: HOW TO PREPARE, CONDUCT AND EVALUATE
A COMMUNITY-BASED TSUNAMI RESPONSE EXERCISE**

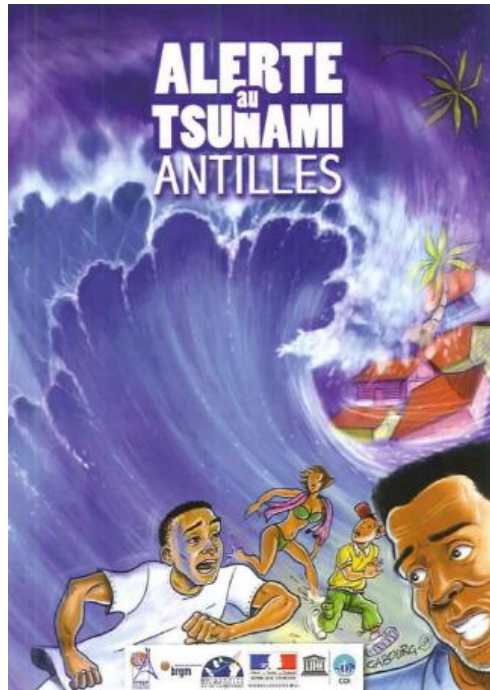


Figure II-1. Cover page of the *Methodological guidelines: How to prepare, conduct and evaluate a community-based tsunami response exercise* (in review).

Available in English, Spanish, and French.

(<http://www.ioc->

[tsunami.org/index.php?option=com_oe&task=viewDocumentRecord&docID=19139](http://www.ioc-tsunami.org/index.php?option=com_oe&task=viewDocumentRecord&docID=19139))

This guide which is under final review is recommended for Member States to consider Caribe Wave Exercises. It 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. The guide is divided into three chapters where it focuses on the knowledge of the tsunami as a hazard, on establishing multi-annual program of exercises, and on the preparedness for conducting a tsunami evacuation exercises. A progressive approach is suggested to allow the guide's target audience to develop multi-annual exercises. This can be done by progressing relatively simply designed exercises that is crucial for selecting the most suited type of exercise to achieve the objectives set, while taking account of a community's existing level of readiness. The first phase is to conduct a tabletop exercise, this is appropriate if the objective is to raise awareness among a teaching team within a school setting about related dangers caused by a tsunami, and to teach people about the counter-measures they should take to make their classroom safe. The second phase takes account of lessons learned during the tabletop exercise and enables a partial tsunami evacuation exercise to be developed. In the third phase, community leaders could design an exercise in which the objective would be for a school community to evacuate to a predetermined safe location in less than 15 minutes. 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.

ANNEX III

TSUNAMI SOURCE SCENARIOS DESCRIPTION

The following scenarios use a standard format to define the tsunami sources as described in the [Figure III-1](#) below. Each fault segment is defined by 4 corner points where point A is the lower left corner of the fault plane. Line segment A-D indicates the down dip bottom rectangular source area, whereas line B-C is the top portion of the rupture plane that is nearest to the sea-floor surface. Letters W and L represents the width and length of the plane, respectively. Letter W_{ap} represents apparent width and applies to the dimensions when observed the fault plane in map view.

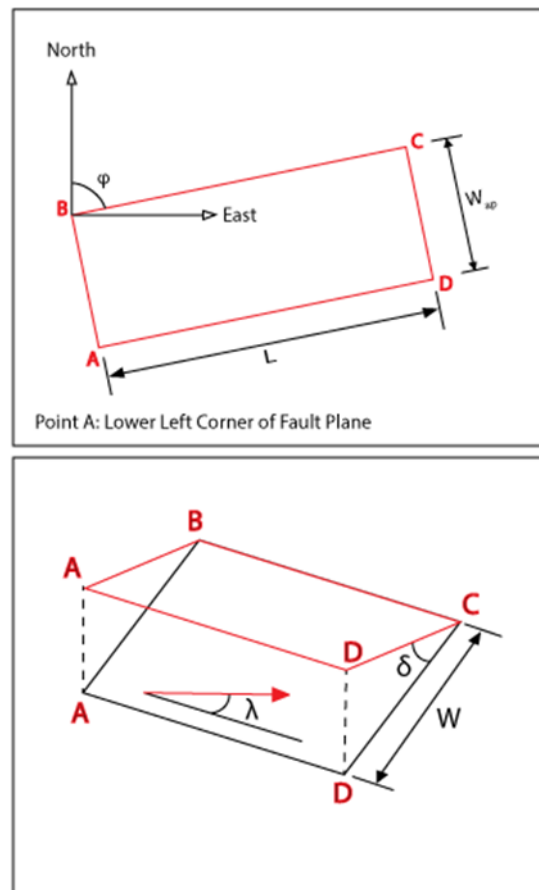


Figure III-1. Schematic of the standard used to describe all fault planes in the Caribe Wave Exercise scenarios.

Jamaica Earthquake Scenario

The Jamaica earthquake scenario consists of a rupture of a fault segment along the Enriquillo-Plantain Garden Fault with hypocentre at:

- Name of Scenario: Caribe Wave 20 Jamaica Scenario
- EQ Origin Time: 1400 UTC
- Hypocentre Longitude: 75.37°W
- Hypocentre Latitude: 18.20°N
- Hypocentre Depth (km): 25 km
- EQ Magnitude (Mw): 8.0
- Slip (m): 6
- Shear modulus: 3.3×10^{11} dyne/cm²
- Seismic Moment: 0.1188×10^{29} dyne-cm

Corner Point A	
Latitude	18.36°
Longitude	-73.97°
Depth (km)	34.51
Corner Point B	
Latitude	18.31°
Longitude	-73.96°
Depth (km)	15.49

Corner Point C	
Latitude	18.04°
Longitude	-76.79°
Depth (km)	15.49
Corner Point D	
Latitude	18.10°
Longitude	-76.79°
Depth (km)	34.51

Other Fault Parameters	
Strike (ϕ phi)	264.45°
Dip (δ delta)	72°
Rake (λ lambda)	0°
Length (km)	300
Width (W in km)	20
Width in Map View (km) [$W_{ap} = W * \cos(\delta)$]	6.18 km

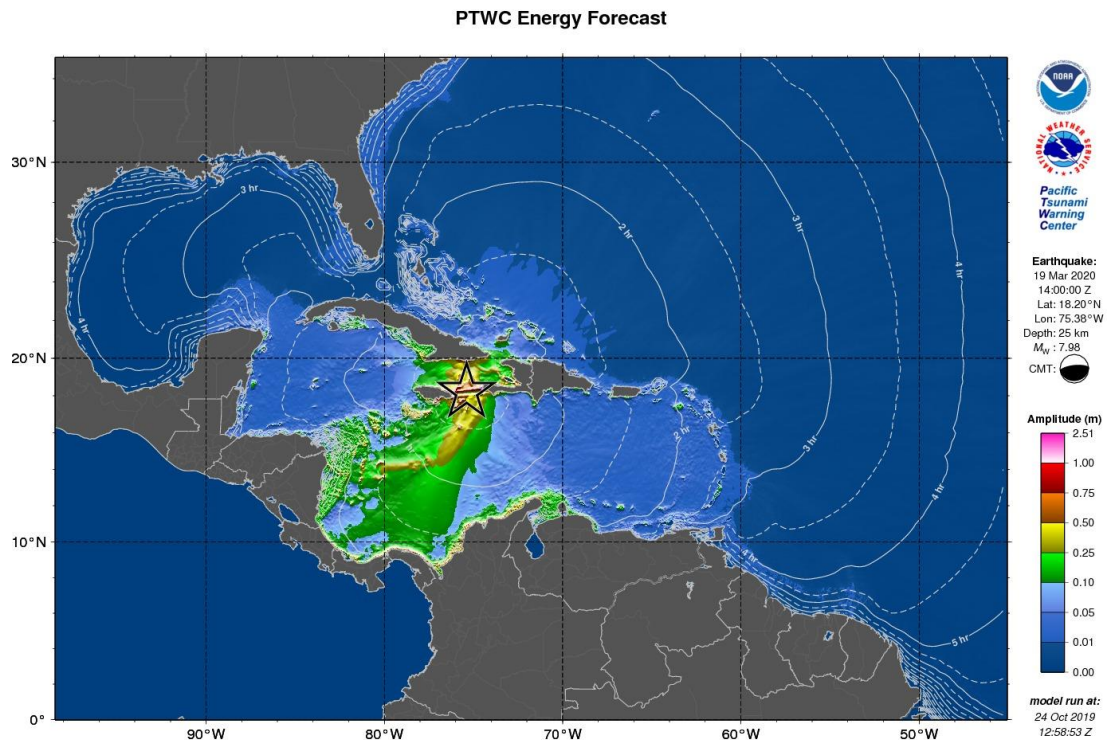


Figure III-2. RIFT maximum amplitude map for the Caribbean and Adjacent Regions for the Jamaica scenario. During a real event this product will only be made available to officially designated Tsunami Warning Focal Points and National Tsunami Warning Centres.

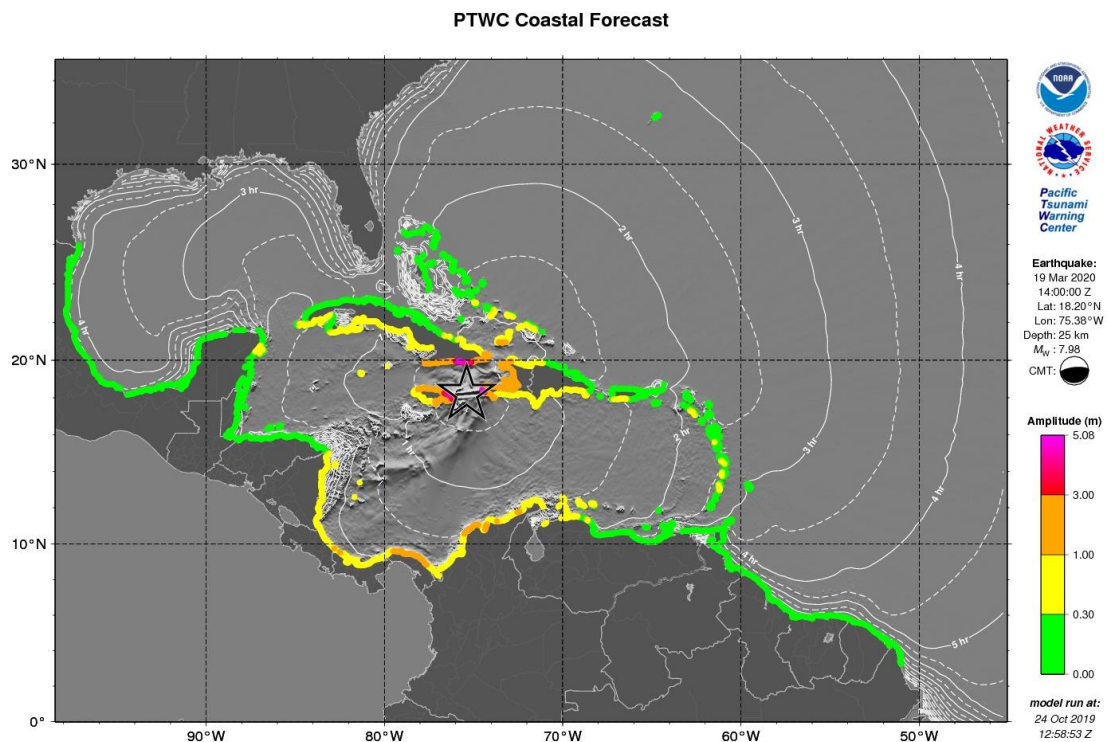


Figure III-3. RIFT coastal tsunami amplitude map for the Caribbean and Adjacent Regions for the Jamaica scenario. During a real event this product will only be made available to officially designated Tsunami Warning Focal Points and National Tsunami.

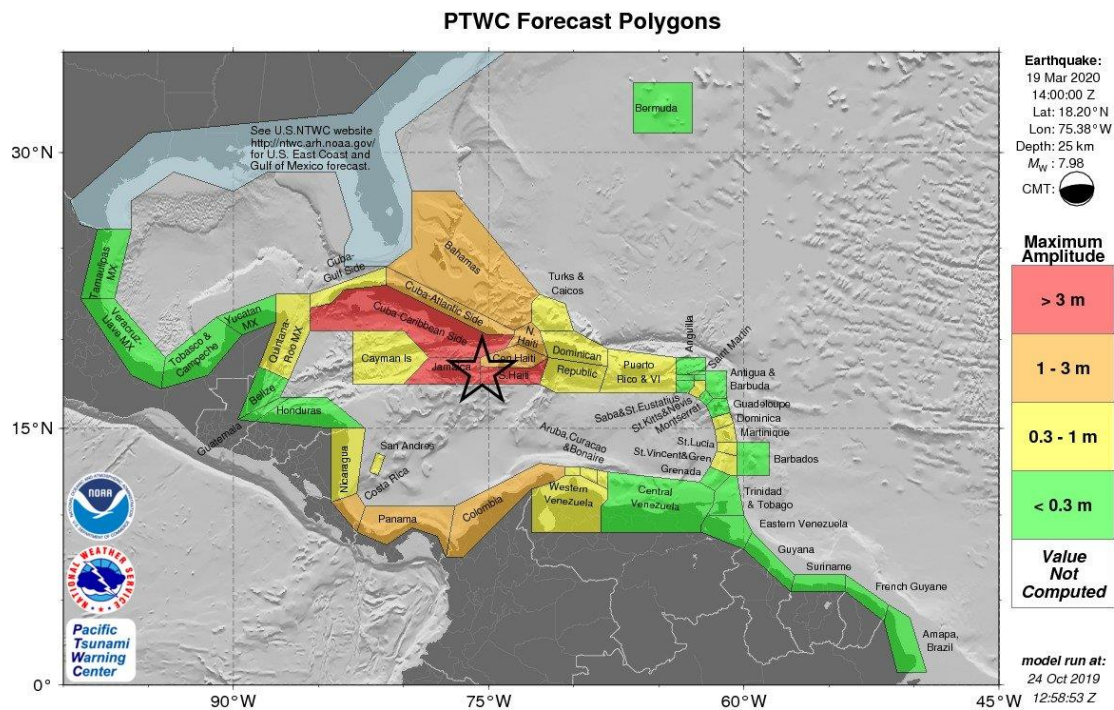


Figure III-4. RIFT forecast polygons for the Caribbean and Adjacent Regions for the Jamaica scenario. During a real event this product will only be made available to officially designated Tsunami Warning Focal Points and National Tsunami Warning Centres.

Portugal Earthquake Scenario

The Portugal earthquake scenario consists of a rupture 270 km off the coast with hypocentre at:

- Name of Scenario: Caribe Wave 20 Portugal Scenario
- EQ Origin Time: 1400 UTC
- Hypocentre Longitude: 10.75°W
- Hypocentre Latitude: 36.04°N
- Hypocentre Depth (km): 5 km
- EQ Magnitude (M_w): 8.5
- Strike (ϕ phi): 345°
- Dip (δ delta): 40°
- Slip (m): 90
- Length (km): 200
- Width (W in km): 80
- Shear modulus: 3.3x10¹¹ dyne/cm²

PTWC Energy Forecast

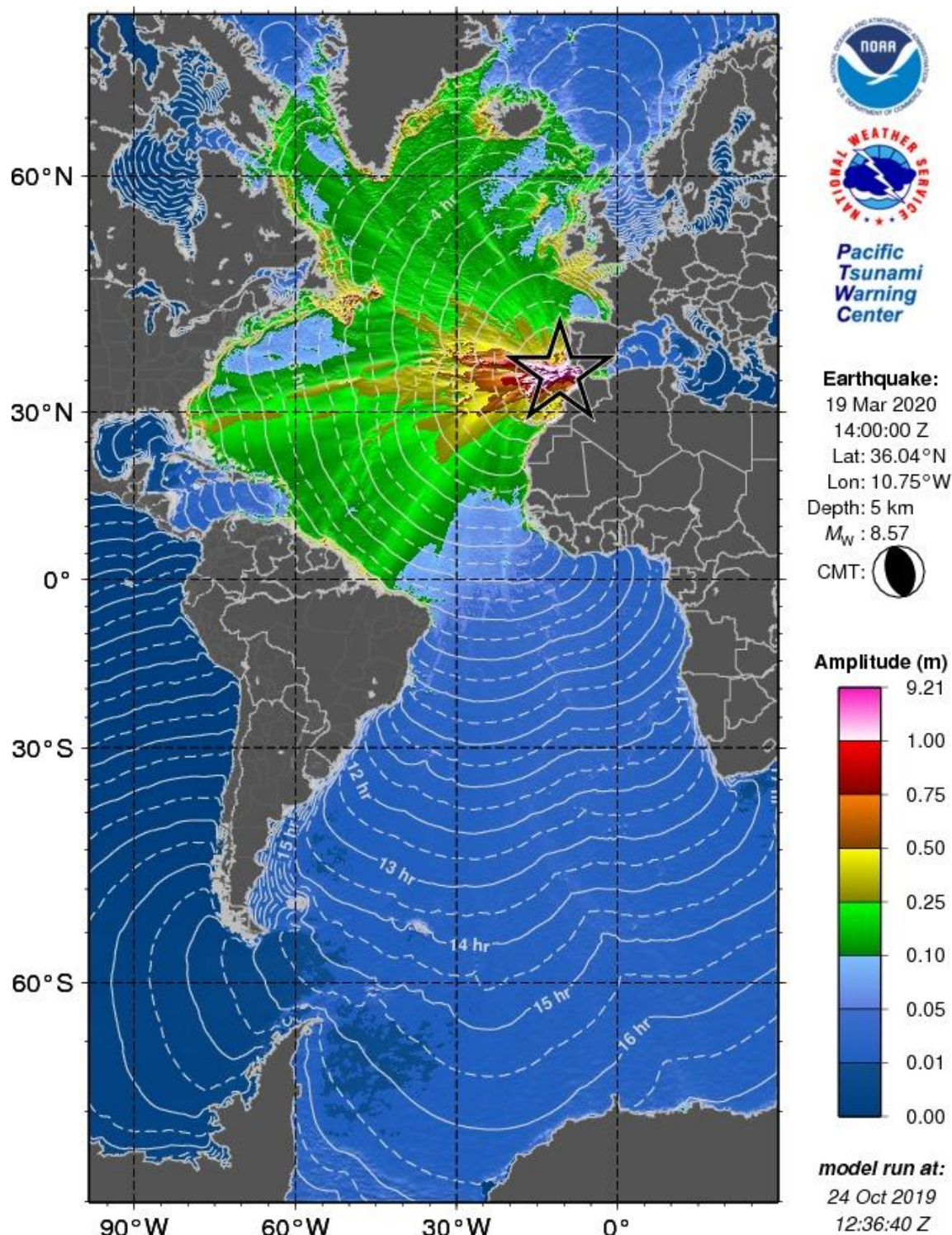


Figure III-5. RIFT maximum amplitude map for the Caribbean and Adjacent Regions for the Portugal scenario. During a real event this product will only be made available to officially designated Tsunami Warning Focal Points and National Tsunami Warning Centres.

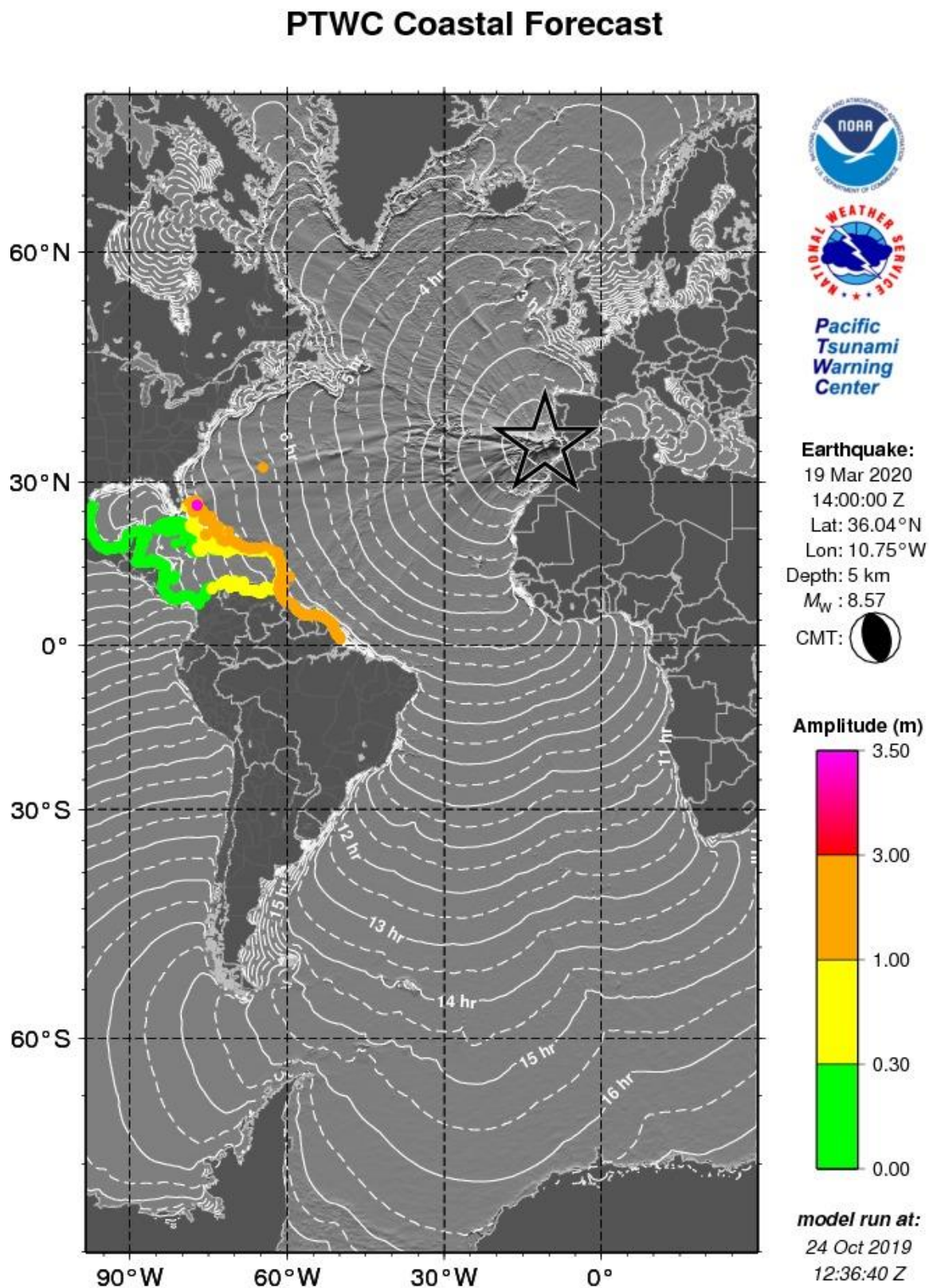


Figure III-6. RIFT coastal tsunami amplitude map for the Caribbean and Adjacent Regions for the Portugal scenario. During a real event this product will only be made available to officially designated Tsunami Warning Focal Points and National Tsunami.

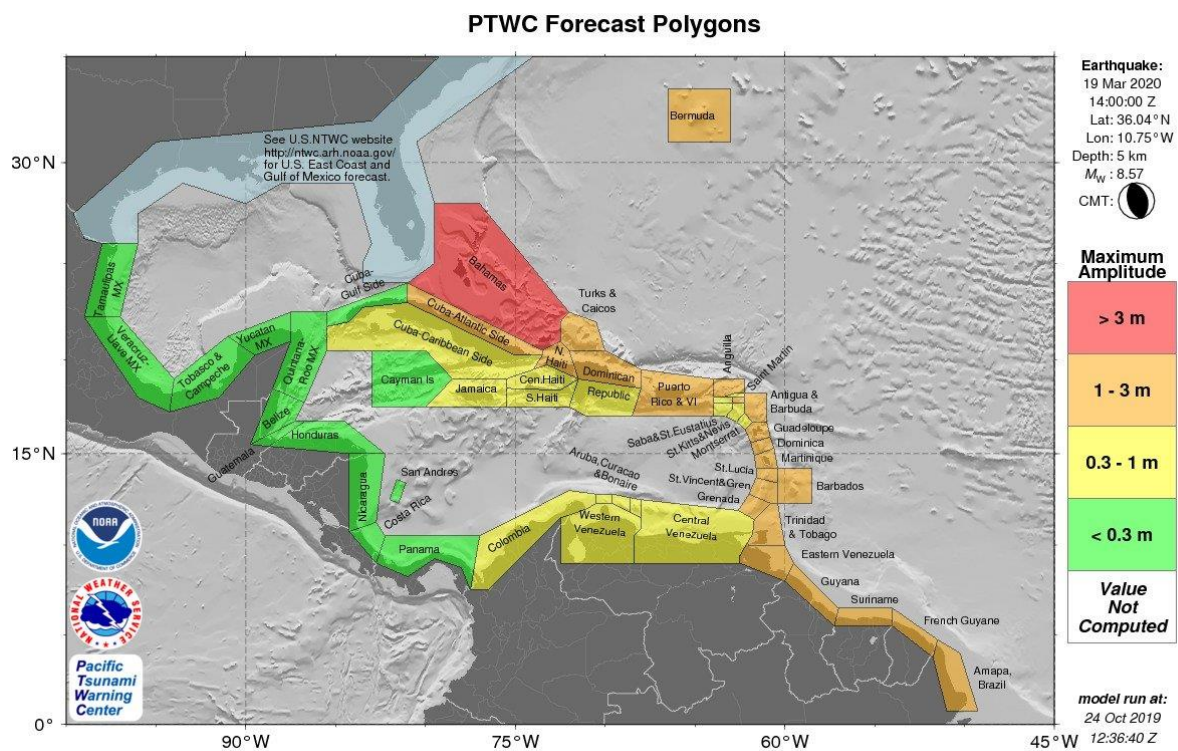


Figure III-7. RIFT forecast polygons for the Caribbean and Adjacent Regions for the Portugal scenario. During a real event this product will only be made available to officially designated Tsunami Warning Focal Points and National Tsunami Warning Centres.

ANNEX IV

EARTHQUAKE IMPACT SCENARIOS

When planning for a tsunami it is important to also take into consideration the potential earthquake impact in areas close to the source, as these impacts can affect tsunami response and increase the tsunami impact by hindering evacuation and contributing debris to be carried by the waves. For earthquake impact, the USGS has developed ShakeMap and the Prompt Assessment of Global Earthquakes for Response (PAGER). The main purpose of ShakeMap is to display the levels of ground shaking produced by the earthquake. The ground shaking events levels in the region are studied depending on the magnitude of the earthquake, the distance from the earthquake source, rock and soil behavior in the region, and propagation of the seismic waves through the Earth's crust. Based on the output of ShakeMap, PAGER estimates the population exposed to earthquake shaking, fatalities and economic losses.

Earthquake Event

The input information for ShakeMap and PAGER are the four corners of the boxes from the fault plane and the depths at each of these four corners. For the case of Caribe Wave 20, the fault plane is represented by one segment for each of the scenarios. The Jamaica fault plane is 300 km long and 20 km wide, and the Portugal fault plane is 200 km long and 80 km wide.

Figures [IV-1](#) and [IV-2](#), show ShakeMap and PAGER outputs for the Caribe Wave 20 Jamaica earthquake scenario.

For the Jamaica scenario, the ShakeMap show intensities up to VIII on the Mercalli Modified Scale ([Figure IV-1](#)). The strongest ground shaking is predicted near the East coast of Jamaica and Southwest of Haiti.

According to PAGER, ([Figure IV-2](#)) the Caribe Wave 20 simulated earthquakes would produce earthquake shaking red alert for Jamaica scenario. Fatalities are probable and economic losses might exceed the gross domestic product (GDP) of Jamaica.

Regarding population exposed to earthquake shaking, it is estimated that approximately 1,934k people for Jamaica scenario would be exposed to Modified Mercalli intensities from III up to VIII (according to pager).

Jamaica Earthquake Scenario

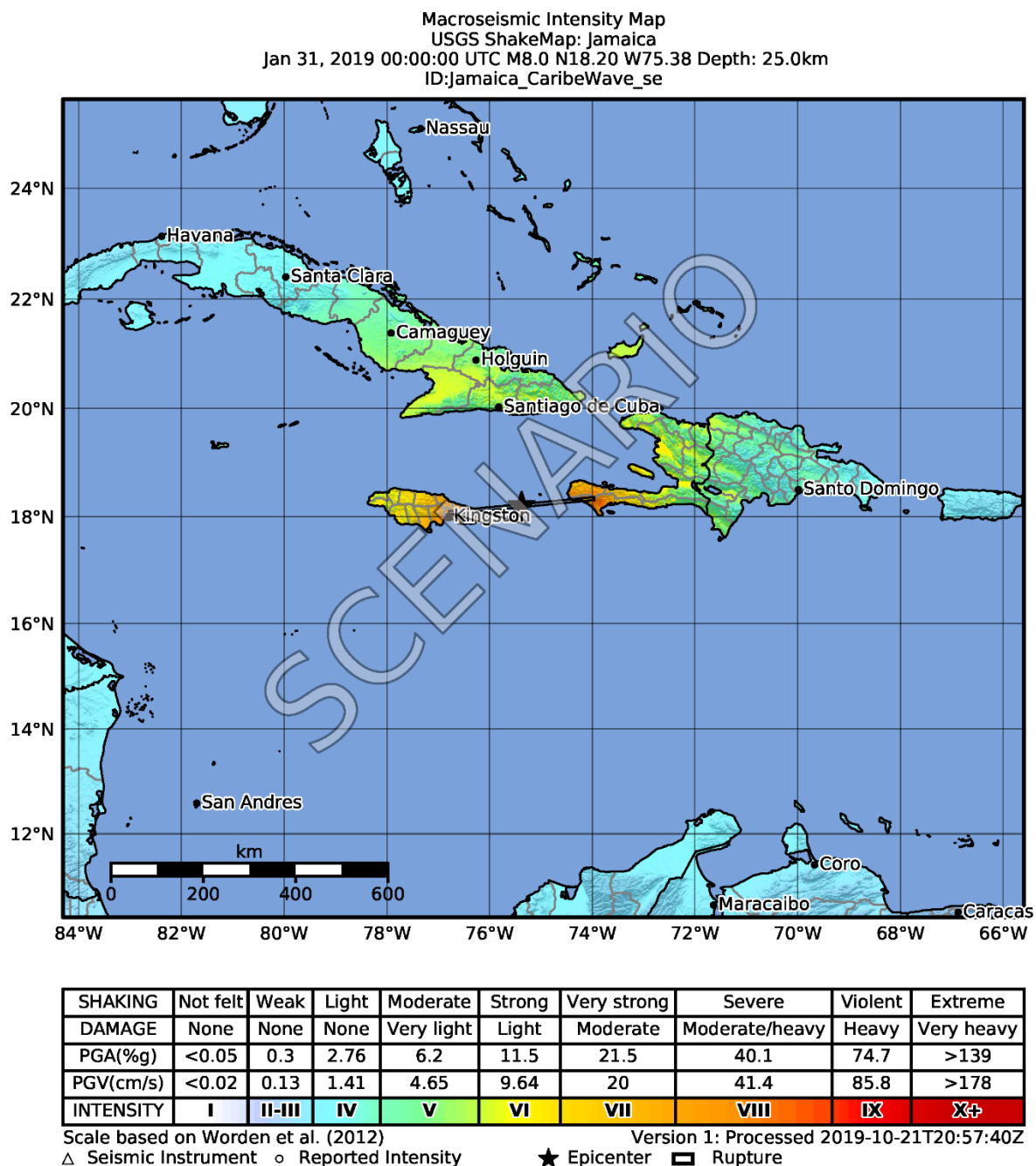


Figure IV-1. ShakeMap output for the CARIBE WAVE 20 Jamaica earthquake scenario (USGS).

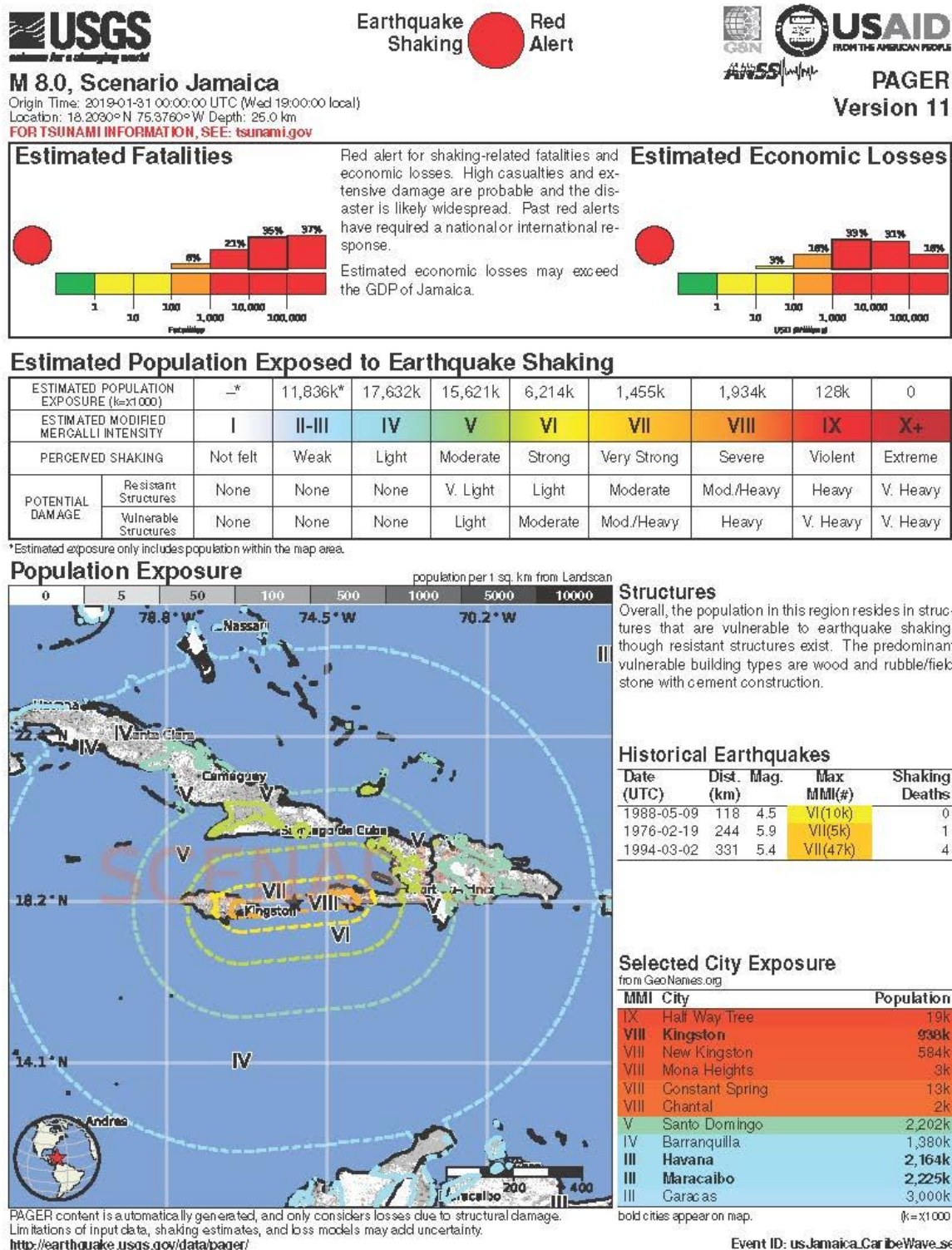


Figure IV-2. PAGER output for CARIBE WAVE 20 Jamaica earthquake scenario (USGS).

ANNEX V

TWC DUMMY (START OF EXERCISE) MESSAGES

PTWC

WECA41 PHEB 191400

TSUCAX

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.

\$\$

ANNEX VI

TWC EXERCISE MESSAGES

Jamaica Scenario

The following messages created for the Caribe Wave 20 tsunami exercise are representative of the official standard products issued by the PTWC for a magnitude 8.0 earthquake and subsequent tsunami originating in the Enriquillo-Plantain Garden Fault Zone. During a real event, the PTWC would also post the text products on tsunami.gov. The alerts would persist longer during a real event than is depicted in this exercise.

PTWC Message #1

ZCZC
WECA41 PHEB 191407
TSUCAX

TEST...TSUNAMI MESSAGE NUMBER 1...TEST
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
1407 UTC THU MAR 19 2020

...THIS MESSAGE IS FOR TEST PURPOSES ONLY...
...TEST TSUNAMI THREAT MESSAGE TEST...

**** NOTICE **** NOTICE **** NOTICE **** NOTICE **** NOTICE ****

THIS IS A TEST MESSAGE. THIS MESSAGE IS ISSUED FOR INFORMATION ONLY IN SUPPORT OF THE UNESCO/IOC TSUNAMI AND OTHER COASTAL HAZARDS WARNING SYSTEM FOR THE CARIBBEAN AND ADJACENT REGIONS AND IS MEANT FOR NATIONAL AUTHORITIES IN EACH COUNTRY OF THAT SYSTEM.

THIS IS A TEST MESSAGE. NATIONAL AUTHORITIES WILL DETERMINE THE APPROPRIATE LEVEL OF ALERT FOR EACH COUNTRY AND MAY ISSUE ADDITIONAL OR MORE REFINED INFORMATION.

**** NOTICE **** NOTICE **** NOTICE **** NOTICE **** NOTICE ****

TEST... PRELIMINARY EARTHQUAKE PARAMETERS ...TEST

* MAGNITUDE 7.9
* ORIGIN TIME 1400 UTC MAR 19 2020
* COORDINATES 18.2 NORTH 75.4 WEST
* DEPTH 25 KM / 16 MILES
* LOCATION JAMAICA REGION

TEST... EVALUATION ...TEST

* THIS IS A TEST MESSAGE. AN EARTHQUAKE WITH A PRELIMINARY MAGNITUDE OF 7.9 OCCURRED IN THE JAMAICA REGION AT 1400 UTC ON THURSDAY MARCH 19 2020.

* THIS IS A TEST MESSAGE. BASED ON THE PRELIMINARY EARTHQUAKE PARAMETERS... WIDESPREAD HAZARDOUS TSUNAMI WAVES ARE POSSIBLE.

TEST... TSUNAMI THREAT FORECAST ...TEST

* THIS IS A TEST MESSAGE. HAZARDOUS TSUNAMI WAVES FROM THIS EARTHQUAKE ARE POSSIBLE WITHIN THE NEXT THREE HOURS ALONG

SOME COASTS OF

CUBA... HAITI... CAYMAN ISLANDS... BAHAMAS... JAMAICA...
TURKS N CAICOS... DOMINICAN REP... COLOMBIA... ARUBA...
PUERTO RICO... BONAIRE... US VIRGIN IS... SAN ANDRES
PROVID... PANAMA... MEXICO... CURACAO... SABA...
HONDURAS... SAINT KITTS... BR VIRGIN IS... SINT
EUSTATIUS... VENEZUELA... MONTSERRAT... SINT MAARTEN...
COSTA RICA... GUADELOUPE... ANGUILLA... DOMINICA... SAINT
LUCIA... MARTINIQUE... SAINT VINCENT... SAINT MARTIN...
SAINT BARTHELEMY... BARBUDA... GRENADA... ANTIGUA...
BERMUDA... BARBADOS AND NICARAGUA

TEST... RECOMMENDED ACTIONS ...TEST

- * THIS IS A TEST MESSAGE. GOVERNMENT AGENCIES RESPONSIBLE FOR THREATENED COASTAL AREAS SHOULD TAKE ACTION TO INFORM AND INSTRUCT ANY COASTAL POPULATIONS AT RISK IN ACCORDANCE WITH THEIR OWN EVALUATION... PROCEDURES AND THE LEVEL OF THREAT.
- * THIS IS A TEST MESSAGE. PERSONS LOCATED IN THREATENED COASTAL AREAS SHOULD STAY ALERT FOR INFORMATION AND FOLLOW INSTRUCTIONS FROM NATIONAL AND LOCAL AUTHORITIES.

TEST... ESTIMATED TIMES OF ARRIVAL ...TEST

- * THIS IS A TEST MESSAGE. ESTIMATED TIMES OF ARRIVAL -ETA- OF THE INITIAL TSUNAMI WAVE FOR PLACES WITHIN THE REGION IDENTIFIED WITH A POTENTIAL TSUNAMI THREAT. ACTUAL ARRIVAL TIMES MAY DIFFER AND THE INITIAL WAVE MAY NOT BE THE LARGEST. A TSUNAMI IS A SERIES OF WAVES AND THE TIME BETWEEN WAVES CAN BE FIVE MINUTES TO ONE HOUR.

LOCATION	REGION	COORDINATES		ETA (UTC)	
SANTIAGO D CUBA	CUBA	19.9N	75.8W	1422	03/19
JEREMIE	HAITI	18.6N	74.1W	1424	03/19
JACAMEL	HAITI	18.1N	72.5W	1433	03/19
BARACOA	CUBA	20.4N	74.5W	1442	03/19
CAYMAN BRAC	CAYMAN ISLANDS	19.7N	79.9W	1446	03/19
GREAT INAGUA	BAHAMAS	20.9N	73.7W	1448	03/19
KINGSTON	JAMAICA	17.9N	76.9W	1451	03/19
CAP HAITEN	HAITI	19.8N	72.2W	1454	03/19
MONTEGO BAY	JAMAICA	18.5N	77.9W	1454	03/19
WEST CAICOS	TURKS N CAICOS	21.7N	72.5W	1458	03/19
GIBARA	CUBA	21.1N	76.1W	1502	03/19
MAYAGUANA	BAHAMAS	22.3N	73.0W	1502	03/19
GRAND CAYMAN	CAYMAN ISLANDS	19.3N	81.3W	1502	03/19
PUERTO PLATA	DOMINICAN REP	19.8N	70.7W	1505	03/19
SANTO DOMINGO	DOMINICAN REP	18.5N	69.9W	1510	03/19
CIENFUEGOS	CUBA	22.0N	80.5W	1511	03/19

GRAND TURK	TURKS N CAICOS	21.5N	71.1W	1513	03/19
LONG ISLAND	BAHAMAS	23.3N	75.1W	1522	03/19
SAN SALVADOR	BAHAMAS	24.1N	74.5W	1522	03/19
SANTA MARTA	COLOMBIA	11.2N	74.2W	1526	03/19
PORT AU PRINCE	HAITI	18.5N	72.4W	1527	03/19
ORANJESTAD	ARUBA	12.5N	70.0W	1529	03/19
EXUMA	BAHAMAS	23.6N	75.9W	1532	03/19
MAYAGUEZ	PUERTO RICO	18.2N	67.2W	1532	03/19
ONIMA	BONAIRE	12.3N	68.3W	1535	03/19
CARTAGENA	COLOMBIA	10.4N	75.6W	1535	03/19
CROOKED ISLAND	BAHAMAS	22.7N	74.1W	1537	03/19
CABO ENGANO	DOMINICAN REP	18.6N	68.3W	1538	03/19
CAT ISLAND	BAHAMAS	24.4N	75.5W	1541	03/19
CHRISTIANSTED	US VIRGIN IS	17.7N	64.7W	1541	03/19
SAN ANDRES	SAN ANDRES PROVI	13.4N	81.4W	1544	03/19
SAN JUAN	PUERTO RICO	18.5N	66.1W	1544	03/19
PROVIDENCIA	SAN ANDRES PROVI	12.6N	81.7W	1547	03/19
BARRANQUILLA	COLOMBIA	11.1N	74.9W	1548	03/19
ELEUTHERA ISLAN	BAHAMAS	25.2N	76.1W	1549	03/19
ALIGANDI	PANAMA	9.2N	78.0W	1550	03/19
ANDROS ISLAND	BAHAMAS	25.0N	77.9W	1558	03/19
PUERTO CARRETO	PANAMA	8.8N	77.6W	1558	03/19
COZUMEL	MEXICO	20.5N	87.0W	1600	03/19
RIOHACHA	COLOMBIA	11.6N	72.9W	1602	03/19
WILLEMSTAD	CURACAO	12.1N	68.9W	1602	03/19
SABA	SABA	17.6N	63.2W	1603	03/19
PUERTO CORTES	HONDURAS	15.9N	88.0W	1603	03/19
BASSETERRE	SAINT KITTS	17.3N	62.7W	1608	03/19
ANEGADA	BR VIRGIN IS	18.8N	64.3W	1609	03/19
NASSAU	BAHAMAS	25.1N	77.4W	1610	03/19
PUERTO OBALDIA	PANAMA	8.7N	77.4W	1610	03/19
SINT EUSTATIUS	SINT EUSTATIUS	17.5N	63.0W	1611	03/19
MAIQUETIA	VENEZUELA	10.6N	67.0W	1611	03/19
PLYMOUTH	MONTSEERRAT	16.7N	62.2W	1612	03/19
SIMPSON BAAI	SINT MAARTEN	18.0N	63.1W	1612	03/19
PUNTA CARIBANA	COLOMBIA	8.6N	76.9W	1615	03/19
PUERTO LIMON	COSTA RICA	10.0N	83.0W	1616	03/19
BASSE TERRE	GUADELOUPE	16.0N	61.7W	1617	03/19
THE VALLEY	ANGUILLA	18.3N	63.1W	1620	03/19
CHARLOTTE AMALI	US VIRGIN IS	18.3N	64.9W	1621	03/19
ROSEAU	DOMINICA	15.3N	61.4W	1621	03/19
FREEPORT	BAHAMAS	26.5N	78.8W	1622	03/19
COLON	PANAMA	9.4N	79.9W	1622	03/19
LA HABANA	CUBA	23.2N	82.4W	1624	03/19
ABACO ISLAND	BAHAMAS	26.6N	77.1W	1627	03/19
CASTRIES	SAINT LUCIA	14.0N	61.0W	1627	03/19
FORT DE FRANCE	MARTINIQUE	14.6N	61.1W	1630	03/19
BOCAS DEL TORO	PANAMA	9.4N	82.2W	1633	03/19
KINGSTOWN	SAINT VINCENT	13.1N	61.2W	1633	03/19
BAIE LUCAS	SAINT MARTIN	18.1N	63.0W	1634	03/19
BIMINI	BAHAMAS	25.8N	79.3W	1635	03/19
BAIE GRAND CASE	SAINT MARTIN	18.1N	63.1W	1638	03/19
SAINT BARTHELEM	SAINT BARTHELEMY	17.9N	62.8W	1639	03/19
CUMANA	VENEZUELA	10.5N	64.2W	1643	03/19
PALMETTO POINT	BARBUDA	17.6N	61.9W	1644	03/19
SAINT GEORGES	GRENADA	12.0N	61.8W	1645	03/19

SAINT JOHNS	ANTIGUA	17.1N	61.9W	1650	03/19
TRUJILLO	HONDURAS	15.9N	86.0W	1650	03/19
ESSO PIER	BERMUDA	32.4N	64.7W	1650	03/19
BAIE BLANCHE	SAINT MARTIN	18.1N	63.0W	1653	03/19
BRIDGETOWN	BARBADOS	13.1N	59.6W	1656	03/19
PUNTA GORDA	NICARAGUA	11.4N	83.8W	1706	03/19

TEST... POTENTIAL IMPACTS ...TEST

- * THIS IS A TEST MESSAGE. A TSUNAMI IS A SERIES OF WAVES. THE TIME BETWEEN WAVE CRESTS CAN VARY FROM 5 MINUTES TO AN HOUR. THE HAZARD MAY PERSIST FOR MANY HOURS OR LONGER AFTER THE INITIAL WAVE.
- * THIS IS A TEST MESSAGE. IMPACTS CAN VARY SIGNIFICANTLY FROM ONE SECTION OF COAST TO THE NEXT DUE TO LOCAL BATHYMETRY AND THE SHAPE AND ELEVATION OF THE SHORELINE.
- * THIS IS A TEST MESSAGE. IMPACTS CAN ALSO VARY DEPENDING UPON THE STATE OF THE TIDE AT THE TIME OF THE MAXIMUM TSUNAMI WAVES.
- * THIS IS A TEST MESSAGE. PERSONS CAUGHT IN THE WATER OF A TSUNAMI MAY DROWN... BE CRUSHED BY DEBRIS IN THE WATER... OR BE SWEEPED OUT TO SEA.

TEST... NEXT UPDATE AND ADDITIONAL INFORMATION ...TEST

- * THIS IS A TEST MESSAGE. THE NEXT MESSAGE WILL BE ISSUED IN ONE HOUR... OR SOONER IF THE SITUATION WARRANTS.
- * THIS IS A TEST MESSAGE. AUTHORITATIVE INFORMATION ABOUT THE EARTHQUAKE FROM THE U.S. GEOLOGICAL SURVEY CAN BE FOUND ON THE INTERNET AT EARTHQUAKE.USGS.GOV/EARTHQUAKES -ALL IN LOWERCASE LETTERS-.
- * THIS IS A TEST MESSAGE. FURTHER INFORMATION ABOUT THIS EVENT MAY BE FOUND AT WWW.TSUNAMI.GOV.
- * THIS IS A TEST MESSAGE. COASTAL REGIONS OF THE US GULF COAST... US EAST COAST... AND THE MARITIME PROVINCES OF CANADA SHOULD REFER TO U.S. NATIONAL TSUNAMI WARNING CENTER MESSAGES THAT CAN BE FOUND AT WWW.TSUNAMI.GOV.

THIS IS A TEST MESSAGE. DO NOT TAKE ACTION BASED ON THIS TEST MESSAGE.

\$\$

NNNN

PTWC Message #2

ZCZC
WECA41 PHEB 191415
TSUCAX

TEST...TSUNAMI MESSAGE NUMBER 2...TEST
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
1415 UTC THU MAR 19 2020

...THIS MESSAGE IS FOR TEST PURPOSES ONLY...
...TEST TSUNAMI THREAT MESSAGE TEST...

**** NOTICE **** NOTICE **** NOTICE **** NOTICE **** NOTICE ****

THIS IS A TEST MESSAGE. THIS MESSAGE IS ISSUED FOR INFORMATION
ONLY IN SUPPORT OF THE UNESCO/IOC TSUNAMI AND OTHER COASTAL
HAZARDS WARNING SYSTEM FOR THE CARIBBEAN AND ADJACENT REGIONS
AND IS MEANT FOR NATIONAL AUTHORITIES IN EACH COUNTRY OF THAT
SYSTEM.

THIS IS A TEST MESSAGE. NATIONAL AUTHORITIES WILL DETERMINE THE
APPROPRIATE LEVEL OF ALERT FOR EACH COUNTRY AND MAY ISSUE
ADDITIONAL OR MORE REFINED INFORMATION.

**** NOTICE **** NOTICE **** NOTICE **** NOTICE **** NOTICE ****

THE EARTHQUAKE MAGNITUDE IS REVISED IN THIS MESSAGE.

TEST... PRELIMINARY EARTHQUAKE PARAMETERS ...TEST

* MAGNITUDE	8.0
* ORIGIN TIME	1400 UTC MAR 19 2020
* COORDINATES	18.2 NORTH 75.4 WEST
* DEPTH	25 KM / 16 MILES
* LOCATION	JAMAICA REGION

TEST... EVALUATION ...TEST

* THIS IS A TEST MESSAGE. AN EARTHQUAKE WITH A PRELIMINARY
MAGNITUDE OF 8.0 OCCURRED IN THE JAMAICA REGION AT 1400 UTC
ON THURSDAY MARCH 19 2020.

* THIS IS A TEST MESSAGE. BASED ON THE PRELIMINARY EARTHQUAKE
PARAMETERS... WIDESPREAD HAZARDOUS TSUNAMI WAVES ARE
POSSIBLE.

TEST... TSUNAMI THREAT FORECAST...UPDATED ...TEST

* THIS IS A TEST MESSAGE. HAZARDOUS TSUNAMI WAVES FROM THIS

EARTHQUAKE ARE POSSIBLE WITHIN THE NEXT THREE HOURS ALONG
SOME COASTS OF

CUBA... HAITI... CAYMAN ISLANDS... BAHAMAS... JAMAICA...
TURKS N CAICOS... DOMINICAN REP... COLOMBIA... ARUBA...
PUERTO RICO... BONAIRE... US VIRGIN IS... SAN ANDRES
PROVID... PANAMA... MEXICO... CURACAO... SABA...
HONDURAS... SAINT KITTS... BR VIRGIN IS... SINT
EUSTATIUS... VENEZUELA... MONTSERRAT... SINT MAARTEN...
COSTA RICA... GUADELOUPE... ANGUILLA... DOMINICA... SAINT
LUCIA... MARTINIQUE... SAINT VINCENT... SAINT MARTIN...
SAINT BARTHELEMY... BARBUDA... GRENADA... ANTIGUA...
BERMUDA... BARBADOS... NICARAGUA AND BELIZE

TEST... RECOMMENDED ACTIONS ...TEST

- * THIS IS A TEST MESSAGE. GOVERNMENT AGENCIES RESPONSIBLE FOR
THREATENED COASTAL AREAS SHOULD TAKE ACTION TO INFORM AND
INSTRUCT ANY COASTAL POPULATIONS AT RISK IN ACCORDANCE WITH
THEIR OWN EVALUATION... PROCEDURES AND THE LEVEL OF THREAT.
- * THIS IS A TEST MESSAGE. PERSONS LOCATED IN THREATENED COASTAL
AREAS SHOULD STAY ALERT FOR INFORMATION AND FOLLOW
INSTRUCTIONS FROM NATIONAL AND LOCAL AUTHORITIES.

TEST... ESTIMATED TIMES OF ARRIVAL ...TEST

- * THIS IS A TEST MESSAGE. ESTIMATED TIMES OF ARRIVAL -ETA- OF
THE INITIAL TSUNAMI WAVE FOR PLACES WITHIN THE REGION
IDENTIFIED WITH A POTENTIAL TSUNAMI THREAT. ACTUAL ARRIVAL
TIMES MAY DIFFER AND THE INITIAL WAVE MAY NOT BE THE
LARGEST. A TSUNAMI IS A SERIES OF WAVES AND THE TIME BETWEEN
WAVES CAN BE FIVE MINUTES TO ONE HOUR.

LOCATION	REGION	COORDINATES	ETA(UTC)
SANTIAGO D CUBA	CUBA	19.9N 75.8W	1422 03/19
JEREMIE	HAITI	18.6N 74.1W	1424 03/19
JACAMEL	HAITI	18.1N 72.5W	1433 03/19
BARACOA	CUBA	20.4N 74.5W	1442 03/19
CAYMAN BRAC	CAYMAN ISLANDS	19.7N 79.9W	1446 03/19
GREAT INAGUA	BAHAMAS	20.9N 73.7W	1448 03/19
KINGSTON	JAMAICA	17.9N 76.9W	1451 03/19
CAP HAITEN	HAITI	19.8N 72.2W	1454 03/19
MONTEGO BAY	JAMAICA	18.5N 77.9W	1454 03/19
WEST CAICOS	TURKS N CAICOS	21.7N 72.5W	1458 03/19
GIBARA	CUBA	21.1N 76.1W	1502 03/19
MAYAGUANA	BAHAMAS	22.3N 73.0W	1502 03/19
GRAND CAYMAN	CAYMAN ISLANDS	19.3N 81.3W	1502 03/19
PUERTO PLATA	DOMINICAN REP	19.8N 70.7W	1505 03/19
SANTO DOMINGO	DOMINICAN REP	18.5N 69.9W	1510 03/19
CIENFUEGOS	CUBA	22.0N 80.5W	1511 03/19
GRAND TURK	TURKS N CAICOS	21.5N 71.1W	1513 03/19

LONG ISLAND	BAHAMAS	23.3N	75.1W	1522	03/19
SAN SALVADOR	BAHAMAS	24.1N	74.5W	1522	03/19
SANTA MARTA	COLOMBIA	11.2N	74.2W	1526	03/19
PORT AU PRINCE	HAITI	18.5N	72.4W	1527	03/19
ORANJESTAD	ARUBA	12.5N	70.0W	1529	03/19
EXUMA	BAHAMAS	23.6N	75.9W	1532	03/19
MAYAGUEZ	PUERTO RICO	18.2N	67.2W	1532	03/19
ONIMA	BONAIRE	12.3N	68.3W	1535	03/19
CARTAGENA	COLOMBIA	10.4N	75.6W	1535	03/19
CROOKED ISLAND	BAHAMAS	22.7N	74.1W	1537	03/19
CABO ENGANO	DOMINICAN REP	18.6N	68.3W	1538	03/19
CAT ISLAND	BAHAMAS	24.4N	75.5W	1541	03/19
CHRISTIANSTED	US VIRGIN IS	17.7N	64.7W	1541	03/19
SAN ANDRES	SAN ANDRES PROVI	13.4N	81.4W	1544	03/19
SAN JUAN	PUERTO RICO	18.5N	66.1W	1544	03/19
PROVIDENCIA	SAN ANDRES PROVI	12.6N	81.7W	1547	03/19
BARRANQUILLA	COLOMBIA	11.1N	74.9W	1548	03/19
ELEUTHERA ISLAN	BAHAMAS	25.2N	76.1W	1549	03/19
ALIGANDI	PANAMA	9.2N	78.0W	1550	03/19
ANDROS ISLAND	BAHAMAS	25.0N	77.9W	1558	03/19
PUERTO CARRETO	PANAMA	8.8N	77.6W	1558	03/19
COZUMEL	MEXICO	20.5N	87.0W	1600	03/19
RIOHACHA	COLOMBIA	11.6N	72.9W	1602	03/19
WILLEMSTAD	CURACAO	12.1N	68.9W	1602	03/19
SABA	SABA	17.6N	63.2W	1603	03/19
PUERTO CORTES	HONDURAS	15.9N	88.0W	1603	03/19
BASSETERRE	SAINT KITTS	17.3N	62.7W	1608	03/19
ANEGADA	BR VIRGIN IS	18.8N	64.3W	1609	03/19
NASSAU	BAHAMAS	25.1N	77.4W	1610	03/19
PUERTO OBALDIA	PANAMA	8.7N	77.4W	1610	03/19
SINT EUSTATIUS	SINT EUSTATIUS	17.5N	63.0W	1611	03/19
MAIQUETIA	VENEZUELA	10.6N	67.0W	1611	03/19
PLYMOUTH	MONTSERRAT	16.7N	62.2W	1612	03/19
SIMPSON BAAI	SINT MAARTEN	18.0N	63.1W	1612	03/19
PUNTA CARIBANA	COLOMBIA	8.6N	76.9W	1615	03/19
PUERTO LIMON	COSTA RICA	10.0N	83.0W	1616	03/19
BASSE TERRE	GUADELOUPE	16.0N	61.7W	1617	03/19
THE VALLEY	ANGUILLA	18.3N	63.1W	1620	03/19
CHARLOTTE AMALI	US VIRGIN IS	18.3N	64.9W	1621	03/19
ROSEAU	DOMINICA	15.3N	61.4W	1621	03/19
FREEPORT	BAHAMAS	26.5N	78.8W	1622	03/19
COLON	PANAMA	9.4N	79.9W	1622	03/19
LA HABANA	CUBA	23.2N	82.4W	1624	03/19
ABACO ISLAND	BAHAMAS	26.6N	77.1W	1627	03/19
CASTRIES	SAINT LUCIA	14.0N	61.0W	1627	03/19
FORT DE FRANCE	MARTINIQUE	14.6N	61.1W	1630	03/19
BOCAS DEL TORO	PANAMA	9.4N	82.2W	1633	03/19
KINGSTOWN	SAINT VINCENT	13.1N	61.2W	1633	03/19
BAIE LUCAS	SAINT MARTIN	18.1N	63.0W	1634	03/19
BIMINI	BAHAMAS	25.8N	79.3W	1635	03/19
BAIE GRAND CASE	SAINT MARTIN	18.1N	63.1W	1638	03/19
SAINT BARTHELEM	SAINT BARTHELEMY	17.9N	62.8W	1639	03/19
CUMANA	VENEZUELA	10.5N	64.2W	1643	03/19
PALMETTO POINT	BARBUDA	17.6N	61.9W	1644	03/19
SAINT GEORGES	GRENADA	12.0N	61.8W	1645	03/19
SAINT JOHNS	ANTIGUA	17.1N	61.9W	1650	03/19
TRUJILLO	HONDURAS	15.9N	86.0W	1650	03/19
ESSO PIER	BERMUDA	32.4N	64.7W	1650	03/19

BAIE BLANCHE	SAINT MARTIN	18.1N	63.0W	1653	03/19
BRIDGETOWN	BARBADOS	13.1N	59.6W	1656	03/19
PUNTA GORDA	NICARAGUA	11.4N	83.8W	1706	03/19
ROADTOWN	BR VIRGIN IS	18.4N	64.6W	1707	03/19
BELIZE CITY	BELIZE	17.5N	88.2W	1713	03/19

TEST... POTENTIAL IMPACTS ...TEST

-
- * THIS IS A TEST MESSAGE. A TSUNAMI IS A SERIES OF WAVES. THE TIME BETWEEN WAVE CRESTS CAN VARY FROM 5 MINUTES TO AN HOUR. THE HAZARD MAY PERSIST FOR MANY HOURS OR LONGER AFTER THE INITIAL WAVE.
 - * THIS IS A TEST MESSAGE. IMPACTS CAN VARY SIGNIFICANTLY FROM ONE SECTION OF COAST TO THE NEXT DUE TO LOCAL BATHYMETRY AND THE SHAPE AND ELEVATION OF THE SHORELINE.
 - * THIS IS A TEST MESSAGE. IMPACTS CAN ALSO VARY DEPENDING UPON THE STATE OF THE TIDE AT THE TIME OF THE MAXIMUM TSUNAMI WAVES.
 - * THIS IS A TEST MESSAGE. PERSONS CAUGHT IN THE WATER OF A TSUNAMI MAY DROWN... BE CRUSHED BY DEBRIS IN THE WATER... OR BE SWEEPED OUT TO SEA.

TEST... NEXT UPDATE AND ADDITIONAL INFORMATION ...TEST

-
- * THIS IS A TEST MESSAGE. THE NEXT MESSAGE WILL BE ISSUED IN ONE HOUR... OR SOONER IF THE SITUATION WARRANTS.
 - * THIS IS A TEST MESSAGE. AUTHORITATIVE INFORMATION ABOUT THE EARTHQUAKE FROM THE U.S. GEOLOGICAL SURVEY CAN BE FOUND ON THE INTERNET AT EARTHQUAKE.USGS.GOV/EARTHQUAKES -ALL IN LOWERCASE LETTERS-.
 - * THIS IS A TEST MESSAGE. FURTHER INFORMATION ABOUT THIS EVENT MAY BE FOUND AT WWW.TSUNAMI.GOV.
 - * THIS IS A TEST MESSAGE. COASTAL REGIONS OF THE US GULF COAST... US EAST COAST... AND THE MARITIME PROVINCES OF CANADA SHOULD REFER TO U.S. NATIONAL TSUNAMI WARNING CENTER MESSAGES THAT CAN BE FOUND AT WWW.TSUNAMI.GOV.

THIS IS A TEST MESSAGE. DO NOT TAKE ACTION BASED ON THIS TEST MESSAGE.

\$\$

NNNN

PTWC Message #3

ZCZC
WECA41 PHEB 191425
TSUCAX

TEST...TSUNAMI MESSAGE NUMBER 3...TEST
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
1425 UTC THU MAR 19 2020

...THIS MESSAGE IS FOR TEST PURPOSES ONLY...
...TEST TSUNAMI THREAT MESSAGE TEST...

**** NOTICE **** NOTICE **** NOTICE **** NOTICE **** NOTICE ****

THIS IS A TEST MESSAGE. THIS MESSAGE IS ISSUED FOR INFORMATION
ONLY IN SUPPORT OF THE UNESCO/IOC TSUNAMI AND OTHER COASTAL
HAZARDS WARNING SYSTEM FOR THE CARIBBEAN AND ADJACENT REGIONS
AND IS MEANT FOR NATIONAL AUTHORITIES IN EACH COUNTRY OF THAT
SYSTEM.

THIS IS A TEST MESSAGE. NATIONAL AUTHORITIES WILL DETERMINE THE
APPROPRIATE LEVEL OF ALERT FOR EACH COUNTRY AND MAY ISSUE
ADDITIONAL OR MORE REFINED INFORMATION.

**** NOTICE **** NOTICE **** NOTICE **** NOTICE **** NOTICE ****

FORECAST TSUNAMI AMPLITUDES ARE PROVIDED IN THIS MESSAGE.

TEST... PRELIMINARY EARTHQUAKE PARAMETERS ...TEST

* MAGNITUDE	8.0
* ORIGIN TIME	1400 UTC MAR 19 2020
* COORDINATES	18.2 NORTH 75.4 WEST
* DEPTH	25 KM / 16 MILES
* LOCATION	JAMAICA REGION

TEST... EVALUATION ...TEST

* THIS IS A TEST MESSAGE. AN EARTHQUAKE WITH A PRELIMINARY
MAGNITUDE OF 8.0 OCCURRED IN THE JAMAICA REGION AT 1400 UTC
ON THURSDAY MARCH 19 2020.

* THIS IS A TEST MESSAGE. BASED ON ALL AVAILABLE DATA...
HAZARDOUS TSUNAMI WAVES ARE FORECAST FOR SOME COASTS.

TEST... TSUNAMI THREAT FORECAST...UPDATED ...TEST

- * THIS IS A TEST MESSAGE. TSUNAMI WAVES REACHING MORE THAN 3 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE ALONG SOME COASTS OF

CUBA... HAITI... AND JAMAICA.

- * THIS IS A TEST MESSAGE. TSUNAMI WAVES REACHING 1 TO 3 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE ALONG SOME COASTS OF

COLOMBIA... COSTA RICA... PANAMA... AND BAHAMAS.

- * THIS IS A TEST MESSAGE. TSUNAMI WAVES REACHING 0.3 TO 1 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE FOR SOME COASTS OF

DOMINICAN REPUBLIC... MEXICO... NICARAGUA... VENEZUELA...
ARUBA... BONAIRE... CAYMAN ISLANDS... CURACAO...
DOMINICA... MARTINIQUE... PUERTO RICO AND VIRGIN
ISLANDS... SAINT KITTS AND NEVIS... SAINT LUCIA... SAINT
VINCENT AND THE GRENADINES... SAN ANDRES AND
PROVIDENCIA... AND TURKS AND CAICOS ISLANDS.

- * THIS IS A TEST MESSAGE. ACTUAL AMPLITUDES AT THE COAST MAY VARY FROM FORECAST AMPLITUDES DUE TO UNCERTAINTIES IN THE FORECAST AND LOCAL FEATURES. IN PARTICULAR MAXIMUM TSUNAMI AMPLITUDES ON ATOLLS OR SMALL ISLANDS AND AT LOCATIONS WITH FRINGING OR BARRIER REEFS WILL LIKELY BE MUCH SMALLER THAN THE FORECAST INDICATES.

- * THIS IS A TEST MESSAGE. FOR ALL OTHER AREAS COVERED BY THIS MESSAGE... THERE IS NO TSUNAMI THREAT ALTHOUGH SMALL SEA LEVEL CHANGES MAY OCCUR.

TEST... RECOMMENDED ACTIONS ...TEST

- * THIS IS A TEST MESSAGE. GOVERNMENT AGENCIES RESPONSIBLE FOR THREATENED COASTAL AREAS SHOULD TAKE ACTION TO INFORM AND INSTRUCT ANY COASTAL POPULATIONS AT RISK IN ACCORDANCE WITH THEIR OWN EVALUATION... PROCEDURES AND THE LEVEL OF THREAT.
- * THIS IS A TEST MESSAGE. PERSONS LOCATED IN THREATENED COASTAL AREAS SHOULD STAY ALERT FOR INFORMATION AND FOLLOW INSTRUCTIONS FROM NATIONAL AND LOCAL AUTHORITIES.

TEST... ESTIMATED TIMES OF ARRIVAL ...TEST

- * THIS IS A TEST MESSAGE. ESTIMATED TIMES OF ARRIVAL -ETA- OF THE INITIAL TSUNAMI WAVE FOR PLACES WITHIN THREATENED REGIONS ARE GIVEN BELOW. ACTUAL ARRIVAL TIMES MAY DIFFER AND THE INITIAL WAVE MAY NOT BE THE LARGEST. A TSUNAMI IS A SERIES OF WAVES AND THE TIME BETWEEN WAVES CAN BE FIVE MINUTES TO ONE HOUR.

LOCATION	REGION	COORDINATES	ETA (UTC)

SANTIAGO D CUBA	CUBA	19.9N	75.8W	1422	03/19
JEREMIE	HAITI	18.6N	74.1W	1424	03/19
JACAMEL	HAITI	18.1N	72.5W	1433	03/19
BARACOA	CUBA	20.4N	74.5W	1442	03/19
CAYMAN BRAC	CAYMAN ISLANDS	19.7N	79.9W	1446	03/19
GREAT INAGUA	BAHAMAS	20.9N	73.7W	1448	03/19
KINGSTON	JAMAICA	17.9N	76.9W	1451	03/19
CAP HAITEN	HAITI	19.8N	72.2W	1454	03/19
MONTEGO BAY	JAMAICA	18.5N	77.9W	1454	03/19
WEST CAICOS	TURKS N CAICOS	21.7N	72.5W	1458	03/19
GIBARA	CUBA	21.1N	76.1W	1502	03/19
MAYAGUANA	BAHAMAS	22.3N	73.0W	1502	03/19
GRAND CAYMAN	CAYMAN ISLANDS	19.3N	81.3W	1502	03/19
PUERTO PLATA	DOMINICAN REP	19.8N	70.7W	1505	03/19
SANTO DOMINGO	DOMINICAN REP	18.5N	69.9W	1510	03/19
CIENFUEGOS	CUBA	22.0N	80.5W	1511	03/19
GRAND TURK	TURKS N CAICOS	21.5N	71.1W	1513	03/19
LONG ISLAND	BAHAMAS	23.3N	75.1W	1522	03/19
SAN SALVADOR	BAHAMAS	24.1N	74.5W	1522	03/19
SANTA MARTA	COLOMBIA	11.2N	74.2W	1526	03/19
PORT AU PRINCE	HAITI	18.5N	72.4W	1527	03/19
ORANJESTAD	ARUBA	12.5N	70.0W	1529	03/19
EXUMA	BAHAMAS	23.6N	75.9W	1532	03/19
MAYAGUEZ	PUERTO RICO	18.2N	67.2W	1532	03/19
ONIMA	BONAIRE	12.3N	68.3W	1535	03/19
CARTAGENA	COLOMBIA	10.4N	75.6W	1535	03/19
CROOKED ISLAND	BAHAMAS	22.7N	74.1W	1537	03/19
CABO ENGANO	DOMINICAN REP	18.6N	68.3W	1538	03/19
CAT ISLAND	BAHAMAS	24.4N	75.5W	1541	03/19
CHRISTIANSTED	US VIRGIN IS	17.7N	64.7W	1541	03/19
SAN ANDRES	SAN ANDRES PROVI	13.4N	81.4W	1544	03/19
SAN JUAN	PUERTO RICO	18.5N	66.1W	1544	03/19
PROVIDENCIA	SAN ANDRES PROVI	12.6N	81.7W	1547	03/19
BARRANQUILLA	COLOMBIA	11.1N	74.9W	1548	03/19
ELEUTHERA ISLAN	BAHAMAS	25.2N	76.1W	1549	03/19
ALIGANDI	PANAMA	9.2N	78.0W	1550	03/19
ANDROS ISLAND	BAHAMAS	25.0N	77.9W	1558	03/19
PUERTO CARRETO	PANAMA	8.8N	77.6W	1558	03/19
COZUMEL	MEXICO	20.5N	87.0W	1600	03/19
RIOHACHA	COLOMBIA	11.6N	72.9W	1602	03/19
WILLEMSTAD	CURACAO	12.1N	68.9W	1602	03/19
BASSETERRE	SAINT KITTS	17.3N	62.7W	1608	03/19
ANEGADA	BR VIRGIN IS	18.8N	64.3W	1609	03/19
NASSAU	BAHAMAS	25.1N	77.4W	1610	03/19
PUERTO OBALDIA	PANAMA	8.7N	77.4W	1610	03/19
PUNTA CARIBANA	COLOMBIA	8.6N	76.9W	1615	03/19
PUERTO LIMON	COSTA RICA	10.0N	83.0W	1616	03/19
CHARLOTTE AMALI	US VIRGIN IS	18.3N	64.9W	1621	03/19
ROSEAU	DOMINICA	15.3N	61.4W	1621	03/19
FREEPORT	BAHAMAS	26.5N	78.8W	1622	03/19
COLON	PANAMA	9.4N	79.9W	1622	03/19
LA HABANA	CUBA	23.2N	82.4W	1624	03/19
ABACO ISLAND	BAHAMAS	26.6N	77.1W	1627	03/19
CASTRIES	SAINT LUCIA	14.0N	61.0W	1627	03/19
FORT DE FRANCE	MARTINIQUE	14.6N	61.1W	1630	03/19
BOCAS DEL TORO	PANAMA	9.4N	82.2W	1633	03/19

KINGSTOWN	SAINT VINCENT	13.1N	61.2W	1633	03/19
BIMINI	BAHAMAS	25.8N	79.3W	1635	03/19
PUNTA GORDA	NICARAGUA	11.4N	83.8W	1706	03/19
ROADTOWN	BR VIRGIN IS	18.4N	64.6W	1707	03/19
SANTA CRZ D SUR	CUBA	20.7N	78.0W	1735	03/19
PUNTO FIJO	VENEZUELA	11.7N	70.2W	1751	03/19
GOLFO VENEZUELA	VENEZUELA	11.4N	71.2W	1850	03/19
NUEVA GERONA	CUBA	21.9N	82.8W	1910	03/19
PUERTO CABEZAS	NICARAGUA	14.0N	83.4W	2032	03/19

TEST... POTENTIAL IMPACTS ...TEST

-
- * THIS IS A TEST MESSAGE. A TSUNAMI IS A SERIES OF WAVES. THE TIME BETWEEN WAVE CRESTS CAN VARY FROM 5 MINUTES TO AN HOUR. THE HAZARD MAY PERSIST FOR MANY HOURS OR LONGER AFTER THE INITIAL WAVE.
 - * THIS IS A TEST MESSAGE. IMPACTS CAN VARY SIGNIFICANTLY FROM ONE SECTION OF COAST TO THE NEXT DUE TO LOCAL BATHYMETRY AND THE SHAPE AND ELEVATION OF THE SHORELINE.
 - * THIS IS A TEST MESSAGE. IMPACTS CAN ALSO VARY DEPENDING UPON THE STATE OF THE TIDE AT THE TIME OF THE MAXIMUM TSUNAMI WAVES.
 - * THIS IS A TEST MESSAGE. PERSONS CAUGHT IN THE WATER OF A TSUNAMI MAY DROWN... BE CRUSHED BY DEBRIS IN THE WATER... OR BE SWEEPED OUT TO SEA.

TEST... NEXT UPDATE AND ADDITIONAL INFORMATION ...TEST

-
- * THIS IS A TEST MESSAGE. THE NEXT MESSAGE WILL BE ISSUED IN ONE HOUR... OR SOONER IF THE SITUATION WARRANTS.
 - * THIS IS A TEST MESSAGE. AUTHORITATIVE INFORMATION ABOUT THE EARTHQUAKE FROM THE U.S. GEOLOGICAL SURVEY CAN BE FOUND ON THE INTERNET AT EARTHQUAKE.USGS.GOV/EARTHQUAKES -ALL IN LOWERCASE LETTERS-.
 - * THIS IS A TEST MESSAGE. FURTHER INFORMATION ABOUT THIS EVENT MAY BE FOUND AT WWW.TSUNAMI.GOV.
 - * THIS IS A TEST MESSAGE. COASTAL REGIONS OF THE US GULF COAST... US EAST COAST... AND THE MARITIME PROVINCES OF CANADA SHOULD REFER TO U.S. NATIONAL TSUNAMI WARNING CENTER MESSAGES THAT CAN BE FOUND AT WWW.TSUNAMI.GOV.

THIS IS A TEST MESSAGE. DO NOT TAKE ACTION BASED ON THIS TEST MESSAGE.

\$\$
NNNN

PTWC Message #4

ZCZC
WECA41 PHEB 191500
TSUCAX

TEST...TSUNAMI MESSAGE NUMBER 4...TEST
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
1500 UTC THU MAR 19 2020

...THIS MESSAGE IS FOR TEST PURPOSES ONLY...
...TEST TSUNAMI THREAT MESSAGE TEST...

**** NOTICE **** NOTICE **** NOTICE **** NOTICE **** NOTICE ****

THIS IS A TEST MESSAGE. THIS MESSAGE IS ISSUED FOR INFORMATION ONLY IN SUPPORT OF THE UNESCO/IOC TSUNAMI AND OTHER COASTAL HAZARDS WARNING SYSTEM FOR THE CARIBBEAN AND ADJACENT REGIONS AND IS MEANT FOR NATIONAL AUTHORITIES IN EACH COUNTRY OF THAT SYSTEM.

THIS IS A TEST MESSAGE. NATIONAL AUTHORITIES WILL DETERMINE THE APPROPRIATE LEVEL OF ALERT FOR EACH COUNTRY AND MAY ISSUE ADDITIONAL OR MORE REFINED INFORMATION.

**** NOTICE **** NOTICE **** NOTICE **** NOTICE **** NOTICE ****

TSUNAMI WAVES HAVE NOW BEEN CONFIRMED.

TEST... PRELIMINARY EARTHQUAKE PARAMETERS ...TEST

* MAGNITUDE	8.0
* ORIGIN TIME	1400 UTC MAR 19 2020
* COORDINATES	18.2 NORTH 75.4 WEST
* DEPTH	25 KM / 16 MILES
* LOCATION	JAMAICA REGION

TEST... EVALUATION ...TEST

* THIS IS A TEST MESSAGE. AN EARTHQUAKE WITH A PRELIMINARY MAGNITUDE OF 8.0 OCCURRED IN THE JAMAICA REGION AT 1400 UTC ON THURSDAY MARCH 19 2020.

* THIS IS A TEST MESSAGE. TSUNAMI WAVES HAVE BEEN OBSERVED.

* THIS IS A TEST MESSAGE. BASED ON ALL AVAILABLE DATA...
HAZARDOUS TSUNAMI WAVES ARE FORECAST FOR SOME COASTS.

TEST... TSUNAMI THREAT FORECAST ...TEST

- * THIS IS A TEST MESSAGE. TSUNAMI WAVES REACHING MORE THAN 3 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE ALONG SOME COASTS OF

CUBA... HAITI... AND JAMAICA.

- * THIS IS A TEST MESSAGE. TSUNAMI WAVES REACHING 1 TO 3 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE ALONG SOME COASTS OF

COLOMBIA... COSTA RICA... PANAMA... AND BAHAMAS.

- * THIS IS A TEST MESSAGE. TSUNAMI WAVES REACHING 0.3 TO 1 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE FOR SOME COASTS OF

DOMINICAN REPUBLIC... MEXICO... NICARAGUA... VENEZUELA...
ARUBA... BONAIRE... CAYMAN ISLANDS... CURACAO...
DOMINICA... MARTINIQUE... PUERTO RICO AND VIRGIN
ISLANDS... SAINT KITTS AND NEVIS... SAINT LUCIA... SAINT
VINCENT AND THE GRENADINES... SAN ANDRES AND
PROVIDENCIA... AND TURKS AND CAICOS ISLANDS.

- * THIS IS A TEST MESSAGE. ACTUAL AMPLITUDES AT THE COAST MAY VARY FROM FORECAST AMPLITUDES DUE TO UNCERTAINTIES IN THE FORECAST AND LOCAL FEATURES. IN PARTICULAR MAXIMUM TSUNAMI AMPLITUDES ON ATOLLS OR SMALL ISLANDS AND AT LOCATIONS WITH FRINGING OR BARRIER REEFS WILL LIKELY BE MUCH SMALLER THAN THE FORECAST INDICATES.

- * THIS IS A TEST MESSAGE. FOR ALL OTHER AREAS COVERED BY THIS MESSAGE... THERE IS NO TSUNAMI THREAT ALTHOUGH SMALL SEA LEVEL CHANGES MAY OCCUR.

TEST... RECOMMENDED ACTIONS ...TEST

- * THIS IS A TEST MESSAGE. GOVERNMENT AGENCIES RESPONSIBLE FOR THREATENED COASTAL AREAS SHOULD TAKE ACTION TO INFORM AND INSTRUCT ANY COASTAL POPULATIONS AT RISK IN ACCORDANCE WITH THEIR OWN EVALUATION... PROCEDURES AND THE LEVEL OF THREAT.
- * THIS IS A TEST MESSAGE. PERSONS LOCATED IN THREATENED COASTAL AREAS SHOULD STAY ALERT FOR INFORMATION AND FOLLOW INSTRUCTIONS FROM NATIONAL AND LOCAL AUTHORITIES.

TEST... ESTIMATED TIMES OF ARRIVAL ...TEST

- * THIS IS A TEST MESSAGE. ESTIMATED TIMES OF ARRIVAL -ETA- OF THE INITIAL TSUNAMI WAVE FOR PLACES WITHIN THREATENED REGIONS ARE GIVEN BELOW. ACTUAL ARRIVAL TIMES MAY DIFFER AND THE INITIAL WAVE MAY NOT BE THE LARGEST. A TSUNAMI IS A SERIES OF WAVES AND THE TIME BETWEEN WAVES CAN BE FIVE MINUTES TO ONE HOUR.

LOCATION	REGION	COORDINATES		ETA (UTC)
SANTIAGO D CUBA	CUBA	19.9N	75.8W	1422 03/19
JEREMIE	HAITI	18.6N	74.1W	1424 03/19
JACAMEL	HAITI	18.1N	72.5W	1433 03/19
BARACOA	CUBA	20.4N	74.5W	1442 03/19
CAYMAN BRAC	CAYMAN ISLANDS	19.7N	79.9W	1446 03/19
GREAT INAGUA	BAHAMAS	20.9N	73.7W	1448 03/19
KINGSTON	JAMAICA	17.9N	76.9W	1451 03/19
CAP HAITEN	HAITI	19.8N	72.2W	1454 03/19
MONTEGO BAY	JAMAICA	18.5N	77.9W	1454 03/19
WEST CAICOS	TURKS N CAICOS	21.7N	72.5W	1458 03/19
GIBARA	CUBA	21.1N	76.1W	1502 03/19
MAYAGUANA	BAHAMAS	22.3N	73.0W	1502 03/19
GRAND CAYMAN	CAYMAN ISLANDS	19.3N	81.3W	1502 03/19
PUERTO PLATA	DOMINICAN REP	19.8N	70.7W	1505 03/19
SANTO DOMINGO	DOMINICAN REP	18.5N	69.9W	1510 03/19
CIENFUEGOS	CUBA	22.0N	80.5W	1511 03/19
GRAND TURK	TURKS N CAICOS	21.5N	71.1W	1513 03/19
LONG ISLAND	BAHAMAS	23.3N	75.1W	1522 03/19
SAN SALVADOR	BAHAMAS	24.1N	74.5W	1522 03/19
SANTA MARTA	COLOMBIA	11.2N	74.2W	1526 03/19
PORT AU PRINCE	HAITI	18.5N	72.4W	1527 03/19
ORANJESTAD	ARUBA	12.5N	70.0W	1529 03/19
EXUMA	BAHAMAS	23.6N	75.9W	1532 03/19
MAYAGUEZ	PUERTO RICO	18.2N	67.2W	1532 03/19
ONIMA	BONAIRE	12.3N	68.3W	1535 03/19
CARTAGENA	COLOMBIA	10.4N	75.6W	1535 03/19
CROOKED ISLAND	BAHAMAS	22.7N	74.1W	1537 03/19
CABO ENGANO	DOMINICAN REP	18.6N	68.3W	1538 03/19
CAT ISLAND	BAHAMAS	24.4N	75.5W	1541 03/19
CHRISTIANSTED	US VIRGIN IS	17.7N	64.7W	1541 03/19
SAN ANDRES	SAN ANDRES PROVI	13.4N	81.4W	1544 03/19
SAN JUAN	PUERTO RICO	18.5N	66.1W	1544 03/19
PROVIDENCIA	SAN ANDRES PROVI	12.6N	81.7W	1547 03/19
BARRANQUILLA	COLOMBIA	11.1N	74.9W	1548 03/19
ELEUTHERA ISLAN	BAHAMAS	25.2N	76.1W	1549 03/19
ALIGANDI	PANAMA	9.2N	78.0W	1550 03/19
ANDROS ISLAND	BAHAMAS	25.0N	77.9W	1558 03/19
PUERTO CARRETO	PANAMA	8.8N	77.6W	1558 03/19
COZUMEL	MEXICO	20.5N	87.0W	1600 03/19
RIOHACHA	COLOMBIA	11.6N	72.9W	1602 03/19
WILLEMSTAD	CURACAO	12.1N	68.9W	1602 03/19
BASSETERRE	SAINT KITTS	17.3N	62.7W	1608 03/19
ANEGADA	BR VIRGIN IS	18.8N	64.3W	1609 03/19
NASSAU	BAHAMAS	25.1N	77.4W	1610 03/19
PUERTO OBALDIA	PANAMA	8.7N	77.4W	1610 03/19
PUNTA CARIBANA	COLOMBIA	8.6N	76.9W	1615 03/19
PUERTO LIMON	COSTA RICA	10.0N	83.0W	1616 03/19
CHARLOTTE AMALI	US VIRGIN IS	18.3N	64.9W	1621 03/19
ROSEAU	DOMINICA	15.3N	61.4W	1621 03/19
FREEPORT	BAHAMAS	26.5N	78.8W	1622 03/19
COLON	PANAMA	9.4N	79.9W	1622 03/19
LA HABANA	CUBA	23.2N	82.4W	1624 03/19
ABACO ISLAND	BAHAMAS	26.6N	77.1W	1627 03/19
CASTRIES	SAINT LUCIA	14.0N	61.0W	1627 03/19
FORT DE FRANCE	MARTINIQUE	14.6N	61.1W	1630 03/19

BOCAS DEL TORO	PANAMA	9.4N	82.2W	1633	03/19
KINGSTOWN	SAINT VINCENT	13.1N	61.2W	1633	03/19
BIMINI	BAHAMAS	25.8N	79.3W	1635	03/19
PUNTA GORDA	NICARAGUA	11.4N	83.8W	1706	03/19
ROADTOWN	BR VIRGIN IS	18.4N	64.6W	1707	03/19
SANTA CRZ D SUR	CUBA	20.7N	78.0W	1735	03/19
PUNTO FIJO	VENEZUELA	11.7N	70.2W	1751	03/19
GOLFO VENEZUELA	VENEZUELA	11.4N	71.2W	1850	03/19
NUEVA GERONA	CUBA	21.9N	82.8W	1910	03/19
PUERTO CABEZAS	NICARAGUA	14.0N	83.4W	2032	03/19

TEST... POTENTIAL IMPACTS ...TEST

-
- * THIS IS A TEST MESSAGE. A TSUNAMI IS A SERIES OF WAVES. THE TIME BETWEEN WAVE CRESTS CAN VARY FROM 5 MINUTES TO AN HOUR. THE HAZARD MAY PERSIST FOR MANY HOURS OR LONGER AFTER THE INITIAL WAVE.
 - * THIS IS A TEST MESSAGE. IMPACTS CAN VARY SIGNIFICANTLY FROM ONE SECTION OF COAST TO THE NEXT DUE TO LOCAL BATHYMETRY AND THE SHAPE AND ELEVATION OF THE SHORELINE.
 - * THIS IS A TEST MESSAGE. IMPACTS CAN ALSO VARY DEPENDING UPON THE STATE OF THE TIDE AT THE TIME OF THE MAXIMUM TSUNAMI WAVES.
 - * THIS IS A TEST MESSAGE. PERSONS CAUGHT IN THE WATER OF A TSUNAMI MAY DROWN... BE CRUSHED BY DEBRIS IN THE WATER... OR BE SWEEPED OUT TO SEA.

TEST... TSUNAMI OBSERVATIONS ...TEST

-
- * THIS IS A TEST MESSAGE. THE FOLLOWING ARE TSUNAMI WAVE OBSERVATIONS FROM COASTAL AND/OR DEEP-OCEAN SEA LEVEL GAUGES AT THE INDICATED LOCATIONS. THE MAXIMUM TSUNAMI HEIGHT IS MEASURED WITH RESPECT TO THE NORMAL TIDE LEVEL.

GAUGE LOCATION	GAUGE COORDINATES		TIME OF MEASURE (UTC)	MAXIMUM TSUNAMI HEIGHT	WAVE PERIOD (MIN)
	LAT	LON			
PORT ROYAL JM	17.9N	76.8W	1456	2.08M/ 6.8FT	16

TEST... NEXT UPDATE AND ADDITIONAL INFORMATION ...TEST

-
- * THIS IS A TEST MESSAGE. THE NEXT MESSAGE WILL BE ISSUED IN ONE HOUR... OR SOONER IF THE SITUATION WARRANTS.
 - * THIS IS A TEST MESSAGE. AUTHORITATIVE INFORMATION ABOUT THE EARTHQUAKE FROM THE U.S. GEOLOGICAL SURVEY CAN BE FOUND ON THE INTERNET AT EARTHQUAKE.USGS.GOV/EARTHQUAKES -ALL IN LOWERCASE LETTERS-.

* THIS IS A TEST MESSAGE. FURTHER INFORMATION ABOUT THIS EVENT
MAY BE FOUND AT WWW.TSUNAMI.GOV.

* THIS IS A TEST MESSAGE. COASTAL REGIONS OF THE US GULF
COAST... US EAST COAST... AND THE MARITIME PROVINCES OF
CANADA SHOULD REFER TO U.S. NATIONAL TSUNAMI WARNING CENTER
MESSAGES THAT CAN BE FOUND AT WWW.TSUNAMI.GOV.

THIS IS A TEST MESSAGE. DO NOT TAKE ACTION BASED ON THIS TEST
MESSAGE.

\$\$

NNNN

PTWC Message #5

ZCZC
WECA41 PHEB 191600
TSUCAX

TEST...TSUNAMI MESSAGE NUMBER 5...TEST
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
1600 UTC THU MAR 19 2020

...THIS MESSAGE IS FOR TEST PURPOSES ONLY...
...TEST TSUNAMI THREAT MESSAGE TEST...

**** NOTICE **** NOTICE **** NOTICE **** NOTICE **** NOTICE ****

THIS IS A TEST MESSAGE. THIS MESSAGE IS ISSUED FOR INFORMATION
ONLY IN SUPPORT OF THE UNESCO/IOC TSUNAMI AND OTHER COASTAL
HAZARDS WARNING SYSTEM FOR THE CARIBBEAN AND ADJACENT REGIONS
AND IS MEANT FOR NATIONAL AUTHORITIES IN EACH COUNTRY OF THAT
SYSTEM.

THIS IS A TEST MESSAGE. NATIONAL AUTHORITIES WILL DETERMINE THE
APPROPRIATE LEVEL OF ALERT FOR EACH COUNTRY AND MAY ISSUE
ADDITIONAL OR MORE REFINED INFORMATION.

**** NOTICE **** NOTICE **** NOTICE **** NOTICE **** NOTICE ****

TEST... PRELIMINARY EARTHQUAKE PARAMETERS ...TEST

* MAGNITUDE	8.0
* ORIGIN TIME	1400 UTC MAR 19 2020
* COORDINATES	18.2 NORTH 75.4 WEST
* DEPTH	25 KM / 16 MILES
* LOCATION	JAMAICA REGION

TEST... EVALUATION ...TEST

* THIS IS A TEST MESSAGE. AN EARTHQUAKE WITH A PRELIMINARY
MAGNITUDE OF 8.0 OCCURRED IN THE JAMAICA REGION AT 1400 UTC
ON THURSDAY MARCH 19 2020.

* THIS IS A TEST MESSAGE. TSUNAMI WAVES HAVE BEEN OBSERVED.

* THIS IS A TEST MESSAGE. BASED ON ALL AVAILABLE DATA...
HAZARDOUS TSUNAMI WAVES ARE FORECAST FOR SOME COASTS.

TEST... TSUNAMI THREAT FORECAST ...TEST

* THIS IS A TEST MESSAGE. TSUNAMI WAVES REACHING MORE THAN 3
METERS ABOVE THE TIDE LEVEL ARE POSSIBLE ALONG SOME COASTS
OF

CUBA... HAITI... AND JAMAICA.

- * THIS IS A TEST MESSAGE. TSUNAMI WAVES REACHING 1 TO 3 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE ALONG SOME COASTS OF

COLOMBIA... COSTA RICA... PANAMA... AND BAHAMAS.

- * THIS IS A TEST MESSAGE. TSUNAMI WAVES REACHING 0.3 TO 1 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE FOR SOME COASTS OF

DOMINICAN REPUBLIC... MEXICO... NICARAGUA... VENEZUELA...
ARUBA... BONAIRE... CAYMAN ISLANDS... CURACAO...
DOMINICA... MARTINIQUE... PUERTO RICO AND VIRGIN
ISLANDS... SAINT KITTS AND NEVIS... SAINT LUCIA... SAINT
VINCENT AND THE GRENADINES... SAN ANDRES AND
PROVIDENCIA... AND TURKS AND CAICOS ISLANDS.

- * THIS IS A TEST MESSAGE. ACTUAL AMPLITUDES AT THE COAST MAY VARY FROM FORECAST AMPLITUDES DUE TO UNCERTAINTIES IN THE FORECAST AND LOCAL FEATURES. IN PARTICULAR MAXIMUM TSUNAMI AMPLITUDES ON ATOLLS OR SMALL ISLANDS AND AT LOCATIONS WITH FRINGING OR BARRIER REEFS WILL LIKELY BE MUCH SMALLER THAN THE FORECAST INDICATES.

- * THIS IS A TEST MESSAGE. FOR ALL OTHER AREAS COVERED BY THIS MESSAGE... THERE IS NO TSUNAMI THREAT ALTHOUGH SMALL SEA LEVEL CHANGES MAY OCCUR.

TEST... RECOMMENDED ACTIONS ...TEST

- * THIS IS A TEST MESSAGE. GOVERNMENT AGENCIES RESPONSIBLE FOR THREATENED COASTAL AREAS SHOULD TAKE ACTION TO INFORM AND INSTRUCT ANY COASTAL POPULATIONS AT RISK IN ACCORDANCE WITH THEIR OWN EVALUATION... PROCEDURES AND THE LEVEL OF THREAT.
- * THIS IS A TEST MESSAGE. PERSONS LOCATED IN THREATENED COASTAL AREAS SHOULD STAY ALERT FOR INFORMATION AND FOLLOW INSTRUCTIONS FROM NATIONAL AND LOCAL AUTHORITIES.

TEST... ESTIMATED TIMES OF ARRIVAL ...TEST

- * THIS IS A TEST MESSAGE. ESTIMATED TIMES OF ARRIVAL -ETA- OF THE INITIAL TSUNAMI WAVE FOR PLACES WITHIN THREATENED REGIONS ARE GIVEN BELOW. ACTUAL ARRIVAL TIMES MAY DIFFER AND THE INITIAL WAVE MAY NOT BE THE LARGEST. A TSUNAMI IS A SERIES OF WAVES AND THE TIME BETWEEN WAVES CAN BE FIVE MINUTES TO ONE HOUR.

LOCATION	REGION	COORDINATES	ETA(UTC)
----------	--------	-------------	----------

GIBARA	CUBA	21.1N	76.1W	1502	03/19
MAYAGUANA	BAHAMAS	22.3N	73.0W	1502	03/19
GRAND CAYMAN	CAYMAN ISLANDS	19.3N	81.3W	1502	03/19
PUERTO PLATA	DOMINICAN REP	19.8N	70.7W	1505	03/19
SANTO DOMINGO	DOMINICAN REP	18.5N	69.9W	1510	03/19
CIENFUEGOS	CUBA	22.0N	80.5W	1511	03/19
GRAND TURK	TURKS N CAICOS	21.5N	71.1W	1513	03/19
LONG ISLAND	BAHAMAS	23.3N	75.1W	1522	03/19
SAN SALVADOR	BAHAMAS	24.1N	74.5W	1522	03/19
SANTA MARTA	COLOMBIA	11.2N	74.2W	1526	03/19
PORT AU PRINCE	HAITI	18.5N	72.4W	1527	03/19
ORANJESTAD	ARUBA	12.5N	70.0W	1529	03/19
EXUMA	BAHAMAS	23.6N	75.9W	1532	03/19
MAYAGUEZ	PUERTO RICO	18.2N	67.2W	1532	03/19
ONIMA	BONAIRE	12.3N	68.3W	1535	03/19
CARTAGENA	COLOMBIA	10.4N	75.6W	1535	03/19
CROOKED ISLAND	BAHAMAS	22.7N	74.1W	1537	03/19
CABO ENGANO	DOMINICAN REP	18.6N	68.3W	1538	03/19
CAT ISLAND	BAHAMAS	24.4N	75.5W	1541	03/19
CHRISTIANSTED	US VIRGIN IS	17.7N	64.7W	1541	03/19
SAN ANDRES	SAN ANDRES PROVI	13.4N	81.4W	1544	03/19
SAN JUAN	PUERTO RICO	18.5N	66.1W	1544	03/19
PROVIDENCIA	SAN ANDRES PROVI	12.6N	81.7W	1547	03/19
BARRANQUILLA	COLOMBIA	11.1N	74.9W	1548	03/19
ELEUTHERA ISLAN	BAHAMAS	25.2N	76.1W	1549	03/19
ALIGANDI	PANAMA	9.2N	78.0W	1550	03/19
ANDROS ISLAND	BAHAMAS	25.0N	77.9W	1558	03/19
PUERTO CARRETO	PANAMA	8.8N	77.6W	1558	03/19
COZUMEL	MEXICO	20.5N	87.0W	1600	03/19
RIOHACHA	COLOMBIA	11.6N	72.9W	1602	03/19
WILLEMSTAD	CURACAO	12.1N	68.9W	1602	03/19
BASSETERRE	SAINT KITTS	17.3N	62.7W	1608	03/19
ANEGADA	BR VIRGIN IS	18.8N	64.3W	1609	03/19
NASSAU	BAHAMAS	25.1N	77.4W	1610	03/19
PUERTO OBALDIA	PANAMA	8.7N	77.4W	1610	03/19
PUNTA CARIBANA	COLOMBIA	8.6N	76.9W	1615	03/19
PUERTO LIMON	COSTA RICA	10.0N	83.0W	1616	03/19
CHARLOTTE AMALI	US VIRGIN IS	18.3N	64.9W	1621	03/19
ROSEAU	DOMINICA	15.3N	61.4W	1621	03/19
FREEPORT	BAHAMAS	26.5N	78.8W	1622	03/19
COLON	PANAMA	9.4N	79.9W	1622	03/19
LA HABANA	CUBA	23.2N	82.4W	1624	03/19
ABACO ISLAND	BAHAMAS	26.6N	77.1W	1627	03/19
CASTRIES	SAINT LUCIA	14.0N	61.0W	1627	03/19
FORT DE FRANCE	MARTINIQUE	14.6N	61.1W	1630	03/19
BOCAS DEL TORO	PANAMA	9.4N	82.2W	1633	03/19
KINGSTOWN	SAINT VINCENT	13.1N	61.2W	1633	03/19
BIMINI	BAHAMAS	25.8N	79.3W	1635	03/19
PUNTA GORDA	NICARAGUA	11.4N	83.8W	1706	03/19
ROADTOWN	BR VIRGIN IS	18.4N	64.6W	1707	03/19
SANTA CRZ D SUR	CUBA	20.7N	78.0W	1735	03/19
PUNTO FIJO	VENEZUELA	11.7N	70.2W	1751	03/19
GOLFO VENEZUELA	VENEZUELA	11.4N	71.2W	1850	03/19
NUEVA GERONA	CUBA	21.9N	82.8W	1910	03/19
PUERTO CABEZAS	NICARAGUA	14.0N	83.4W	2032	03/19

TEST... POTENTIAL IMPACTS ...TEST

-
- * THIS IS A TEST MESSAGE. A TSUNAMI IS A SERIES OF WAVES. THE TIME BETWEEN WAVE CRESTS CAN VARY FROM 5 MINUTES TO AN HOUR. THE HAZARD MAY PERSIST FOR MANY HOURS OR LONGER AFTER THE INITIAL WAVE.
 - * THIS IS A TEST MESSAGE. IMPACTS CAN VARY SIGNIFICANTLY FROM ONE SECTION OF COAST TO THE NEXT DUE TO LOCAL BATHYMETRY AND THE SHAPE AND ELEVATION OF THE SHORELINE.
 - * THIS IS A TEST MESSAGE. IMPACTS CAN ALSO VARY DEPENDING UPON THE STATE OF THE TIDE AT THE TIME OF THE MAXIMUM TSUNAMI WAVES.
 - * THIS IS A TEST MESSAGE. PERSONS CAUGHT IN THE WATER OF A TSUNAMI MAY DROWN... BE CRUSHED BY DEBRIS IN THE WATER... OR BE SWEEPED OUT TO SEA.

TEST... TSUNAMI OBSERVATIONS ...TEST

-
- * THIS IS A TEST MESSAGE. THE FOLLOWING ARE TSUNAMI WAVE OBSERVATIONS FROM COASTAL AND/OR DEEP-OCEAN SEA LEVEL GAUGES AT THE INDICATED LOCATIONS. THE MAXIMUM TSUNAMI HEIGHT IS MEASURED WITH RESPECT TO THE NORMAL TIDE LEVEL.

GAUGE LOCATION	GAUGE COORDINATES		TIME OF MEASURE (UTC)	MAXIMUM TSUNAMI HEIGHT	WAVE PERIOD (MIN)
	LAT	LON			
SAN ANDRES CO	12.6N	81.7W	1556	0.57M/ 1.9FT	28
SAN JUAN PR	18.5N	66.1W	1558	0.07M/ 0.2FT	22
ESPERANZA VIEQUES P	18.1N	65.5W	1558	0.25M/ 0.8FT	28
ARECIBO PR	18.5N	66.7W	1551	0.10M/ 0.3FT	16
LIMETREE VI	17.7N	64.8W	1552	0.23M/ 0.8FT	18
ST CROIX VI	17.7N	64.7W	1549	0.15M/ 0.5FT	20
ISLA NAVAL CO	10.2N	75.8W	1547	0.73M/ 2.4FT	24
ROATAN ISLAND HN	16.3N	86.5W	1552	0.15M/ 0.5FT	26
YABUCOA PR	18.1N	65.8W	1544	0.28M/ 0.9FT	18
BULLEN BAY CURACAO	12.2N	69.0W	1547	0.39M/ 1.3FT	26
MAGUEYES ISLAND PR	18.0N	67.0W	1541	0.29M/ 1.0FT	26
MAYAGUEZ PR	18.2N	67.2W	1547	0.29M/ 1.0FT	26
SANTA MARTA CO	11.2N	74.2W	1537	0.72M/ 2.4FT	20
PUNTA CANA DO	18.5N	68.4W	1539	0.23M/ 0.7FT	22
MONA ISLAND PR	18.1N	67.9W	1529	0.29M/ 0.9FT	22
DART 42407	15.3N	68.2W	1524	0.03M/ 0.1FT	16
GRAND TURK ISLAND T	21.4N	71.1W	1521	0.18M/ 0.6FT	24
PUERTO PLATA DO	19.8N	70.7W	1518	0.19M/ 0.6FT	14
BARAHONA DO	18.2N	71.1W	1516	0.52M/ 1.7FT	20
GEORGE TOWN CY	19.3N	81.4W	1505	0.32M/ 1.1FT	24
CAP HAITIEN HT	19.8N	72.2W	1504	0.46M/ 1.5FT	22
PORT ROYAL JM	17.9N	76.8W	1456	2.08M/ 6.8FT	16

TEST... NEXT UPDATE AND ADDITIONAL INFORMATION ...TEST

- * THIS IS A TEST MESSAGE. THE NEXT MESSAGE WILL BE ISSUED IN ONE HOUR... OR SOONER IF THE SITUATION WARRANTS.
- * THIS IS A TEST MESSAGE. AUTHORITATIVE INFORMATION ABOUT THE EARTHQUAKE FROM THE U.S. GEOLOGICAL SURVEY CAN BE FOUND ON THE INTERNET AT EARTHQUAKE.USGS.GOV/EARTHQUAKES -ALL IN LOWERCASE LETTERS-.
- * THIS IS A TEST MESSAGE. FURTHER INFORMATION ABOUT THIS EVENT MAY BE FOUND AT WWW.TSUNAMI.GOV.
- * THIS IS A TEST MESSAGE. COASTAL REGIONS OF THE US GULF COAST... US EAST COAST... AND THE MARITIME PROVINCES OF CANADA SHOULD REFER TO U.S. NATIONAL TSUNAMI WARNING CENTER MESSAGES THAT CAN BE FOUND AT WWW.TSUNAMI.GOV.

THIS IS A TEST MESSAGE. DO NOT TAKE ACTION BASED ON THIS TEST MESSAGE.

\$\$

NNNN

PTWC Message #6

ZCZC
WECA41 PHEB 191700
TSUCAX

TEST...TSUNAMI MESSAGE NUMBER 6...TEST
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
1700 UTC THU MAR 19 2020

...THIS MESSAGE IS FOR TEST PURPOSES ONLY...
...TEST TSUNAMI THREAT MESSAGE TEST...

**** NOTICE **** NOTICE **** NOTICE **** NOTICE **** NOTICE ****

THIS IS A TEST MESSAGE. THIS MESSAGE IS ISSUED FOR INFORMATION ONLY IN SUPPORT OF THE UNESCO/IOC TSUNAMI AND OTHER COASTAL HAZARDS WARNING SYSTEM FOR THE CARIBBEAN AND ADJACENT REGIONS AND IS MEANT FOR NATIONAL AUTHORITIES IN EACH COUNTRY OF THAT SYSTEM.

THIS IS A TEST MESSAGE. NATIONAL AUTHORITIES WILL DETERMINE THE APPROPRIATE LEVEL OF ALERT FOR EACH COUNTRY AND MAY ISSUE ADDITIONAL OR MORE REFINED INFORMATION.

**** NOTICE **** NOTICE **** NOTICE **** NOTICE **** NOTICE ****

TEST... PRELIMINARY EARTHQUAKE PARAMETERS ...TEST

* MAGNITUDE 8.0
* ORIGIN TIME 1400 UTC MAR 19 2020
* COORDINATES 18.2 NORTH 75.4 WEST
* DEPTH 25 KM / 16 MILES
* LOCATION JAMAICA REGION

TEST... EVALUATION ...TEST

* THIS IS A TEST MESSAGE. AN EARTHQUAKE WITH A PRELIMINARY MAGNITUDE OF 8.0 OCCURRED IN THE JAMAICA REGION AT 1400 UTC ON THURSDAY MARCH 19 2020.

* THIS IS A TEST MESSAGE. TSUNAMI WAVES HAVE BEEN OBSERVED.

* THIS IS A TEST MESSAGE. BASED ON ALL AVAILABLE DATA...
HAZARDOUS TSUNAMI WAVES ARE FORECAST FOR SOME COASTS.

TEST... TSUNAMI THREAT FORECAST ...TEST

* THIS IS A TEST MESSAGE. TSUNAMI WAVES REACHING MORE THAN 3 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE ALONG SOME COASTS OF

CUBA... HAITI... AND JAMAICA.

- * THIS IS A TEST MESSAGE. TSUNAMI WAVES REACHING 1 TO 3 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE ALONG SOME COASTS OF

COLOMBIA... COSTA RICA... PANAMA... AND BAHAMAS.

- * THIS IS A TEST MESSAGE. TSUNAMI WAVES REACHING 0.3 TO 1 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE FOR SOME COASTS OF

DOMINICAN REPUBLIC... MEXICO... NICARAGUA... VENEZUELA...
ARUBA... BONAIRE... CAYMAN ISLANDS... CURACAO...
DOMINICA... MARTINIQUE... PUERTO RICO AND VIRGIN
ISLANDS... SAINT KITTS AND NEVIS... SAINT LUCIA... SAINT
VINCENT AND THE GRENADINES... SAN ANDRES AND
PROVIDENCIA... AND TURKS AND CAICOS ISLANDS.

- * THIS IS A TEST MESSAGE. ACTUAL AMPLITUDES AT THE COAST MAY VARY FROM FORECAST AMPLITUDES DUE TO UNCERTAINTIES IN THE FORECAST AND LOCAL FEATURES. IN PARTICULAR MAXIMUM TSUNAMI AMPLITUDES ON ATOLLS OR SMALL ISLANDS AND AT LOCATIONS WITH FRINGING OR BARRIER REEFS WILL LIKELY BE MUCH SMALLER THAN THE FORECAST INDICATES.

- * THIS IS A TEST MESSAGE. FOR ALL OTHER AREAS COVERED BY THIS MESSAGE... THERE IS NO TSUNAMI THREAT ALTHOUGH SMALL SEA LEVEL CHANGES MAY OCCUR.

TEST... RECOMMENDED ACTIONS ...TEST

- * THIS IS A TEST MESSAGE. GOVERNMENT AGENCIES RESPONSIBLE FOR THREATENED COASTAL AREAS SHOULD TAKE ACTION TO INFORM AND INSTRUCT ANY COASTAL POPULATIONS AT RISK IN ACCORDANCE WITH THEIR OWN EVALUATION... PROCEDURES AND THE LEVEL OF THREAT.
- * THIS IS A TEST MESSAGE. PERSONS LOCATED IN THREATENED COASTAL AREAS SHOULD STAY ALERT FOR INFORMATION AND FOLLOW INSTRUCTIONS FROM NATIONAL AND LOCAL AUTHORITIES.

TEST... ESTIMATED TIMES OF ARRIVAL ...TEST

- * THIS IS A TEST MESSAGE. ESTIMATED TIMES OF ARRIVAL -ETA- OF THE INITIAL TSUNAMI WAVE FOR PLACES WITHIN THREATENED REGIONS ARE GIVEN BELOW. ACTUAL ARRIVAL TIMES MAY DIFFER AND THE INITIAL WAVE MAY NOT BE THE LARGEST. A TSUNAMI IS A SERIES OF WAVES AND THE TIME BETWEEN WAVES CAN BE FIVE MINUTES TO ONE HOUR.

LOCATION	REGION	COORDINATES	ETA (UTC)
----------	--------	-------------	-----------

COZUMEL	MEXICO	20.5N	87.0W	1600	03/19
RIOHACHA	COLOMBIA	11.6N	72.9W	1602	03/19
WILLEMSTAD	CURACAO	12.1N	68.9W	1602	03/19
BASSETERRE	SAINT KITTS	17.3N	62.7W	1608	03/19
ANEGADA	BR VIRGIN IS	18.8N	64.3W	1609	03/19
NASSAU	BAHAMAS	25.1N	77.4W	1610	03/19
PUERTO OBALDIA	PANAMA	8.7N	77.4W	1610	03/19
PUNTA CARIBANA	COLOMBIA	8.6N	76.9W	1615	03/19
PUERTO LIMON	COSTA RICA	10.0N	83.0W	1616	03/19
CHARLOTTE AMALI	US VIRGIN IS	18.3N	64.9W	1621	03/19
ROSEAU	DOMINICA	15.3N	61.4W	1621	03/19
FREEPORT	BAHAMAS	26.5N	78.8W	1622	03/19
COLON	PANAMA	9.4N	79.9W	1622	03/19
LA HABANA	CUBA	23.2N	82.4W	1624	03/19
ABACO ISLAND	BAHAMAS	26.6N	77.1W	1627	03/19
CASTRIES	SAINT LUCIA	14.0N	61.0W	1627	03/19
FORT DE FRANCE	MARTINIQUE	14.6N	61.1W	1630	03/19
BOCAS DEL TORO	PANAMA	9.4N	82.2W	1633	03/19
KINGSTOWN	SAINT VINCENT	13.1N	61.2W	1633	03/19
BIMINI	BAHAMAS	25.8N	79.3W	1635	03/19
PUNTA GORDA	NICARAGUA	11.4N	83.8W	1706	03/19
ROADTOWN	BR VIRGIN IS	18.4N	64.6W	1707	03/19
SANTA CRZ D SUR	CUBA	20.7N	78.0W	1735	03/19
PUNTO FIJO	VENEZUELA	11.7N	70.2W	1751	03/19
GOLFO VENEZUELA	VENEZUELA	11.4N	71.2W	1850	03/19
NUEVA GERONA	CUBA	21.9N	82.8W	1910	03/19
PUERTO CABEZAS	NICARAGUA	14.0N	83.4W	2032	03/19

TEST... POTENTIAL IMPACTS ...TEST

- * THIS IS A TEST MESSAGE. A TSUNAMI IS A SERIES OF WAVES. THE TIME BETWEEN WAVE CRESTS CAN VARY FROM 5 MINUTES TO AN HOUR. THE HAZARD MAY PERSIST FOR MANY HOURS OR LONGER AFTER THE INITIAL WAVE.
- * THIS IS A TEST MESSAGE. IMPACTS CAN VARY SIGNIFICANTLY FROM ONE SECTION OF COAST TO THE NEXT DUE TO LOCAL BATHYMETRY AND THE SHAPE AND ELEVATION OF THE SHORELINE.
- * THIS IS A TEST MESSAGE. IMPACTS CAN ALSO VARY DEPENDING UPON THE STATE OF THE TIDE AT THE TIME OF THE MAXIMUM TSUNAMI WAVES.
- * THIS IS A TEST MESSAGE. PERSONS CAUGHT IN THE WATER OF A TSUNAMI MAY DROWN... BE CRUSHED BY DEBRIS IN THE WATER... OR BE SWEEPED OUT TO SEA.

TEST... TSUNAMI OBSERVATIONS ...TEST

- * THIS IS A TEST MESSAGE. THE FOLLOWING ARE TSUNAMI WAVE OBSERVATIONS FROM COASTAL AND/OR DEEP-OCEAN SEA LEVEL GAUGES AT THE INDICATED LOCATIONS. THE MAXIMUM TSUNAMI HEIGHT IS MEASURED WITH RESPECT TO THE NORMAL TIDE LEVEL.

GAUGE LOCATION	GAUGE COORDINATES		TIME OF MEASURE (UTC)	MAXIMUM TSUNAMI HEIGHT		WAVE PERIOD (MIN)
	LAT	LON				
PRICKLEY BAY GD	12.0N	61.8W	1700	0.16M/	0.5FT	20
LE ROBERT MARTINIQUE	14.7N	60.9W	1659	0.12M/	0.4FT	22
CALLIAQUA VC	13.1N	61.2W	1648	0.33M/	1.1FT	26
BLOWING POINT AI	18.2N	63.1W	1643	0.25M/	0.8FT	22
POINT A PITRE GP	16.2N	61.5W	1639	0.13M/	0.4FT	28
DESIRADE GUADELOUPE	16.3N	61.1W	1645	0.10M/	0.3FT	18
FORT DE FRANCE MQ	14.6N	61.1W	1639	0.31M/	1.0FT	14
SAINT MARTIN FR	18.1N	63.1W	1635	0.17M/	0.6FT	18
ISLA MUJERES MX	21.3N	86.7W	1634	0.25M/	0.8FT	24
CULEBRA IS PR	18.3N	65.3W	1635	0.09M/	0.3FT	26
LE PRECHEUR MARTINI	14.8N	61.2W	1635	0.20M/	0.7FT	22
ROSEAU DM	15.3N	61.4W	1631	0.23M/	0.8FT	22
PORTSMOUTH DM	15.6N	61.5W	1631	0.30M/	1.0FT	26
LAMESHURBAYSTJOHNVI	18.3N	64.7W	1628	0.17M/	0.6FT	16
DESHAIES GUADELOUPE	16.3N	61.8W	1627	0.22M/	0.7FT	22
LIMON CR	10.0N	83.0W	1626	0.89M/	2.9FT	26
CEIBA CABOTAGE HN	15.8N	86.8W	1625	0.13M/	0.4FT	22
SAPZURRO CO	8.7N	77.4W	1617	0.69M/	2.3FT	18
BASSETERRE KN	17.3N	62.7W	1620	0.17M/	0.6FT	28
CARRIE BOW CAY BZ	16.8N	88.1W	1617	0.17M/	0.5FT	24
PUERTO CORTES HN	15.8N	88.0W	1610	0.18M/	0.6FT	14
SIAN KAN MX	19.3N	87.4W	1612	0.21M/	0.7FT	26
EL PORVENIR PA	9.6N	78.9W	1607	1.18M/	3.9FT	28
PUERTO MORELOS MX	20.9N	86.9W	1603	0.25M/	0.8FT	28
PUERTO MORELOS MX	20.9N	86.9W	1601	0.25M/	0.8FT	22
PUERTO MORELOS MX	20.9N	86.9W	1603	0.25M/	0.8FT	16
SAN ANDRES CO	12.6N	81.7W	1556	0.57M/	1.9FT	28
SAN JUAN PR	18.5N	66.1W	1558	0.07M/	0.2FT	22
ESPERANZA VIEQUES P	18.1N	65.5W	1558	0.25M/	0.8FT	28
ARECIBO PR	18.5N	66.7W	1551	0.10M/	0.3FT	16
LIMETREE VI	17.7N	64.8W	1552	0.23M/	0.8FT	18
ST CROIX VI	17.7N	64.7W	1549	0.15M/	0.5FT	20
ISLA NAVAL CO	10.2N	75.8W	1547	0.73M/	2.4FT	24
ROATAN ISLAND HN	16.3N	86.5W	1552	0.15M/	0.5FT	26
YABUCOA PR	18.1N	65.8W	1544	0.28M/	0.9FT	18
BULLEN BAY CURACAO	12.2N	69.0W	1547	0.39M/	1.3FT	26
MAGUEYES ISLAND PR	18.0N	67.0W	1541	0.29M/	1.0FT	26
MAYAGUEZ PR	18.2N	67.2W	1547	0.29M/	1.0FT	26
SANTA MARTA CO	11.2N	74.2W	1537	0.72M/	2.4FT	20
PUNTA CANA DO	18.5N	68.4W	1539	0.23M/	0.7FT	22
MONA ISLAND PR	18.1N	67.9W	1529	0.29M/	0.9FT	22
DART 42407	15.3N	68.2W	1524	0.03M/	0.1FT	16
GRAND TURK ISLAND T	21.4N	71.1W	1521	0.18M/	0.6FT	24
PUERTO PLATA DO	19.8N	70.7W	1518	0.19M/	0.6FT	14
BARAHONA DO	18.2N	71.1W	1516	0.52M/	1.7FT	20
GEORGE TOWN CY	19.3N	81.4W	1505	0.32M/	1.1FT	24
CAP HAITIEN HT	19.8N	72.2W	1504	0.46M/	1.5FT	22
PORT ROYAL JM	17.9N	76.8W	1456	2.08M/	6.8FT	16

TEST... NEXT UPDATE AND ADDITIONAL INFORMATION ...TEST

* THIS IS A TEST MESSAGE. THE NEXT MESSAGE WILL BE ISSUED IN

ONE HOUR... OR SOONER IF THE SITUATION WARRANTS.

- * THIS IS A TEST MESSAGE. AUTHORITATIVE INFORMATION ABOUT THE EARTHQUAKE FROM THE U.S. GEOLOGICAL SURVEY CAN BE FOUND ON THE INTERNET AT EARTHQUAKE.USGS.GOV/EARTHQUAKES -ALL IN LOWERCASE LETTERS-.
- * THIS IS A TEST MESSAGE. FURTHER INFORMATION ABOUT THIS EVENT MAY BE FOUND AT WWW.TSUNAMI.GOV.
- * THIS IS A TEST MESSAGE. COASTAL REGIONS OF THE US GULF COAST... US EAST COAST... AND THE MARITIME PROVINCES OF CANADA SHOULD REFER TO U.S. NATIONAL TSUNAMI WARNING CENTER MESSAGES THAT CAN BE FOUND AT WWW.TSUNAMI.GOV.

THIS IS A TEST MESSAGE. DO NOT TAKE ACTION BASED ON THIS TEST MESSAGE.

\$\$

NNNN

PTWC Message #7

ZCZC
WECA41 PHEB 191800
TSUCAX

TEST...TSUNAMI MESSAGE NUMBER 7...TEST
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
1800 UTC THU MAR 19 2020

...THIS MESSAGE IS FOR TEST PURPOSES ONLY...
...TEST TSUNAMI THREAT MESSAGE TEST...

**** NOTICE **** NOTICE **** NOTICE **** NOTICE **** NOTICE ****

THIS IS A TEST MESSAGE. THIS MESSAGE IS ISSUED FOR INFORMATION ONLY IN SUPPORT OF THE UNESCO/IOC TSUNAMI AND OTHER COASTAL HAZARDS WARNING SYSTEM FOR THE CARIBBEAN AND ADJACENT REGIONS AND IS MEANT FOR NATIONAL AUTHORITIES IN EACH COUNTRY OF THAT SYSTEM.

THIS IS A TEST MESSAGE. NATIONAL AUTHORITIES WILL DETERMINE THE APPROPRIATE LEVEL OF ALERT FOR EACH COUNTRY AND MAY ISSUE ADDITIONAL OR MORE REFINED INFORMATION.

**** NOTICE **** NOTICE **** NOTICE **** NOTICE **** NOTICE ****

TEST... PRELIMINARY EARTHQUAKE PARAMETERS ...TEST

* MAGNITUDE	8.0
* ORIGIN TIME	1400 UTC MAR 19 2020
* COORDINATES	18.2 NORTH 75.4 WEST
* DEPTH	25 KM / 16 MILES
* LOCATION	JAMAICA REGION

TEST... EVALUATION ...TEST

* THIS IS A TEST MESSAGE. AN EARTHQUAKE WITH A PRELIMINARY MAGNITUDE OF 8.0 OCCURRED IN THE JAMAICA REGION AT 1400 UTC ON THURSDAY MARCH 19 2020.

* THIS IS A TEST MESSAGE. TSUNAMI WAVES HAVE BEEN OBSERVED.

* THIS IS A TEST MESSAGE. BASED ON ALL AVAILABLE DATA...
HAZARDOUS TSUNAMI WAVES ARE FORECAST FOR SOME COASTS.

TEST... TSUNAMI THREAT FORECAST ...TEST

* THIS IS A TEST MESSAGE. TSUNAMI WAVES REACHING MORE THAN 3 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE ALONG SOME COASTS OF

CUBA... HAITI... AND JAMAICA.

- * THIS IS A TEST MESSAGE. TSUNAMI WAVES REACHING 1 TO 3 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE ALONG SOME COASTS OF

COLOMBIA... COSTA RICA... PANAMA... AND BAHAMAS.

- * THIS IS A TEST MESSAGE. TSUNAMI WAVES REACHING 0.3 TO 1 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE FOR SOME COASTS OF

DOMINICAN REPUBLIC... MEXICO... NICARAGUA... VENEZUELA...
ARUBA... BONAIRE... CAYMAN ISLANDS... CURACAO...
DOMINICA... MARTINIQUE... PUERTO RICO AND VIRGIN
ISLANDS... SAINT KITTS AND NEVIS... SAINT LUCIA... SAINT
VINCENT AND THE GRENADINES... SAN ANDRES AND
PROVIDENCIA... AND TURKS AND CAICOS ISLANDS.

- * THIS IS A TEST MESSAGE. ACTUAL AMPLITUDES AT THE COAST MAY VARY FROM FORECAST AMPLITUDES DUE TO UNCERTAINTIES IN THE FORECAST AND LOCAL FEATURES. IN PARTICULAR MAXIMUM TSUNAMI AMPLITUDES ON ATOLLS OR SMALL ISLANDS AND AT LOCATIONS WITH FRINGING OR BARRIER REEFS WILL LIKELY BE MUCH SMALLER THAN THE FORECAST INDICATES.

- * THIS IS A TEST MESSAGE. FOR ALL OTHER AREAS COVERED BY THIS MESSAGE... THERE IS NO TSUNAMI THREAT ALTHOUGH SMALL SEA LEVEL CHANGES MAY OCCUR.

TEST... RECOMMENDED ACTIONS ...TEST

- * THIS IS A TEST MESSAGE. GOVERNMENT AGENCIES RESPONSIBLE FOR THREATENED COASTAL AREAS SHOULD TAKE ACTION TO INFORM AND INSTRUCT ANY COASTAL POPULATIONS AT RISK IN ACCORDANCE WITH THEIR OWN EVALUATION... PROCEDURES AND THE LEVEL OF THREAT.
- * THIS IS A TEST MESSAGE. PERSONS LOCATED IN THREATENED COASTAL AREAS SHOULD STAY ALERT FOR INFORMATION AND FOLLOW INSTRUCTIONS FROM NATIONAL AND LOCAL AUTHORITIES.

TEST... ESTIMATED TIMES OF ARRIVAL ...TEST

- * THIS IS A TEST MESSAGE. ESTIMATED TIMES OF ARRIVAL -ETA- OF THE INITIAL TSUNAMI WAVE FOR PLACES WITHIN THREATENED REGIONS ARE GIVEN BELOW. ACTUAL ARRIVAL TIMES MAY DIFFER AND THE INITIAL WAVE MAY NOT BE THE LARGEST. A TSUNAMI IS A SERIES OF WAVES AND THE TIME BETWEEN WAVES CAN BE FIVE MINUTES TO ONE HOUR.

LOCATION	REGION	COORDINATES	ETA(UTC)
----------	--------	-------------	----------

PUNTA GORDA	NICARAGUA	11.4N	83.8W	1706	03/19
ROADTOWN	BR VIRGIN IS	18.4N	64.6W	1707	03/19
SANTA CRZ D SUR	CUBA	20.7N	78.0W	1735	03/19
PUNTO FIJO	VENEZUELA	11.7N	70.2W	1751	03/19
GOLFO VENEZUELA	VENEZUELA	11.4N	71.2W	1850	03/19
NUEVA GERONA	CUBA	21.9N	82.8W	1910	03/19
PUERTO CABEZAS	NICARAGUA	14.0N	83.4W	2032	03/19

TEST... POTENTIAL IMPACTS ...TEST

-
- * THIS IS A TEST MESSAGE. A TSUNAMI IS A SERIES OF WAVES. THE TIME BETWEEN WAVE CRESTS CAN VARY FROM 5 MINUTES TO AN HOUR. THE HAZARD MAY PERSIST FOR MANY HOURS OR LONGER AFTER THE INITIAL WAVE.
 - * THIS IS A TEST MESSAGE. IMPACTS CAN VARY SIGNIFICANTLY FROM ONE SECTION OF COAST TO THE NEXT DUE TO LOCAL BATHYMETRY AND THE SHAPE AND ELEVATION OF THE SHORELINE.
 - * THIS IS A TEST MESSAGE. IMPACTS CAN ALSO VARY DEPENDING UPON THE STATE OF THE TIDE AT THE TIME OF THE MAXIMUM TSUNAMI WAVES.
 - * THIS IS A TEST MESSAGE. PERSONS CAUGHT IN THE WATER OF A TSUNAMI MAY DROWN... BE CRUSHED BY DEBRIS IN THE WATER... OR BE SWEEPED OUT TO SEA.

TEST... TSUNAMI OBSERVATIONS ...TEST

-
- * THIS IS A TEST MESSAGE. THE FOLLOWING ARE TSUNAMI WAVE OBSERVATIONS FROM COASTAL AND/OR DEEP-OCEAN SEA LEVEL GAUGES AT THE INDICATED LOCATIONS. THE MAXIMUM TSUNAMI HEIGHT IS MEASURED WITH RESPECT TO THE NORMAL TIDE LEVEL.

GAUGE LOCATION	GAUGE COORDINATES		TIME OF MEASURE (UTC)	MAXIMUM TSUNAMI HEIGHT	WAVE PERIOD (MIN)
	LAT	LON			
GANTERS BAY ST LUCI	14.0N	61.0W	1701	0.28M/ 0.9FT	28
PRICKLEY BAY GD	12.0N	61.8W	1700	0.16M/ 0.5FT	20
LE ROBERT MARTINIQU	14.7N	60.9W	1659	0.12M/ 0.4FT	22
CALLIAQUA VC	13.1N	61.2W	1648	0.33M/ 1.1FT	26
BLOWING POINT AI	18.2N	63.1W	1643	0.25M/ 0.8FT	22
POINT A PITRE GP	16.2N	61.5W	1639	0.13M/ 0.4FT	28
DESIRADE GUADELOUPE	16.3N	61.1W	1645	0.10M/ 0.3FT	18
FORT DE FRANCE MQ	14.6N	61.1W	1639	0.31M/ 1.0FT	14
SAINT MARTIN FR	18.1N	63.1W	1635	0.17M/ 0.6FT	18
ISLA MUJERES MX	21.3N	86.7W	1634	0.25M/ 0.8FT	24
CULEBRA IS PR	18.3N	65.3W	1635	0.09M/ 0.3FT	26
LE PRECHEUR MARTINI	14.8N	61.2W	1635	0.20M/ 0.7FT	22
ROSEAU DM	15.3N	61.4W	1631	0.23M/ 0.8FT	22
PORTSMOUTH DM	15.6N	61.5W	1631	0.30M/ 1.0FT	26
LAMESHURBAYSTJOHNVI	18.3N	64.7W	1628	0.17M/ 0.6FT	16
DESHAIES GUADELOUPE	16.3N	61.8W	1627	0.22M/ 0.7FT	22

LIMON CR	10.0N	83.0W	1626	0.89M/	2.9FT	26
CEIBA CABOTAGE HN	15.8N	86.8W	1625	0.13M/	0.4FT	22
SAPZURRO CO	8.7N	77.4W	1617	0.69M/	2.3FT	18
BASSETERRE KN	17.3N	62.7W	1620	0.17M/	0.6FT	28
CARRIE BOW CAY BZ	16.8N	88.1W	1617	0.17M/	0.5FT	24
PUERTO CORTES HN	15.8N	88.0W	1610	0.18M/	0.6FT	14
SIAN KAAAN MX	19.3N	87.4W	1612	0.21M/	0.7FT	26
EL PORVENIR PA	9.6N	78.9W	1607	1.18M/	3.9FT	28
PUERTO MORELOS MX	20.9N	86.9W	1603	0.25M/	0.8FT	28
PUERTO MORELOS MX	20.9N	86.9W	1601	0.25M/	0.8FT	22
PUERTO MORELOS MX	20.9N	86.9W	1603	0.25M/	0.8FT	16
SAN ANDRES CO	12.6N	81.7W	1556	0.57M/	1.9FT	28
SAN JUAN PR	18.5N	66.1W	1558	0.07M/	0.2FT	22
ESPERANZA VIEQUES P	18.1N	65.5W	1558	0.25M/	0.8FT	28
ARECIBO PR	18.5N	66.7W	1551	0.10M/	0.3FT	16
LIMETREE VI	17.7N	64.8W	1552	0.23M/	0.8FT	18
ST CROIX VI	17.7N	64.7W	1549	0.15M/	0.5FT	20
ISLA NAVAL CO	10.2N	75.8W	1547	0.73M/	2.4FT	24
ROATAN ISLAND HN	16.3N	86.5W	1552	0.15M/	0.5FT	26
YABUCOA PR	18.1N	65.8W	1544	0.28M/	0.9FT	18
BULLEN BAY CURACAO	12.2N	69.0W	1547	0.39M/	1.3FT	26
MAGUEYES ISLAND PR	18.0N	67.0W	1541	0.29M/	1.0FT	26
MAYAGUEZ PR	18.2N	67.2W	1547	0.29M/	1.0FT	26
SANTA MARTA CO	11.2N	74.2W	1537	0.72M/	2.4FT	20
PUNTA CANA DO	18.5N	68.4W	1539	0.23M/	0.7FT	22
MONA ISLAND PR	18.1N	67.9W	1529	0.29M/	0.9FT	22
DART 42407	15.3N	68.2W	1524	0.03M/	0.1FT	16
GRAND TURK ISLAND T	21.4N	71.1W	1521	0.18M/	0.6FT	24
PUERTO PLATA DO	19.8N	70.7W	1518	0.19M/	0.6FT	14
BARAHONA DO	18.2N	71.1W	1516	0.52M/	1.7FT	20
GEORGE TOWN CY	19.3N	81.4W	1505	0.32M/	1.1FT	24
CAP HAITIEN HT	19.8N	72.2W	1504	0.46M/	1.5FT	22
PORT ROYAL JM	17.9N	76.8W	1456	2.08M/	6.8FT	16

TEST... NEXT UPDATE AND ADDITIONAL INFORMATION ...TEST

- * THIS IS A TEST MESSAGE. THE NEXT MESSAGE WILL BE ISSUED IN ONE HOUR... OR SOONER IF THE SITUATION WARRANTS.
- * THIS IS A TEST MESSAGE. AUTHORITATIVE INFORMATION ABOUT THE EARTHQUAKE FROM THE U.S. GEOLOGICAL SURVEY CAN BE FOUND ON THE INTERNET AT EARTHQUAKE.USGS.GOV/EARTHQUAKES -ALL IN LOWERCASE LETTERS-.
- * THIS IS A TEST MESSAGE. FURTHER INFORMATION ABOUT THIS EVENT MAY BE FOUND AT WWW.TSUNAMI.GOV.
- * THIS IS A TEST MESSAGE. COASTAL REGIONS OF THE US GULF COAST... US EAST COAST... AND THE MARITIME PROVINCES OF CANADA SHOULD REFER TO U.S. NATIONAL TSUNAMI WARNING CENTER MESSAGES THAT CAN BE FOUND AT WWW.TSUNAMI.GOV.

THIS IS A TEST MESSAGE. DO NOT TAKE ACTION BASED ON THIS TEST MESSAGE.

\$\$

NNNN

PTWC Message #8

ZCZC
WECA41 PHEB 191900
TSUCAX

TEST...TSUNAMI MESSAGE NUMBER 8...TEST
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
1900 UTC THU MAR 19 2020

...THIS MESSAGE IS FOR TEST PURPOSES ONLY...
...TEST TSUNAMI THREAT MESSAGE TEST...

**** NOTICE **** NOTICE **** NOTICE **** NOTICE **** NOTICE ****

THIS IS A TEST MESSAGE. THIS MESSAGE IS ISSUED FOR INFORMATION
ONLY IN SUPPORT OF THE UNESCO/IOC TSUNAMI AND OTHER COASTAL
HAZARDS WARNING SYSTEM FOR THE CARIBBEAN AND ADJACENT REGIONS
AND IS MEANT FOR NATIONAL AUTHORITIES IN EACH COUNTRY OF THAT
SYSTEM.

THIS IS A TEST MESSAGE. NATIONAL AUTHORITIES WILL DETERMINE THE
APPROPRIATE LEVEL OF ALERT FOR EACH COUNTRY AND MAY ISSUE
ADDITIONAL OR MORE REFINED INFORMATION.

**** NOTICE **** NOTICE **** NOTICE **** NOTICE **** NOTICE ****

TEST... PRELIMINARY EARTHQUAKE PARAMETERS ...TEST

* MAGNITUDE	8.0
* ORIGIN TIME	1400 UTC MAR 19 2020
* COORDINATES	18.2 NORTH 75.4 WEST
* DEPTH	25 KM / 16 MILES
* LOCATION	JAMAICA REGION

TEST... EVALUATION ...TEST

* THIS IS A TEST MESSAGE. AN EARTHQUAKE WITH A PRELIMINARY
MAGNITUDE OF 8.0 OCCURRED IN THE JAMAICA REGION AT 1400 UTC
ON THURSDAY MARCH 19 2020.

* THIS IS A TEST MESSAGE. TSUNAMI WAVES HAVE BEEN OBSERVED.

* THIS IS A TEST MESSAGE. BASED ON ALL AVAILABLE DATA...
HAZARDOUS TSUNAMI WAVES ARE FORECAST FOR SOME COASTS.

TEST... TSUNAMI THREAT FORECAST ...TEST

- * THIS IS A TEST MESSAGE. TSUNAMI WAVES REACHING MORE THAN 3 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE ALONG SOME COASTS OF

CUBA... HAITI... AND JAMAICA.

- * THIS IS A TEST MESSAGE. TSUNAMI WAVES REACHING 1 TO 3 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE ALONG SOME COASTS OF

COLOMBIA... COSTA RICA... PANAMA... AND BAHAMAS.

- * THIS IS A TEST MESSAGE. TSUNAMI WAVES REACHING 0.3 TO 1 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE FOR SOME COASTS OF

DOMINICAN REPUBLIC... MEXICO... NICARAGUA... VENEZUELA...
ARUBA... BONAIRE... CAYMAN ISLANDS... CURACAO...
DOMINICA... MARTINIQUE... PUERTO RICO AND VIRGIN
ISLANDS... SAINT KITTS AND NEVIS... SAINT LUCIA... SAINT
VINCENT AND THE GRENADINES... SAN ANDRES AND
PROVIDENCIA... AND TURKS AND CAICOS ISLANDS.

- * THIS IS A TEST MESSAGE. ACTUAL AMPLITUDES AT THE COAST MAY VARY FROM FORECAST AMPLITUDES DUE TO UNCERTAINTIES IN THE FORECAST AND LOCAL FEATURES. IN PARTICULAR MAXIMUM TSUNAMI AMPLITUDES ON ATOLLS OR SMALL ISLANDS AND AT LOCATIONS WITH FRINGING OR BARRIER REEFS WILL LIKELY BE MUCH SMALLER THAN THE FORECAST INDICATES.

- * THIS IS A TEST MESSAGE. FOR ALL OTHER AREAS COVERED BY THIS MESSAGE... THERE IS NO TSUNAMI THREAT ALTHOUGH SMALL SEA LEVEL CHANGES MAY OCCUR.

TEST... RECOMMENDED ACTIONS ...TEST

- * THIS IS A TEST MESSAGE. GOVERNMENT AGENCIES RESPONSIBLE FOR THREATENED COASTAL AREAS SHOULD TAKE ACTION TO INFORM AND INSTRUCT ANY COASTAL POPULATIONS AT RISK IN ACCORDANCE WITH THEIR OWN EVALUATION... PROCEDURES AND THE LEVEL OF THREAT.
- * THIS IS A TEST MESSAGE. PERSONS LOCATED IN THREATENED COASTAL AREAS SHOULD STAY ALERT FOR INFORMATION AND FOLLOW INSTRUCTIONS FROM NATIONAL AND LOCAL AUTHORITIES.

TEST... ESTIMATED TIMES OF ARRIVAL ...TEST

- * THIS IS A TEST MESSAGE. ESTIMATED TIMES OF ARRIVAL -ETA- OF THE INITIAL TSUNAMI WAVE FOR PLACES WITHIN THREATENED REGIONS ARE GIVEN BELOW. ACTUAL ARRIVAL TIMES MAY DIFFER AND THE INITIAL WAVE MAY NOT BE THE LARGEST. A TSUNAMI IS A SERIES OF WAVES AND THE TIME BETWEEN WAVES CAN BE FIVE MINUTES TO ONE HOUR.

LOCATION	REGION	COORDINATES		ETA (UTC)
GOLFO VENEZUELA	VENEZUELA	11.4N	71.2W	1850 03/19
NUEVA GERONA	CUBA	21.9N	82.8W	1910 03/19
PUERTO CABEZAS	NICARAGUA	14.0N	83.4W	2032 03/19

TEST... POTENTIAL IMPACTS ...TEST

- * THIS IS A TEST MESSAGE. A TSUNAMI IS A SERIES OF WAVES. THE TIME BETWEEN WAVE CRESTS CAN VARY FROM 5 MINUTES TO AN HOUR. THE HAZARD MAY PERSIST FOR MANY HOURS OR LONGER AFTER THE INITIAL WAVE.
- * THIS IS A TEST MESSAGE. IMPACTS CAN VARY SIGNIFICANTLY FROM ONE SECTION OF COAST TO THE NEXT DUE TO LOCAL BATHYMETRY AND THE SHAPE AND ELEVATION OF THE SHORELINE.
- * THIS IS A TEST MESSAGE. IMPACTS CAN ALSO VARY DEPENDING UPON THE STATE OF THE TIDE AT THE TIME OF THE MAXIMUM TSUNAMI WAVES.
- * THIS IS A TEST MESSAGE. PERSONS CAUGHT IN THE WATER OF A TSUNAMI MAY DROWN... BE CRUSHED BY DEBRIS IN THE WATER... OR BE SWEEPED OUT TO SEA.

TEST... TSUNAMI OBSERVATIONS ...TEST

- * THIS IS A TEST MESSAGE. THE FOLLOWING ARE TSUNAMI WAVE OBSERVATIONS FROM COASTAL AND/OR DEEP-OCEAN SEA LEVEL GAUGES AT THE INDICATED LOCATIONS. THE MAXIMUM TSUNAMI HEIGHT IS MEASURED WITH RESPECT TO THE NORMAL TIDE LEVEL.

GAUGE LOCATION	GAUGE COORDINATES		TIME OF MEASURE (UTC)	MAXIMUM TSUNAMI HEIGHT	WAVE PERIOD (MIN)
	LAT	LON			
GANTERS BAY ST LUCI	14.0N	61.0W	1701	0.28M/ 0.9FT	28
PRICKLEY BAY GD	12.0N	61.8W	1700	0.16M/ 0.5FT	20
LE ROBERT MARTINIQU	14.7N	60.9W	1659	0.12M/ 0.4FT	22
CALLIAQUA VC	13.1N	61.2W	1648	0.33M/ 1.1FT	26
BLOWING POINT AI	18.2N	63.1W	1643	0.25M/ 0.8FT	22
POINT A PITRE GP	16.2N	61.5W	1639	0.13M/ 0.4FT	28
DESIRADE GUADELOUPE	16.3N	61.1W	1645	0.10M/ 0.3FT	18
FORT DE FRANCE MQ	14.6N	61.1W	1639	0.31M/ 1.0FT	14
SAINT MARTIN FR	18.1N	63.1W	1635	0.17M/ 0.6FT	18
ISLA MUJERES MX	21.3N	86.7W	1634	0.25M/ 0.8FT	24
CULEBRA IS PR	18.3N	65.3W	1635	0.09M/ 0.3FT	26
LE PRECHEUR MARTINI	14.8N	61.2W	1635	0.20M/ 0.7FT	22
ROSEAU DM	15.3N	61.4W	1631	0.23M/ 0.8FT	22
PORTSMOUTH DM	15.6N	61.5W	1631	0.30M/ 1.0FT	26
LAMESHURBAYSTJOHNVI	18.3N	64.7W	1628	0.17M/ 0.6FT	16
DESHAIES GUADELOUPE	16.3N	61.8W	1627	0.22M/ 0.7FT	22
LIMON CR	10.0N	83.0W	1626	0.89M/ 2.9FT	26

CEIBA CABOTAGE HN	15.8N	86.8W	1625	0.13M/	0.4FT	22
SAPZURRO CO	8.7N	77.4W	1617	0.69M/	2.3FT	18
BASSETERRE KN	17.3N	62.7W	1620	0.17M/	0.6FT	28
CARRIE BOW CAY BZ	16.8N	88.1W	1617	0.17M/	0.5FT	24
PUERTO CORTES HN	15.8N	88.0W	1610	0.18M/	0.6FT	14
SIAN KAAH MX	19.3N	87.4W	1612	0.21M/	0.7FT	26
EL PORVENIR PA	9.6N	78.9W	1607	1.18M/	3.9FT	28
PUERTO MORELOS MX	20.9N	86.9W	1603	0.25M/	0.8FT	28
PUERTO MORELOS MX	20.9N	86.9W	1601	0.25M/	0.8FT	22
PUERTO MORELOS MX	20.9N	86.9W	1603	0.25M/	0.8FT	16
SAN ANDRES CO	12.6N	81.7W	1556	0.57M/	1.9FT	28
SAN JUAN PR	18.5N	66.1W	1558	0.07M/	0.2FT	22
ESPERANZA VIEQUES P	18.1N	65.5W	1558	0.25M/	0.8FT	28
ARECIBO PR	18.5N	66.7W	1551	0.10M/	0.3FT	16
LIMETREE VI	17.7N	64.8W	1552	0.23M/	0.8FT	18
ST CROIX VI	17.7N	64.7W	1549	0.15M/	0.5FT	20
ISLA NAVAL CO	10.2N	75.8W	1547	0.73M/	2.4FT	24
ROATAN ISLAND HN	16.3N	86.5W	1552	0.15M/	0.5FT	26
YABUCOA PR	18.1N	65.8W	1544	0.28M/	0.9FT	18
BULLEN BAY CURACAO	12.2N	69.0W	1547	0.39M/	1.3FT	26
MAGUEYES ISLAND PR	18.0N	67.0W	1541	0.29M/	1.0FT	26
MAYAGUEZ PR	18.2N	67.2W	1547	0.29M/	1.0FT	26
SANTA MARTA CO	11.2N	74.2W	1537	0.72M/	2.4FT	20
PUNTA CANA DO	18.5N	68.4W	1539	0.23M/	0.7FT	22
MONA ISLAND PR	18.1N	67.9W	1529	0.29M/	0.9FT	22
DART 42407	15.3N	68.2W	1524	0.03M/	0.1FT	16
GRAND TURK ISLAND T	21.4N	71.1W	1521	0.18M/	0.6FT	24
PUERTO PLATA DO	19.8N	70.7W	1518	0.19M/	0.6FT	14
BARAHONA DO	18.2N	71.1W	1516	0.52M/	1.7FT	20
GEORGE TOWN CY	19.3N	81.4W	1505	0.32M/	1.1FT	24
CAP HAITIEN HT	19.8N	72.2W	1504	0.46M/	1.5FT	22
PORT ROYAL JM	17.9N	76.8W	1456	2.08M/	6.8FT	16

TEST... NEXT UPDATE AND ADDITIONAL INFORMATION ...TEST

- * THIS IS A TEST MESSAGE. THE NEXT MESSAGE WILL BE ISSUED IN ONE HOUR... OR SOONER IF THE SITUATION WARRANTS.
- * THIS IS A TEST MESSAGE. AUTHORITATIVE INFORMATION ABOUT THE EARTHQUAKE FROM THE U.S. GEOLOGICAL SURVEY CAN BE FOUND ON THE INTERNET AT EARTHQUAKE.USGS.GOV/EARTHQUAKES -ALL IN LOWERCASE LETTERS-.
- * THIS IS A TEST MESSAGE. FURTHER INFORMATION ABOUT THIS EVENT MAY BE FOUND AT WWW.TSUNAMI.GOV.
- * THIS IS A TEST MESSAGE. COASTAL REGIONS OF THE US GULF COAST... US EAST COAST... AND THE MARITIME PROVINCES OF CANADA SHOULD REFER TO U.S. NATIONAL TSUNAMI WARNING CENTER MESSAGES THAT CAN BE FOUND AT WWW.TSUNAMI.GOV.

THIS IS A TEST MESSAGE. DO NOT TAKE ACTION BASED ON THIS TEST MESSAGE.

\$\$

NNNN

PTWC Message #9

ZCZC
WECA41 PHEB 192000
TSUCAX

TEST...TSUNAMI MESSAGE NUMBER 9...TEST
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
2000 UTC THU MAR 19 2020

...THIS MESSAGE IS FOR TEST PURPOSES ONLY...
...TEST TSUNAMI THREAT MESSAGE TEST...

**** NOTICE **** NOTICE **** NOTICE **** NOTICE **** NOTICE ****

THIS IS A TEST MESSAGE. THIS MESSAGE IS ISSUED FOR INFORMATION
ONLY IN SUPPORT OF THE UNESCO/IOC TSUNAMI AND OTHER COASTAL
HAZARDS WARNING SYSTEM FOR THE CARIBBEAN AND ADJACENT REGIONS
AND IS MEANT FOR NATIONAL AUTHORITIES IN EACH COUNTRY OF THAT
SYSTEM.

THIS IS A TEST MESSAGE. NATIONAL AUTHORITIES WILL DETERMINE THE
APPROPRIATE LEVEL OF ALERT FOR EACH COUNTRY AND MAY ISSUE
ADDITIONAL OR MORE REFINED INFORMATION.

**** NOTICE **** NOTICE **** NOTICE **** NOTICE **** NOTICE ****

TEST... PRELIMINARY EARTHQUAKE PARAMETERS ...TEST

* MAGNITUDE	8.0
* ORIGIN TIME	1400 UTC MAR 19 2020
* COORDINATES	18.2 NORTH 75.4 WEST
* DEPTH	25 KM / 16 MILES
* LOCATION	JAMAICA REGION

TEST... EVALUATION ...TEST

* THIS IS A TEST MESSAGE. AN EARTHQUAKE WITH A PRELIMINARY
MAGNITUDE OF 8.0 OCCURRED IN THE JAMAICA REGION AT 1400 UTC
ON THURSDAY MARCH 19 2020.

* THIS IS A TEST MESSAGE. TSUNAMI WAVES HAVE BEEN OBSERVED.

* THIS IS A TEST MESSAGE. BASED ON ALL AVAILABLE DATA...
HAZARDOUS TSUNAMI WAVES ARE FORECAST FOR SOME COASTS.

TEST... TSUNAMI THREAT FORECAST ...TEST

- * THIS IS A TEST MESSAGE. TSUNAMI WAVES REACHING MORE THAN 3 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE ALONG SOME COASTS OF

CUBA... HAITI... AND JAMAICA.

- * THIS IS A TEST MESSAGE. TSUNAMI WAVES REACHING 1 TO 3 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE ALONG SOME COASTS OF

COLOMBIA... COSTA RICA... PANAMA... AND BAHAMAS.

- * THIS IS A TEST MESSAGE. TSUNAMI WAVES REACHING 0.3 TO 1 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE FOR SOME COASTS OF

DOMINICAN REPUBLIC... MEXICO... NICARAGUA... VENEZUELA...
ARUBA... BONAIRE... CAYMAN ISLANDS... CURACAO...
DOMINICA... MARTINIQUE... PUERTO RICO AND VIRGIN
ISLANDS... SAINT KITTS AND NEVIS... SAINT LUCIA... SAINT
VINCENT AND THE GRENADINES... SAN ANDRES AND
PROVIDENCIA... AND TURKS AND CAICOS ISLANDS.

- * THIS IS A TEST MESSAGE. ACTUAL AMPLITUDES AT THE COAST MAY VARY FROM FORECAST AMPLITUDES DUE TO UNCERTAINTIES IN THE FORECAST AND LOCAL FEATURES. IN PARTICULAR MAXIMUM TSUNAMI AMPLITUDES ON ATOLLS OR SMALL ISLANDS AND AT LOCATIONS WITH FRINGING OR BARRIER REEFS WILL LIKELY BE MUCH SMALLER THAN THE FORECAST INDICATES.

- * THIS IS A TEST MESSAGE. FOR ALL OTHER AREAS COVERED BY THIS MESSAGE... THERE IS NO TSUNAMI THREAT ALTHOUGH SMALL SEA LEVEL CHANGES MAY OCCUR.

TEST... RECOMMENDED ACTIONS ...TEST

- * THIS IS A TEST MESSAGE. GOVERNMENT AGENCIES RESPONSIBLE FOR THREATENED COASTAL AREAS SHOULD TAKE ACTION TO INFORM AND INSTRUCT ANY COASTAL POPULATIONS AT RISK IN ACCORDANCE WITH THEIR OWN EVALUATION... PROCEDURES AND THE LEVEL OF THREAT.
- * THIS IS A TEST MESSAGE. PERSONS LOCATED IN THREATENED COASTAL AREAS SHOULD STAY ALERT FOR INFORMATION AND FOLLOW INSTRUCTIONS FROM NATIONAL AND LOCAL AUTHORITIES.

TEST... ESTIMATED TIMES OF ARRIVAL ...TEST

- * THIS IS A TEST MESSAGE. ESTIMATED TIMES OF ARRIVAL -ETA- OF THE INITIAL TSUNAMI WAVE FOR PLACES WITHIN THREATENED REGIONS ARE GIVEN BELOW. ACTUAL ARRIVAL TIMES MAY DIFFER AND THE INITIAL WAVE MAY NOT BE THE LARGEST. A TSUNAMI IS A SERIES OF WAVES AND THE TIME BETWEEN WAVES CAN BE FIVE MINUTES TO ONE HOUR.

LOCATION	REGION	COORDINATES	ETA (UTC)
NUEVA GERONA	CUBA	21.9N 82.8W	1910 03/19
PUERTO CABEZAS	NICARAGUA	14.0N 83.4W	2032 03/19

TEST... POTENTIAL IMPACTS ...TEST

- * THIS IS A TEST MESSAGE. A TSUNAMI IS A SERIES OF WAVES. THE TIME BETWEEN WAVE CRESTS CAN VARY FROM 5 MINUTES TO AN HOUR. THE HAZARD MAY PERSIST FOR MANY HOURS OR LONGER AFTER THE INITIAL WAVE.
- * THIS IS A TEST MESSAGE. IMPACTS CAN VARY SIGNIFICANTLY FROM ONE SECTION OF COAST TO THE NEXT DUE TO LOCAL BATHYMETRY AND THE SHAPE AND ELEVATION OF THE SHORELINE.
- * THIS IS A TEST MESSAGE. IMPACTS CAN ALSO VARY DEPENDING UPON THE STATE OF THE TIDE AT THE TIME OF THE MAXIMUM TSUNAMI WAVES.
- * THIS IS A TEST MESSAGE. PERSONS CAUGHT IN THE WATER OF A TSUNAMI MAY DROWN... BE CRUSHED BY DEBRIS IN THE WATER... OR BE SWEEPED OUT TO SEA.

TEST... TSUNAMI OBSERVATIONS ...TEST

- * THIS IS A TEST MESSAGE. THE FOLLOWING ARE TSUNAMI WAVE OBSERVATIONS FROM COASTAL AND/OR DEEP-OCEAN SEA LEVEL GAUGES AT THE INDICATED LOCATIONS. THE MAXIMUM TSUNAMI HEIGHT IS MEASURED WITH RESPECT TO THE NORMAL TIDE LEVEL.

GAUGE LOCATION	GAUGE COORDINATES		TIME OF MEASURE (UTC)	MAXIMUM TSUNAMI HEIGHT	WAVE PERIOD (MIN)
	LAT	LON			
WRIGHT BEACH NC	34.2N	77.8W	1901	0.09M/ 0.3FT	18
GANTERS BAY ST LUCI	14.0N	61.0W	1701	0.28M/ 0.9FT	28
PRICKLEY BAY GD	12.0N	61.8W	1700	0.16M/ 0.5FT	20
LE ROBERT MARTINIQU	14.7N	60.9W	1659	0.12M/ 0.4FT	22
CALLIAQUA VC	13.1N	61.2W	1648	0.33M/ 1.1FT	26
BLOWING POINT AI	18.2N	63.1W	1643	0.25M/ 0.8FT	22
POINT A PITRE GP	16.2N	61.5W	1639	0.13M/ 0.4FT	28
DESIRADE GUADELOUPE	16.3N	61.1W	1645	0.10M/ 0.3FT	18
FORT DE FRANCE MQ	14.6N	61.1W	1639	0.31M/ 1.0FT	14
SAINT MARTIN FR	18.1N	63.1W	1635	0.17M/ 0.6FT	18
ISLA MUJERES MX	21.3N	86.7W	1634	0.25M/ 0.8FT	24
CULEBRA IS PR	18.3N	65.3W	1635	0.09M/ 0.3FT	26
LE PRECHEUR MARTINI	14.8N	61.2W	1635	0.20M/ 0.7FT	22
ROSEAU DM	15.3N	61.4W	1631	0.23M/ 0.8FT	22
PORTSMOUTH DM	15.6N	61.5W	1631	0.30M/ 1.0FT	26
LAMESHURBAYSTJOHNVI	18.3N	64.7W	1628	0.17M/ 0.6FT	16
DESHAIES GUADELOUPE	16.3N	61.8W	1627	0.22M/ 0.7FT	22
LIMON CR	10.0N	83.0W	1626	0.89M/ 2.9FT	26

CEIBA CABOTAGE HN	15.8N	86.8W	1625	0.13M/	0.4FT	22
SAPZURRO CO	8.7N	77.4W	1617	0.69M/	2.3FT	18
BASSETERRE KN	17.3N	62.7W	1620	0.17M/	0.6FT	28
CARRIE BOW CAY BZ	16.8N	88.1W	1617	0.17M/	0.5FT	24
PUERTO CORTES HN	15.8N	88.0W	1610	0.18M/	0.6FT	14
SIAN KAAH MX	19.3N	87.4W	1612	0.21M/	0.7FT	26
EL PORVENIR PA	9.6N	78.9W	1607	1.18M/	3.9FT	28
PUERTO MORELOS MX	20.9N	86.9W	1603	0.25M/	0.8FT	28
PUERTO MORELOS MX	20.9N	86.9W	1601	0.25M/	0.8FT	22
PUERTO MORELOS MX	20.9N	86.9W	1603	0.25M/	0.8FT	16
SAN ANDRES CO	12.6N	81.7W	1556	0.57M/	1.9FT	28
SAN JUAN PR	18.5N	66.1W	1558	0.07M/	0.2FT	22
ESPERANZA VIEQUES P	18.1N	65.5W	1558	0.25M/	0.8FT	28
ARECIBO PR	18.5N	66.7W	1551	0.10M/	0.3FT	16
LIMETREE VI	17.7N	64.8W	1552	0.23M/	0.8FT	18
ST CROIX VI	17.7N	64.7W	1549	0.15M/	0.5FT	20
ISLA NAVAL CO	10.2N	75.8W	1547	0.73M/	2.4FT	24
ROATAN ISLAND HN	16.3N	86.5W	1552	0.15M/	0.5FT	26
YABUCOA PR	18.1N	65.8W	1544	0.28M/	0.9FT	18
BULLEN BAY CURACAO	12.2N	69.0W	1547	0.39M/	1.3FT	26
MAGUEYES ISLAND PR	18.0N	67.0W	1541	0.29M/	1.0FT	26
MAYAGUEZ PR	18.2N	67.2W	1547	0.29M/	1.0FT	26
SANTA MARTA CO	11.2N	74.2W	1537	0.72M/	2.4FT	20
PUNTA CANA DO	18.5N	68.4W	1539	0.23M/	0.7FT	22
MONA ISLAND PR	18.1N	67.9W	1529	0.29M/	0.9FT	22
DART 42407	15.3N	68.2W	1524	0.03M/	0.1FT	16
GRAND TURK ISLAND T	21.4N	71.1W	1521	0.18M/	0.6FT	24
PUERTO PLATA DO	19.8N	70.7W	1518	0.19M/	0.6FT	14
BARAHONA DO	18.2N	71.1W	1516	0.52M/	1.7FT	20
GEORGE TOWN CY	19.3N	81.4W	1505	0.32M/	1.1FT	24
CAP HAITIEN HT	19.8N	72.2W	1504	0.46M/	1.5FT	22
PORT ROYAL JM	17.9N	76.8W	1456	2.08M/	6.8FT	16

TEST... NEXT UPDATE AND ADDITIONAL INFORMATION ...TEST

-
- * THIS IS A TEST MESSAGE. THE NEXT MESSAGE WILL BE ISSUED IN ONE HOUR... OR SOONER IF THE SITUATION WARRANTS.
 - * THIS IS A TEST MESSAGE. AUTHORITATIVE INFORMATION ABOUT THE EARTHQUAKE FROM THE U.S. GEOLOGICAL SURVEY CAN BE FOUND ON THE INTERNET AT EARTHQUAKE.USGS.GOV/EARTHQUAKES -ALL IN LOWERCASE LETTERS-.
 - * THIS IS A TEST MESSAGE. FURTHER INFORMATION ABOUT THIS EVENT MAY BE FOUND AT WWW.TSUNAMI.GOV.
 - * THIS IS A TEST MESSAGE. COASTAL REGIONS OF THE US GULF COAST... US EAST COAST... AND THE MARITIME PROVINCES OF CANADA SHOULD REFER TO U.S. NATIONAL TSUNAMI WARNING CENTER MESSAGES THAT CAN BE FOUND AT WWW.TSUNAMI.GOV.

THIS IS A TEST MESSAGE. DO NOT TAKE ACTION BASED ON THIS TEST MESSAGE.

\$\$

NNNN

PTWC Message #10

ZCZC
WECA41 PHEB 192100
TSUCAX

TEST...TSUNAMI MESSAGE NUMBER 10...TEST
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
2100 UTC THU MAR 19 2020

...THIS MESSAGE IS FOR TEST PURPOSES ONLY...
...TEST TSUNAMI THREAT MESSAGE TEST...

**** NOTICE **** NOTICE **** NOTICE **** NOTICE **** NOTICE ****

THIS IS A TEST MESSAGE. THIS MESSAGE IS ISSUED FOR INFORMATION
ONLY IN SUPPORT OF THE UNESCO/IOC TSUNAMI AND OTHER COASTAL
HAZARDS WARNING SYSTEM FOR THE CARIBBEAN AND ADJACENT REGIONS
AND IS MEANT FOR NATIONAL AUTHORITIES IN EACH COUNTRY OF THAT
SYSTEM.

THIS IS A TEST MESSAGE. NATIONAL AUTHORITIES WILL DETERMINE THE
APPROPRIATE LEVEL OF ALERT FOR EACH COUNTRY AND MAY ISSUE
ADDITIONAL OR MORE REFINED INFORMATION.

**** NOTICE **** NOTICE **** NOTICE **** NOTICE **** NOTICE ****

TEST... PRELIMINARY EARTHQUAKE PARAMETERS ...TEST

* MAGNITUDE	8.0
* ORIGIN TIME	1400 UTC MAR 19 2020
* COORDINATES	18.2 NORTH 75.4 WEST
* DEPTH	25 KM / 16 MILES
* LOCATION	JAMAICA REGION

TEST... EVALUATION ...TEST

* THIS IS A TEST MESSAGE. AN EARTHQUAKE WITH A PRELIMINARY
MAGNITUDE OF 8.0 OCCURRED IN THE JAMAICA REGION AT 1400 UTC
ON THURSDAY MARCH 19 2020.

* THIS IS A TEST MESSAGE. TSUNAMI WAVES HAVE BEEN OBSERVED.

* THIS IS A TEST MESSAGE. BASED ON ALL AVAILABLE DATA...
HAZARDOUS TSUNAMI WAVES ARE FORECAST FOR SOME COASTS.

TEST... TSUNAMI THREAT FORECAST ...TEST

- * THIS IS A TEST MESSAGE. TSUNAMI WAVES REACHING MORE THAN 3 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE ALONG SOME COASTS OF

CUBA... HAITI... AND JAMAICA.

- * THIS IS A TEST MESSAGE. TSUNAMI WAVES REACHING 1 TO 3 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE ALONG SOME COASTS OF

COLOMBIA... COSTA RICA... PANAMA... AND BAHAMAS.

- * THIS IS A TEST MESSAGE. TSUNAMI WAVES REACHING 0.3 TO 1 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE FOR SOME COASTS OF

DOMINICAN REPUBLIC... MEXICO... NICARAGUA... VENEZUELA...
ARUBA... BONAIRE... CAYMAN ISLANDS... CURACAO...
DOMINICA... MARTINIQUE... PUERTO RICO AND VIRGIN
ISLANDS... SAINT KITTS AND NEVIS... SAINT LUCIA... SAINT
VINCENT AND THE GRENADINES... SAN ANDRES AND
PROVIDENCIA... AND TURKS AND CAICOS ISLANDS.

- * THIS IS A TEST MESSAGE. ACTUAL AMPLITUDES AT THE COAST MAY VARY FROM FORECAST AMPLITUDES DUE TO UNCERTAINTIES IN THE FORECAST AND LOCAL FEATURES. IN PARTICULAR MAXIMUM TSUNAMI AMPLITUDES ON ATOLLS OR SMALL ISLANDS AND AT LOCATIONS WITH FRINGING OR BARRIER REEFS WILL LIKELY BE MUCH SMALLER THAN THE FORECAST INDICATES.

- * THIS IS A TEST MESSAGE. FOR ALL OTHER AREAS COVERED BY THIS MESSAGE... THERE IS NO TSUNAMI THREAT ALTHOUGH SMALL SEA LEVEL CHANGES MAY OCCUR.

TEST... RECOMMENDED ACTIONS ...TEST

- * THIS IS A TEST MESSAGE. GOVERNMENT AGENCIES RESPONSIBLE FOR THREATENED COASTAL AREAS SHOULD TAKE ACTION TO INFORM AND INSTRUCT ANY COASTAL POPULATIONS AT RISK IN ACCORDANCE WITH THEIR OWN EVALUATION... PROCEDURES AND THE LEVEL OF THREAT.
- * THIS IS A TEST MESSAGE. PERSONS LOCATED IN THREATENED COASTAL AREAS SHOULD STAY ALERT FOR INFORMATION AND FOLLOW INSTRUCTIONS FROM NATIONAL AND LOCAL AUTHORITIES.

TEST... ESTIMATED TIMES OF ARRIVAL ...TEST

- * THIS IS A TEST MESSAGE. ESTIMATED TIMES OF ARRIVAL -ETA- OF THE INITIAL TSUNAMI WAVE FOR PLACES WITHIN THREATENED REGIONS ARE GIVEN BELOW. ACTUAL ARRIVAL TIMES MAY DIFFER AND THE INITIAL WAVE MAY NOT BE THE LARGEST. A TSUNAMI IS A SERIES OF WAVES AND THE TIME BETWEEN WAVES CAN BE FIVE MINUTES TO ONE HOUR.

LOCATION	REGION	COORDINATES	ETA (UTC)
-----	-----	-----	-----
PUERTO CABEZAS	NICARAGUA	14.0N 83.4W	2032 03/19

TEST... POTENTIAL IMPACTS ...TEST

-
- * THIS IS A TEST MESSAGE. A TSUNAMI IS A SERIES OF WAVES. THE TIME BETWEEN WAVE CRESTS CAN VARY FROM 5 MINUTES TO AN HOUR. THE HAZARD MAY PERSIST FOR MANY HOURS OR LONGER AFTER THE INITIAL WAVE.
 - * THIS IS A TEST MESSAGE. IMPACTS CAN VARY SIGNIFICANTLY FROM ONE SECTION OF COAST TO THE NEXT DUE TO LOCAL BATHYMETRY AND THE SHAPE AND ELEVATION OF THE SHORELINE.
 - * THIS IS A TEST MESSAGE. IMPACTS CAN ALSO VARY DEPENDING UPON THE STATE OF THE TIDE AT THE TIME OF THE MAXIMUM TSUNAMI WAVES.
 - * THIS IS A TEST MESSAGE. PERSONS CAUGHT IN THE WATER OF A TSUNAMI MAY DROWN... BE CRUSHED BY DEBRIS IN THE WATER... OR BE SWEEPED OUT TO SEA.

TEST... TSUNAMI OBSERVATIONS ...TEST

-
- * THIS IS A TEST MESSAGE. THE FOLLOWING ARE TSUNAMI WAVE OBSERVATIONS FROM COASTAL AND/OR DEEP-OCEAN SEA LEVEL GAUGES AT THE INDICATED LOCATIONS. THE MAXIMUM TSUNAMI HEIGHT IS MEASURED WITH RESPECT TO THE NORMAL TIDE LEVEL.

GAUGE LOCATION	GAUGE COORDINATES		TIME OF MEASURE (UTC)	MAXIMUM TSUNAMI HEIGHT	WAVE PERIOD (MIN)
	LAT	LON			
-----	-----	-----	-----	-----	-----
WRIGHT BEACH NC	34.2N	77.8W	1901	0.09M/ 0.3FT	18
GANTERS BAY ST LUCI	14.0N	61.0W	1701	0.28M/ 0.9FT	28
PRICKLEY BAY GD	12.0N	61.8W	1700	0.16M/ 0.5FT	20
LE ROBERT MARTINIQU	14.7N	60.9W	1659	0.12M/ 0.4FT	22
CALLIAQUA VC	13.1N	61.2W	1648	0.33M/ 1.1FT	26
BLOWING POINT AI	18.2N	63.1W	1643	0.25M/ 0.8FT	22
POINT A PITRE GP	16.2N	61.5W	1639	0.13M/ 0.4FT	28
DESIRADE GUADELOUPE	16.3N	61.1W	1645	0.10M/ 0.3FT	18
FORT DE FRANCE MQ	14.6N	61.1W	1639	0.31M/ 1.0FT	14
SAINT MARTIN FR	18.1N	63.1W	1635	0.17M/ 0.6FT	18
ISLA MUJERES MX	21.3N	86.7W	1634	0.25M/ 0.8FT	24
CULEBRA IS PR	18.3N	65.3W	1635	0.09M/ 0.3FT	26
LE PRECHEUR MARTINI	14.8N	61.2W	1635	0.20M/ 0.7FT	22
ROSEAU DM	15.3N	61.4W	1631	0.23M/ 0.8FT	22
PORTSMOUTH DM	15.6N	61.5W	1631	0.30M/ 1.0FT	26
LAMESHURBAYSTJOHNVI	18.3N	64.7W	1628	0.17M/ 0.6FT	16
DESHAIES GUADELOUPE	16.3N	61.8W	1627	0.22M/ 0.7FT	22
LIMON CR	10.0N	83.0W	1626	0.89M/ 2.9FT	26
CEIBA CABOTAGE HN	15.8N	86.8W	1625	0.13M/ 0.4FT	22

SAPZURRO CO	8.7N	77.4W	1617	0.69M/	2.3FT	18
BASSETERRE KN	17.3N	62.7W	1620	0.17M/	0.6FT	28
CARRIE BOW CAY BZ	16.8N	88.1W	1617	0.17M/	0.5FT	24
PUERTO CORTES HN	15.8N	88.0W	1610	0.18M/	0.6FT	14
SIAN KAAAN MX	19.3N	87.4W	1612	0.21M/	0.7FT	26
EL PORVENIR PA	9.6N	78.9W	1607	1.18M/	3.9FT	28
PUERTO MORELOS MX	20.9N	86.9W	1603	0.25M/	0.8FT	28
PUERTO MORELOS MX	20.9N	86.9W	1601	0.25M/	0.8FT	22
PUERTO MORELOS MX	20.9N	86.9W	1603	0.25M/	0.8FT	16
SAN ANDRES CO	12.6N	81.7W	1556	0.57M/	1.9FT	28
SAN JUAN PR	18.5N	66.1W	1558	0.07M/	0.2FT	22
ESPERANZA VIEQUES P	18.1N	65.5W	1558	0.25M/	0.8FT	28
ARECIBO PR	18.5N	66.7W	1551	0.10M/	0.3FT	16
LIMETREE VI	17.7N	64.8W	1552	0.23M/	0.8FT	18
ST CROIX VI	17.7N	64.7W	1549	0.15M/	0.5FT	20
ISLA NAVAL CO	10.2N	75.8W	1547	0.73M/	2.4FT	24
ROATAN ISLAND HN	16.3N	86.5W	1552	0.15M/	0.5FT	26
YABUCOA PR	18.1N	65.8W	1544	0.28M/	0.9FT	18
BULLEN BAY CURACAO	12.2N	69.0W	1547	0.39M/	1.3FT	26
MAGUEYES ISLAND PR	18.0N	67.0W	1541	0.29M/	1.0FT	26
MAYAGUEZ PR	18.2N	67.2W	1547	0.29M/	1.0FT	26
SANTA MARTA CO	11.2N	74.2W	1537	0.72M/	2.4FT	20
PUNTA CANA DO	18.5N	68.4W	1539	0.23M/	0.7FT	22
MONA ISLAND PR	18.1N	67.9W	1529	0.29M/	0.9FT	22
DART 42407	15.3N	68.2W	1524	0.03M/	0.1FT	16
GRAND TURK ISLAND T	21.4N	71.1W	1521	0.18M/	0.6FT	24
PUERTO PLATA DO	19.8N	70.7W	1518	0.19M/	0.6FT	14
BARAHONA DO	18.2N	71.1W	1516	0.52M/	1.7FT	20
GEORGE TOWN CY	19.3N	81.4W	1505	0.32M/	1.1FT	24
CAP HAITIEN HT	19.8N	72.2W	1504	0.46M/	1.5FT	22
PORT ROYAL JM	17.9N	76.8W	1456	2.08M/	6.8FT	16

TEST... NEXT UPDATE AND ADDITIONAL INFORMATION ...TEST

-
- * THIS IS A TEST MESSAGE. THE NEXT MESSAGE WILL BE ISSUED IN ONE HOUR... OR SOONER IF THE SITUATION WARRANTS.
 - * THIS IS A TEST MESSAGE. AUTHORITATIVE INFORMATION ABOUT THE EARTHQUAKE FROM THE U.S. GEOLOGICAL SURVEY CAN BE FOUND ON THE INTERNET AT EARTHQUAKE.USGS.GOV/EARTHQUAKES -ALL IN LOWERCASE LETTERS-.
 - * THIS IS A TEST MESSAGE. FURTHER INFORMATION ABOUT THIS EVENT MAY BE FOUND AT WWW.TSUNAMI.GOV.
 - * THIS IS A TEST MESSAGE. COASTAL REGIONS OF THE US GULF COAST... US EAST COAST... AND THE MARITIME PROVINCES OF CANADA SHOULD REFER TO U.S. NATIONAL TSUNAMI WARNING CENTER MESSAGES THAT CAN BE FOUND AT WWW.TSUNAMI.GOV.

THIS IS A TEST MESSAGE. DO NOT TAKE ACTION BASED ON THIS TEST MESSAGE.

\$\$

NNNN

PTWC Message #11

ZCZC
WECA41 PHEB 192200
TSUCAX

TEST...TSUNAMI MESSAGE NUMBER 11...TEST
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
2200 UTC THU MAR 19 2020

...THIS MESSAGE IS FOR TEST PURPOSES ONLY...
...TEST TSUNAMI THREAT MESSAGE TEST...

**** NOTICE **** NOTICE **** NOTICE **** NOTICE **** NOTICE ****

THIS IS A TEST MESSAGE. THIS MESSAGE IS ISSUED FOR INFORMATION
ONLY IN SUPPORT OF THE UNESCO/IOC TSUNAMI AND OTHER COASTAL
HAZARDS WARNING SYSTEM FOR THE CARIBBEAN AND ADJACENT REGIONS
AND IS MEANT FOR NATIONAL AUTHORITIES IN EACH COUNTRY OF THAT
SYSTEM.

THIS IS A TEST MESSAGE. NATIONAL AUTHORITIES WILL DETERMINE THE
APPROPRIATE LEVEL OF ALERT FOR EACH COUNTRY AND MAY ISSUE
ADDITIONAL OR MORE REFINED INFORMATION.

**** NOTICE **** NOTICE **** NOTICE **** NOTICE **** NOTICE ****

TEST... PRELIMINARY EARTHQUAKE PARAMETERS ...TEST

* MAGNITUDE 8.0
* ORIGIN TIME 1400 UTC MAR 19 2020
* COORDINATES 18.2 NORTH 75.4 WEST
* DEPTH 25 KM / 16 MILES
* LOCATION JAMAICA REGION

TEST... EVALUATION ...TEST

* THIS IS A TEST MESSAGE. AN EARTHQUAKE WITH A PRELIMINARY
MAGNITUDE OF 8.0 OCCURRED IN THE JAMAICA REGION AT 1400 UTC
ON THURSDAY MARCH 19 2020.

* THIS IS A TEST MESSAGE. TSUNAMI WAVES HAVE BEEN OBSERVED.

* THIS IS A TEST MESSAGE. BASED ON ALL AVAILABLE DATA...
HAZARDOUS TSUNAMI WAVES ARE FORECAST FOR SOME COASTS.

TEST... TSUNAMI THREAT FORECAST ...TEST

- * THIS IS A TEST MESSAGE. TSUNAMI WAVES REACHING MORE THAN 3 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE ALONG SOME COASTS OF

CUBA... HAITI... AND JAMAICA.

- * THIS IS A TEST MESSAGE. TSUNAMI WAVES REACHING 1 TO 3 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE ALONG SOME COASTS OF

COLOMBIA... COSTA RICA... PANAMA... AND BAHAMAS.

- * THIS IS A TEST MESSAGE. TSUNAMI WAVES REACHING 0.3 TO 1 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE FOR SOME COASTS OF

DOMINICAN REPUBLIC... MEXICO... NICARAGUA... VENEZUELA...
ARUBA... BONAIRE... CAYMAN ISLANDS... CURACAO...
DOMINICA... MARTINIQUE... PUERTO RICO AND VIRGIN
ISLANDS... SAINT KITTS AND NEVIS... SAINT LUCIA... SAINT
VINCENT AND THE GRENADINES... SAN ANDRES AND
PROVIDENCIA... AND TURKS AND CAICOS ISLANDS.

- * THIS IS A TEST MESSAGE. ACTUAL AMPLITUDES AT THE COAST MAY VARY FROM FORECAST AMPLITUDES DUE TO UNCERTAINTIES IN THE FORECAST AND LOCAL FEATURES. IN PARTICULAR MAXIMUM TSUNAMI AMPLITUDES ON ATOLLS OR SMALL ISLANDS AND AT LOCATIONS WITH FRINGING OR BARRIER REEFS WILL LIKELY BE MUCH SMALLER THAN THE FORECAST INDICATES.

- * THIS IS A TEST MESSAGE. FOR ALL OTHER AREAS COVERED BY THIS MESSAGE... THERE IS NO TSUNAMI THREAT ALTHOUGH SMALL SEA LEVEL CHANGES MAY OCCUR.

TEST... RECOMMENDED ACTIONS ...TEST

- * THIS IS A TEST MESSAGE. GOVERNMENT AGENCIES RESPONSIBLE FOR THREATENED COASTAL AREAS SHOULD TAKE ACTION TO INFORM AND INSTRUCT ANY COASTAL POPULATIONS AT RISK IN ACCORDANCE WITH THEIR OWN EVALUATION... PROCEDURES AND THE LEVEL OF THREAT.
- * THIS IS A TEST MESSAGE. PERSONS LOCATED IN THREATENED COASTAL AREAS SHOULD STAY ALERT FOR INFORMATION AND FOLLOW INSTRUCTIONS FROM NATIONAL AND LOCAL AUTHORITIES.

TEST... POTENTIAL IMPACTS ...TEST

- * THIS IS A TEST MESSAGE. A TSUNAMI IS A SERIES OF WAVES. THE TIME BETWEEN WAVE CRESTS CAN VARY FROM 5 MINUTES TO AN HOUR. THE HAZARD MAY PERSIST FOR MANY HOURS OR LONGER AFTER THE INITIAL WAVE.
- * THIS IS A TEST MESSAGE. IMPACTS CAN VARY SIGNIFICANTLY FROM

ONE SECTION OF COAST TO THE NEXT DUE TO LOCAL BATHYMETRY AND THE SHAPE AND ELEVATION OF THE SHORELINE.

* THIS IS A TEST MESSAGE. IMPACTS CAN ALSO VARY DEPENDING UPON THE STATE OF THE TIDE AT THE TIME OF THE MAXIMUM TSUNAMI WAVES.

* THIS IS A TEST MESSAGE. PERSONS CAUGHT IN THE WATER OF A TSUNAMI MAY DROWN... BE CRUSHED BY DEBRIS IN THE WATER... OR BE SWEEPED OUT TO SEA.

TEST... TSUNAMI OBSERVATIONS ...TEST

* THIS IS A TEST MESSAGE. THE FOLLOWING ARE TSUNAMI WAVE OBSERVATIONS FROM COASTAL AND/OR DEEP-OCEAN SEA LEVEL GAUGES AT THE INDICATED LOCATIONS. THE MAXIMUM TSUNAMI HEIGHT IS MEASURED WITH RESPECT TO THE NORMAL TIDE LEVEL.

GAUGE LOCATION	GAUGE COORDINATES		TIME OF MEASURE (UTC)	MAXIMUM TSUNAMI HEIGHT	WAVE PERIOD (MIN)
	LAT	LON			
WRIGHT BEACH NC	34.2N	77.8W	1901	0.09M/ 0.3FT	18
GANTERS BAY ST LUCI	14.0N	61.0W	1701	0.28M/ 0.9FT	28
PRICKLEY BAY GD	12.0N	61.8W	1700	0.16M/ 0.5FT	20
LE ROBERT MARTINIQU	14.7N	60.9W	1659	0.12M/ 0.4FT	22
CALLIAQUA VC	13.1N	61.2W	1648	0.33M/ 1.1FT	26
BLOWING POINT AI	18.2N	63.1W	1643	0.25M/ 0.8FT	22
POINT A PITRE GP	16.2N	61.5W	1639	0.13M/ 0.4FT	28
DESIRADE GUADELOUPE	16.3N	61.1W	1645	0.10M/ 0.3FT	18
FORT DE FRANCE MQ	14.6N	61.1W	1639	0.31M/ 1.0FT	14
SAINT MARTIN FR	18.1N	63.1W	1635	0.17M/ 0.6FT	18
ISLA MUJERES MX	21.3N	86.7W	1634	0.25M/ 0.8FT	24
CULEBRA IS PR	18.3N	65.3W	1635	0.09M/ 0.3FT	26
LE PRECHEUR MARTINI	14.8N	61.2W	1635	0.20M/ 0.7FT	22
ROSEAU DM	15.3N	61.4W	1631	0.23M/ 0.8FT	22
PORTSMOUTH DM	15.6N	61.5W	1631	0.30M/ 1.0FT	26
LAMESHURBAYSTJOHNVI	18.3N	64.7W	1628	0.17M/ 0.6FT	16
DESHAIES GUADELOUPE	16.3N	61.8W	1627	0.22M/ 0.7FT	22
LIMON CR	10.0N	83.0W	1626	0.89M/ 2.9FT	26
CEIBA CABOTAGE HN	15.8N	86.8W	1625	0.13M/ 0.4FT	22
SAPZURRO CO	8.7N	77.4W	1617	0.69M/ 2.3FT	18
BASSETERRE KN	17.3N	62.7W	1620	0.17M/ 0.6FT	28
CARRIE BOW CAY BZ	16.8N	88.1W	1617	0.17M/ 0.5FT	24
PUERTO CORTES HN	15.8N	88.0W	1610	0.18M/ 0.6FT	14
SIAN KAN MX	19.3N	87.4W	1612	0.21M/ 0.7FT	26
EL PORVENIR PA	9.6N	78.9W	1607	1.18M/ 3.9FT	28
PUERTO MORELOS MX	20.9N	86.9W	1603	0.25M/ 0.8FT	28
PUERTO MORELOS MX	20.9N	86.9W	1601	0.25M/ 0.8FT	22
PUERTO MORELOS MX	20.9N	86.9W	1603	0.25M/ 0.8FT	16
SAN ANDRES CO	12.6N	81.7W	1556	0.57M/ 1.9FT	28
SAN JUAN PR	18.5N	66.1W	1558	0.07M/ 0.2FT	22
ESPERANZA VIEQUES P	18.1N	65.5W	1558	0.25M/ 0.8FT	28
ARECIBO PR	18.5N	66.7W	1551	0.10M/ 0.3FT	16
LIMETREE VI	17.7N	64.8W	1552	0.23M/ 0.8FT	18
ST CROIX VI	17.7N	64.7W	1549	0.15M/ 0.5FT	20

ISLA NAVAL CO	10.2N	75.8W	1547	0.73M/	2.4FT	24
ROATAN ISLAND HN	16.3N	86.5W	1552	0.15M/	0.5FT	26
YABUCOA PR	18.1N	65.8W	1544	0.28M/	0.9FT	18
BULLEN BAY CURACAO	12.2N	69.0W	1547	0.39M/	1.3FT	26
MAGUEYES ISLAND PR	18.0N	67.0W	1541	0.29M/	1.0FT	26
MAYAGUEZ PR	18.2N	67.2W	1547	0.29M/	1.0FT	26
SANTA MARTA CO	11.2N	74.2W	1537	0.72M/	2.4FT	20
PUNTA CANA DO	18.5N	68.4W	1539	0.23M/	0.7FT	22
MONA ISLAND PR	18.1N	67.9W	1529	0.29M/	0.9FT	22
DART 42407	15.3N	68.2W	1524	0.03M/	0.1FT	16
GRAND TURK ISLAND T	21.4N	71.1W	1521	0.18M/	0.6FT	24
PUERTO PLATA DO	19.8N	70.7W	1518	0.19M/	0.6FT	14
BARAHONA DO	18.2N	71.1W	1516	0.52M/	1.7FT	20
GEORGE TOWN CY	19.3N	81.4W	1505	0.32M/	1.1FT	24
CAP HAITIEN HT	19.8N	72.2W	1504	0.46M/	1.5FT	22
PORT ROYAL JM	17.9N	76.8W	1456	2.08M/	6.8FT	16

TEST... NEXT UPDATE AND ADDITIONAL INFORMATION ...TEST

-
- * THIS IS A TEST MESSAGE. THE NEXT MESSAGE WILL BE ISSUED IN ONE HOUR... OR SOONER IF THE SITUATION WARRANTS.
 - * THIS IS A TEST MESSAGE. AUTHORITATIVE INFORMATION ABOUT THE EARTHQUAKE FROM THE U.S. GEOLOGICAL SURVEY CAN BE FOUND ON THE INTERNET AT EARTHQUAKE.USGS.GOV/EARTHQUAKES -ALL IN LOWERCASE LETTERS-.
 - * THIS IS A TEST MESSAGE. FURTHER INFORMATION ABOUT THIS EVENT MAY BE FOUND AT WWW.TSUNAMI.GOV.
 - * THIS IS A TEST MESSAGE. COASTAL REGIONS OF THE US GULF COAST... US EAST COAST... AND THE MARITIME PROVINCES OF CANADA SHOULD REFER TO U.S. NATIONAL TSUNAMI WARNING CENTER MESSAGES THAT CAN BE FOUND AT WWW.TSUNAMI.GOV.

THIS IS A TEST MESSAGE. DO NOT TAKE ACTION BASED ON THIS TEST MESSAGE.

\$\$

NNNN

PTWC Message #12

ZCZC
WECA41 PHEB 192300
TSUCAX

TEST...TSUNAMI MESSAGE NUMBER 12...TEST
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
2300 UTC THU MAR 19 2020

...THIS MESSAGE IS FOR TEST PURPOSES ONLY...
...TEST FINAL TSUNAMI THREAT MESSAGE TEST...

**** NOTICE **** NOTICE **** NOTICE **** NOTICE **** NOTICE ****

THIS IS A TEST MESSAGE. THIS MESSAGE IS ISSUED FOR INFORMATION ONLY IN SUPPORT OF THE UNESCO/IOC TSUNAMI AND OTHER COASTAL HAZARDS WARNING SYSTEM FOR THE CARIBBEAN AND ADJACENT REGIONS AND IS MEANT FOR NATIONAL AUTHORITIES IN EACH COUNTRY OF THAT SYSTEM.

THIS IS A TEST MESSAGE. NATIONAL AUTHORITIES WILL DETERMINE THE APPROPRIATE LEVEL OF ALERT FOR EACH COUNTRY AND MAY ISSUE ADDITIONAL OR MORE REFINED INFORMATION.

**** NOTICE **** NOTICE **** NOTICE **** NOTICE **** NOTICE ****

TEST... PRELIMINARY EARTHQUAKE PARAMETERS ...TEST

* MAGNITUDE	8.0
* ORIGIN TIME	1400 UTC MAR 19 2020
* COORDINATES	18.2 NORTH 75.4 WEST
* DEPTH	25 KM / 16 MILES
* LOCATION	JAMAICA REGION

TEST... EVALUATION ...TEST

* THIS IS A TEST MESSAGE. AN EARTHQUAKE WITH A PRELIMINARY MAGNITUDE OF 8.0 OCCURRED IN THE JAMAICA REGION AT 1400 UTC ON THURSDAY MARCH 19 2020.

* THIS IS A TEST MESSAGE. BASED ON ALL AVAILABLE DATA... THE TSUNAMI THREAT FROM THIS EARTHQUAKE HAS PASSED AND THERE IS NO FURTHER THREAT.

TEST... TSUNAMI THREAT FORECAST...UPDATED ...TEST

* THIS IS A TEST MESSAGE. THE TSUNAMI THREAT HAS NOW LARGELY PASSED.

TEST... RECOMMENDED ACTIONS ...TEST

-
- * THIS IS A TEST MESSAGE. GOVERNMENT AGENCIES RESPONSIBLE FOR ANY IMPACTED COASTAL AREAS SHOULD MONITOR CONDITIONS AT THE COAST TO DETERMINE IF AND WHEN IT IS SAFE TO RESUME NORMAL ACTIVITIES.
 - * THIS IS A TEST MESSAGE. PERSONS LOCATED NEAR IMPACTED COASTAL AREAS SHOULD STAY ALERT FOR INFORMATION AND FOLLOW INSTRUCTIONS FROM LOCAL AUTHORITIES.
 - * THIS IS A TEST MESSAGE. REMAIN OBSERVANT AND EXERCISE NORMAL CAUTION NEAR THE SEA.

TEST... POTENTIAL IMPACTS ...TEST

-
- * THIS IS A TEST MESSAGE. MINOR SEA LEVEL FLUCTUATIONS UP TO 30 CM ABOVE AND BELOW THE NORMAL TIDE MAY OCCUR IN COASTAL AREAS NEAR THE EARTHQUAKE OVER THE NEXT FEW HOURS.... AND CONTINUING FOR UP TO SEVERAL HOURS.

TEST... TSUNAMI OBSERVATIONS ...TEST

-
- * THIS IS A TEST MESSAGE. THE FOLLOWING ARE TSUNAMI WAVE OBSERVATIONS FROM COASTAL AND/OR DEEP-OCEAN SEA LEVEL GAUGES AT THE INDICATED LOCATIONS. THE MAXIMUM TSUNAMI HEIGHT IS MEASURED WITH RESPECT TO THE NORMAL TIDE LEVEL.

GAUGE LOCATION	GAUGE COORDINATES		TIME OF MEASURE (UTC)	MAXIMUM TSUNAMI HEIGHT		WAVE PERIOD (MIN)
	LAT	LON				
WRIGHT BEACH NC	34.2N	77.8W	1901	0.09M/	0.3FT	18
GANTERS BAY ST LUCI	14.0N	61.0W	1701	0.28M/	0.9FT	28
PRICKLEY BAY GD	12.0N	61.8W	1700	0.16M/	0.5FT	20
LE ROBERT MARTINIQU	14.7N	60.9W	1659	0.12M/	0.4FT	22
CALLIAQUA VC	13.1N	61.2W	1648	0.33M/	1.1FT	26
BLOWING POINT AI	18.2N	63.1W	1643	0.25M/	0.8FT	22
POINT A PITRE GP	16.2N	61.5W	1639	0.13M/	0.4FT	28
DESIKRADE GUADELOUPE	16.3N	61.1W	1645	0.10M/	0.3FT	18
FORT DE FRANCE MQ	14.6N	61.1W	1639	0.31M/	1.0FT	14
SAINT MARTIN FR	18.1N	63.1W	1635	0.17M/	0.6FT	18
ISLA MUJERES MX	21.3N	86.7W	1634	0.25M/	0.8FT	24
CULEBRA IS PR	18.3N	65.3W	1635	0.09M/	0.3FT	26
LE PRECHEUR MARTINI	14.8N	61.2W	1635	0.20M/	0.7FT	22
ROSEAU DM	15.3N	61.4W	1631	0.23M/	0.8FT	22
PORTSMOUTH DM	15.6N	61.5W	1631	0.30M/	1.0FT	26
LAMESHURBAYSTJOHNVI	18.3N	64.7W	1628	0.17M/	0.6FT	16
DESHAIES GUADELOUPE	16.3N	61.8W	1627	0.22M/	0.7FT	22
LIMON CR	10.0N	83.0W	1626	0.89M/	2.9FT	26
CEIBA CABOTAGE HN	15.8N	86.8W	1625	0.13M/	0.4FT	22
SAPZURRO CO	8.7N	77.4W	1617	0.69M/	2.3FT	18
BASSETERRE KN	17.3N	62.7W	1620	0.17M/	0.6FT	28

CARRIE BOW CAY BZ	16.8N	88.1W	1617	0.17M/	0.5FT	24
PUERTO CORTES HN	15.8N	88.0W	1610	0.18M/	0.6FT	14
SIAN KAAH MX	19.3N	87.4W	1612	0.21M/	0.7FT	26
EL PORVENIR PA	9.6N	78.9W	1607	1.18M/	3.9FT	28
PUERTO MORELOS MX	20.9N	86.9W	1603	0.25M/	0.8FT	28
PUERTO MORELOS MX	20.9N	86.9W	1601	0.25M/	0.8FT	22
PUERTO MORELOS MX	20.9N	86.9W	1603	0.25M/	0.8FT	16
SAN ANDRES CO	12.6N	81.7W	1556	0.57M/	1.9FT	28
SAN JUAN PR	18.5N	66.1W	1558	0.07M/	0.2FT	22
ESPERANZA VIEQUES P	18.1N	65.5W	1558	0.25M/	0.8FT	28
ARECIBO PR	18.5N	66.7W	1551	0.10M/	0.3FT	16
LIMETREE VI	17.7N	64.8W	1552	0.23M/	0.8FT	18
ST CROIX VI	17.7N	64.7W	1549	0.15M/	0.5FT	20
ISLA NAVAL CO	10.2N	75.8W	1547	0.73M/	2.4FT	24
ROATAN ISLAND HN	16.3N	86.5W	1552	0.15M/	0.5FT	26
YABUCOA PR	18.1N	65.8W	1544	0.28M/	0.9FT	18
BULLEN BAY CURACAO	12.2N	69.0W	1547	0.39M/	1.3FT	26
MAGUEYES ISLAND PR	18.0N	67.0W	1541	0.29M/	1.0FT	26
MAYAGUEZ PR	18.2N	67.2W	1547	0.29M/	1.0FT	26
SANTA MARTA CO	11.2N	74.2W	1537	0.72M/	2.4FT	20
PUNTA CANA DO	18.5N	68.4W	1539	0.23M/	0.7FT	22
MONA ISLAND PR	18.1N	67.9W	1529	0.29M/	0.9FT	22
DART 42407	15.3N	68.2W	1524	0.03M/	0.1FT	16
GRAND TURK ISLAND T	21.4N	71.1W	1521	0.18M/	0.6FT	24
PUERTO PLATA DO	19.8N	70.7W	1518	0.19M/	0.6FT	14
BARAHONA DO	18.2N	71.1W	1516	0.52M/	1.7FT	20
GEORGE TOWN CY	19.3N	81.4W	1505	0.32M/	1.1FT	24
CAP HAITIEN HT	19.8N	72.2W	1504	0.46M/	1.5FT	22
PORT ROYAL JM	17.9N	76.8W	1456	2.08M/	6.8FT	16

TEST... NEXT UPDATE AND ADDITIONAL INFORMATION ...TEST

- * THIS IS A TEST MESSAGE. THIS WILL BE THE FINAL STATEMENT ISSUED FOR THIS EVENT UNLESS NEW INFORMATION IS RECEIVED OR THE SITUATION CHANGES.
- * THIS IS A TEST MESSAGE. AUTHORITATIVE INFORMATION ABOUT THE EARTHQUAKE FROM THE U.S. GEOLOGICAL SURVEY CAN BE FOUND ON THE INTERNET AT EARTHQUAKE.USGS.GOV/EARTHQUAKES -ALL IN LOWERCASE LETTERS-.
- * THIS IS A TEST MESSAGE. FURTHER INFORMATION ABOUT THIS EVENT MAY BE FOUND AT WWW.TSUNAMI.GOV.
- * THIS IS A TEST MESSAGE. COASTAL REGIONS OF THE US GULF COAST... US EAST COAST... AND THE MARITIME PROVINCES OF CANADA SHOULD REFER TO U.S. NATIONAL TSUNAMI WARNING CENTER MESSAGES THAT CAN BE FOUND AT WWW.TSUNAMI.GOV.

THIS IS A TEST MESSAGE. DO NOT TAKE ACTION BASED ON THIS TEST MESSAGE.

\$\$

NNNN

Portugal Scenario

The following messages created for the Caribe Wave 20 tsunami exercise are representative of the official standard products issued by the PTWC for a magnitude 8.5 earthquake and subsequent tsunami originating 270 km off the Portugal coast. During a real event, the PTWC would also post the text products on tsunami.gov. The alerts would persist longer during a real event than is depicted in this exercise.

PTWC Message #1

ZCZC
WECA43 PHEB 191407
TIBCAX

TEST...TSUNAMI INFORMATION STATEMENT NUMBER 1...TEST
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
1407 UTC THU MAR 19 2020

...THIS MESSAGE IS FOR TEST PURPOSES ONLY...
...TEST TSUNAMI INFORMATION STATEMENT TEST...

**** NOTICE **** NOTICE **** NOTICE **** NOTICE **** NOTICE ****

THIS IS A TEST MESSAGE. THIS STATEMENT IS ISSUED FOR INFORMATION ONLY IN SUPPORT OF THE UNESCO/IOC TSUNAMI AND OTHER COASTAL HAZARDS WARNING SYSTEM FOR THE CARIBBEAN AND ADJACENT REGIONS AND IS MEANT FOR NATIONAL AUTHORITIES IN EACH COUNTRY OF THAT SYSTEM.

THIS IS A TEST MESSAGE. NATIONAL AUTHORITIES WILL DETERMINE THE APPROPRIATE LEVEL OF ALERT FOR EACH COUNTRY AND MAY ISSUE ADDITIONAL OR MORE REFINED INFORMATION.

**** NOTICE **** NOTICE **** NOTICE **** NOTICE **** NOTICE ****

TEST... PRELIMINARY EARTHQUAKE PARAMETERS ...TEST

* MAGNITUDE 8.2
* ORIGIN TIME 1400 UTC MAR 19 2020
* COORDINATES 36.0 NORTH 10.8 WEST
* DEPTH 5 KM / 3 MILES
* LOCATION AZORES-CAPE ST. VINCENT RIDGE

TEST... EVALUATION ...TEST

* THIS IS A TEST MESSAGE. AN EARTHQUAKE WITH A PRELIMINARY MAGNITUDE OF 8.2 OCCURRED NEAR THE AZORES-CAPE SAINT VINCENT RIDGE AT 1400 UTC ON THURSDAY MARCH 19 2020.

* THIS IS A TEST MESSAGE. THE TSUNAMI THREAT TO THE CARIBBEAN REGION FROM THIS EARTHQUAKE IS STILL UNDER INVESTIGATION. FURTHER INFORMATION ON THE THREAT WILL BE ISSUED AS SOON AS POSSIBLE.

TEST... RECOMMENDED ACTIONS ...TEST

* THIS IS A TEST MESSAGE. CONSIDER AND PREPARE FOR THE POSSIBILITY OF A TSUNAMI THREAT TO THE CARIBBEAN REGION FROM THIS EARTHQUAKE.

TEST... NEXT UPDATE AND ADDITIONAL INFORMATION ...TEST

- * THIS IS A TEST MESSAGE. FURTHER STATEMENTS ON THE TSUNAMI THREAT TO THE CARIBBEAN REGION FROM THIS EARTHQUAKE WILL BE ISSUED AS SOON AS INFORMATION BECOMES AVAILABLE OR IN NO MORE THAN ONE HOUR.
- * THIS IS A TEST MESSAGE. AUTHORITATIVE INFORMATION ABOUT THE EARTHQUAKE FROM THE U.S. GEOLOGICAL SURVEY CAN BE FOUND ON THE INTERNET AT EARTHQUAKE.USGS.GOV/EARTHQUAKES -ALL IN LOWERCASE LETTERS-.
- * THIS IS A TEST MESSAGE. FURTHER INFORMATION ABOUT THIS EVENT MAY BE FOUND AT WWW.TSUNAMI.GOV.
- * THIS IS A TEST MESSAGE. COASTAL REGIONS OF THE US GULF COAST... US EAST COAST... AND THE MARITIME PROVINCES OF CANADA SHOULD REFER TO U.S. NATIONAL TSUNAMI WARNING CENTER MESSAGES THAT CAN BE FOUND AT WWW.TSUNAMI.GOV.

THIS IS A TEST MESSAGE. DO NOT TAKE ACTION BASED ON THIS TEST MESSAGE.

\$\$

NNNN

PTWC Message #2

ZCZC
WECA43 PHEB 191415
TIBCAX

TEST...TSUNAMI INFORMATION STATEMENT NUMBER 2...TEST
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
1415 UTC THU MAR 19 2020

...THIS MESSAGE IS FOR TEST PURPOSES ONLY...
...TEST TSUNAMI INFORMATION STATEMENT TEST...

**** NOTICE **** NOTICE **** NOTICE **** NOTICE **** NOTICE ****

THIS IS A TEST MESSAGE. THIS STATEMENT IS ISSUED FOR INFORMATION ONLY IN SUPPORT OF THE UNESCO/IOC TSUNAMI AND OTHER COASTAL HAZARDS WARNING SYSTEM FOR THE CARIBBEAN AND ADJACENT REGIONS AND IS MEANT FOR NATIONAL AUTHORITIES IN EACH COUNTRY OF THAT SYSTEM.

THIS IS A TEST MESSAGE. NATIONAL AUTHORITIES WILL DETERMINE THE APPROPRIATE LEVEL OF ALERT FOR EACH COUNTRY AND MAY ISSUE ADDITIONAL OR MORE REFINED INFORMATION.

**** NOTICE **** NOTICE **** NOTICE **** NOTICE **** NOTICE ****

THE EARTHQUAKE MAGNITUDE IS REVISED IN THIS MESSAGE.

TEST... PRELIMINARY EARTHQUAKE PARAMETERS ...TEST

* MAGNITUDE	8.4
* ORIGIN TIME	1400 UTC MAR 19 2020
* COORDINATES	36.0 NORTH 10.8 WEST
* DEPTH	5 KM / 3 MILES
* LOCATION	AZORES-CAPE ST. VINCENT RIDGE

TEST... EVALUATION ...TEST

* THIS IS A TEST MESSAGE. AN EARTHQUAKE WITH A PRELIMINARY MAGNITUDE OF 8.4 OCCURRED NEAR THE AZORES-CAPE SAINT VINCENT RIDGE AT 1400 UTC ON THURSDAY MARCH 19 2020.

* THIS IS A TEST MESSAGE. THE TSUNAMI THREAT TO THE CARIBBEAN REGION FROM THIS EARTHQUAKE IS STILL UNDER INVESTIGATION. FURTHER INFORMATION ON THE THREAT WILL BE ISSUED AS SOON AS POSSIBLE.

TEST... RECOMMENDED ACTIONS ...TEST

* THIS IS A TEST MESSAGE. CONSIDER AND PREPARE FOR THE POSSIBILITY OF A TSUNAMI THREAT TO THE CARIBBEAN REGION FROM THIS EARTHQUAKE.

TEST... NEXT UPDATE AND ADDITIONAL INFORMATION ...TEST

-
- * THIS IS A TEST MESSAGE. FURTHER STATEMENTS ON THE TSUNAMI THREAT TO THE CARIBBEAN REGION FROM THIS EARTHQUAKE WILL BE ISSUED AS SOON AS INFORMATION BECOMES AVAILABLE OR IN NO MORE THAN ONE HOUR.
 - * THIS IS A TEST MESSAGE. AUTHORITATIVE INFORMATION ABOUT THE EARTHQUAKE FROM THE U.S. GEOLOGICAL SURVEY CAN BE FOUND ON THE INTERNET AT EARTHQUAKE.USGS.GOV/EARTHQUAKES -ALL IN LOWERCASE LETTERS-.
 - * THIS IS A TEST MESSAGE. FURTHER INFORMATION ABOUT THIS EVENT MAY BE FOUND AT WWW.TSUNAMI.GOV.
 - * THIS IS A TEST MESSAGE. COASTAL REGIONS OF THE US GULF COAST... US EAST COAST... AND THE MARITIME PROVINCES OF CANADA SHOULD REFER TO U.S. NATIONAL TSUNAMI WARNING CENTER MESSAGES THAT CAN BE FOUND AT WWW.TSUNAMI.GOV.

THIS IS A TEST MESSAGE. DO NOT TAKE ACTION BASED ON THIS TEST MESSAGE.

\$\$

NNNN

PTWC Message #3

ZCZC
WECA41 PHEB 191425
TSUCAX

TEST...TSUNAMI MESSAGE NUMBER 3...TEST
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
1425 UTC THU MAR 19 2020

...THIS MESSAGE IS FOR TEST PURPOSES ONLY...
...TEST TSUNAMI THREAT MESSAGE TEST...

**** NOTICE **** NOTICE **** NOTICE **** NOTICE **** NOTICE ****

THIS IS A TEST MESSAGE. THIS MESSAGE IS ISSUED FOR INFORMATION ONLY IN SUPPORT OF THE UNESCO/IOC TSUNAMI AND OTHER COASTAL HAZARDS WARNING SYSTEM FOR THE CARIBBEAN AND ADJACENT REGIONS AND IS MEANT FOR NATIONAL AUTHORITIES IN EACH COUNTRY OF THAT SYSTEM.

THIS IS A TEST MESSAGE. NATIONAL AUTHORITIES WILL DETERMINE THE APPROPRIATE LEVEL OF ALERT FOR EACH COUNTRY AND MAY ISSUE ADDITIONAL OR MORE REFINED INFORMATION.

**** NOTICE **** NOTICE **** NOTICE **** NOTICE **** NOTICE ****

THE EARTHQUAKE MAGNITUDE IS REVISED IN THIS MESSAGE.

FORECAST TSUNAMI AMPLITUDES ARE PROVIDED IN THIS MESSAGE.

TEST... PRELIMINARY EARTHQUAKE PARAMETERS ...TEST

* MAGNITUDE	8.5
* ORIGIN TIME	1400 UTC MAR 19 2020
* COORDINATES	36.0 NORTH 10.8 WEST
* DEPTH	5 KM / 3 MILES
* LOCATION	AZORES-CAPE ST. VINCENT RIDGE

TEST... EVALUATION ...TEST

* THIS IS A TEST MESSAGE. AN EARTHQUAKE WITH A PRELIMINARY MAGNITUDE OF 8.5 OCCURRED NEAR THE AZORES-CAPE SAINT VINCENT RIDGE AT 1400 UTC ON THURSDAY MARCH 19 2020.

* THIS IS A TEST MESSAGE. BASED ON ALL AVAILABLE DATA...
HAZARDOUS TSUNAMI WAVES ARE FORECAST FOR SOME COASTS.

TEST... TSUNAMI THREAT FORECAST...UPDATED ...TEST

* THIS IS A TEST MESSAGE. TSUNAMI WAVES REACHING MORE THAN 3 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE ALONG SOME COASTS OF

BAHAMAS.

- * THIS IS A TEST MESSAGE. TSUNAMI WAVES REACHING 1 TO 3 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE ALONG SOME COASTS OF

BRAZIL... CUBA... DOMINICAN REPUBLIC... FRENCH GUYANE...
GUYANA... HAITI... SURINAME... VENEZUELA... ANGUILLA...
ANTIGUA AND BARBUDA... BARBADOS... BERMUDA... DOMINICA...
GRENADA... GUADELOUPE... MARTINIQUE... PUERTO RICO AND
VIRGIN ISLANDS... SAINT BARTHELEMY... SAINT LUCIA... SAINT
VINCENT AND THE GRENADINES... TRINIDAD AND TOBAGO... AND
TURKS AND CAICOS ISLANDS.

- * THIS IS A TEST MESSAGE. TSUNAMI WAVES REACHING 0.3 TO 1 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE FOR SOME COASTS OF

COLOMBIA... ARUBA... BONAIRE... CURACAO... JAMAICA...
MONTSEERRAT... SABA AND SAINT EUSTATIUS... SAINT KITTS AND
NEVIS... SINT MAARTEN... AND SAINT MARTIN.

- * THIS IS A TEST MESSAGE. ACTUAL AMPLITUDES AT THE COAST MAY VARY FROM FORECAST AMPLITUDES DUE TO UNCERTAINTIES IN THE FORECAST AND LOCAL FEATURES. IN PARTICULAR MAXIMUM TSUNAMI AMPLITUDES ON ATOLLS OR SMALL ISLANDS AND AT LOCATIONS WITH FRINGING OR BARRIER REEFS WILL LIKELY BE MUCH SMALLER THAN THE FORECAST INDICATES.

- * THIS IS A TEST MESSAGE. FOR ALL OTHER AREAS COVERED BY THIS MESSAGE... THERE IS NO TSUNAMI THREAT ALTHOUGH SMALL SEA LEVEL CHANGES MAY OCCUR.

TEST... RECOMMENDED ACTIONS ...TEST

- * THIS IS A TEST MESSAGE. GOVERNMENT AGENCIES RESPONSIBLE FOR THREATENED COASTAL AREAS SHOULD TAKE ACTION TO INFORM AND INSTRUCT ANY COASTAL POPULATIONS AT RISK IN ACCORDANCE WITH THEIR OWN EVALUATION... PROCEDURES AND THE LEVEL OF THREAT.
- * THIS IS A TEST MESSAGE. PERSONS LOCATED IN THREATENED COASTAL AREAS SHOULD STAY ALERT FOR INFORMATION AND FOLLOW INSTRUCTIONS FROM NATIONAL AND LOCAL AUTHORITIES.

TEST... ESTIMATED TIMES OF ARRIVAL ...TEST

- * THIS IS A TEST MESSAGE. ESTIMATED TIMES OF ARRIVAL -ETA- OF THE INITIAL TSUNAMI WAVE FOR PLACES WITHIN THREATENED REGIONS ARE GIVEN BELOW. ACTUAL ARRIVAL TIMES MAY DIFFER AND THE INITIAL WAVE MAY NOT BE THE LARGEST. A TSUNAMI IS A SERIES OF WAVES AND THE TIME BETWEEN WAVES CAN BE FIVE MINUTES TO ONE HOUR.

LOCATION	REGION	COORDINATES	ETA(UTC)
ESSO PIER	BERMUDA	32.4N 64.7W	2051 03/19
ROSEAU	DOMINICA	15.3N 61.4W	2118 03/19
PLYMOUTH	MONTSEERRAT	16.7N 62.2W	2118 03/19
BRIDGETOWN	BARBADOS	13.1N 59.6W	2118 03/19

CASTRIES	SAINT LUCIA	14.0N	61.0W	2119	03/19
BASSE TERRE	GUADELOUPE	16.0N	61.7W	2122	03/19
SINT EUSTATIUS	SINT EUSTATIUS	17.5N	63.0W	2123	03/19
SABA	SABA	17.6N	63.2W	2124	03/19
FORT DE FRANCE	MARTINIQUE	14.6N	61.1W	2125	03/19
SAN JUAN	PUERTO RICO	18.5N	66.1W	2125	03/19
CHRISTIANSTED	US VIRGIN IS	17.7N	64.7W	2126	03/19
ANEGADA	BR VIRGIN IS	18.8N	64.3W	2126	03/19
THE VALLEY	ANGUILLA	18.3N	63.1W	2127	03/19
SAINT JOHNS	ANTIGUA	17.1N	61.9W	2127	03/19
BASSETERRE	SAINT KITTS	17.3N	62.7W	2128	03/19
PALMETTO POINT	BARBUDA	17.6N	61.9W	2128	03/19
SIMPSON BAAI	SINT MAARTEN	18.0N	63.1W	2131	03/19
KINGSTOWN	SAINT VINCENT	13.1N	61.2W	2136	03/19
MAYAGUEZ	PUERTO RICO	18.2N	67.2W	2137	03/19
CABO ENGANO	DOMINICAN REP	18.6N	68.3W	2151	03/19
GRAND TURK	TURKS N CAICOS	21.5N	71.1W	2152	03/19
PUERTO PLATA	DOMINICAN REP	19.8N	70.7W	2153	03/19
BAIE LUCAS	SAINT MARTIN	18.1N	63.0W	2153	03/19
SAINT BARTHELEM	SAINT BARTHELEMY	17.9N	62.8W	2154	03/19
BAIE GRAND CASE	SAINT MARTIN	18.1N	63.1W	2154	03/19
PIRATES BAY	TRINIDAD TOBAGO	11.3N	60.6W	2201	03/19
MAYAGUANA	BAHAMAS	22.3N	73.0W	2202	03/19
CHARLOTTE AMALI	US VIRGIN IS	18.3N	64.9W	2203	03/19
SAINT GEORGES	GRENADA	12.0N	61.8W	2203	03/19
WEST CAICOS	TURKS N CAICOS	21.7N	72.5W	2205	03/19
BAIE BLANCHE	SAINT MARTIN	18.1N	63.0W	2207	03/19
SAN SALVADOR	BAHAMAS	24.1N	74.5W	2208	03/19
CAP HAITEN	HAITI	19.8N	72.2W	2209	03/19
SANTO DOMINGO	DOMINICAN REP	18.5N	69.9W	2216	03/19
LONG ISLAND	BAHAMAS	23.3N	75.1W	2221	03/19
ONIMA	BONAIRE	12.3N	68.3W	2223	03/19
GREAT INAGUA	BAHAMAS	20.9N	73.7W	2223	03/19
EXUMA	BAHAMAS	23.6N	75.9W	2224	03/19
CAT ISLAND	BAHAMAS	24.4N	75.5W	2224	03/19
BARACOA	CUBA	20.4N	74.5W	2227	03/19
ELEUTHERA ISLAN	BAHAMAS	25.2N	76.1W	2229	03/19
CROOKED ISLAND	BAHAMAS	22.7N	74.1W	2234	03/19
JACAMEL	HAITI	18.1N	72.5W	2235	03/19
ANDROS ISLAND	BAHAMAS	25.0N	77.9W	2235	03/19
GIBARA	CUBA	21.1N	76.1W	2237	03/19
ORANJESTAD	ARUBA	12.5N	70.0W	2237	03/19
ROADTOWN	BR VIRGIN IS	18.4N	64.6W	2240	03/19
JEREMIE	HAITI	18.6N	74.1W	2241	03/19
SANTIAGO D CUBA	CUBA	19.9N	75.8W	2244	03/19
NASSAU	BAHAMAS	25.1N	77.4W	2247	03/19
CAYENNE	FRENCH GUYANE	4.9N	52.3W	2247	03/19
MAIQUETIA	VENEZUELA	10.6N	67.0W	2250	03/19
WILLEMSTAD	CURACAO	12.1N	68.9W	2257	03/19
ABACO ISLAND	BAHAMAS	26.6N	77.1W	2258	03/19
FREEPORT	BAHAMAS	26.5N	78.8W	2259	03/19
CUMANA	VENEZUELA	10.5N	64.2W	2303	03/19
PORT OF SPAIN	TRINIDAD TOBAGO	10.6N	61.5W	2308	03/19
BIMINI	BAHAMAS	25.8N	79.3W	2312	03/19
SANTA MARTA	COLOMBIA	11.2N	74.2W	2322	03/19
MONTEGO BAY	JAMAICA	18.5N	77.9W	2326	03/19
PORT AU PRINCE	HAITI	18.5N	72.4W	2334	03/19
CIENFUEGOS	CUBA	22.0N	80.5W	2337	03/19

CARTAGENA	COLOMBIA	10.4N	75.6W	2338	03/19
KINGSTON	JAMAICA	17.9N	76.9W	2343	03/19
BARRANQUILLA	COLOMBIA	11.1N	74.9W	2347	03/19
RIOHACHA	COLOMBIA	11.6N	72.9W	2351	03/19
PUNTA CARIBANA	COLOMBIA	8.6N	76.9W	0022	03/20
GEORGETOWN	GUYANA	6.8N	58.2W	0033	03/20
PARAMARIBO	SURINAME	5.9N	55.2W	0033	03/20
PUNTO FIJO	VENEZUELA	11.7N	70.2W	0104	03/20
PORLAMAR	VENEZUELA	10.9N	63.8W	0157	03/20
SANTA CRZ D SUR	CUBA	20.7N	78.0W	0201	03/20
GOLFO VENEZUELA	VENEZUELA	11.4N	71.2W	0203	03/20
ILHA DE MARACA	BRAZIL	2.2N	50.5W	0210	03/20
NUEVA GERONA	CUBA	21.9N	82.8W	0339	03/20

TEST... POTENTIAL IMPACTS ...TEST

- * THIS IS A TEST MESSAGE. A TSUNAMI IS A SERIES OF WAVES. THE TIME BETWEEN WAVE CRESTS CAN VARY FROM 5 MINUTES TO AN HOUR. THE HAZARD MAY PERSIST FOR MANY HOURS OR LONGER AFTER THE INITIAL WAVE.
- * THIS IS A TEST MESSAGE. IMPACTS CAN VARY SIGNIFICANTLY FROM ONE SECTION OF COAST TO THE NEXT DUE TO LOCAL BATHYMETRY AND THE SHAPE AND ELEVATION OF THE SHORELINE.
- * THIS IS A TEST MESSAGE. IMPACTS CAN ALSO VARY DEPENDING UPON THE STATE OF THE TIDE AT THE TIME OF THE MAXIMUM TSUNAMI WAVES.
- * THIS IS A TEST MESSAGE. PERSONS CAUGHT IN THE WATER OF A TSUNAMI MAY DROWN... BE CRUSHED BY DEBRIS IN THE WATER... OR BE SWEEPED OUT TO SEA.

TEST... NEXT UPDATE AND ADDITIONAL INFORMATION ...TEST

- * THIS IS A TEST MESSAGE. THE NEXT MESSAGE WILL BE ISSUED IN ONE HOUR... OR SOONER IF THE SITUATION WARRANTS.
- * THIS IS A TEST MESSAGE. AUTHORITATIVE INFORMATION ABOUT THE EARTHQUAKE FROM THE U.S. GEOLOGICAL SURVEY CAN BE FOUND ON THE INTERNET AT EARTHQUAKE.USGS.GOV/EARTHQUAKES -ALL IN LOWERCASE LETTERS-.
- * THIS IS A TEST MESSAGE. FURTHER INFORMATION ABOUT THIS EVENT MAY BE FOUND AT WWW.TSUNAMI.GOV.
- * THIS IS A TEST MESSAGE. COASTAL REGIONS OF THE US GULF COAST... US EAST COAST... AND THE MARITIME PROVINCES OF CANADA SHOULD REFER TO U.S. NATIONAL TSUNAMI WARNING CENTER MESSAGES THAT CAN BE FOUND AT WWW.TSUNAMI.GOV.

THIS IS A TEST MESSAGE. DO NOT TAKE ACTION BASED ON THIS TEST MESSAGE.

\$\$
NNNN

PTWC Message #4

ZCZC
WECA41 PHEB 191500
TSUCAX

TEST...TSUNAMI MESSAGE NUMBER 4...TEST
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
1500 UTC THU MAR 19 2020

...THIS MESSAGE IS FOR TEST PURPOSES ONLY...
...TEST TSUNAMI THREAT MESSAGE TEST...

**** NOTICE **** NOTICE **** NOTICE **** NOTICE **** NOTICE ****

THIS IS A TEST MESSAGE. THIS MESSAGE IS ISSUED FOR INFORMATION
ONLY IN SUPPORT OF THE UNESCO/IOC TSUNAMI AND OTHER COASTAL
HAZARDS WARNING SYSTEM FOR THE CARIBBEAN AND ADJACENT REGIONS
AND IS MEANT FOR NATIONAL AUTHORITIES IN EACH COUNTRY OF THAT
SYSTEM.

THIS IS A TEST MESSAGE. NATIONAL AUTHORITIES WILL DETERMINE THE
APPROPRIATE LEVEL OF ALERT FOR EACH COUNTRY AND MAY ISSUE
ADDITIONAL OR MORE REFINED INFORMATION.

**** NOTICE **** NOTICE **** NOTICE **** NOTICE **** NOTICE ****

TEST... PRELIMINARY EARTHQUAKE PARAMETERS ...TEST

* MAGNITUDE	8.5
* ORIGIN TIME	1400 UTC MAR 19 2020
* COORDINATES	36.0 NORTH 10.8 WEST
* DEPTH	5 KM / 3 MILES
* LOCATION	AZORES-CAPE ST. VINCENT RIDGE

TEST... EVALUATION ...TEST

* THIS IS A TEST MESSAGE. AN EARTHQUAKE WITH A PRELIMINARY
MAGNITUDE OF 8.5 OCCURRED NEAR THE AZORES-CAPE SAINT VINCENT
RIDGE AT 1400 UTC ON THURSDAY MARCH 19 2020.

* THIS IS A TEST MESSAGE. BASED ON ALL AVAILABLE DATA...
HAZARDOUS TSUNAMI WAVES ARE FORECAST FOR SOME COASTS.

TEST... TSUNAMI THREAT FORECAST ...TEST

* THIS IS A TEST MESSAGE. TSUNAMI WAVES REACHING MORE THAN 3
METERS ABOVE THE TIDE LEVEL ARE POSSIBLE ALONG SOME COASTS
OF

BAHAMAS.

* THIS IS A TEST MESSAGE. TSUNAMI WAVES REACHING 1 TO 3 METERS
ABOVE THE TIDE LEVEL ARE POSSIBLE ALONG SOME COASTS OF

BRAZIL... CUBA... DOMINICAN REPUBLIC... FRENCH GUYANE...
GUYANA... HAITI... SURINAME... VENEZUELA... ANGUILLA...
ANTIGUA AND BARBUDA... BARBADOS... BERMUDA... DOMINICA...
GRENADA... GUADELOUPE... MARTINIQUE... PUERTO RICO AND
VIRGIN ISLANDS... SAINT BARTHELEMY... SAINT LUCIA... SAINT
VINCENT AND THE GRENADINES... TRINIDAD AND TOBAGO... AND
TURKS AND CAICOS ISLANDS.

- * THIS IS A TEST MESSAGE. TSUNAMI WAVES REACHING 0.3 TO 1
METERS ABOVE THE TIDE LEVEL ARE POSSIBLE FOR SOME COASTS OF

COLOMBIA... ARUBA... BONAIRE... CURACAO... JAMAICA...
MONTSEERRAT... SABA AND SAINT EUSTATIUS... SAINT KITTS AND
NEVIS... SINT MAARTEN... AND SAINT MARTIN.

- * THIS IS A TEST MESSAGE. ACTUAL AMPLITUDES AT THE COAST MAY
VARY FROM FORECAST AMPLITUDES DUE TO UNCERTAINTIES IN THE
FORECAST AND LOCAL FEATURES. IN PARTICULAR MAXIMUM TSUNAMI
AMPLITUDES ON ATOLLS OR SMALL ISLANDS AND AT LOCATIONS WITH
FRINGING OR BARRIER REEFS WILL LIKELY BE MUCH SMALLER THAN
THE FORECAST INDICATES.

- * THIS IS A TEST MESSAGE. FOR ALL OTHER AREAS COVERED BY THIS
MESSAGE... THERE IS NO TSUNAMI THREAT ALTHOUGH SMALL SEA
LEVEL CHANGES MAY OCCUR.

TEST... RECOMMENDED ACTIONS ...TEST

- * THIS IS A TEST MESSAGE. GOVERNMENT AGENCIES RESPONSIBLE FOR
THREATENED COASTAL AREAS SHOULD TAKE ACTION TO INFORM AND
INSTRUCT ANY COASTAL POPULATIONS AT RISK IN ACCORDANCE WITH
THEIR OWN EVALUATION... PROCEDURES AND THE LEVEL OF THREAT.
- * THIS IS A TEST MESSAGE. PERSONS LOCATED IN THREATENED COASTAL
AREAS SHOULD STAY ALERT FOR INFORMATION AND FOLLOW
INSTRUCTIONS FROM NATIONAL AND LOCAL AUTHORITIES.

TEST... ESTIMATED TIMES OF ARRIVAL ...TEST

- * THIS IS A TEST MESSAGE. ESTIMATED TIMES OF ARRIVAL -ETA- OF
THE INITIAL TSUNAMI WAVE FOR PLACES WITHIN THREATENED
REGIONS ARE GIVEN BELOW. ACTUAL ARRIVAL TIMES MAY DIFFER AND
THE INITIAL WAVE MAY NOT BE THE LARGEST. A TSUNAMI IS A
SERIES OF WAVES AND THE TIME BETWEEN WAVES CAN BE FIVE
MINUTES TO ONE HOUR.

LOCATION	REGION	COORDINATES	ETA (UTC)
ESSO PIER	BERMUDA	32.4N 64.7W	2051 03/19
ROSEAU	DOMINICA	15.3N 61.4W	2118 03/19
PLYMOUTH	MONTSEERRAT	16.7N 62.2W	2118 03/19
BRIDGETOWN	BARBADOS	13.1N 59.6W	2118 03/19
CASTRIES	SAINT LUCIA	14.0N 61.0W	2119 03/19
BASSE TERRE	GUADELOUPE	16.0N 61.7W	2122 03/19
SINT EUSTATIUS	SINT EUSTATIUS	17.5N 63.0W	2123 03/19
SABA	SABA	17.6N 63.2W	2124 03/19

FORT DE FRANCE	MARTINIQUE	14.6N	61.1W	2125	03/19
SAN JUAN	PUERTO RICO	18.5N	66.1W	2125	03/19
CHRISTIANSTED	US VIRGIN IS	17.7N	64.7W	2126	03/19
ANEGADA	BR VIRGIN IS	18.8N	64.3W	2126	03/19
THE VALLEY	ANGUILLA	18.3N	63.1W	2127	03/19
SAINT JOHNS	ANTIGUA	17.1N	61.9W	2127	03/19
BASSETERRE	SAINT KITTS	17.3N	62.7W	2128	03/19
PALMETTO POINT	BARBUDA	17.6N	61.9W	2128	03/19
SIMPSON BAAI	SINT MAARTEN	18.0N	63.1W	2131	03/19
KINGSTOWN	SAINT VINCENT	13.1N	61.2W	2136	03/19
MAYAGUEZ	PUERTO RICO	18.2N	67.2W	2137	03/19
CABO ENGANO	DOMINICAN REP	18.6N	68.3W	2151	03/19
GRAND TURK	TURKS N CAICOS	21.5N	71.1W	2152	03/19
PUERTO PLATA	DOMINICAN REP	19.8N	70.7W	2153	03/19
BAIE LUCAS	SAINT MARTIN	18.1N	63.0W	2153	03/19
SAINT BARTHELEM	SAINT BARTHELEMY	17.9N	62.8W	2154	03/19
BAIE GRAND CASE	SAINT MARTIN	18.1N	63.1W	2154	03/19
PIRATES BAY	TRINIDAD TOBAGO	11.3N	60.6W	2201	03/19
MAYAGUANA	BAHAMAS	22.3N	73.0W	2202	03/19
CHARLOTTE AMALI	US VIRGIN IS	18.3N	64.9W	2203	03/19
SAINT GEORGES	GRENADA	12.0N	61.8W	2203	03/19
WEST CAICOS	TURKS N CAICOS	21.7N	72.5W	2205	03/19
BAIE BLANCHE	SAINT MARTIN	18.1N	63.0W	2207	03/19
SAN SALVADOR	BAHAMAS	24.1N	74.5W	2208	03/19
CAP HAITEN	HAITI	19.8N	72.2W	2209	03/19
SANTO DOMINGO	DOMINICAN REP	18.5N	69.9W	2216	03/19
LONG ISLAND	BAHAMAS	23.3N	75.1W	2221	03/19
ONIMA	BONAIRE	12.3N	68.3W	2223	03/19
GREAT INAGUA	BAHAMAS	20.9N	73.7W	2223	03/19
EXUMA	BAHAMAS	23.6N	75.9W	2224	03/19
CAT ISLAND	BAHAMAS	24.4N	75.5W	2224	03/19
BARACOA	CUBA	20.4N	74.5W	2227	03/19
ELEUTHERA ISLAN	BAHAMAS	25.2N	76.1W	2229	03/19
CROOKED ISLAND	BAHAMAS	22.7N	74.1W	2234	03/19
JACAMEL	HAITI	18.1N	72.5W	2235	03/19
ANDROS ISLAND	BAHAMAS	25.0N	77.9W	2235	03/19
GIBARA	CUBA	21.1N	76.1W	2237	03/19
ORANJESTAD	ARUBA	12.5N	70.0W	2237	03/19
ROADTOWN	BR VIRGIN IS	18.4N	64.6W	2240	03/19
JEREMIE	HAITI	18.6N	74.1W	2241	03/19
SANTIAGO D CUBA	CUBA	19.9N	75.8W	2244	03/19
NASSAU	BAHAMAS	25.1N	77.4W	2247	03/19
CAYENNE	FRENCH GUYANE	4.9N	52.3W	2247	03/19
MAIQUETIA	VENEZUELA	10.6N	67.0W	2250	03/19
WILLEMSTAD	CURACAO	12.1N	68.9W	2257	03/19
ABACO ISLAND	BAHAMAS	26.6N	77.1W	2258	03/19
FREEPORT	BAHAMAS	26.5N	78.8W	2259	03/19
CUMANA	VENEZUELA	10.5N	64.2W	2303	03/19
PORT OF SPAIN	TRINIDAD TOBAGO	10.6N	61.5W	2308	03/19
BIMINI	BAHAMAS	25.8N	79.3W	2312	03/19
SANTA MARTA	COLOMBIA	11.2N	74.2W	2322	03/19
MONTEGO BAY	JAMAICA	18.5N	77.9W	2326	03/19
PORT AU PRINCE	HAITI	18.5N	72.4W	2334	03/19
CIENFUEGOS	CUBA	22.0N	80.5W	2337	03/19
CARTAGENA	COLOMBIA	10.4N	75.6W	2338	03/19
KINGSTON	JAMAICA	17.9N	76.9W	2343	03/19
BARRANQUILLA	COLOMBIA	11.1N	74.9W	2347	03/19
RIOHACHA	COLOMBIA	11.6N	72.9W	2351	03/19

PUNTA CARIBANA	COLOMBIA	8.6N	76.9W	0022	03/20
GEORGETOWN	GUYANA	6.8N	58.2W	0033	03/20
PARAMARIBO	SURINAME	5.9N	55.2W	0033	03/20
PUNTO FIJO	VENEZUELA	11.7N	70.2W	0104	03/20
PORLAMAR	VENEZUELA	10.9N	63.8W	0157	03/20
SANTA CRZ D SUR	CUBA	20.7N	78.0W	0201	03/20
GOLFO VENEZUELA	VENEZUELA	11.4N	71.2W	0203	03/20
ILHA DE MARACA	BRAZIL	2.2N	50.5W	0210	03/20
NUEVA GERONA	CUBA	21.9N	82.8W	0339	03/20

TEST... POTENTIAL IMPACTS ...TEST

- * THIS IS A TEST MESSAGE. A TSUNAMI IS A SERIES OF WAVES. THE TIME BETWEEN WAVE CRESTS CAN VARY FROM 5 MINUTES TO AN HOUR. THE HAZARD MAY PERSIST FOR MANY HOURS OR LONGER AFTER THE INITIAL WAVE.
- * THIS IS A TEST MESSAGE. IMPACTS CAN VARY SIGNIFICANTLY FROM ONE SECTION OF COAST TO THE NEXT DUE TO LOCAL BATHYMETRY AND THE SHAPE AND ELEVATION OF THE SHORELINE.
- * THIS IS A TEST MESSAGE. IMPACTS CAN ALSO VARY DEPENDING UPON THE STATE OF THE TIDE AT THE TIME OF THE MAXIMUM TSUNAMI WAVES.
- * THIS IS A TEST MESSAGE. PERSONS CAUGHT IN THE WATER OF A TSUNAMI MAY DROWN... BE CRUSHED BY DEBRIS IN THE WATER... OR BE SWEEPED OUT TO SEA.

TEST... NEXT UPDATE AND ADDITIONAL INFORMATION ...TEST

- * THIS IS A TEST MESSAGE. THE NEXT MESSAGE WILL BE ISSUED IN ONE HOUR... OR SOONER IF THE SITUATION WARRANTS.
- * THIS IS A TEST MESSAGE. AUTHORITATIVE INFORMATION ABOUT THE EARTHQUAKE FROM THE U.S. GEOLOGICAL SURVEY CAN BE FOUND ON THE INTERNET AT EARTHQUAKE.USGS.GOV/EARTHQUAKES -ALL IN LOWERCASE LETTERS-.
- * THIS IS A TEST MESSAGE. FURTHER INFORMATION ABOUT THIS EVENT MAY BE FOUND AT WWW.TSUNAMI.GOV.
- * THIS IS A TEST MESSAGE. COASTAL REGIONS OF THE US GULF COAST... US EAST COAST... AND THE MARITIME PROVINCES OF CANADA SHOULD REFER TO U.S. NATIONAL TSUNAMI WARNING CENTER MESSAGES THAT CAN BE FOUND AT WWW.TSUNAMI.GOV.

THIS IS A TEST MESSAGE. DO NOT TAKE ACTION BASED ON THIS TEST MESSAGE.

\$\$

NNNN

PTWC Message #5

ZCZC
WECA41 PHEB 191520
TSUCAX

TEST...TSUNAMI MESSAGE NUMBER 5...TEST
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
1520 UTC THU MAR 19 2020

...THIS MESSAGE IS FOR TEST PURPOSES ONLY...
...TEST TSUNAMI THREAT MESSAGE TEST...

**** NOTICE **** NOTICE **** NOTICE **** NOTICE **** NOTICE ****

THIS IS A TEST MESSAGE. THIS MESSAGE IS ISSUED FOR INFORMATION
ONLY IN SUPPORT OF THE UNESCO/IOC TSUNAMI AND OTHER COASTAL
HAZARDS WARNING SYSTEM FOR THE CARIBBEAN AND ADJACENT REGIONS
AND IS MEANT FOR NATIONAL AUTHORITIES IN EACH COUNTRY OF THAT
SYSTEM.

THIS IS A TEST MESSAGE. NATIONAL AUTHORITIES WILL DETERMINE THE
APPROPRIATE LEVEL OF ALERT FOR EACH COUNTRY AND MAY ISSUE
ADDITIONAL OR MORE REFINED INFORMATION.

**** NOTICE **** NOTICE **** NOTICE **** NOTICE **** NOTICE ****

TSUNAMI WAVES HAVE NOW BEEN CONFIRMED.

TEST... PRELIMINARY EARTHQUAKE PARAMETERS ...TEST

* MAGNITUDE	8.5
* ORIGIN TIME	1400 UTC MAR 19 2020
* COORDINATES	36.0 NORTH 10.8 WEST
* DEPTH	5 KM / 3 MILES
* LOCATION	AZORES-CAPE ST. VINCENT RIDGE

TEST... EVALUATION ...TEST

* THIS IS A TEST MESSAGE. AN EARTHQUAKE WITH A PRELIMINARY
MAGNITUDE OF 8.5 OCCURRED NEAR THE AZORES-CAPE SAINT VINCENT
RIDGE AT 1400 UTC ON THURSDAY MARCH 19 2020.

* THIS IS A TEST MESSAGE. TSUNAMI WAVES HAVE BEEN OBSERVED.

* THIS IS A TEST MESSAGE. BASED ON ALL AVAILABLE DATA...
HAZARDOUS TSUNAMI WAVES ARE FORECAST FOR SOME COASTS.

TEST... TSUNAMI THREAT FORECAST ...TEST

- * THIS IS A TEST MESSAGE. TSUNAMI WAVES REACHING MORE THAN 3 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE ALONG SOME COASTS OF

BAHAMAS.

- * THIS IS A TEST MESSAGE. TSUNAMI WAVES REACHING 1 TO 3 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE ALONG SOME COASTS OF

BRAZIL... CUBA... DOMINICAN REPUBLIC... FRENCH GUYANE...
GUYANA... HAITI... SURINAME... VENEZUELA... ANGUILLA...
ANTIGUA AND BARBUDA... BARBADOS... BERMUDA... DOMINICA...
GRENADA... GUADELOUPE... MARTINIQUE... PUERTO RICO AND
VIRGIN ISLANDS... SAINT BARTHELEMY... SAINT LUCIA... SAINT
VINCENT AND THE GRENADINES... TRINIDAD AND TOBAGO... AND
TURKS AND CAICOS ISLANDS.

- * THIS IS A TEST MESSAGE. TSUNAMI WAVES REACHING 0.3 TO 1 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE FOR SOME COASTS OF

COLOMBIA... ARUBA... BONAIRE... CURACAO... JAMAICA...
MONTSEERRAT... SABA AND SAINT EUSTATIUS... SAINT KITTS AND
NEVIS... SINT MAARTEN... AND SAINT MARTIN.

- * THIS IS A TEST MESSAGE. ACTUAL AMPLITUDES AT THE COAST MAY VARY FROM FORECAST AMPLITUDES DUE TO UNCERTAINTIES IN THE FORECAST AND LOCAL FEATURES. IN PARTICULAR MAXIMUM TSUNAMI AMPLITUDES ON ATOLLS OR SMALL ISLANDS AND AT LOCATIONS WITH FRINGING OR BARRIER REEFS WILL LIKELY BE MUCH SMALLER THAN THE FORECAST INDICATES.

- * THIS IS A TEST MESSAGE. FOR ALL OTHER AREAS COVERED BY THIS MESSAGE... THERE IS NO TSUNAMI THREAT ALTHOUGH SMALL SEA LEVEL CHANGES MAY OCCUR.

TEST... RECOMMENDED ACTIONS ...TEST

- * THIS IS A TEST MESSAGE. GOVERNMENT AGENCIES RESPONSIBLE FOR THREATENED COASTAL AREAS SHOULD TAKE ACTION TO INFORM AND INSTRUCT ANY COASTAL POPULATIONS AT RISK IN ACCORDANCE WITH THEIR OWN EVALUATION... PROCEDURES AND THE LEVEL OF THREAT.
- * THIS IS A TEST MESSAGE. PERSONS LOCATED IN THREATENED COASTAL AREAS SHOULD STAY ALERT FOR INFORMATION AND FOLLOW INSTRUCTIONS FROM NATIONAL AND LOCAL AUTHORITIES.

TEST... ESTIMATED TIMES OF ARRIVAL ...TEST

- * THIS IS A TEST MESSAGE. ESTIMATED TIMES OF ARRIVAL -ETA- OF THE INITIAL TSUNAMI WAVE FOR PLACES WITHIN THREATENED REGIONS ARE GIVEN BELOW. ACTUAL ARRIVAL TIMES MAY DIFFER AND

THE INITIAL WAVE MAY NOT BE THE LARGEST. A TSUNAMI IS A SERIES OF WAVES AND THE TIME BETWEEN WAVES CAN BE FIVE MINUTES TO ONE HOUR.

LOCATION	REGION	COORDINATES		ETA (UTC)	
ESSO PIER	BERMUDA	32.4N	64.7W	2051	03/19
ROSEAU	DOMINICA	15.3N	61.4W	2118	03/19
PLYMOUTH	MONTSERRAT	16.7N	62.2W	2118	03/19
BRIDGETOWN	BARBADOS	13.1N	59.6W	2118	03/19
CASTRIES	SAINT LUCIA	14.0N	61.0W	2119	03/19
BASSE TERRE	GUADELOUPE	16.0N	61.7W	2122	03/19
SINT EUSTATIUS	SINT EUSTATIUS	17.5N	63.0W	2123	03/19
SABA	SABA	17.6N	63.2W	2124	03/19
FORT DE FRANCE	MARTINIQUE	14.6N	61.1W	2125	03/19
SAN JUAN	PUERTO RICO	18.5N	66.1W	2125	03/19
CHRISTIANSTED	US VIRGIN IS	17.7N	64.7W	2126	03/19
ANEGADA	BR VIRGIN IS	18.8N	64.3W	2126	03/19
THE VALLEY	ANGUILLA	18.3N	63.1W	2127	03/19
SAINT JOHNS	ANTIGUA	17.1N	61.9W	2127	03/19
BASSETERRE	SAINT KITTS	17.3N	62.7W	2128	03/19
PALMETTO POINT	BARBUDA	17.6N	61.9W	2128	03/19
SIMPSON BAAI	SINT MAARTEN	18.0N	63.1W	2131	03/19
KINGSTOWN	SAINT VINCENT	13.1N	61.2W	2136	03/19
MAYAGUEZ	PUERTO RICO	18.2N	67.2W	2137	03/19
CABO ENGANO	DOMINICAN REP	18.6N	68.3W	2151	03/19
GRAND TURK	TURKS N CAICOS	21.5N	71.1W	2152	03/19
PUERTO PLATA	DOMINICAN REP	19.8N	70.7W	2153	03/19
BAIE LUCAS	SAINT MARTIN	18.1N	63.0W	2153	03/19
SAINT BARTHELEM	SAINT BARTHELEMY	17.9N	62.8W	2154	03/19
BAIE GRAND CASE	SAINT MARTIN	18.1N	63.1W	2154	03/19
PIRATES BAY	TRINIDAD TOBAGO	11.3N	60.6W	2201	03/19
MAYAGUANA	BAHAMAS	22.3N	73.0W	2202	03/19
CHARLOTTE AMALI	US VIRGIN IS	18.3N	64.9W	2203	03/19
SAINT GEORGES	GRENADA	12.0N	61.8W	2203	03/19
WEST CAICOS	TURKS N CAICOS	21.7N	72.5W	2205	03/19
BAIE BLANCHE	SAINT MARTIN	18.1N	63.0W	2207	03/19
SAN SALVADOR	BAHAMAS	24.1N	74.5W	2208	03/19
CAP HAITEN	HAITI	19.8N	72.2W	2209	03/19
SANTO DOMINGO	DOMINICAN REP	18.5N	69.9W	2216	03/19
LONG ISLAND	BAHAMAS	23.3N	75.1W	2221	03/19
ONIMA	BONAIRE	12.3N	68.3W	2223	03/19
GREAT INAGUA	BAHAMAS	20.9N	73.7W	2223	03/19
EXUMA	BAHAMAS	23.6N	75.9W	2224	03/19
CAT ISLAND	BAHAMAS	24.4N	75.5W	2224	03/19
BARACOA	CUBA	20.4N	74.5W	2227	03/19
ELEUTHERA ISLAN	BAHAMAS	25.2N	76.1W	2229	03/19
CROOKED ISLAND	BAHAMAS	22.7N	74.1W	2234	03/19
JACAMEL	HAITI	18.1N	72.5W	2235	03/19
ANDROS ISLAND	BAHAMAS	25.0N	77.9W	2235	03/19
GIBARA	CUBA	21.1N	76.1W	2237	03/19
ORANJESTAD	ARUBA	12.5N	70.0W	2237	03/19
ROADTOWN	BR VIRGIN IS	18.4N	64.6W	2240	03/19
JEREMIE	HAITI	18.6N	74.1W	2241	03/19
SANTIAGO D CUBA	CUBA	19.9N	75.8W	2244	03/19
NASSAU	BAHAMAS	25.1N	77.4W	2247	03/19
CAYENNE	FRENCH GUYANE	4.9N	52.3W	2247	03/19
MAIQUETIA	VENEZUELA	10.6N	67.0W	2250	03/19

WILLEMSTAD	CURACAO	12.1N	68.9W	2257	03/19
ABACO ISLAND	BAHAMAS	26.6N	77.1W	2258	03/19
FREEPORT	BAHAMAS	26.5N	78.8W	2259	03/19
CUMANA	VENEZUELA	10.5N	64.2W	2303	03/19
PORT OF SPAIN	TRINIDAD TOBAGO	10.6N	61.5W	2308	03/19
BIMINI	BAHAMAS	25.8N	79.3W	2312	03/19
SANTA MARTA	COLOMBIA	11.2N	74.2W	2322	03/19
MONTEGO BAY	JAMAICA	18.5N	77.9W	2326	03/19
PORT AU PRINCE	HAITI	18.5N	72.4W	2334	03/19
CIENFUEGOS	CUBA	22.0N	80.5W	2337	03/19
CARTAGENA	COLOMBIA	10.4N	75.6W	2338	03/19
KINGSTON	JAMAICA	17.9N	76.9W	2343	03/19
BARRANQUILLA	COLOMBIA	11.1N	74.9W	2347	03/19
RIOHACHA	COLOMBIA	11.6N	72.9W	2351	03/19
PUNTA CARIBANA	COLOMBIA	8.6N	76.9W	0022	03/20
GEORGETOWN	GUYANA	6.8N	58.2W	0033	03/20
PARAMARIBO	SURINAME	5.9N	55.2W	0033	03/20
PUNTO FIJO	VENEZUELA	11.7N	70.2W	0104	03/20
PORLAMAR	VENEZUELA	10.9N	63.8W	0157	03/20
SANTA CRZ D SUR	CUBA	20.7N	78.0W	0201	03/20
GOLFO VENEZUELA	VENEZUELA	11.4N	71.2W	0203	03/20
ILHA DE MARACA	BRAZIL	2.2N	50.5W	0210	03/20
NUEVA GERONA	CUBA	21.9N	82.8W	0339	03/20

TEST... POTENTIAL IMPACTS ...TEST

- * THIS IS A TEST MESSAGE. A TSUNAMI IS A SERIES OF WAVES. THE TIME BETWEEN WAVE CRESTS CAN VARY FROM 5 MINUTES TO AN HOUR. THE HAZARD MAY PERSIST FOR MANY HOURS OR LONGER AFTER THE INITIAL WAVE.
- * THIS IS A TEST MESSAGE. IMPACTS CAN VARY SIGNIFICANTLY FROM ONE SECTION OF COAST TO THE NEXT DUE TO LOCAL BATHYMETRY AND THE SHAPE AND ELEVATION OF THE SHORELINE.
- * THIS IS A TEST MESSAGE. IMPACTS CAN ALSO VARY DEPENDING UPON THE STATE OF THE TIDE AT THE TIME OF THE MAXIMUM TSUNAMI WAVES.
- * THIS IS A TEST MESSAGE. PERSONS CAUGHT IN THE WATER OF A TSUNAMI MAY DROWN... BE CRUSHED BY DEBRIS IN THE WATER... OR BE SWEEPED OUT TO SEA.

TEST... TSUNAMI OBSERVATIONS ...TEST

- * THIS IS A TEST MESSAGE. THE FOLLOWING ARE TSUNAMI WAVE OBSERVATIONS FROM COASTAL AND/OR DEEP-OCEAN SEA LEVEL GAUGES AT THE INDICATED LOCATIONS. THE MAXIMUM TSUNAMI HEIGHT IS MEASURED WITH RESPECT TO THE NORMAL TIDE LEVEL.

GAUGE LOCATION	GAUGE COORDINATES		TIME OF MEASURE	MAXIMUM TSUNAMI HEIGHT	WAVE PERIOD
	LAT	LON	(UTC)		(MIN)

ALBUFEIRA PT	37.1N	8.3W	1505	15.43M/50.6FT	16
PORTO SANTO PT	33.1N	16.3W	1503	10.23M/33.6FT	14

TEST... NEXT UPDATE AND ADDITIONAL INFORMATION ...TEST

-
- * THIS IS A TEST MESSAGE. THE NEXT MESSAGE WILL BE ISSUED IN ONE HOUR... OR SOONER IF THE SITUATION WARRANTS.
 - * THIS IS A TEST MESSAGE. AUTHORITATIVE INFORMATION ABOUT THE EARTHQUAKE FROM THE U.S. GEOLOGICAL SURVEY CAN BE FOUND ON THE INTERNET AT EARTHQUAKE.USGS.GOV/EARTHQUAKES -ALL IN LOWERCASE LETTERS-.
 - * THIS IS A TEST MESSAGE. FURTHER INFORMATION ABOUT THIS EVENT MAY BE FOUND AT WWW.TSUNAMI.GOV.
 - * THIS IS A TEST MESSAGE. COASTAL REGIONS OF THE US GULF COAST... US EAST COAST... AND THE MARITIME PROVINCES OF CANADA SHOULD REFER TO U.S. NATIONAL TSUNAMI WARNING CENTER MESSAGES THAT CAN BE FOUND AT WWW.TSUNAMI.GOV.

THIS IS A TEST MESSAGE. DO NOT TAKE ACTION BASED ON THIS TEST MESSAGE.

\$\$

NNNN

PTWC Message #6

ZCZC
WECA41 PHEB 191600
TSUCAX

TEST...TSUNAMI MESSAGE NUMBER 6...TEST
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
1600 UTC THU MAR 19 2020

...THIS MESSAGE IS FOR TEST PURPOSES ONLY...
...TEST TSUNAMI THREAT MESSAGE TEST...

**** NOTICE **** NOTICE **** NOTICE **** NOTICE **** NOTICE ****

THIS IS A TEST MESSAGE. THIS MESSAGE IS ISSUED FOR INFORMATION ONLY IN SUPPORT OF THE UNESCO/IOC TSUNAMI AND OTHER COASTAL HAZARDS WARNING SYSTEM FOR THE CARIBBEAN AND ADJACENT REGIONS AND IS MEANT FOR NATIONAL AUTHORITIES IN EACH COUNTRY OF THAT SYSTEM.

THIS IS A TEST MESSAGE. NATIONAL AUTHORITIES WILL DETERMINE THE APPROPRIATE LEVEL OF ALERT FOR EACH COUNTRY AND MAY ISSUE ADDITIONAL OR MORE REFINED INFORMATION.

**** NOTICE **** NOTICE **** NOTICE **** NOTICE **** NOTICE ****

TEST... PRELIMINARY EARTHQUAKE PARAMETERS ...TEST

* MAGNITUDE	8.5
* ORIGIN TIME	1400 UTC MAR 19 2020
* COORDINATES	36.0 NORTH 10.8 WEST
* DEPTH	5 KM / 3 MILES
* LOCATION	AZORES-CAPE ST. VINCENT RIDGE

TEST... EVALUATION ...TEST

* THIS IS A TEST MESSAGE. AN EARTHQUAKE WITH A PRELIMINARY MAGNITUDE OF 8.5 OCCURRED NEAR THE AZORES-CAPE SAINT VINCENT RIDGE AT 1400 UTC ON THURSDAY MARCH 19 2020.

* THIS IS A TEST MESSAGE. TSUNAMI WAVES HAVE BEEN OBSERVED.

* THIS IS A TEST MESSAGE. BASED ON ALL AVAILABLE DATA...
HAZARDOUS TSUNAMI WAVES ARE FORECAST FOR SOME COASTS.

TEST... TSUNAMI THREAT FORECAST ...TEST

* THIS IS A TEST MESSAGE. TSUNAMI WAVES REACHING MORE THAN 3 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE ALONG SOME COASTS OF

BAHAMAS.

- * THIS IS A TEST MESSAGE. TSUNAMI WAVES REACHING 1 TO 3 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE ALONG SOME COASTS OF

BRAZIL... CUBA... DOMINICAN REPUBLIC... FRENCH GUYANE...
GUYANA... HAITI... SURINAME... VENEZUELA... ANGUILLA...
ANTIGUA AND BARBUDA... BARBADOS... BERMUDA... DOMINICA...
GRENADA... GUADELOUPE... MARTINIQUE... PUERTO RICO AND
VIRGIN ISLANDS... SAINT BARTHELEMY... SAINT LUCIA... SAINT
VINCENT AND THE GRENADINES... TRINIDAD AND TOBAGO... AND
TURKS AND CAICOS ISLANDS.

- * THIS IS A TEST MESSAGE. TSUNAMI WAVES REACHING 0.3 TO 1 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE FOR SOME COASTS OF

COLOMBIA... ARUBA... BONAIRE... CURACAO... JAMAICA...
MONTSERRAT... SABA AND SAINT EUSTATIUS... SAINT KITTS AND
NEVIS... SINT MAARTEN... AND SAINT MARTIN.

- * THIS IS A TEST MESSAGE. ACTUAL AMPLITUDES AT THE COAST MAY VARY FROM FORECAST AMPLITUDES DUE TO UNCERTAINTIES IN THE FORECAST AND LOCAL FEATURES. IN PARTICULAR MAXIMUM TSUNAMI AMPLITUDES ON ATOLLS OR SMALL ISLANDS AND AT LOCATIONS WITH FRINGING OR BARRIER REEFS WILL LIKELY BE MUCH SMALLER THAN THE FORECAST INDICATES.

- * THIS IS A TEST MESSAGE. FOR ALL OTHER AREAS COVERED BY THIS MESSAGE... THERE IS NO TSUNAMI THREAT ALTHOUGH SMALL SEA LEVEL CHANGES MAY OCCUR.

TEST... RECOMMENDED ACTIONS ...TEST

- * THIS IS A TEST MESSAGE. GOVERNMENT AGENCIES RESPONSIBLE FOR THREATENED COASTAL AREAS SHOULD TAKE ACTION TO INFORM AND INSTRUCT ANY COASTAL POPULATIONS AT RISK IN ACCORDANCE WITH THEIR OWN EVALUATION... PROCEDURES AND THE LEVEL OF THREAT.
- * THIS IS A TEST MESSAGE. PERSONS LOCATED IN THREATENED COASTAL AREAS SHOULD STAY ALERT FOR INFORMATION AND FOLLOW INSTRUCTIONS FROM NATIONAL AND LOCAL AUTHORITIES.

TEST... ESTIMATED TIMES OF ARRIVAL ...TEST

- * THIS IS A TEST MESSAGE. ESTIMATED TIMES OF ARRIVAL -ETA- OF THE INITIAL TSUNAMI WAVE FOR PLACES WITHIN THREATENED REGIONS ARE GIVEN BELOW. ACTUAL ARRIVAL TIMES MAY DIFFER AND THE INITIAL WAVE MAY NOT BE THE LARGEST. A TSUNAMI IS A SERIES OF WAVES AND THE TIME BETWEEN WAVES CAN BE FIVE MINUTES TO ONE HOUR.

LOCATION	REGION	COORDINATES		ETA (UTC)	
ESSO PIER	BERMUDA	32.4N	64.7W	2051	03/19
ROSEAU	DOMINICA	15.3N	61.4W	2118	03/19
PLYMOUTH	MONTSERRAT	16.7N	62.2W	2118	03/19
BRIDGETOWN	BARBADOS	13.1N	59.6W	2118	03/19
CASTRIES	SAINT LUCIA	14.0N	61.0W	2119	03/19
BASSE TERRE	GUADELOUPE	16.0N	61.7W	2122	03/19
SINT EUSTATIUS	SINT EUSTATIUS	17.5N	63.0W	2123	03/19
SABA	SABA	17.6N	63.2W	2124	03/19
FORT DE FRANCE	MARTINIQUE	14.6N	61.1W	2125	03/19
SAN JUAN	PUERTO RICO	18.5N	66.1W	2125	03/19
CHRISTIANSTED	US VIRGIN IS	17.7N	64.7W	2126	03/19
ANEGADA	BR VIRGIN IS	18.8N	64.3W	2126	03/19
THE VALLEY	ANGUILLA	18.3N	63.1W	2127	03/19
SAINT JOHNS	ANTIGUA	17.1N	61.9W	2127	03/19
BASSETTERRE	SAINT KITTS	17.3N	62.7W	2128	03/19
PALMETTO POINT	BARBUDA	17.6N	61.9W	2128	03/19
SIMPSON BAAI	SINT MAARTEN	18.0N	63.1W	2131	03/19
KINGSTOWN	SAINT VINCENT	13.1N	61.2W	2136	03/19
MAYAGUEZ	PUERTO RICO	18.2N	67.2W	2137	03/19
CABO ENGANO	DOMINICAN REP	18.6N	68.3W	2151	03/19
GRAND TURK	TURKS N CAICOS	21.5N	71.1W	2152	03/19
PUERTO PLATA	DOMINICAN REP	19.8N	70.7W	2153	03/19
BAIE LUCAS	SAINT MARTIN	18.1N	63.0W	2153	03/19
SAINT BARTHELEM	SAINT BARTHELEMY	17.9N	62.8W	2154	03/19
BAIE GRAND CASE	SAINT MARTIN	18.1N	63.1W	2154	03/19
PIRATES BAY	TRINIDAD TOBAGO	11.3N	60.6W	2201	03/19
MAYAGUANA	BAHAMAS	22.3N	73.0W	2202	03/19
CHARLOTTE AMALI	US VIRGIN IS	18.3N	64.9W	2203	03/19
SAINT GEORGES	GRENADA	12.0N	61.8W	2203	03/19
WEST CAICOS	TURKS N CAICOS	21.7N	72.5W	2205	03/19
BAIE BLANCHE	SAINT MARTIN	18.1N	63.0W	2207	03/19
SAN SALVADOR	BAHAMAS	24.1N	74.5W	2208	03/19
CAP HAITEN	HAITI	19.8N	72.2W	2209	03/19
SANTO DOMINGO	DOMINICAN REP	18.5N	69.9W	2216	03/19
LONG ISLAND	BAHAMAS	23.3N	75.1W	2221	03/19
ONIMA	BONAIRE	12.3N	68.3W	2223	03/19
GREAT INAGUA	BAHAMAS	20.9N	73.7W	2223	03/19
EXUMA	BAHAMAS	23.6N	75.9W	2224	03/19
CAT ISLAND	BAHAMAS	24.4N	75.5W	2224	03/19
BARACOA	CUBA	20.4N	74.5W	2227	03/19
ELEUTHERA ISLAN	BAHAMAS	25.2N	76.1W	2229	03/19
CROOKED ISLAND	BAHAMAS	22.7N	74.1W	2234	03/19
JACAMEL	HAITI	18.1N	72.5W	2235	03/19
ANDROS ISLAND	BAHAMAS	25.0N	77.9W	2235	03/19
GIBARA	CUBA	21.1N	76.1W	2237	03/19
ORANJESTAD	ARUBA	12.5N	70.0W	2237	03/19
ROADTOWN	BR VIRGIN IS	18.4N	64.6W	2240	03/19
JEREMIE	HAITI	18.6N	74.1W	2241	03/19
SANTIAGO D CUBA	CUBA	19.9N	75.8W	2244	03/19
NASSAU	BAHAMAS	25.1N	77.4W	2247	03/19
CAYENNE	FRENCH GUYANE	4.9N	52.3W	2247	03/19
MAIQUETIA	VENEZUELA	10.6N	67.0W	2250	03/19
WILLEMSTAD	CURACAO	12.1N	68.9W	2257	03/19
ABACO ISLAND	BAHAMAS	26.6N	77.1W	2258	03/19
FREEPORT	BAHAMAS	26.5N	78.8W	2259	03/19

CUMANA	VENEZUELA	10.5N	64.2W	2303	03/19
PORT OF SPAIN	TRINIDAD TOBAGO	10.6N	61.5W	2308	03/19
BIMINI	BAHAMAS	25.8N	79.3W	2312	03/19
SANTA MARTA	COLOMBIA	11.2N	74.2W	2322	03/19
MONTEGO BAY	JAMAICA	18.5N	77.9W	2326	03/19
PORT AU PRINCE	HAITI	18.5N	72.4W	2334	03/19
CIENFUEGOS	CUBA	22.0N	80.5W	2337	03/19
CARTAGENA	COLOMBIA	10.4N	75.6W	2338	03/19
KINGSTON	JAMAICA	17.9N	76.9W	2343	03/19
BARRANQUILLA	COLOMBIA	11.1N	74.9W	2347	03/19
RIOHACHA	COLOMBIA	11.6N	72.9W	2351	03/19
PUNTA CARIBANA	COLOMBIA	8.6N	76.9W	0022	03/20
GEORGETOWN	GUYANA	6.8N	58.2W	0033	03/20
PARAMARIBO	SURINAME	5.9N	55.2W	0033	03/20
PUNTO FIJO	VENEZUELA	11.7N	70.2W	0104	03/20
PORLAMAR	VENEZUELA	10.9N	63.8W	0157	03/20
SANTA CRZ D SUR	CUBA	20.7N	78.0W	0201	03/20
GOLFO VENEZUELA	VENEZUELA	11.4N	71.2W	0203	03/20
ILHA DE MARACA	BRAZIL	2.2N	50.5W	0210	03/20
NUEVA GERONA	CUBA	21.9N	82.8W	0339	03/20

TEST... POTENTIAL IMPACTS ...TEST

- * THIS IS A TEST MESSAGE. A TSUNAMI IS A SERIES OF WAVES. THE TIME BETWEEN WAVE CRESTS CAN VARY FROM 5 MINUTES TO AN HOUR. THE HAZARD MAY PERSIST FOR MANY HOURS OR LONGER AFTER THE INITIAL WAVE.
- * THIS IS A TEST MESSAGE. IMPACTS CAN VARY SIGNIFICANTLY FROM ONE SECTION OF COAST TO THE NEXT DUE TO LOCAL BATHYMETRY AND THE SHAPE AND ELEVATION OF THE SHORELINE.
- * THIS IS A TEST MESSAGE. IMPACTS CAN ALSO VARY DEPENDING UPON THE STATE OF THE TIDE AT THE TIME OF THE MAXIMUM TSUNAMI WAVES.
- * THIS IS A TEST MESSAGE. PERSONS CAUGHT IN THE WATER OF A TSUNAMI MAY DROWN... BE CRUSHED BY DEBRIS IN THE WATER... OR BE SWEEPED OUT TO SEA.

TEST... TSUNAMI OBSERVATIONS ...TEST

- * THIS IS A TEST MESSAGE. THE FOLLOWING ARE TSUNAMI WAVE OBSERVATIONS FROM COASTAL AND/OR DEEP-OCEAN SEA LEVEL GAUGES AT THE INDICATED LOCATIONS. THE MAXIMUM TSUNAMI HEIGHT IS MEASURED WITH RESPECT TO THE NORMAL TIDE LEVEL.

GAUGE LOCATION	GAUGE COORDINATES		TIME OF MEASURE (UTC)	MAXIMUM TSUNAMI HEIGHT	WAVE PERIOD (MIN)
	LAT	LON			
FERROL ES	43.5N	8.3W	1600	1.46M/ 4.8FT	16
ELHIERRO ES	27.8N	17.9W	1554	1.78M/ 5.9FT	22
FUERTEVENTURA ES	28.5N	13.9W	1551	2.39M/ 7.9FT	28

LAGOMERA ES	28.1N	17.1W	1545	1.89M/ 6.2FT	16
LA PALMA ES	28.7N	17.8W	1543	2.99M/ 9.8FT	18
TENERIFE ES	28.5N	16.2W	1540	3.00M/ 9.8FT	20
ARRECIFE ES	29.0N	13.5W	1529	2.72M/ 8.9FT	24
LASPALMAS ES	28.1N	15.4W	1532	3.80M/12.5FT	18
ALGECIRAS ES	36.2N	5.4W	1534	1.27M/ 4.2FT	26
CADIZ ES	36.5N	6.3W	1528	8.34M/27.4FT	20
HUELVA ES	37.1N	6.8W	1526	11.04M/36.2FT	22
ALBUFEIRA PT	37.1N	8.3W	1505	15.43M/50.6FT	16
PORTO SANTO PT	33.1N	16.3W	1503	10.23M/33.6FT	14

TEST... NEXT UPDATE AND ADDITIONAL INFORMATION ...TEST

-
- * THIS IS A TEST MESSAGE. THE NEXT MESSAGE WILL BE ISSUED IN ONE HOUR... OR SOONER IF THE SITUATION WARRANTS.
 - * THIS IS A TEST MESSAGE. AUTHORITATIVE INFORMATION ABOUT THE EARTHQUAKE FROM THE U.S. GEOLOGICAL SURVEY CAN BE FOUND ON THE INTERNET AT EARTHQUAKE.USGS.GOV/EARTHQUAKES -ALL IN LOWERCASE LETTERS-.
 - * THIS IS A TEST MESSAGE. FURTHER INFORMATION ABOUT THIS EVENT MAY BE FOUND AT WWW.TSUNAMI.GOV.
 - * THIS IS A TEST MESSAGE. COASTAL REGIONS OF THE US GULF COAST... US EAST COAST... AND THE MARITIME PROVINCES OF CANADA SHOULD REFER TO U.S. NATIONAL TSUNAMI WARNING CENTER MESSAGES THAT CAN BE FOUND AT WWW.TSUNAMI.GOV.

THIS IS A TEST MESSAGE. DO NOT TAKE ACTION BASED ON THIS TEST MESSAGE.

\$\$

NNNN

PTWC Message #7

ZCZC
WECA41 PHEB 191700
TSUCAX

TEST...TSUNAMI MESSAGE NUMBER 7...TEST
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
1700 UTC THU MAR 19 2020

...THIS MESSAGE IS FOR TEST PURPOSES ONLY...
...TEST TSUNAMI THREAT MESSAGE TEST...

**** NOTICE **** NOTICE **** NOTICE **** NOTICE **** NOTICE ****

THIS IS A TEST MESSAGE. THIS MESSAGE IS ISSUED FOR INFORMATION ONLY IN SUPPORT OF THE UNESCO/IOC TSUNAMI AND OTHER COASTAL HAZARDS WARNING SYSTEM FOR THE CARIBBEAN AND ADJACENT REGIONS AND IS MEANT FOR NATIONAL AUTHORITIES IN EACH COUNTRY OF THAT SYSTEM.

THIS IS A TEST MESSAGE. NATIONAL AUTHORITIES WILL DETERMINE THE APPROPRIATE LEVEL OF ALERT FOR EACH COUNTRY AND MAY ISSUE ADDITIONAL OR MORE REFINED INFORMATION.

**** NOTICE **** NOTICE **** NOTICE **** NOTICE **** NOTICE ****

TEST... PRELIMINARY EARTHQUAKE PARAMETERS ...TEST

* MAGNITUDE	8.5
* ORIGIN TIME	1400 UTC MAR 19 2020
* COORDINATES	36.0 NORTH 10.8 WEST
* DEPTH	5 KM / 3 MILES
* LOCATION	AZORES-CAPE ST. VINCENT RIDGE

TEST... EVALUATION ...TEST

* THIS IS A TEST MESSAGE. AN EARTHQUAKE WITH A PRELIMINARY MAGNITUDE OF 8.5 OCCURRED NEAR THE AZORES-CAPE SAINT VINCENT RIDGE AT 1400 UTC ON THURSDAY MARCH 19 2020.

* THIS IS A TEST MESSAGE. TSUNAMI WAVES HAVE BEEN OBSERVED.

* THIS IS A TEST MESSAGE. BASED ON ALL AVAILABLE DATA...
HAZARDOUS TSUNAMI WAVES ARE FORECAST FOR SOME COASTS.

TEST... TSUNAMI THREAT FORECAST ...TEST

* THIS IS A TEST MESSAGE. TSUNAMI WAVES REACHING MORE THAN 3 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE ALONG SOME COASTS OF

BAHAMAS.

- * THIS IS A TEST MESSAGE. TSUNAMI WAVES REACHING 1 TO 3 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE ALONG SOME COASTS OF

BRAZIL... CUBA... DOMINICAN REPUBLIC... FRENCH GUYANE...
GUYANA... HAITI... SURINAME... VENEZUELA... ANGUILLA...
ANTIGUA AND BARBUDA... BARBADOS... BERMUDA... DOMINICA...
GRENADA... GUADELOUPE... MARTINIQUE... PUERTO RICO AND
VIRGIN ISLANDS... SAINT BARTHELEMY... SAINT LUCIA... SAINT
VINCENT AND THE GRENADINES... TRINIDAD AND TOBAGO... AND
TURKS AND CAICOS ISLANDS.

- * THIS IS A TEST MESSAGE. TSUNAMI WAVES REACHING 0.3 TO 1 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE FOR SOME COASTS OF

COLOMBIA... ARUBA... BONAIRE... CURACAO... JAMAICA...
MONTSERRAT... SABA AND SAINT EUSTATIUS... SAINT KITTS AND
NEVIS... SINT MAARTEN... AND SAINT MARTIN.

- * THIS IS A TEST MESSAGE. ACTUAL AMPLITUDES AT THE COAST MAY VARY FROM FORECAST AMPLITUDES DUE TO UNCERTAINTIES IN THE FORECAST AND LOCAL FEATURES. IN PARTICULAR MAXIMUM TSUNAMI AMPLITUDES ON ATOLLS OR SMALL ISLANDS AND AT LOCATIONS WITH FRINGING OR BARRIER REEFS WILL LIKELY BE MUCH SMALLER THAN THE FORECAST INDICATES.

- * THIS IS A TEST MESSAGE. FOR ALL OTHER AREAS COVERED BY THIS MESSAGE... THERE IS NO TSUNAMI THREAT ALTHOUGH SMALL SEA LEVEL CHANGES MAY OCCUR.

TEST... RECOMMENDED ACTIONS ...TEST

- * THIS IS A TEST MESSAGE. GOVERNMENT AGENCIES RESPONSIBLE FOR THREATENED COASTAL AREAS SHOULD TAKE ACTION TO INFORM AND INSTRUCT ANY COASTAL POPULATIONS AT RISK IN ACCORDANCE WITH THEIR OWN EVALUATION... PROCEDURES AND THE LEVEL OF THREAT.
- * THIS IS A TEST MESSAGE. PERSONS LOCATED IN THREATENED COASTAL AREAS SHOULD STAY ALERT FOR INFORMATION AND FOLLOW INSTRUCTIONS FROM NATIONAL AND LOCAL AUTHORITIES.

TEST... ESTIMATED TIMES OF ARRIVAL ...TEST

- * THIS IS A TEST MESSAGE. ESTIMATED TIMES OF ARRIVAL -ETA- OF THE INITIAL TSUNAMI WAVE FOR PLACES WITHIN THREATENED REGIONS ARE GIVEN BELOW. ACTUAL ARRIVAL TIMES MAY DIFFER AND THE INITIAL WAVE MAY NOT BE THE LARGEST. A TSUNAMI IS A SERIES OF WAVES AND THE TIME BETWEEN WAVES CAN BE FIVE MINUTES TO ONE HOUR.

LOCATION	REGION	COORDINATES		ETA (UTC)	
ESSO PIER	BERMUDA	32.4N	64.7W	2051	03/19
ROSEAU	DOMINICA	15.3N	61.4W	2118	03/19
PLYMOUTH	MONTSERRAT	16.7N	62.2W	2118	03/19
BRIDGETOWN	BARBADOS	13.1N	59.6W	2118	03/19
CASTRIES	SAINT LUCIA	14.0N	61.0W	2119	03/19
BASSE TERRE	GUADELOUPE	16.0N	61.7W	2122	03/19
SINT EUSTATIUS	SINT EUSTATIUS	17.5N	63.0W	2123	03/19
SABA	SABA	17.6N	63.2W	2124	03/19
FORT DE FRANCE	MARTINIQUE	14.6N	61.1W	2125	03/19
SAN JUAN	PUERTO RICO	18.5N	66.1W	2125	03/19
CHRISTIANSTED	US VIRGIN IS	17.7N	64.7W	2126	03/19
ANEGADA	BR VIRGIN IS	18.8N	64.3W	2126	03/19
THE VALLEY	ANGUILLA	18.3N	63.1W	2127	03/19
SAINT JOHNS	ANTIGUA	17.1N	61.9W	2127	03/19
BASSETERRE	SAINT KITTS	17.3N	62.7W	2128	03/19
PALMETTO POINT	BARBUDA	17.6N	61.9W	2128	03/19
SIMPSON BAAI	SINT MAARTEN	18.0N	63.1W	2131	03/19
KINGSTOWN	SAINT VINCENT	13.1N	61.2W	2136	03/19
MAYAGUEZ	PUERTO RICO	18.2N	67.2W	2137	03/19
CABO ENGANO	DOMINICAN REP	18.6N	68.3W	2151	03/19
GRAND TURK	TURKS N CAICOS	21.5N	71.1W	2152	03/19
PUERTO PLATA	DOMINICAN REP	19.8N	70.7W	2153	03/19
BAIE LUCAS	SAINT MARTIN	18.1N	63.0W	2153	03/19
SAINT BARTHELEM	SAINT BARTHELEMY	17.9N	62.8W	2154	03/19
BAIE GRAND CASE	SAINT MARTIN	18.1N	63.1W	2154	03/19
PIRATES BAY	TRINIDAD TOBAGO	11.3N	60.6W	2201	03/19
MAYAGUANA	BAHAMAS	22.3N	73.0W	2202	03/19
CHARLOTTE AMALI	US VIRGIN IS	18.3N	64.9W	2203	03/19
SAINT GEORGES	GRENADA	12.0N	61.8W	2203	03/19
WEST CAICOS	TURKS N CAICOS	21.7N	72.5W	2205	03/19
BAIE BLANCHE	SAINT MARTIN	18.1N	63.0W	2207	03/19
SAN SALVADOR	BAHAMAS	24.1N	74.5W	2208	03/19
CAP HAITEN	HAITI	19.8N	72.2W	2209	03/19
SANTO DOMINGO	DOMINICAN REP	18.5N	69.9W	2216	03/19
LONG ISLAND	BAHAMAS	23.3N	75.1W	2221	03/19
ONIMA	BONAIRE	12.3N	68.3W	2223	03/19
GREAT INAGUA	BAHAMAS	20.9N	73.7W	2223	03/19
EXUMA	BAHAMAS	23.6N	75.9W	2224	03/19
CAT ISLAND	BAHAMAS	24.4N	75.5W	2224	03/19
BARACOA	CUBA	20.4N	74.5W	2227	03/19
ELEUTHERA ISLAN	BAHAMAS	25.2N	76.1W	2229	03/19
CROOKED ISLAND	BAHAMAS	22.7N	74.1W	2234	03/19
JACAMEL	HAITI	18.1N	72.5W	2235	03/19
ANDROS ISLAND	BAHAMAS	25.0N	77.9W	2235	03/19
GIBARA	CUBA	21.1N	76.1W	2237	03/19
ORANJESTAD	ARUBA	12.5N	70.0W	2237	03/19
ROADTOWN	BR VIRGIN IS	18.4N	64.6W	2240	03/19
JEREMIE	HAITI	18.6N	74.1W	2241	03/19
SANTIAGO D CUBA	CUBA	19.9N	75.8W	2244	03/19
NASSAU	BAHAMAS	25.1N	77.4W	2247	03/19
CAYENNE	FRENCH GUYANE	4.9N	52.3W	2247	03/19
MAIQUETIA	VENEZUELA	10.6N	67.0W	2250	03/19
WILLEMSTAD	CURACAO	12.1N	68.9W	2257	03/19
ABACO ISLAND	BAHAMAS	26.6N	77.1W	2258	03/19
FREEPORT	BAHAMAS	26.5N	78.8W	2259	03/19

CUMANA	VENEZUELA	10.5N	64.2W	2303	03/19
PORT OF SPAIN	TRINIDAD TOBAGO	10.6N	61.5W	2308	03/19
BIMINI	BAHAMAS	25.8N	79.3W	2312	03/19
SANTA MARTA	COLOMBIA	11.2N	74.2W	2322	03/19
MONTEGO BAY	JAMAICA	18.5N	77.9W	2326	03/19
PORT AU PRINCE	HAITI	18.5N	72.4W	2334	03/19
CIENFUEGOS	CUBA	22.0N	80.5W	2337	03/19
CARTAGENA	COLOMBIA	10.4N	75.6W	2338	03/19
KINGSTON	JAMAICA	17.9N	76.9W	2343	03/19
BARRANQUILLA	COLOMBIA	11.1N	74.9W	2347	03/19
RIOHACHA	COLOMBIA	11.6N	72.9W	2351	03/19
PUNTA CARIBANA	COLOMBIA	8.6N	76.9W	0022	03/20
GEORGETOWN	GUYANA	6.8N	58.2W	0033	03/20
PARAMARIBO	SURINAME	5.9N	55.2W	0033	03/20
PUNTO FIJO	VENEZUELA	11.7N	70.2W	0104	03/20
PORLAMAR	VENEZUELA	10.9N	63.8W	0157	03/20
SANTA CRZ D SUR	CUBA	20.7N	78.0W	0201	03/20
GOLFO VENEZUELA	VENEZUELA	11.4N	71.2W	0203	03/20
ILHA DE MARACA	BRAZIL	2.2N	50.5W	0210	03/20
NUEVA GERONA	CUBA	21.9N	82.8W	0339	03/20

TEST... POTENTIAL IMPACTS ...TEST

- * THIS IS A TEST MESSAGE. A TSUNAMI IS A SERIES OF WAVES. THE TIME BETWEEN WAVE CRESTS CAN VARY FROM 5 MINUTES TO AN HOUR. THE HAZARD MAY PERSIST FOR MANY HOURS OR LONGER AFTER THE INITIAL WAVE.
- * THIS IS A TEST MESSAGE. IMPACTS CAN VARY SIGNIFICANTLY FROM ONE SECTION OF COAST TO THE NEXT DUE TO LOCAL BATHYMETRY AND THE SHAPE AND ELEVATION OF THE SHORELINE.
- * THIS IS A TEST MESSAGE. IMPACTS CAN ALSO VARY DEPENDING UPON THE STATE OF THE TIDE AT THE TIME OF THE MAXIMUM TSUNAMI WAVES.
- * THIS IS A TEST MESSAGE. PERSONS CAUGHT IN THE WATER OF A TSUNAMI MAY DROWN... BE CRUSHED BY DEBRIS IN THE WATER... OR BE SWEEPED OUT TO SEA.

TEST... TSUNAMI OBSERVATIONS ...TEST

- * THIS IS A TEST MESSAGE. THE FOLLOWING ARE TSUNAMI WAVE OBSERVATIONS FROM COASTAL AND/OR DEEP-OCEAN SEA LEVEL GAUGES AT THE INDICATED LOCATIONS. THE MAXIMUM TSUNAMI HEIGHT IS MEASURED WITH RESPECT TO THE NORMAL TIDE LEVEL.

GAUGE LOCATION	GAUGE COORDINATES		TIME OF MEASURE (UTC)	MAXIMUM TSUNAMI HEIGHT	WAVE PERIOD (MIN)
	LAT	LON			
BOUCAU BAYONNE FR	43.5N	1.5W	1645	0.73M/ 2.4FT	26
CARTAGENA ES	37.6N	1.0W	1630	0.40M/ 1.3FT	28
SAID MA	35.1N	2.3W	1627	0.74M/ 2.4FT	28

PONTA DELGADA PT	37.7N	25.7W	1604	3.82M/12.5FT	22
FERROL ES	43.5N	8.3W	1600	1.46M/ 4.8FT	16
ELHIERRO ES	27.8N	17.9W	1554	1.78M/ 5.9FT	22
FUERTEVENTURA ES	28.5N	13.9W	1551	2.39M/ 7.9FT	28
LAGOMERA ES	28.1N	17.1W	1545	1.89M/ 6.2FT	16
LA PALMA ES	28.7N	17.8W	1543	2.99M/ 9.8FT	18
TENERIFE ES	28.5N	16.2W	1540	3.00M/ 9.8FT	20
ARRECIFE ES	29.0N	13.5W	1529	2.72M/ 8.9FT	24
LASPALMAS ES	28.1N	15.4W	1532	3.80M/12.5FT	18
ALGECIRAS ES	36.2N	5.4W	1534	1.27M/ 4.2FT	26
CADIZ ES	36.5N	6.3W	1528	8.34M/27.4FT	20
HUELVA ES	37.1N	6.8W	1526	11.04M/36.2FT	22
ALBUFEIRA PT	37.1N	8.3W	1505	15.43M/50.6FT	16
PORTO SANTO PT	33.1N	16.3W	1503	10.23M/33.6FT	14

TEST... NEXT UPDATE AND ADDITIONAL INFORMATION ...TEST

-
- * THIS IS A TEST MESSAGE. THE NEXT MESSAGE WILL BE ISSUED IN ONE HOUR... OR SOONER IF THE SITUATION WARRANTS.
 - * THIS IS A TEST MESSAGE. AUTHORITATIVE INFORMATION ABOUT THE EARTHQUAKE FROM THE U.S. GEOLOGICAL SURVEY CAN BE FOUND ON THE INTERNET AT EARTHQUAKE.USGS.GOV/EARTHQUAKES -ALL IN LOWERCASE LETTERS-.
 - * THIS IS A TEST MESSAGE. FURTHER INFORMATION ABOUT THIS EVENT MAY BE FOUND AT WWW.TSUNAMI.GOV.
 - * THIS IS A TEST MESSAGE. COASTAL REGIONS OF THE US GULF COAST... US EAST COAST... AND THE MARITIME PROVINCES OF CANADA SHOULD REFER TO U.S. NATIONAL TSUNAMI WARNING CENTER MESSAGES THAT CAN BE FOUND AT WWW.TSUNAMI.GOV.

THIS IS A TEST MESSAGE. DO NOT TAKE ACTION BASED ON THIS TEST MESSAGE.

\$\$

NNNN

PTWC Message #8

ZCZC
WECA41 PHEB 191800
TSUCAX

TEST...TSUNAMI MESSAGE NUMBER 8...TEST
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
1800 UTC THU MAR 19 2020

...THIS MESSAGE IS FOR TEST PURPOSES ONLY...
...TEST TSUNAMI THREAT MESSAGE TEST...

**** NOTICE **** NOTICE **** NOTICE **** NOTICE **** NOTICE ****

THIS IS A TEST MESSAGE. THIS MESSAGE IS ISSUED FOR INFORMATION ONLY IN SUPPORT OF THE UNESCO/IOC TSUNAMI AND OTHER COASTAL HAZARDS WARNING SYSTEM FOR THE CARIBBEAN AND ADJACENT REGIONS AND IS MEANT FOR NATIONAL AUTHORITIES IN EACH COUNTRY OF THAT SYSTEM.

THIS IS A TEST MESSAGE. NATIONAL AUTHORITIES WILL DETERMINE THE APPROPRIATE LEVEL OF ALERT FOR EACH COUNTRY AND MAY ISSUE ADDITIONAL OR MORE REFINED INFORMATION.

**** NOTICE **** NOTICE **** NOTICE **** NOTICE **** NOTICE ****

TEST... PRELIMINARY EARTHQUAKE PARAMETERS ...TEST

* MAGNITUDE	8.5
* ORIGIN TIME	1400 UTC MAR 19 2020
* COORDINATES	36.0 NORTH 10.8 WEST
* DEPTH	5 KM / 3 MILES
* LOCATION	AZORES-CAPE ST. VINCENT RIDGE

TEST... EVALUATION ...TEST

* THIS IS A TEST MESSAGE. AN EARTHQUAKE WITH A PRELIMINARY MAGNITUDE OF 8.5 OCCURRED NEAR THE AZORES-CAPE SAINT VINCENT RIDGE AT 1400 UTC ON THURSDAY MARCH 19 2020.

* THIS IS A TEST MESSAGE. TSUNAMI WAVES HAVE BEEN OBSERVED.

* THIS IS A TEST MESSAGE. BASED ON ALL AVAILABLE DATA...
HAZARDOUS TSUNAMI WAVES ARE FORECAST FOR SOME COASTS.

TEST... TSUNAMI THREAT FORECAST ...TEST

* THIS IS A TEST MESSAGE. TSUNAMI WAVES REACHING MORE THAN 3 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE ALONG SOME COASTS OF

BAHAMAS.

- * THIS IS A TEST MESSAGE. TSUNAMI WAVES REACHING 1 TO 3 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE ALONG SOME COASTS OF

BRAZIL... CUBA... DOMINICAN REPUBLIC... FRENCH GUYANE...
GUYANA... HAITI... SURINAME... VENEZUELA... ANGUILLA...
ANTIGUA AND BARBUDA... BARBADOS... BERMUDA... DOMINICA...
GRENADA... GUADELOUPE... MARTINIQUE... PUERTO RICO AND
VIRGIN ISLANDS... SAINT BARTHELEMY... SAINT LUCIA... SAINT
VINCENT AND THE GRENADINES... TRINIDAD AND TOBAGO... AND
TURKS AND CAICOS ISLANDS.

- * THIS IS A TEST MESSAGE. TSUNAMI WAVES REACHING 0.3 TO 1 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE FOR SOME COASTS OF

COLOMBIA... ARUBA... BONAIRE... CURACAO... JAMAICA...
MONTSERRAT... SABA AND SAINT EUSTATIUS... SAINT KITTS AND
NEVIS... SINT MAARTEN... AND SAINT MARTIN.

- * THIS IS A TEST MESSAGE. ACTUAL AMPLITUDES AT THE COAST MAY VARY FROM FORECAST AMPLITUDES DUE TO UNCERTAINTIES IN THE FORECAST AND LOCAL FEATURES. IN PARTICULAR MAXIMUM TSUNAMI AMPLITUDES ON ATOLLS OR SMALL ISLANDS AND AT LOCATIONS WITH FRINGING OR BARRIER REEFS WILL LIKELY BE MUCH SMALLER THAN THE FORECAST INDICATES.

- * THIS IS A TEST MESSAGE. FOR ALL OTHER AREAS COVERED BY THIS MESSAGE... THERE IS NO TSUNAMI THREAT ALTHOUGH SMALL SEA LEVEL CHANGES MAY OCCUR.

TEST... RECOMMENDED ACTIONS ...TEST

- * THIS IS A TEST MESSAGE. GOVERNMENT AGENCIES RESPONSIBLE FOR THREATENED COASTAL AREAS SHOULD TAKE ACTION TO INFORM AND INSTRUCT ANY COASTAL POPULATIONS AT RISK IN ACCORDANCE WITH THEIR OWN EVALUATION... PROCEDURES AND THE LEVEL OF THREAT.
- * THIS IS A TEST MESSAGE. PERSONS LOCATED IN THREATENED COASTAL AREAS SHOULD STAY ALERT FOR INFORMATION AND FOLLOW INSTRUCTIONS FROM NATIONAL AND LOCAL AUTHORITIES.

TEST... ESTIMATED TIMES OF ARRIVAL ...TEST

- * THIS IS A TEST MESSAGE. ESTIMATED TIMES OF ARRIVAL -ETA- OF THE INITIAL TSUNAMI WAVE FOR PLACES WITHIN THREATENED REGIONS ARE GIVEN BELOW. ACTUAL ARRIVAL TIMES MAY DIFFER AND THE INITIAL WAVE MAY NOT BE THE LARGEST. A TSUNAMI IS A SERIES OF WAVES AND THE TIME BETWEEN WAVES CAN BE FIVE MINUTES TO ONE HOUR.

LOCATION	REGION	COORDINATES		ETA (UTC)	
ESSO PIER	BERMUDA	32.4N	64.7W	2051	03/19
ROSEAU	DOMINICA	15.3N	61.4W	2118	03/19
PLYMOUTH	MONTSERRAT	16.7N	62.2W	2118	03/19
BRIDGETOWN	BARBADOS	13.1N	59.6W	2118	03/19
CASTRIES	SAINT LUCIA	14.0N	61.0W	2119	03/19
BASSE TERRE	GUADELOUPE	16.0N	61.7W	2122	03/19
SINT EUSTATIUS	SINT EUSTATIUS	17.5N	63.0W	2123	03/19
SABA	SABA	17.6N	63.2W	2124	03/19
FORT DE FRANCE	MARTINIQUE	14.6N	61.1W	2125	03/19
SAN JUAN	PUERTO RICO	18.5N	66.1W	2125	03/19
CHRISTIANSTED	US VIRGIN IS	17.7N	64.7W	2126	03/19
ANEGADA	BR VIRGIN IS	18.8N	64.3W	2126	03/19
THE VALLEY	ANGUILLA	18.3N	63.1W	2127	03/19
SAINT JOHNS	ANTIGUA	17.1N	61.9W	2127	03/19
BASSETTERRE	SAINT KITTS	17.3N	62.7W	2128	03/19
PALMETTO POINT	BARBUDA	17.6N	61.9W	2128	03/19
SIMPSON BAAI	SINT MAARTEN	18.0N	63.1W	2131	03/19
KINGSTOWN	SAINT VINCENT	13.1N	61.2W	2136	03/19
MAYAGUEZ	PUERTO RICO	18.2N	67.2W	2137	03/19
CABO ENGANO	DOMINICAN REP	18.6N	68.3W	2151	03/19
GRAND TURK	TURKS N CAICOS	21.5N	71.1W	2152	03/19
PUERTO PLATA	DOMINICAN REP	19.8N	70.7W	2153	03/19
BAIE LUCAS	SAINT MARTIN	18.1N	63.0W	2153	03/19
SAINT BARTHELEM	SAINT BARTHELEMY	17.9N	62.8W	2154	03/19
BAIE GRAND CASE	SAINT MARTIN	18.1N	63.1W	2154	03/19
PIRATES BAY	TRINIDAD TOBAGO	11.3N	60.6W	2201	03/19
MAYAGUANA	BAHAMAS	22.3N	73.0W	2202	03/19
CHARLOTTE AMALI	US VIRGIN IS	18.3N	64.9W	2203	03/19
SAINT GEORGES	GRENADA	12.0N	61.8W	2203	03/19
WEST CAICOS	TURKS N CAICOS	21.7N	72.5W	2205	03/19
BAIE BLANCHE	SAINT MARTIN	18.1N	63.0W	2207	03/19
SAN SALVADOR	BAHAMAS	24.1N	74.5W	2208	03/19
CAP HAITEN	HAITI	19.8N	72.2W	2209	03/19
SANTO DOMINGO	DOMINICAN REP	18.5N	69.9W	2216	03/19
LONG ISLAND	BAHAMAS	23.3N	75.1W	2221	03/19
ONIMA	BONAIRE	12.3N	68.3W	2223	03/19
GREAT INAGUA	BAHAMAS	20.9N	73.7W	2223	03/19
EXUMA	BAHAMAS	23.6N	75.9W	2224	03/19
CAT ISLAND	BAHAMAS	24.4N	75.5W	2224	03/19
BARACOA	CUBA	20.4N	74.5W	2227	03/19
ELEUTHERA ISLAN	BAHAMAS	25.2N	76.1W	2229	03/19
CROOKED ISLAND	BAHAMAS	22.7N	74.1W	2234	03/19
JACAMEL	HAITI	18.1N	72.5W	2235	03/19
ANDROS ISLAND	BAHAMAS	25.0N	77.9W	2235	03/19
GIBARA	CUBA	21.1N	76.1W	2237	03/19
ORANJESTAD	ARUBA	12.5N	70.0W	2237	03/19
ROADTOWN	BR VIRGIN IS	18.4N	64.6W	2240	03/19
JEREMIE	HAITI	18.6N	74.1W	2241	03/19
SANTIAGO D CUBA	CUBA	19.9N	75.8W	2244	03/19
NASSAU	BAHAMAS	25.1N	77.4W	2247	03/19
CAYENNE	FRENCH GUYANE	4.9N	52.3W	2247	03/19
MAIQUETIA	VENEZUELA	10.6N	67.0W	2250	03/19
WILLEMSTAD	CURACAO	12.1N	68.9W	2257	03/19
ABACO ISLAND	BAHAMAS	26.6N	77.1W	2258	03/19
FREEPORT	BAHAMAS	26.5N	78.8W	2259	03/19

CUMANA	VENEZUELA	10.5N	64.2W	2303	03/19
PORT OF SPAIN	TRINIDAD TOBAGO	10.6N	61.5W	2308	03/19
BIMINI	BAHAMAS	25.8N	79.3W	2312	03/19
SANTA MARTA	COLOMBIA	11.2N	74.2W	2322	03/19
MONTEGO BAY	JAMAICA	18.5N	77.9W	2326	03/19
PORT AU PRINCE	HAITI	18.5N	72.4W	2334	03/19
CIENFUEGOS	CUBA	22.0N	80.5W	2337	03/19
CARTAGENA	COLOMBIA	10.4N	75.6W	2338	03/19
KINGSTON	JAMAICA	17.9N	76.9W	2343	03/19
BARRANQUILLA	COLOMBIA	11.1N	74.9W	2347	03/19
RIOHACHA	COLOMBIA	11.6N	72.9W	2351	03/19
PUNTA CARIBANA	COLOMBIA	8.6N	76.9W	0022	03/20
GEORGETOWN	GUYANA	6.8N	58.2W	0033	03/20
PARAMARIBO	SURINAME	5.9N	55.2W	0033	03/20
PUNTO FIJO	VENEZUELA	11.7N	70.2W	0104	03/20
PORLAMAR	VENEZUELA	10.9N	63.8W	0157	03/20
SANTA CRZ D SUR	CUBA	20.7N	78.0W	0201	03/20
GOLFO VENEZUELA	VENEZUELA	11.4N	71.2W	0203	03/20
ILHA DE MARACA	BRAZIL	2.2N	50.5W	0210	03/20
NUEVA GERONA	CUBA	21.9N	82.8W	0339	03/20

TEST... POTENTIAL IMPACTS ...TEST

- * THIS IS A TEST MESSAGE. A TSUNAMI IS A SERIES OF WAVES. THE TIME BETWEEN WAVE CRESTS CAN VARY FROM 5 MINUTES TO AN HOUR. THE HAZARD MAY PERSIST FOR MANY HOURS OR LONGER AFTER THE INITIAL WAVE.
- * THIS IS A TEST MESSAGE. IMPACTS CAN VARY SIGNIFICANTLY FROM ONE SECTION OF COAST TO THE NEXT DUE TO LOCAL BATHYMETRY AND THE SHAPE AND ELEVATION OF THE SHORELINE.
- * THIS IS A TEST MESSAGE. IMPACTS CAN ALSO VARY DEPENDING UPON THE STATE OF THE TIDE AT THE TIME OF THE MAXIMUM TSUNAMI WAVES.
- * THIS IS A TEST MESSAGE. PERSONS CAUGHT IN THE WATER OF A TSUNAMI MAY DROWN... BE CRUSHED BY DEBRIS IN THE WATER... OR BE SWEEPED OUT TO SEA.

TEST... TSUNAMI OBSERVATIONS ...TEST

- * THIS IS A TEST MESSAGE. THE FOLLOWING ARE TSUNAMI WAVE OBSERVATIONS FROM COASTAL AND/OR DEEP-OCEAN SEA LEVEL GAUGES AT THE INDICATED LOCATIONS. THE MAXIMUM TSUNAMI HEIGHT IS MEASURED WITH RESPECT TO THE NORMAL TIDE LEVEL.

GAUGE LOCATION	GAUGE COORDINATES		TIME OF MEASURE (UTC)	MAXIMUM TSUNAMI HEIGHT	WAVE PERIOD (MIN)
	LAT	LON			
BARCELONA ES	41.3N	2.2E	1754	0.11M/ 0.4FT	16
LES SABLES DOLONNE	46.5N	1.8W	1752	0.69M/ 2.3FT	22
PALMEIRA CAPE VERDE	16.8N	23.0W	1738	1.07M/ 3.5FT	26

CONCARMEAU FR	47.9N	3.9W	1732	0.87M/ 2.9FT	22
VALENCIA ES	39.4N	0.3W	1728	0.19M/ 0.6FT	18
LE CONQUET FR	48.4N	4.8W	1730	0.93M/ 3.0FT	28
MIMIZAN FR	44.2N	1.3W	1702	0.69M/ 2.3FT	24
BOUCAU BAYONNE FR	43.5N	1.5W	1645	0.73M/ 2.4FT	26
CARTAGENA ES	37.6N	1.0W	1630	0.40M/ 1.3FT	28
SAID MA	35.1N	2.3W	1627	0.74M/ 2.4FT	28
PONTA DELGADA PT	37.7N	25.7W	1604	3.82M/12.5FT	22
FERROL ES	43.5N	8.3W	1600	1.46M/ 4.8FT	16
ELHIERRO ES	27.8N	17.9W	1554	1.78M/ 5.9FT	22
FUERTEVENTURA ES	28.5N	13.9W	1551	2.39M/ 7.9FT	28
LAGOMERA ES	28.1N	17.1W	1545	1.89M/ 6.2FT	16
LA PALMA ES	28.7N	17.8W	1543	2.99M/ 9.8FT	18
TENERIFE ES	28.5N	16.2W	1540	3.00M/ 9.8FT	20
ARRECIFE ES	29.0N	13.5W	1529	2.72M/ 8.9FT	24
LASPALMAS ES	28.1N	15.4W	1532	3.80M/12.5FT	18
ALGECIRAS ES	36.2N	5.4W	1534	1.27M/ 4.2FT	26
CADIZ ES	36.5N	6.3W	1528	8.34M/27.4FT	20
HUELVA ES	37.1N	6.8W	1526	11.04M/36.2FT	22
ALBUFEIRA PT	37.1N	8.3W	1505	15.43M/50.6FT	16
PORTO SANTO PT	33.1N	16.3W	1503	10.23M/33.6FT	14

TEST... NEXT UPDATE AND ADDITIONAL INFORMATION ...TEST

-
- * THIS IS A TEST MESSAGE. THE NEXT MESSAGE WILL BE ISSUED IN ONE HOUR... OR SOONER IF THE SITUATION WARRANTS.
 - * THIS IS A TEST MESSAGE. AUTHORITATIVE INFORMATION ABOUT THE EARTHQUAKE FROM THE U.S. GEOLOGICAL SURVEY CAN BE FOUND ON THE INTERNET AT EARTHQUAKE.USGS.GOV/EARTHQUAKES -ALL IN LOWERCASE LETTERS-.
 - * THIS IS A TEST MESSAGE. FURTHER INFORMATION ABOUT THIS EVENT MAY BE FOUND AT WWW.TSUNAMI.GOV.
 - * THIS IS A TEST MESSAGE. COASTAL REGIONS OF THE US GULF COAST... US EAST COAST... AND THE MARITIME PROVINCES OF CANADA SHOULD REFER TO U.S. NATIONAL TSUNAMI WARNING CENTER MESSAGES THAT CAN BE FOUND AT WWW.TSUNAMI.GOV.

THIS IS A TEST MESSAGE. DO NOT TAKE ACTION BASED ON THIS TEST MESSAGE.

\$\$

NNNN

PTWC Message #9

ZCZC
WECA41 PHEB 191900
TSUCAX

TEST...TSUNAMI MESSAGE NUMBER 9...TEST
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
1900 UTC THU MAR 19 2020

...THIS MESSAGE IS FOR TEST PURPOSES ONLY...
...TEST TSUNAMI THREAT MESSAGE TEST...

**** NOTICE **** NOTICE **** NOTICE **** NOTICE **** NOTICE ****

THIS IS A TEST MESSAGE. THIS MESSAGE IS ISSUED FOR INFORMATION ONLY IN SUPPORT OF THE UNESCO/IOC TSUNAMI AND OTHER COASTAL HAZARDS WARNING SYSTEM FOR THE CARIBBEAN AND ADJACENT REGIONS AND IS MEANT FOR NATIONAL AUTHORITIES IN EACH COUNTRY OF THAT SYSTEM.

THIS IS A TEST MESSAGE. NATIONAL AUTHORITIES WILL DETERMINE THE APPROPRIATE LEVEL OF ALERT FOR EACH COUNTRY AND MAY ISSUE ADDITIONAL OR MORE REFINED INFORMATION.

**** NOTICE **** NOTICE **** NOTICE **** NOTICE **** NOTICE ****

TEST... PRELIMINARY EARTHQUAKE PARAMETERS ...TEST

* MAGNITUDE	8.5
* ORIGIN TIME	1400 UTC MAR 19 2020
* COORDINATES	36.0 NORTH 10.8 WEST
* DEPTH	5 KM / 3 MILES
* LOCATION	AZORES-CAPE ST. VINCENT RIDGE

TEST... EVALUATION ...TEST

* THIS IS A TEST MESSAGE. AN EARTHQUAKE WITH A PRELIMINARY MAGNITUDE OF 8.5 OCCURRED NEAR THE AZORES-CAPE SAINT VINCENT RIDGE AT 1400 UTC ON THURSDAY MARCH 19 2020.

* THIS IS A TEST MESSAGE. TSUNAMI WAVES HAVE BEEN OBSERVED.

* THIS IS A TEST MESSAGE. BASED ON ALL AVAILABLE DATA...
HAZARDOUS TSUNAMI WAVES ARE FORECAST FOR SOME COASTS.

TEST... TSUNAMI THREAT FORECAST ...TEST

* THIS IS A TEST MESSAGE. TSUNAMI WAVES REACHING MORE THAN 3 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE ALONG SOME COASTS OF

BAHAMAS.

- * THIS IS A TEST MESSAGE. TSUNAMI WAVES REACHING 1 TO 3 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE ALONG SOME COASTS OF

BRAZIL... CUBA... DOMINICAN REPUBLIC... FRENCH GUYANE...
GUYANA... HAITI... SURINAME... VENEZUELA... ANGUILLA...
ANTIGUA AND BARBUDA... BARBADOS... BERMUDA... DOMINICA...
GRENADA... GUADELOUPE... MARTINIQUE... PUERTO RICO AND
VIRGIN ISLANDS... SAINT BARTHELEMY... SAINT LUCIA... SAINT
VINCENT AND THE GRENADINES... TRINIDAD AND TOBAGO... AND
TURKS AND CAICOS ISLANDS.

- * THIS IS A TEST MESSAGE. TSUNAMI WAVES REACHING 0.3 TO 1 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE FOR SOME COASTS OF

COLOMBIA... ARUBA... BONAIRE... CURACAO... JAMAICA...
MONTSEERRAT... SABA AND SAINT EUSTATIUS... SAINT KITTS AND
NEVIS... SINT MAARTEN... AND SAINT MARTIN.

- * THIS IS A TEST MESSAGE. ACTUAL AMPLITUDES AT THE COAST MAY VARY FROM FORECAST AMPLITUDES DUE TO UNCERTAINTIES IN THE FORECAST AND LOCAL FEATURES. IN PARTICULAR MAXIMUM TSUNAMI AMPLITUDES ON ATOLLS OR SMALL ISLANDS AND AT LOCATIONS WITH FRINGING OR BARRIER REEFS WILL LIKELY BE MUCH SMALLER THAN THE FORECAST INDICATES.

- * THIS IS A TEST MESSAGE. FOR ALL OTHER AREAS COVERED BY THIS MESSAGE... THERE IS NO TSUNAMI THREAT ALTHOUGH SMALL SEA LEVEL CHANGES MAY OCCUR.

TEST... RECOMMENDED ACTIONS ...TEST

- * THIS IS A TEST MESSAGE. GOVERNMENT AGENCIES RESPONSIBLE FOR THREATENED COASTAL AREAS SHOULD TAKE ACTION TO INFORM AND INSTRUCT ANY COASTAL POPULATIONS AT RISK IN ACCORDANCE WITH THEIR OWN EVALUATION... PROCEDURES AND THE LEVEL OF THREAT.
- * THIS IS A TEST MESSAGE. PERSONS LOCATED IN THREATENED COASTAL AREAS SHOULD STAY ALERT FOR INFORMATION AND FOLLOW INSTRUCTIONS FROM NATIONAL AND LOCAL AUTHORITIES.

TEST... ESTIMATED TIMES OF ARRIVAL ...TEST

- * THIS IS A TEST MESSAGE. ESTIMATED TIMES OF ARRIVAL -ETA- OF THE INITIAL TSUNAMI WAVE FOR PLACES WITHIN THREATENED REGIONS ARE GIVEN BELOW. ACTUAL ARRIVAL TIMES MAY DIFFER AND THE INITIAL WAVE MAY NOT BE THE LARGEST. A TSUNAMI IS A SERIES OF WAVES AND THE TIME BETWEEN WAVES CAN BE FIVE MINUTES TO ONE HOUR.

LOCATION	REGION	COORDINATES	ETA(UTC)
----------	--------	-------------	----------

ESSO PIER	BERMUDA	32.4N	64.7W	2051	03/19
ROSEAU	DOMINICA	15.3N	61.4W	2118	03/19
PLYMOUTH	MONTSERRAT	16.7N	62.2W	2118	03/19
BRIDGETOWN	BARBADOS	13.1N	59.6W	2118	03/19
CASTRIES	SAINT LUCIA	14.0N	61.0W	2119	03/19
BASSE TERRE	GUADELOUPE	16.0N	61.7W	2122	03/19
SINT EUSTATIUS	SINT EUSTATIUS	17.5N	63.0W	2123	03/19
SABA	SABA	17.6N	63.2W	2124	03/19
FORT DE FRANCE	MARTINIQUE	14.6N	61.1W	2125	03/19
SAN JUAN	PUERTO RICO	18.5N	66.1W	2125	03/19
CHRISTIANSTED	US VIRGIN IS	17.7N	64.7W	2126	03/19
ANEGADA	BR VIRGIN IS	18.8N	64.3W	2126	03/19
THE VALLEY	ANGUILLA	18.3N	63.1W	2127	03/19
SAINT JOHNS	ANTIGUA	17.1N	61.9W	2127	03/19
BASSETERRE	SAINT KITTS	17.3N	62.7W	2128	03/19
PALMETTO POINT	BARBUDA	17.6N	61.9W	2128	03/19
SIMPSON BAAI	SINT MAARTEN	18.0N	63.1W	2131	03/19
KINGSTOWN	SAINT VINCENT	13.1N	61.2W	2136	03/19
MAYAGUEZ	PUERTO RICO	18.2N	67.2W	2137	03/19
CABO ENGANO	DOMINICAN REP	18.6N	68.3W	2151	03/19
GRAND TURK	TURKS N CAICOS	21.5N	71.1W	2152	03/19
PUERTO PLATA	DOMINICAN REP	19.8N	70.7W	2153	03/19
BAIE LUCAS	SAINT MARTIN	18.1N	63.0W	2153	03/19
SAINT BARTHELEM	SAINT BARTHELEMY	17.9N	62.8W	2154	03/19
BAIE GRAND CASE	SAINT MARTIN	18.1N	63.1W	2154	03/19
PIRATES BAY	TRINIDAD TOBAGO	11.3N	60.6W	2201	03/19
MAYAGUANA	BAHAMAS	22.3N	73.0W	2202	03/19
CHARLOTTE AMALI	US VIRGIN IS	18.3N	64.9W	2203	03/19
SAINT GEORGES	GRENADA	12.0N	61.8W	2203	03/19
WEST CAICOS	TURKS N CAICOS	21.7N	72.5W	2205	03/19
BAIE BLANCHE	SAINT MARTIN	18.1N	63.0W	2207	03/19
SAN SALVADOR	BAHAMAS	24.1N	74.5W	2208	03/19
CAP HAITEN	HAITI	19.8N	72.2W	2209	03/19
SANTO DOMINGO	DOMINICAN REP	18.5N	69.9W	2216	03/19
LONG ISLAND	BAHAMAS	23.3N	75.1W	2221	03/19
ONIMA	BONAIRE	12.3N	68.3W	2223	03/19
GREAT INAGUA	BAHAMAS	20.9N	73.7W	2223	03/19
EXUMA	BAHAMAS	23.6N	75.9W	2224	03/19
CAT ISLAND	BAHAMAS	24.4N	75.5W	2224	03/19
BARACOA	CUBA	20.4N	74.5W	2227	03/19
ELEUTHERA ISLAN	BAHAMAS	25.2N	76.1W	2229	03/19
CROOKED ISLAND	BAHAMAS	22.7N	74.1W	2234	03/19
JACAMEL	HAITI	18.1N	72.5W	2235	03/19
ANDROS ISLAND	BAHAMAS	25.0N	77.9W	2235	03/19
GIBARA	CUBA	21.1N	76.1W	2237	03/19
ORANJESTAD	ARUBA	12.5N	70.0W	2237	03/19
ROADTOWN	BR VIRGIN IS	18.4N	64.6W	2240	03/19
JEREMIE	HAITI	18.6N	74.1W	2241	03/19
SANTIAGO D CUBA	CUBA	19.9N	75.8W	2244	03/19
NASSAU	BAHAMAS	25.1N	77.4W	2247	03/19
CAYENNE	FRENCH GUYANE	4.9N	52.3W	2247	03/19
MAIQUETIA	VENEZUELA	10.6N	67.0W	2250	03/19
WILLEMSTAD	CURACAO	12.1N	68.9W	2257	03/19
ABACO ISLAND	BAHAMAS	26.6N	77.1W	2258	03/19
FREEPORT	BAHAMAS	26.5N	78.8W	2259	03/19
CUMANA	VENEZUELA	10.5N	64.2W	2303	03/19
PORT OF SPAIN	TRINIDAD TOBAGO	10.6N	61.5W	2308	03/19

BIMINI	BAHAMAS	25.8N	79.3W	2312	03/19
SANTA MARTA	COLOMBIA	11.2N	74.2W	2322	03/19
MONTEGO BAY	JAMAICA	18.5N	77.9W	2326	03/19
PORT AU PRINCE	HAITI	18.5N	72.4W	2334	03/19
CIENFUEGOS	CUBA	22.0N	80.5W	2337	03/19
CARTAGENA	COLOMBIA	10.4N	75.6W	2338	03/19
KINGSTON	JAMAICA	17.9N	76.9W	2343	03/19
BARRANQUILLA	COLOMBIA	11.1N	74.9W	2347	03/19
RIOHACHA	COLOMBIA	11.6N	72.9W	2351	03/19
PUNTA CARIBANA	COLOMBIA	8.6N	76.9W	0022	03/20
GEORGETOWN	GUYANA	6.8N	58.2W	0033	03/20
PARAMARIBO	SURINAME	5.9N	55.2W	0033	03/20
PUNTO FIJO	VENEZUELA	11.7N	70.2W	0104	03/20
PORLAMAR	VENEZUELA	10.9N	63.8W	0157	03/20
SANTA CRZ D SUR	CUBA	20.7N	78.0W	0201	03/20
GOLFO VENEZUELA	VENEZUELA	11.4N	71.2W	0203	03/20
ILHA DE MARACA	BRAZIL	2.2N	50.5W	0210	03/20
NUEVA GERONA	CUBA	21.9N	82.8W	0339	03/20

TEST... POTENTIAL IMPACTS ...TEST

- * THIS IS A TEST MESSAGE. A TSUNAMI IS A SERIES OF WAVES. THE TIME BETWEEN WAVE CRESTS CAN VARY FROM 5 MINUTES TO AN HOUR. THE HAZARD MAY PERSIST FOR MANY HOURS OR LONGER AFTER THE INITIAL WAVE.
- * THIS IS A TEST MESSAGE. IMPACTS CAN VARY SIGNIFICANTLY FROM ONE SECTION OF COAST TO THE NEXT DUE TO LOCAL BATHYMETRY AND THE SHAPE AND ELEVATION OF THE SHORELINE.
- * THIS IS A TEST MESSAGE. IMPACTS CAN ALSO VARY DEPENDING UPON THE STATE OF THE TIDE AT THE TIME OF THE MAXIMUM TSUNAMI WAVES.
- * THIS IS A TEST MESSAGE. PERSONS CAUGHT IN THE WATER OF A TSUNAMI MAY DROWN... BE CRUSHED BY DEBRIS IN THE WATER... OR BE SWEEPED OUT TO SEA.

TEST... TSUNAMI OBSERVATIONS ...TEST

- * THIS IS A TEST MESSAGE. THE FOLLOWING ARE TSUNAMI WAVE OBSERVATIONS FROM COASTAL AND/OR DEEP-OCEAN SEA LEVEL GAUGES AT THE INDICATED LOCATIONS. THE MAXIMUM TSUNAMI HEIGHT IS MEASURED WITH RESPECT TO THE NORMAL TIDE LEVEL.

GAUGE LOCATION	GAUGE COORDINATES		TIME OF MEASURE (UTC)	MAXIMUM TSUNAMI HEIGHT	WAVE PERIOD (MIN)
	LAT	LON			
MALIN HEAD IE	55.4N	7.3W	1854	0.71M/ 2.3FT	18
FOS-SUR-MER FR	43.4N	4.9E	1849	0.11M/ 0.3FT	20
PORT-VENDRES FR	43.0N	3.1E	1848	0.12M/ 0.4FT	22
GENOVA IT	44.4N	8.9E	1837	0.15M/ 0.5FT	26
NOUADHIBOU MR	20.8N	17.0W	1835	1.22M/ 4.0FT	22

IMPERIA IT	43.9N	8.0E	1820	0.13M/	0.4FT	24
MONACO MC	43.7N	7.4E	1820	0.11M/	0.4FT	28
NICE FR	43.7N	7.3E	1823	0.13M/	0.4FT	18
CARLOFORTE IT	39.1N	8.3E	1816	0.14M/	0.4FT	14
LA FIGUEIRETTE	43.5N	6.9E	1812	0.12M/	0.4FT	18
PORT FERREOL FR	43.4N	6.7E	1811	0.12M/	0.4FT	24
AJACCIO FR	41.9N	8.8E	1814	0.10M/	0.3FT	26
PRAIA CV	14.9N	23.5W	1801	0.78M/	2.6FT	22
LHERBAUDIERE FR	47.0N	2.3W	1801	0.82M/	2.7FT	26
BARCELONA ES	41.3N	2.2E	1754	0.11M/	0.4FT	16
LES SABLES DOLONNE	46.5N	1.8W	1752	0.69M/	2.3FT	22
PALMEIRA CAPE VERDE	16.8N	23.0W	1738	1.07M/	3.5FT	26
CONCARMEAU FR	47.9N	3.9W	1732	0.87M/	2.9FT	22
VALENCIA ES	39.4N	0.3W	1728	0.19M/	0.6FT	18
LE CONQUET FR	48.4N	4.8W	1730	0.93M/	3.0FT	28
MIMIZAN FR	44.2N	1.3W	1702	0.69M/	2.3FT	24
BOUCAU BAYONNE FR	43.5N	1.5W	1645	0.73M/	2.4FT	26
CARTAGENA ES	37.6N	1.0W	1630	0.40M/	1.3FT	28
SAID MA	35.1N	2.3W	1627	0.74M/	2.4FT	28
PONTA DELGADA PT	37.7N	25.7W	1604	3.82M/12.5FT		22
FERROL ES	43.5N	8.3W	1600	1.46M/	4.8FT	16
ELHIERRO ES	27.8N	17.9W	1554	1.78M/	5.9FT	22
FUERTEVENTURA ES	28.5N	13.9W	1551	2.39M/	7.9FT	28
LAGOMERA ES	28.1N	17.1W	1545	1.89M/	6.2FT	16
LA PALMA ES	28.7N	17.8W	1543	2.99M/	9.8FT	18
TENERIFE ES	28.5N	16.2W	1540	3.00M/	9.8FT	20
ARRECIFE ES	29.0N	13.5W	1529	2.72M/	8.9FT	24
LASPALMAS ES	28.1N	15.4W	1532	3.80M/12.5FT		18
ALGECIRAS ES	36.2N	5.4W	1534	1.27M/	4.2FT	26
CADIZ ES	36.5N	6.3W	1528	8.34M/27.4FT		20
HUELVA ES	37.1N	6.8W	1526	11.04M/36.2FT		22
ALBUFEIRA PT	37.1N	8.3W	1505	15.43M/50.6FT		16
PORTO SANTO PT	33.1N	16.3W	1503	10.23M/33.6FT		14

TEST... NEXT UPDATE AND ADDITIONAL INFORMATION ...TEST

-
- * THIS IS A TEST MESSAGE. THE NEXT MESSAGE WILL BE ISSUED IN ONE HOUR... OR SOONER IF THE SITUATION WARRANTS.
 - * THIS IS A TEST MESSAGE. AUTHORITATIVE INFORMATION ABOUT THE EARTHQUAKE FROM THE U.S. GEOLOGICAL SURVEY CAN BE FOUND ON THE INTERNET AT EARTHQUAKE.USGS.GOV/EARTHQUAKES -ALL IN LOWERCASE LETTERS-.
 - * THIS IS A TEST MESSAGE. FURTHER INFORMATION ABOUT THIS EVENT MAY BE FOUND AT WWW.TSUNAMI.GOV.
 - * THIS IS A TEST MESSAGE. COASTAL REGIONS OF THE US GULF COAST... US EAST COAST... AND THE MARITIME PROVINCES OF CANADA SHOULD REFER TO U.S. NATIONAL TSUNAMI WARNING CENTER MESSAGES THAT CAN BE FOUND AT WWW.TSUNAMI.GOV.

THIS IS A TEST MESSAGE. DO NOT TAKE ACTION BASED ON THIS TEST MESSAGE.

NNNN

PTWC Message #10

ZCZC
WECA41 PHEB 192000
TSUCAX

TEST...TSUNAMI MESSAGE NUMBER 10...TEST
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
2000 UTC THU MAR 19 2020

...THIS MESSAGE IS FOR TEST PURPOSES ONLY...
...TEST TSUNAMI THREAT MESSAGE TEST...

**** NOTICE **** NOTICE **** NOTICE **** NOTICE **** NOTICE ****

THIS IS A TEST MESSAGE. THIS MESSAGE IS ISSUED FOR INFORMATION ONLY IN SUPPORT OF THE UNESCO/IOC TSUNAMI AND OTHER COASTAL HAZARDS WARNING SYSTEM FOR THE CARIBBEAN AND ADJACENT REGIONS AND IS MEANT FOR NATIONAL AUTHORITIES IN EACH COUNTRY OF THAT SYSTEM.

THIS IS A TEST MESSAGE. NATIONAL AUTHORITIES WILL DETERMINE THE APPROPRIATE LEVEL OF ALERT FOR EACH COUNTRY AND MAY ISSUE ADDITIONAL OR MORE REFINED INFORMATION.

**** NOTICE **** NOTICE **** NOTICE **** NOTICE **** NOTICE ****

TEST... PRELIMINARY EARTHQUAKE PARAMETERS ...TEST

* MAGNITUDE	8.5
* ORIGIN TIME	1400 UTC MAR 19 2020
* COORDINATES	36.0 NORTH 10.8 WEST
* DEPTH	5 KM / 3 MILES
* LOCATION	AZORES-CAPE ST. VINCENT RIDGE

TEST... EVALUATION ...TEST

* THIS IS A TEST MESSAGE. AN EARTHQUAKE WITH A PRELIMINARY MAGNITUDE OF 8.5 OCCURRED NEAR THE AZORES-CAPE SAINT VINCENT RIDGE AT 1400 UTC ON THURSDAY MARCH 19 2020.

* THIS IS A TEST MESSAGE. TSUNAMI WAVES HAVE BEEN OBSERVED.

* THIS IS A TEST MESSAGE. BASED ON ALL AVAILABLE DATA...
HAZARDOUS TSUNAMI WAVES ARE FORECAST FOR SOME COASTS.

TEST... TSUNAMI THREAT FORECAST ...TEST

* THIS IS A TEST MESSAGE. TSUNAMI WAVES REACHING MORE THAN 3 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE ALONG SOME COASTS OF

BAHAMAS.

- * THIS IS A TEST MESSAGE. TSUNAMI WAVES REACHING 1 TO 3 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE ALONG SOME COASTS OF

BRAZIL... CUBA... DOMINICAN REPUBLIC... FRENCH GUYANE...
GUYANA... HAITI... SURINAME... VENEZUELA... ANGUILLA...
ANTIGUA AND BARBUDA... BARBADOS... BERMUDA... DOMINICA...
GRENADA... GUADELOUPE... MARTINIQUE... PUERTO RICO AND
VIRGIN ISLANDS... SAINT BARTHELEMY... SAINT LUCIA... SAINT
VINCENT AND THE GRENADINES... TRINIDAD AND TOBAGO... AND
TURKS AND CAICOS ISLANDS.

- * THIS IS A TEST MESSAGE. TSUNAMI WAVES REACHING 0.3 TO 1 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE FOR SOME COASTS OF

COLOMBIA... ARUBA... BONAIRE... CURACAO... JAMAICA...
MONTSERRAT... SABA AND SAINT EUSTATIUS... SAINT KITTS AND
NEVIS... SINT MAARTEN... AND SAINT MARTIN.

- * THIS IS A TEST MESSAGE. ACTUAL AMPLITUDES AT THE COAST MAY VARY FROM FORECAST AMPLITUDES DUE TO UNCERTAINTIES IN THE FORECAST AND LOCAL FEATURES. IN PARTICULAR MAXIMUM TSUNAMI AMPLITUDES ON ATOLLS OR SMALL ISLANDS AND AT LOCATIONS WITH FRINGING OR BARRIER REEFS WILL LIKELY BE MUCH SMALLER THAN THE FORECAST INDICATES.

- * THIS IS A TEST MESSAGE. FOR ALL OTHER AREAS COVERED BY THIS MESSAGE... THERE IS NO TSUNAMI THREAT ALTHOUGH SMALL SEA LEVEL CHANGES MAY OCCUR.

TEST... RECOMMENDED ACTIONS ...TEST

- * THIS IS A TEST MESSAGE. GOVERNMENT AGENCIES RESPONSIBLE FOR THREATENED COASTAL AREAS SHOULD TAKE ACTION TO INFORM AND INSTRUCT ANY COASTAL POPULATIONS AT RISK IN ACCORDANCE WITH THEIR OWN EVALUATION... PROCEDURES AND THE LEVEL OF THREAT.
- * THIS IS A TEST MESSAGE. PERSONS LOCATED IN THREATENED COASTAL AREAS SHOULD STAY ALERT FOR INFORMATION AND FOLLOW INSTRUCTIONS FROM NATIONAL AND LOCAL AUTHORITIES.

TEST... ESTIMATED TIMES OF ARRIVAL ...TEST

- * THIS IS A TEST MESSAGE. ESTIMATED TIMES OF ARRIVAL -ETA- OF THE INITIAL TSUNAMI WAVE FOR PLACES WITHIN THREATENED REGIONS ARE GIVEN BELOW. ACTUAL ARRIVAL TIMES MAY DIFFER AND THE INITIAL WAVE MAY NOT BE THE LARGEST. A TSUNAMI IS A SERIES OF WAVES AND THE TIME BETWEEN WAVES CAN BE FIVE MINUTES TO ONE HOUR.

LOCATION	REGION	COORDINATES		ETA (UTC)	
ESSO PIER	BERMUDA	32.4N	64.7W	2051	03/19
ROSEAU	DOMINICA	15.3N	61.4W	2118	03/19
PLYMOUTH	MONTSERRAT	16.7N	62.2W	2118	03/19
BRIDGETOWN	BARBADOS	13.1N	59.6W	2118	03/19
CASTRIES	SAINT LUCIA	14.0N	61.0W	2119	03/19
BASSE TERRE	GUADELOUPE	16.0N	61.7W	2122	03/19
SINT EUSTATIUS	SINT EUSTATIUS	17.5N	63.0W	2123	03/19
SABA	SABA	17.6N	63.2W	2124	03/19
FORT DE FRANCE	MARTINIQUE	14.6N	61.1W	2125	03/19
SAN JUAN	PUERTO RICO	18.5N	66.1W	2125	03/19
CHRISTIANSTED	US VIRGIN IS	17.7N	64.7W	2126	03/19
ANEGADA	BR VIRGIN IS	18.8N	64.3W	2126	03/19
THE VALLEY	ANGUILLA	18.3N	63.1W	2127	03/19
SAINT JOHNS	ANTIGUA	17.1N	61.9W	2127	03/19
BASSETTERRE	SAINT KITTS	17.3N	62.7W	2128	03/19
PALMETTO POINT	BARBUDA	17.6N	61.9W	2128	03/19
SIMPSON BAAI	SINT MAARTEN	18.0N	63.1W	2131	03/19
KINGSTOWN	SAINT VINCENT	13.1N	61.2W	2136	03/19
MAYAGUEZ	PUERTO RICO	18.2N	67.2W	2137	03/19
CABO ENGANO	DOMINICAN REP	18.6N	68.3W	2151	03/19
GRAND TURK	TURKS N CAICOS	21.5N	71.1W	2152	03/19
PUERTO PLATA	DOMINICAN REP	19.8N	70.7W	2153	03/19
BAIE LUCAS	SAINT MARTIN	18.1N	63.0W	2153	03/19
SAINT BARTHELEM	SAINT BARTHELEMY	17.9N	62.8W	2154	03/19
BAIE GRAND CASE	SAINT MARTIN	18.1N	63.1W	2154	03/19
PIRATES BAY	TRINIDAD TOBAGO	11.3N	60.6W	2201	03/19
MAYAGUANA	BAHAMAS	22.3N	73.0W	2202	03/19
CHARLOTTE AMALI	US VIRGIN IS	18.3N	64.9W	2203	03/19
SAINT GEORGES	GRENADA	12.0N	61.8W	2203	03/19
WEST CAICOS	TURKS N CAICOS	21.7N	72.5W	2205	03/19
BAIE BLANCHE	SAINT MARTIN	18.1N	63.0W	2207	03/19
SAN SALVADOR	BAHAMAS	24.1N	74.5W	2208	03/19
CAP HAITEN	HAITI	19.8N	72.2W	2209	03/19
SANTO DOMINGO	DOMINICAN REP	18.5N	69.9W	2216	03/19
LONG ISLAND	BAHAMAS	23.3N	75.1W	2221	03/19
ONIMA	BONAIRE	12.3N	68.3W	2223	03/19
GREAT INAGUA	BAHAMAS	20.9N	73.7W	2223	03/19
EXUMA	BAHAMAS	23.6N	75.9W	2224	03/19
CAT ISLAND	BAHAMAS	24.4N	75.5W	2224	03/19
BARACOA	CUBA	20.4N	74.5W	2227	03/19
ELEUTHERA ISLAN	BAHAMAS	25.2N	76.1W	2229	03/19
CROOKED ISLAND	BAHAMAS	22.7N	74.1W	2234	03/19
JACAMEL	HAITI	18.1N	72.5W	2235	03/19
ANDROS ISLAND	BAHAMAS	25.0N	77.9W	2235	03/19
GIBARA	CUBA	21.1N	76.1W	2237	03/19
ORANJESTAD	ARUBA	12.5N	70.0W	2237	03/19
ROADTOWN	BR VIRGIN IS	18.4N	64.6W	2240	03/19
JEREMIE	HAITI	18.6N	74.1W	2241	03/19
SANTIAGO D CUBA	CUBA	19.9N	75.8W	2244	03/19
NASSAU	BAHAMAS	25.1N	77.4W	2247	03/19
CAYENNE	FRENCH GUYANE	4.9N	52.3W	2247	03/19
MAIQUETIA	VENEZUELA	10.6N	67.0W	2250	03/19
WILLEMSTAD	CURACAO	12.1N	68.9W	2257	03/19
ABACO ISLAND	BAHAMAS	26.6N	77.1W	2258	03/19
FREEPORT	BAHAMAS	26.5N	78.8W	2259	03/19

CUMANA	VENEZUELA	10.5N	64.2W	2303	03/19
PORT OF SPAIN	TRINIDAD TOBAGO	10.6N	61.5W	2308	03/19
BIMINI	BAHAMAS	25.8N	79.3W	2312	03/19
SANTA MARTA	COLOMBIA	11.2N	74.2W	2322	03/19
MONTEGO BAY	JAMAICA	18.5N	77.9W	2326	03/19
PORT AU PRINCE	HAITI	18.5N	72.4W	2334	03/19
CIENFUEGOS	CUBA	22.0N	80.5W	2337	03/19
CARTAGENA	COLOMBIA	10.4N	75.6W	2338	03/19
KINGSTON	JAMAICA	17.9N	76.9W	2343	03/19
BARRANQUILLA	COLOMBIA	11.1N	74.9W	2347	03/19
RIOHACHA	COLOMBIA	11.6N	72.9W	2351	03/19
PUNTA CARIBANA	COLOMBIA	8.6N	76.9W	0022	03/20
GEORGETOWN	GUYANA	6.8N	58.2W	0033	03/20
PARAMARIBO	SURINAME	5.9N	55.2W	0033	03/20
PUNTO FIJO	VENEZUELA	11.7N	70.2W	0104	03/20
PORLAMAR	VENEZUELA	10.9N	63.8W	0157	03/20
SANTA CRZ D SUR	CUBA	20.7N	78.0W	0201	03/20
GOLFO VENEZUELA	VENEZUELA	11.4N	71.2W	0203	03/20
ILHA DE MARACA	BRAZIL	2.2N	50.5W	0210	03/20
NUEVA GERONA	CUBA	21.9N	82.8W	0339	03/20

TEST... POTENTIAL IMPACTS ...TEST

-
- * THIS IS A TEST MESSAGE. A TSUNAMI IS A SERIES OF WAVES. THE TIME BETWEEN WAVE CRESTS CAN VARY FROM 5 MINUTES TO AN HOUR. THE HAZARD MAY PERSIST FOR MANY HOURS OR LONGER AFTER THE INITIAL WAVE.
 - * THIS IS A TEST MESSAGE. IMPACTS CAN VARY SIGNIFICANTLY FROM ONE SECTION OF COAST TO THE NEXT DUE TO LOCAL BATHYMETRY AND THE SHAPE AND ELEVATION OF THE SHORELINE.
 - * THIS IS A TEST MESSAGE. IMPACTS CAN ALSO VARY DEPENDING UPON THE STATE OF THE TIDE AT THE TIME OF THE MAXIMUM TSUNAMI WAVES.
 - * THIS IS A TEST MESSAGE. PERSONS CAUGHT IN THE WATER OF A TSUNAMI MAY DROWN... BE CRUSHED BY DEBRIS IN THE WATER... OR BE SWEEPED OUT TO SEA.

TEST... TSUNAMI OBSERVATIONS ...TEST

-
- * THIS IS A TEST MESSAGE. THE FOLLOWING ARE TSUNAMI WAVE OBSERVATIONS FROM COASTAL AND/OR DEEP-OCEAN SEA LEVEL GAUGES AT THE INDICATED LOCATIONS. THE MAXIMUM TSUNAMI HEIGHT IS MEASURED WITH RESPECT TO THE NORMAL TIDE LEVEL.

GAUGE LOCATION	GAUGE COORDINATES		TIME OF MEASURE (UTC)	MAXIMUM TSUNAMI HEIGHT	WAVE PERIOD (MIN)
	LAT	LON			
SALERNO IT	40.7N	14.8E	1906	0.07M/ 0.2FT	24
SETE FR	43.4N	3.7E	1901	0.11M/ 0.4FT	28
MALIN HEAD IE	55.4N	7.3W	1854	0.71M/ 2.3FT	18
FOS-SUR-MER FR	43.4N	4.9E	1849	0.11M/ 0.3FT	20
PORT-VENDRES FR	43.0N	3.1E	1848	0.12M/ 0.4FT	22

GENOVA IT	44.4N	8.9E	1837	0.15M/	0.5FT	26
NOUADHIBOU MR	20.8N	17.0W	1835	1.22M/	4.0FT	22
IMPERIA IT	43.9N	8.0E	1820	0.13M/	0.4FT	24
MONACO MC	43.7N	7.4E	1820	0.11M/	0.4FT	28
NICE FR	43.7N	7.3E	1823	0.13M/	0.4FT	18
CARLOFORTE IT	39.1N	8.3E	1816	0.14M/	0.4FT	14
LA FIGUEIRETTE	43.5N	6.9E	1812	0.12M/	0.4FT	18
PORT FERREOL FR	43.4N	6.7E	1811	0.12M/	0.4FT	24
AJACCIO FR	41.9N	8.8E	1814	0.10M/	0.3FT	26
PRAIA CV	14.9N	23.5W	1801	0.78M/	2.6FT	22
LHERBAUDIERE FR	47.0N	2.3W	1801	0.82M/	2.7FT	26
BARCELONA ES	41.3N	2.2E	1754	0.11M/	0.4FT	16
LES SABLES DOLONNE	46.5N	1.8W	1752	0.69M/	2.3FT	22
PALMEIRA CAPE VERDE	16.8N	23.0W	1738	1.07M/	3.5FT	26
CONCARMEAU FR	47.9N	3.9W	1732	0.87M/	2.9FT	22
VALENCIA ES	39.4N	0.3W	1728	0.19M/	0.6FT	18
LE CONQUET FR	48.4N	4.8W	1730	0.93M/	3.0FT	28
MIMIZAN FR	44.2N	1.3W	1702	0.69M/	2.3FT	24
BOUCAU BAYONNE FR	43.5N	1.5W	1645	0.73M/	2.4FT	26
CARTAGENA ES	37.6N	1.0W	1630	0.40M/	1.3FT	28
SAID MA	35.1N	2.3W	1627	0.74M/	2.4FT	28
PONTA DELGADA PT	37.7N	25.7W	1604	3.82M/12.5FT		22
FERROL ES	43.5N	8.3W	1600	1.46M/	4.8FT	16
ELHIERRO ES	27.8N	17.9W	1554	1.78M/	5.9FT	22
FUERTEVENTURA ES	28.5N	13.9W	1551	2.39M/	7.9FT	28
LAGOMERA ES	28.1N	17.1W	1545	1.89M/	6.2FT	16
LA PALMA ES	28.7N	17.8W	1543	2.99M/	9.8FT	18
TENERIFE ES	28.5N	16.2W	1540	3.00M/	9.8FT	20
ARRECIFE ES	29.0N	13.5W	1529	2.72M/	8.9FT	24
LASPALMAS ES	28.1N	15.4W	1532	3.80M/12.5FT		18
ALGECIRAS ES	36.2N	5.4W	1534	1.27M/	4.2FT	26
CADIZ ES	36.5N	6.3W	1528	8.34M/27.4FT		20
HUELVA ES	37.1N	6.8W	1526	11.04M/36.2FT		22
ALBUFEIRA PT	37.1N	8.3W	1505	15.43M/50.6FT		16
PORTO SANTO PT	33.1N	16.3W	1503	10.23M/33.6FT		14

TEST... NEXT UPDATE AND ADDITIONAL INFORMATION ...TEST

-
- * THIS IS A TEST MESSAGE. THE NEXT MESSAGE WILL BE ISSUED IN ONE HOUR... OR SOONER IF THE SITUATION WARRANTS.
 - * THIS IS A TEST MESSAGE. AUTHORITATIVE INFORMATION ABOUT THE EARTHQUAKE FROM THE U.S. GEOLOGICAL SURVEY CAN BE FOUND ON THE INTERNET AT EARTHQUAKE.USGS.GOV/EARTHQUAKES -ALL IN LOWERCASE LETTERS-.
 - * THIS IS A TEST MESSAGE. FURTHER INFORMATION ABOUT THIS EVENT MAY BE FOUND AT WWW.TSUNAMI.GOV.
 - * THIS IS A TEST MESSAGE. COASTAL REGIONS OF THE US GULF COAST... US EAST COAST... AND THE MARITIME PROVINCES OF CANADA SHOULD REFER TO U.S. NATIONAL TSUNAMI WARNING CENTER MESSAGES THAT CAN BE FOUND AT WWW.TSUNAMI.GOV.

THIS IS A TEST MESSAGE. DO NOT TAKE ACTION BASED ON THIS TEST MESSAGE.

\$\$

NNNN

PTWC Message #11

ZCZC

WECA41 PHEB 192100

TSUCAX

TEST...TSUNAMI MESSAGE NUMBER 11...TEST
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
2100 UTC THU MAR 19 2020

...THIS MESSAGE IS FOR TEST PURPOSES ONLY...
...TEST TSUNAMI THREAT MESSAGE TEST...

**** NOTICE **** NOTICE **** NOTICE **** NOTICE **** NOTICE ****

THIS IS A TEST MESSAGE. THIS MESSAGE IS ISSUED FOR INFORMATION
ONLY IN SUPPORT OF THE UNESCO/IOC TSUNAMI AND OTHER COASTAL
HAZARDS WARNING SYSTEM FOR THE CARIBBEAN AND ADJACENT REGIONS
AND IS MEANT FOR NATIONAL AUTHORITIES IN EACH COUNTRY OF THAT
SYSTEM.

THIS IS A TEST MESSAGE. NATIONAL AUTHORITIES WILL DETERMINE THE
APPROPRIATE LEVEL OF ALERT FOR EACH COUNTRY AND MAY ISSUE
ADDITIONAL OR MORE REFINED INFORMATION.

**** NOTICE **** NOTICE **** NOTICE **** NOTICE **** NOTICE ****

TEST... PRELIMINARY EARTHQUAKE PARAMETERS ...TEST

* MAGNITUDE	8.5
* ORIGIN TIME	1400 UTC MAR 19 2020
* COORDINATES	36.0 NORTH 10.8 WEST
* DEPTH	5 KM / 3 MILES
* LOCATION	AZORES-CAPE ST. VINCENT RIDGE

TEST... EVALUATION ...TEST

* THIS IS A TEST MESSAGE. AN EARTHQUAKE WITH A PRELIMINARY
MAGNITUDE OF 8.5 OCCURRED NEAR THE AZORES-CAPE SAINT VINCENT
RIDGE AT 1400 UTC ON THURSDAY MARCH 19 2020.

* THIS IS A TEST MESSAGE. TSUNAMI WAVES HAVE BEEN OBSERVED.

* THIS IS A TEST MESSAGE. BASED ON ALL AVAILABLE DATA...
HAZARDOUS TSUNAMI WAVES ARE FORECAST FOR SOME COASTS.

TEST... TSUNAMI THREAT FORECAST ...TEST

-
- * THIS IS A TEST MESSAGE. TSUNAMI WAVES REACHING MORE THAN 3 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE ALONG SOME COASTS OF

BAHAMAS.

- * THIS IS A TEST MESSAGE. TSUNAMI WAVES REACHING 1 TO 3 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE ALONG SOME COASTS OF

BRAZIL... CUBA... DOMINICAN REPUBLIC... FRENCH GUYANE...
GUYANA... HAITI... SURINAME... VENEZUELA... ANGUILLA...
ANTIGUA AND BARBUDA... BARBADOS... BERMUDA... DOMINICA...
GRENADA... GUADELOUPE... MARTINIQUE... PUERTO RICO AND
VIRGIN ISLANDS... SAINT BARTHELEMY... SAINT LUCIA... SAINT
VINCENT AND THE GRENADINES... TRINIDAD AND TOBAGO... AND
TURKS AND CAICOS ISLANDS.

- * THIS IS A TEST MESSAGE. TSUNAMI WAVES REACHING 0.3 TO 1 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE FOR SOME COASTS OF

COLOMBIA... ARUBA... BONAIRE... CURACAO... JAMAICA...
MONTSERRAT... SABA AND SAINT EUSTATIUS... SAINT KITTS AND
NEVIS... SINT MAARTEN... AND SAINT MARTIN.

- * THIS IS A TEST MESSAGE. ACTUAL AMPLITUDES AT THE COAST MAY VARY FROM FORECAST AMPLITUDES DUE TO UNCERTAINTIES IN THE FORECAST AND LOCAL FEATURES. IN PARTICULAR MAXIMUM TSUNAMI AMPLITUDES ON ATOLLS OR SMALL ISLANDS AND AT LOCATIONS WITH FRINGING OR BARRIER REEFS WILL LIKELY BE MUCH SMALLER THAN THE FORECAST INDICATES.

- * THIS IS A TEST MESSAGE. FOR ALL OTHER AREAS COVERED BY THIS MESSAGE... THERE IS NO TSUNAMI THREAT ALTHOUGH SMALL SEA LEVEL CHANGES MAY OCCUR.

TEST... RECOMMENDED ACTIONS ...TEST

-
- * THIS IS A TEST MESSAGE. GOVERNMENT AGENCIES RESPONSIBLE FOR THREATENED COASTAL AREAS SHOULD TAKE ACTION TO INFORM AND INSTRUCT ANY COASTAL POPULATIONS AT RISK IN ACCORDANCE WITH THEIR OWN EVALUATION... PROCEDURES AND THE LEVEL OF THREAT.
 - * THIS IS A TEST MESSAGE. PERSONS LOCATED IN THREATENED COASTAL AREAS SHOULD STAY ALERT FOR INFORMATION AND FOLLOW INSTRUCTIONS FROM NATIONAL AND LOCAL AUTHORITIES.

TEST... ESTIMATED TIMES OF ARRIVAL ...TEST

-
- * THIS IS A TEST MESSAGE. ESTIMATED TIMES OF ARRIVAL -ETA- OF THE INITIAL TSUNAMI WAVE FOR PLACES WITHIN THREATENED

REGIONS ARE GIVEN BELOW. ACTUAL ARRIVAL TIMES MAY DIFFER AND THE INITIAL WAVE MAY NOT BE THE LARGEST. A TSUNAMI IS A SERIES OF WAVES AND THE TIME BETWEEN WAVES CAN BE FIVE MINUTES TO ONE HOUR.

LOCATION	REGION	COORDINATES		ETA (UTC)	
ESSO PIER	BERMUDA	32.4N	64.7W	2051	03/19
ROSEAU	DOMINICA	15.3N	61.4W	2118	03/19
PLYMOUTH	MONTSERRAT	16.7N	62.2W	2118	03/19
BRIDGETOWN	BARBADOS	13.1N	59.6W	2118	03/19
CASTRIES	SAINT LUCIA	14.0N	61.0W	2119	03/19
BASSE TERRE	GUADELOUPE	16.0N	61.7W	2122	03/19
SINT EUSTATIUS	SINT EUSTATIUS	17.5N	63.0W	2123	03/19
SABA	SABA	17.6N	63.2W	2124	03/19
FORT DE FRANCE	MARTINIQUE	14.6N	61.1W	2125	03/19
SAN JUAN	PUERTO RICO	18.5N	66.1W	2125	03/19
CHRISTIANSTED	US VIRGIN IS	17.7N	64.7W	2126	03/19
ANEGADA	BR VIRGIN IS	18.8N	64.3W	2126	03/19
THE VALLEY	ANGUILLA	18.3N	63.1W	2127	03/19
SAINT JOHNS	ANTIGUA	17.1N	61.9W	2127	03/19
BASSETERRE	SAINT KITTS	17.3N	62.7W	2128	03/19
PALMETTO POINT	BARBUDA	17.6N	61.9W	2128	03/19
SIMPSON BAAI	SINT MAARTEN	18.0N	63.1W	2131	03/19
KINGSTOWN	SAINT VINCENT	13.1N	61.2W	2136	03/19
MAYAGUEZ	PUERTO RICO	18.2N	67.2W	2137	03/19
CABO ENGANO	DOMINICAN REP	18.6N	68.3W	2151	03/19
GRAND TURK	TURKS N CAICOS	21.5N	71.1W	2152	03/19
PUERTO PLATA	DOMINICAN REP	19.8N	70.7W	2153	03/19
BAIE LUCAS	SAINT MARTIN	18.1N	63.0W	2153	03/19
SAINT BARTHELEM	SAINT BARTHELEMY	17.9N	62.8W	2154	03/19
BAIE GRAND CASE	SAINT MARTIN	18.1N	63.1W	2154	03/19
PIRATES BAY	TRINIDAD TOBAGO	11.3N	60.6W	2201	03/19
MAYAGUANA	BAHAMAS	22.3N	73.0W	2202	03/19
CHARLOTTE AMALI	US VIRGIN IS	18.3N	64.9W	2203	03/19
SAINT GEORGES	GRENADA	12.0N	61.8W	2203	03/19
WEST CAICOS	TURKS N CAICOS	21.7N	72.5W	2205	03/19
BAIE BLANCHE	SAINT MARTIN	18.1N	63.0W	2207	03/19
SAN SALVADOR	BAHAMAS	24.1N	74.5W	2208	03/19
CAP HAITEN	HAITI	19.8N	72.2W	2209	03/19
SANTO DOMINGO	DOMINICAN REP	18.5N	69.9W	2216	03/19
LONG ISLAND	BAHAMAS	23.3N	75.1W	2221	03/19
ONIMA	BONAIRE	12.3N	68.3W	2223	03/19
GREAT INAGUA	BAHAMAS	20.9N	73.7W	2223	03/19
EXUMA	BAHAMAS	23.6N	75.9W	2224	03/19
CAT ISLAND	BAHAMAS	24.4N	75.5W	2224	03/19
BARACOA	CUBA	20.4N	74.5W	2227	03/19
ELEUTHERA ISLAN	BAHAMAS	25.2N	76.1W	2229	03/19
CROOKED ISLAND	BAHAMAS	22.7N	74.1W	2234	03/19
JACAMEL	HAITI	18.1N	72.5W	2235	03/19
ANDROS ISLAND	BAHAMAS	25.0N	77.9W	2235	03/19
GIBARA	CUBA	21.1N	76.1W	2237	03/19
ORANJESTAD	ARUBA	12.5N	70.0W	2237	03/19
ROADTOWN	BR VIRGIN IS	18.4N	64.6W	2240	03/19
JEREMIE	HAITI	18.6N	74.1W	2241	03/19
SANTIAGO D CUBA	CUBA	19.9N	75.8W	2244	03/19
NASSAU	BAHAMAS	25.1N	77.4W	2247	03/19
CAYENNE	FRENCH GUYANE	4.9N	52.3W	2247	03/19

MAIQUETIA	VENEZUELA	10.6N	67.0W	2250	03/19
WILLEMSTAD	CURACAO	12.1N	68.9W	2257	03/19
ABACO ISLAND	BAHAMAS	26.6N	77.1W	2258	03/19
FREEPORT	BAHAMAS	26.5N	78.8W	2259	03/19
CUMANA	VENEZUELA	10.5N	64.2W	2303	03/19
PORT OF SPAIN	TRINIDAD TOBAGO	10.6N	61.5W	2308	03/19
BIMINI	BAHAMAS	25.8N	79.3W	2312	03/19
SANTA MARTA	COLOMBIA	11.2N	74.2W	2322	03/19
MONTEGO BAY	JAMAICA	18.5N	77.9W	2326	03/19
PORT AU PRINCE	HAITI	18.5N	72.4W	2334	03/19
CIENFUEGOS	CUBA	22.0N	80.5W	2337	03/19
CARTAGENA	COLOMBIA	10.4N	75.6W	2338	03/19
KINGSTON	JAMAICA	17.9N	76.9W	2343	03/19
BARRANQUILLA	COLOMBIA	11.1N	74.9W	2347	03/19
RIOHACHA	COLOMBIA	11.6N	72.9W	2351	03/19
PUNTA CARIBANA	COLOMBIA	8.6N	76.9W	0022	03/20
GEORGETOWN	GUYANA	6.8N	58.2W	0033	03/20
PARAMARIBO	SURINAME	5.9N	55.2W	0033	03/20
PUNTO FIJO	VENEZUELA	11.7N	70.2W	0104	03/20
PORLAMAR	VENEZUELA	10.9N	63.8W	0157	03/20
SANTA CRZ D SUR	CUBA	20.7N	78.0W	0201	03/20
GOLFO VENEZUELA	VENEZUELA	11.4N	71.2W	0203	03/20
ILHA DE MARACA	BRAZIL	2.2N	50.5W	0210	03/20
NUEVA GERONA	CUBA	21.9N	82.8W	0339	03/20

TEST... POTENTIAL IMPACTS ...TEST

-
- * THIS IS A TEST MESSAGE. A TSUNAMI IS A SERIES OF WAVES. THE TIME BETWEEN WAVE CRESTS CAN VARY FROM 5 MINUTES TO AN HOUR. THE HAZARD MAY PERSIST FOR MANY HOURS OR LONGER AFTER THE INITIAL WAVE.
 - * THIS IS A TEST MESSAGE. IMPACTS CAN VARY SIGNIFICANTLY FROM ONE SECTION OF COAST TO THE NEXT DUE TO LOCAL BATHYMETRY AND THE SHAPE AND ELEVATION OF THE SHORELINE.
 - * THIS IS A TEST MESSAGE. IMPACTS CAN ALSO VARY DEPENDING UPON THE STATE OF THE TIDE AT THE TIME OF THE MAXIMUM TSUNAMI WAVES.
 - * THIS IS A TEST MESSAGE. PERSONS CAUGHT IN THE WATER OF A TSUNAMI MAY DROWN... BE CRUSHED BY DEBRIS IN THE WATER... OR BE SWEEPED OUT TO SEA.

TEST... TSUNAMI OBSERVATIONS ...TEST

-
- * THIS IS A TEST MESSAGE. THE FOLLOWING ARE TSUNAMI WAVE OBSERVATIONS FROM COASTAL AND/OR DEEP-OCEAN SEA LEVEL GAUGES AT THE INDICATED LOCATIONS. THE MAXIMUM TSUNAMI HEIGHT IS MEASURED WITH RESPECT TO THE NORMAL TIDE LEVEL.

GAUGE LOCATION	GAUGE COORDINATES		TIME OF MEASURE (UTC)	MAXIMUM TSUNAMI HEIGHT	WAVE PERIOD (MIN)
	LAT	LON			
SALERNO IT	40.7N	14.8E	1906	0.07M/ 0.2FT	24

SETE FR	43.4N	3.7E	1901	0.11M/	0.4FT	28
MALIN HEAD IE	55.4N	7.3W	1854	0.71M/	2.3FT	18
FOS-SUR-MER FR	43.4N	4.9E	1849	0.11M/	0.3FT	20
PORT-VENDRES FR	43.0N	3.1E	1848	0.12M/	0.4FT	22
GENOVA IT	44.4N	8.9E	1837	0.15M/	0.5FT	26
NOUADHIBOU MR	20.8N	17.0W	1835	1.22M/	4.0FT	22
IMPERIA IT	43.9N	8.0E	1820	0.13M/	0.4FT	24
MONACO MC	43.7N	7.4E	1820	0.11M/	0.4FT	28
NICE FR	43.7N	7.3E	1823	0.13M/	0.4FT	18
CARLOFORTE IT	39.1N	8.3E	1816	0.14M/	0.4FT	14
LA FIGUEIRETTE	43.5N	6.9E	1812	0.12M/	0.4FT	18
PORT FERREOL FR	43.4N	6.7E	1811	0.12M/	0.4FT	24
AJACCIO FR	41.9N	8.8E	1814	0.10M/	0.3FT	26
PRAIA CV	14.9N	23.5W	1801	0.78M/	2.6FT	22
LHERBAUDIERE FR	47.0N	2.3W	1801	0.82M/	2.7FT	26
BARCELONA ES	41.3N	2.2E	1754	0.11M/	0.4FT	16
LES SABLES DOLONNE	46.5N	1.8W	1752	0.69M/	2.3FT	22
PALMEIRA CAPE VERDE	16.8N	23.0W	1738	1.07M/	3.5FT	26
CONCARMEAU FR	47.9N	3.9W	1732	0.87M/	2.9FT	22
VALENCIA ES	39.4N	0.3W	1728	0.19M/	0.6FT	18
LE CONQUET FR	48.4N	4.8W	1730	0.93M/	3.0FT	28
MIMIZAN FR	44.2N	1.3W	1702	0.69M/	2.3FT	24
BOUCAU BAYONNE FR	43.5N	1.5W	1645	0.73M/	2.4FT	26
CARTAGENA ES	37.6N	1.0W	1630	0.40M/	1.3FT	28
SAID MA	35.1N	2.3W	1627	0.74M/	2.4FT	28
PONTA DELGADA PT	37.7N	25.7W	1604	3.82M/12.5FT		22
FERROL ES	43.5N	8.3W	1600	1.46M/	4.8FT	16
ELHIERRO ES	27.8N	17.9W	1554	1.78M/	5.9FT	22
FUERTEVENTURA ES	28.5N	13.9W	1551	2.39M/	7.9FT	28
LAGOMERA ES	28.1N	17.1W	1545	1.89M/	6.2FT	16
LA PALMA ES	28.7N	17.8W	1543	2.99M/	9.8FT	18
TENERIFE ES	28.5N	16.2W	1540	3.00M/	9.8FT	20
ARRECIFE ES	29.0N	13.5W	1529	2.72M/	8.9FT	24
LASPALMAS ES	28.1N	15.4W	1532	3.80M/12.5FT		18
ALGECIRAS ES	36.2N	5.4W	1534	1.27M/	4.2FT	26
CADIZ ES	36.5N	6.3W	1528	8.34M/27.4FT		20
HUELVA ES	37.1N	6.8W	1526	11.04M/36.2FT		22
ALBUFEIRA PT	37.1N	8.3W	1505	15.43M/50.6FT		16
PORTO SANTO PT	33.1N	16.3W	1503	10.23M/33.6FT		14

TEST... NEXT UPDATE AND ADDITIONAL INFORMATION ...TEST

-
- * THIS IS A TEST MESSAGE. THE NEXT MESSAGE WILL BE ISSUED IN ONE HOUR... OR SOONER IF THE SITUATION WARRANTS.
 - * THIS IS A TEST MESSAGE. AUTHORITATIVE INFORMATION ABOUT THE EARTHQUAKE FROM THE U.S. GEOLOGICAL SURVEY CAN BE FOUND ON THE INTERNET AT EARTHQUAKE.USGS.GOV/EARTHQUAKES -ALL IN LOWERCASE LETTERS-.
 - * THIS IS A TEST MESSAGE. FURTHER INFORMATION ABOUT THIS EVENT MAY BE FOUND AT WWW.TSUNAMI.GOV.
 - * THIS IS A TEST MESSAGE. COASTAL REGIONS OF THE US GULF COAST... US EAST COAST... AND THE MARITIME PROVINCES OF CANADA SHOULD REFER TO U.S. NATIONAL TSUNAMI WARNING CENTER MESSAGES THAT CAN BE FOUND AT WWW.TSUNAMI.GOV.

THIS IS A TEST MESSAGE. DO NOT TAKE ACTION BASED ON THIS TEST MESSAGE.

\$\$

NNNN

PTWC Message #12

ZCZC
WECA41 PHEB 192200
TSUCAX

TEST...TSUNAMI MESSAGE NUMBER 12...TEST
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
2200 UTC THU MAR 19 2020

...THIS MESSAGE IS FOR TEST PURPOSES ONLY...
...TEST TSUNAMI THREAT MESSAGE TEST...

**** NOTICE **** NOTICE **** NOTICE **** NOTICE **** NOTICE ****

THIS IS A TEST MESSAGE. THIS MESSAGE IS ISSUED FOR INFORMATION ONLY IN SUPPORT OF THE UNESCO/IOC TSUNAMI AND OTHER COASTAL HAZARDS WARNING SYSTEM FOR THE CARIBBEAN AND ADJACENT REGIONS AND IS MEANT FOR NATIONAL AUTHORITIES IN EACH COUNTRY OF THAT SYSTEM.

THIS IS A TEST MESSAGE. NATIONAL AUTHORITIES WILL DETERMINE THE APPROPRIATE LEVEL OF ALERT FOR EACH COUNTRY AND MAY ISSUE ADDITIONAL OR MORE REFINED INFORMATION.

**** NOTICE **** NOTICE **** NOTICE **** NOTICE **** NOTICE ****

TEST... PRELIMINARY EARTHQUAKE PARAMETERS ...TEST

* MAGNITUDE 8.5
* ORIGIN TIME 1400 UTC MAR 19 2020
* COORDINATES 36.0 NORTH 10.8 WEST
* DEPTH 5 KM / 3 MILES
* LOCATION AZORES-CAPE ST. VINCENT RIDGE

TEST... EVALUATION ...TEST

* THIS IS A TEST MESSAGE. AN EARTHQUAKE WITH A PRELIMINARY MAGNITUDE OF 8.5 OCCURRED NEAR THE AZORES-CAPE SAINT VINCENT RIDGE AT 1400 UTC ON THURSDAY MARCH 19 2020.

* THIS IS A TEST MESSAGE. TSUNAMI WAVES HAVE BEEN OBSERVED.

- * THIS IS A TEST MESSAGE. BASED ON ALL AVAILABLE DATA...
HAZARDOUS TSUNAMI WAVES ARE FORECAST FOR SOME COASTS.

TEST... TSUNAMI THREAT FORECAST ...TEST

- * THIS IS A TEST MESSAGE. TSUNAMI WAVES REACHING MORE THAN 3
METERS ABOVE THE TIDE LEVEL ARE POSSIBLE ALONG SOME COASTS
OF

BAHAMAS.

- * THIS IS A TEST MESSAGE. TSUNAMI WAVES REACHING 1 TO 3 METERS
ABOVE THE TIDE LEVEL ARE POSSIBLE ALONG SOME COASTS OF

BRAZIL... CUBA... DOMINICAN REPUBLIC... FRENCH GUYANE...
GUYANA... HAITI... SURINAME... VENEZUELA... ANGUILLA...
ANTIGUA AND BARBUDA... BARBADOS... BERMUDA... DOMINICA...
GRENADA... GUADELOUPE... MARTINIQUE... PUERTO RICO AND
VIRGIN ISLANDS... SAINT BARTHELEMY... SAINT LUCIA... SAINT
VINCENT AND THE GRENADINES... TRINIDAD AND TOBAGO... AND
TURKS AND CAICOS ISLANDS.

- * THIS IS A TEST MESSAGE. TSUNAMI WAVES REACHING 0.3 TO 1
METERS ABOVE THE TIDE LEVEL ARE POSSIBLE FOR SOME COASTS OF

COLOMBIA... ARUBA... BONAIRE... CURACAO... JAMAICA...
MONTSERRAT... SABA AND SAINT EUSTATIUS... SAINT KITTS AND
NEVIS... SINT MAARTEN... AND SAINT MARTIN.

- * THIS IS A TEST MESSAGE. ACTUAL AMPLITUDES AT THE COAST MAY
VARY FROM FORECAST AMPLITUDES DUE TO UNCERTAINTIES IN THE
FORECAST AND LOCAL FEATURES. IN PARTICULAR MAXIMUM TSUNAMI
AMPLITUDES ON ATOLLS OR SMALL ISLANDS AND AT LOCATIONS WITH
FRINGING OR BARRIER REEFS WILL LIKELY BE MUCH SMALLER THAN
THE FORECAST INDICATES.

- * THIS IS A TEST MESSAGE. FOR ALL OTHER AREAS COVERED BY THIS
MESSAGE... THERE IS NO TSUNAMI THREAT ALTHOUGH SMALL SEA
LEVEL CHANGES MAY OCCUR.

TEST... RECOMMENDED ACTIONS ...TEST

- * THIS IS A TEST MESSAGE. GOVERNMENT AGENCIES RESPONSIBLE FOR
THREATENED COASTAL AREAS SHOULD TAKE ACTION TO INFORM AND
INSTRUCT ANY COASTAL POPULATIONS AT RISK IN ACCORDANCE WITH
THEIR OWN EVALUATION... PROCEDURES AND THE LEVEL OF THREAT.

- * THIS IS A TEST MESSAGE. PERSONS LOCATED IN THREATENED COASTAL
AREAS SHOULD STAY ALERT FOR INFORMATION AND FOLLOW
INSTRUCTIONS FROM NATIONAL AND LOCAL AUTHORITIES.

TEST... ESTIMATED TIMES OF ARRIVAL ...TEST

* THIS IS A TEST MESSAGE. ESTIMATED TIMES OF ARRIVAL -ETA- OF THE INITIAL TSUNAMI WAVE FOR PLACES WITHIN THREATENED REGIONS ARE GIVEN BELOW. ACTUAL ARRIVAL TIMES MAY DIFFER AND THE INITIAL WAVE MAY NOT BE THE LARGEST. A TSUNAMI IS A SERIES OF WAVES AND THE TIME BETWEEN WAVES CAN BE FIVE MINUTES TO ONE HOUR.

LOCATION	REGION	COORDINATES		ETA (UTC)
ROSEAU	DOMINICA	15.3N	61.4W	2118 03/19
PLYMOUTH	MONTSERRAT	16.7N	62.2W	2118 03/19
BRIDGETOWN	BARBADOS	13.1N	59.6W	2118 03/19
CASTRIES	SAINT LUCIA	14.0N	61.0W	2119 03/19
BASSE TERRE	GUADELOUPE	16.0N	61.7W	2122 03/19
SINT EUSTATIUS	SINT EUSTATIUS	17.5N	63.0W	2123 03/19
SABA	SABA	17.6N	63.2W	2124 03/19
FORT DE FRANCE	MARTINIQUE	14.6N	61.1W	2125 03/19
SAN JUAN	PUERTO RICO	18.5N	66.1W	2125 03/19
CHRISTIANSTED	US VIRGIN IS	17.7N	64.7W	2126 03/19
ANEGADA	BR VIRGIN IS	18.8N	64.3W	2126 03/19
THE VALLEY	ANGUILLA	18.3N	63.1W	2127 03/19
SAINT JOHNS	ANTIGUA	17.1N	61.9W	2127 03/19
BASSETERRE	SAINT KITTS	17.3N	62.7W	2128 03/19
PALMETTO POINT	BARBUDA	17.6N	61.9W	2128 03/19
SIMPSON BAAI	SINT MAARTEN	18.0N	63.1W	2131 03/19
KINGSTOWN	SAINT VINCENT	13.1N	61.2W	2136 03/19
MAYAGUEZ	PUERTO RICO	18.2N	67.2W	2137 03/19
CABO ENGANO	DOMINICAN REP	18.6N	68.3W	2151 03/19
GRAND TURK	TURKS N CAICOS	21.5N	71.1W	2152 03/19
PUERTO PLATA	DOMINICAN REP	19.8N	70.7W	2153 03/19
BAIE LUCAS	SAINT MARTIN	18.1N	63.0W	2153 03/19
SAINT BARTHELEM	SAINT BARTHELEMY	17.9N	62.8W	2154 03/19
BAIE GRAND CASE	SAINT MARTIN	18.1N	63.1W	2154 03/19
PIRATES BAY	TRINIDAD TOBAGO	11.3N	60.6W	2201 03/19
MAYAGUANA	BAHAMAS	22.3N	73.0W	2202 03/19
CHARLOTTE AMALI	US VIRGIN IS	18.3N	64.9W	2203 03/19
SAINT GEORGES	GRENADA	12.0N	61.8W	2203 03/19
WEST CAICOS	TURKS N CAICOS	21.7N	72.5W	2205 03/19
BAIE BLANCHE	SAINT MARTIN	18.1N	63.0W	2207 03/19
SAN SALVADOR	BAHAMAS	24.1N	74.5W	2208 03/19
CAP HAITEN	HAITI	19.8N	72.2W	2209 03/19
SANTO DOMINGO	DOMINICAN REP	18.5N	69.9W	2216 03/19
LONG ISLAND	BAHAMAS	23.3N	75.1W	2221 03/19
ONIMA	BONAIRE	12.3N	68.3W	2223 03/19
GREAT INAGUA	BAHAMAS	20.9N	73.7W	2223 03/19
EXUMA	BAHAMAS	23.6N	75.9W	2224 03/19
CAT ISLAND	BAHAMAS	24.4N	75.5W	2224 03/19
BARACOA	CUBA	20.4N	74.5W	2227 03/19
ELEUTHERA ISLAN	BAHAMAS	25.2N	76.1W	2229 03/19
CROOKED ISLAND	BAHAMAS	22.7N	74.1W	2234 03/19
JACAMEL	HAITI	18.1N	72.5W	2235 03/19
ANDROS ISLAND	BAHAMAS	25.0N	77.9W	2235 03/19
GIBARA	CUBA	21.1N	76.1W	2237 03/19
ORANJESTAD	ARUBA	12.5N	70.0W	2237 03/19

ROADTOWN	BR VIRGIN IS	18.4N	64.6W	2240	03/19
JEREMIE	HAITI	18.6N	74.1W	2241	03/19
SANTIAGO D CUBA	CUBA	19.9N	75.8W	2244	03/19
NASSAU	BAHAMAS	25.1N	77.4W	2247	03/19
CAYENNE	FRENCH GUYANE	4.9N	52.3W	2247	03/19
MAIQUETIA	VENEZUELA	10.6N	67.0W	2250	03/19
WILLEMSTAD	CURACAO	12.1N	68.9W	2257	03/19
ABACO ISLAND	BAHAMAS	26.6N	77.1W	2258	03/19
FREEPORT	BAHAMAS	26.5N	78.8W	2259	03/19
CUMANA	VENEZUELA	10.5N	64.2W	2303	03/19
PORT OF SPAIN	TRINIDAD TOBAGO	10.6N	61.5W	2308	03/19
BIMINI	BAHAMAS	25.8N	79.3W	2312	03/19
SANTA MARTA	COLOMBIA	11.2N	74.2W	2322	03/19
MONTEGO BAY	JAMAICA	18.5N	77.9W	2326	03/19
PORT AU PRINCE	HAITI	18.5N	72.4W	2334	03/19
CIENFUEGOS	CUBA	22.0N	80.5W	2337	03/19
CARTAGENA	COLOMBIA	10.4N	75.6W	2338	03/19
KINGSTON	JAMAICA	17.9N	76.9W	2343	03/19
BARRANQUILLA	COLOMBIA	11.1N	74.9W	2347	03/19
RIOHACHA	COLOMBIA	11.6N	72.9W	2351	03/19
PUNTA CARIBANA	COLOMBIA	8.6N	76.9W	0022	03/20
GEORGETOWN	GUYANA	6.8N	58.2W	0033	03/20
PARAMARIBO	SURINAME	5.9N	55.2W	0033	03/20
PUNTO FIJO	VENEZUELA	11.7N	70.2W	0104	03/20
PORLAMAR	VENEZUELA	10.9N	63.8W	0157	03/20
SANTA CRZ D SUR	CUBA	20.7N	78.0W	0201	03/20
GOLFO VENEZUELA	VENEZUELA	11.4N	71.2W	0203	03/20
ILHA DE MARACA	BRAZIL	2.2N	50.5W	0210	03/20
NUEVA GERONA	CUBA	21.9N	82.8W	0339	03/20

TEST... POTENTIAL IMPACTS ...TEST

- * THIS IS A TEST MESSAGE. A TSUNAMI IS A SERIES OF WAVES. THE TIME BETWEEN WAVE CRESTS CAN VARY FROM 5 MINUTES TO AN HOUR. THE HAZARD MAY PERSIST FOR MANY HOURS OR LONGER AFTER THE INITIAL WAVE.
- * THIS IS A TEST MESSAGE. IMPACTS CAN VARY SIGNIFICANTLY FROM ONE SECTION OF COAST TO THE NEXT DUE TO LOCAL BATHYMETRY AND THE SHAPE AND ELEVATION OF THE SHORELINE.
- * THIS IS A TEST MESSAGE. IMPACTS CAN ALSO VARY DEPENDING UPON THE STATE OF THE TIDE AT THE TIME OF THE MAXIMUM TSUNAMI WAVES.
- * THIS IS A TEST MESSAGE. PERSONS CAUGHT IN THE WATER OF A TSUNAMI MAY DROWN... BE CRUSHED BY DEBRIS IN THE WATER... OR BE SWEEPED OUT TO SEA.

TEST... TSUNAMI OBSERVATIONS ...TEST

- * THIS IS A TEST MESSAGE. THE FOLLOWING ARE TSUNAMI WAVE OBSERVATIONS FROM COASTAL AND/OR DEEP-OCEAN SEA LEVEL GAUGES AT THE INDICATED LOCATIONS. THE MAXIMUM TSUNAMI HEIGHT IS

MEASURED WITH RESPECT TO THE NORMAL TIDE LEVEL.

GAUGE LOCATION	GAUGE COORDINATES		TIME OF MEASURE (UTC)	MAXIMUM TSUNAMI HEIGHT	WAVE PERIOD (MIN)
	LAT	LON			
PUERTO PLATA DO	19.8N	70.7W	2200	0.97M/ 3.2FT	16
BLOWING POINT AI	18.2N	63.1W	2157	0.93M/ 3.1FT	26
PUNTA CANA DO	18.5N	68.4W	2159	0.85M/ 2.8FT	24
MONA ISLAND PR	18.1N	67.9W	2200	0.69M/ 2.3FT	24
SAINT MARTIN FR	18.1N	63.1W	2158	0.93M/ 3.1FT	14
GANTERS BAY ST LUCI	14.0N	61.0W	2155	0.64M/ 2.1FT	20
MAYAGUEZ PR	18.2N	67.2W	2151	1.21M/ 4.0FT	20
BARBUDA AG	17.6N	61.8W	2146	1.04M/ 3.4FT	18
ESPERANZA VIEQUES P	18.1N	65.5W	2144	0.68M/ 2.2FT	28
CALLIAQUA VC	13.1N	61.2W	2146	0.56M/ 1.8FT	22
YABUCOA PR	18.1N	65.8W	2139	0.70M/ 2.3FT	28
DART 41424	33.0N	72.7W	2141	0.10M/ 0.3FT	24
ARECIBO PR	18.5N	66.7W	2139	1.57M/ 5.1FT	14
LIMETREE VI	17.7N	64.8W	2134	0.62M/ 2.0FT	28
BASSETERRE KN	17.3N	62.7W	2141	0.84M/ 2.8FT	24
ST CROIX VI	17.7N	64.7W	2138	0.73M/ 2.4FT	28
SAN JUAN PR	18.5N	66.1W	2136	1.28M/ 4.2FT	28
FORT DE FRANCE MQ	14.6N	61.1W	2135	0.73M/ 2.4FT	16
ROSEAU DM	15.3N	61.4W	2131	0.64M/ 2.1FT	18
PORTSMOUTH DM	15.6N	61.5W	2128	0.70M/ 2.3FT	28
DART 41420	23.4N	67.3W	2125	0.14M/ 0.5FT	26
LE ROBERT MARTINIQUE	14.7N	60.9W	2125	1.34M/ 4.4FT	28
LE PRECHEUR MARTINI	14.8N	61.2W	2126	0.66M/ 2.2FT	26
DESHAIES GUADELOUPE	16.3N	61.8W	2128	0.73M/ 2.4FT	22
PORT ST CHARLES BB	13.3N	59.6W	2125	1.61M/ 5.3FT	28
DART 44402	39.3N	70.7W	2127	0.10M/ 0.3FT	24
SAINT PIERRE MIQUEL	46.5N	56.1W	2119	1.02M/ 3.4FT	20
PARHAM AT	17.1N	61.8W	2115	1.31M/ 4.3FT	26
DESIRADE GUADELOUPE	16.3N	61.1W	2106	1.21M/ 4.0FT	20
DART 41425	28.7N	65.7W	2110	0.25M/ 0.8FT	16
DART 41421	23.4N	63.8W	2106	0.14M/ 0.5FT	20
BERMUDA UK	32.4N	64.7W	2105	2.30M/ 7.6FT	20
SALERNO IT	40.7N	14.8E	1906	0.07M/ 0.2FT	24
SETE FR	43.4N	3.7E	1901	0.11M/ 0.4FT	28
MALIN HEAD IE	55.4N	7.3W	1854	0.71M/ 2.3FT	18
FOS-SUR-MER FR	43.4N	4.9E	1849	0.11M/ 0.3FT	20
PORT-VENDRES FR	43.0N	3.1E	1848	0.12M/ 0.4FT	22
GENOVA IT	44.4N	8.9E	1837	0.15M/ 0.5FT	26
NOUADHIBOU MR	20.8N	17.0W	1835	1.22M/ 4.0FT	22
IMPERIA IT	43.9N	8.0E	1820	0.13M/ 0.4FT	24
MONACO MC	43.7N	7.4E	1820	0.11M/ 0.4FT	28
NICE FR	43.7N	7.3E	1823	0.13M/ 0.4FT	18
CARLOFORTE IT	39.1N	8.3E	1816	0.14M/ 0.4FT	14
LA FIGUEIRETTE	43.5N	6.9E	1812	0.12M/ 0.4FT	18
PORT FERREOL FR	43.4N	6.7E	1811	0.12M/ 0.4FT	24
AJACCIO FR	41.9N	8.8E	1814	0.10M/ 0.3FT	26
PRAIA CV	14.9N	23.5W	1801	0.78M/ 2.6FT	22
LHERBAUDIERE FR	47.0N	2.3W	1801	0.82M/ 2.7FT	26
BARCELONA ES	41.3N	2.2E	1754	0.11M/ 0.4FT	16
LES SABLES DOLONNE	46.5N	1.8W	1752	0.69M/ 2.3FT	22
PALMEIRA CAPE VERDE	16.8N	23.0W	1738	1.07M/ 3.5FT	26
CONCARMEAU FR	47.9N	3.9W	1732	0.87M/ 2.9FT	22

VALENCIA ES	39.4N	0.3W	1728	0.19M/ 0.6FT	18
LE CONQUET FR	48.4N	4.8W	1730	0.93M/ 3.0FT	28
MIMIZAN FR	44.2N	1.3W	1702	0.69M/ 2.3FT	24
BOUCAU BAYONNE FR	43.5N	1.5W	1645	0.73M/ 2.4FT	26
CARTAGENA ES	37.6N	1.0W	1630	0.40M/ 1.3FT	28
SAID MA	35.1N	2.3W	1627	0.74M/ 2.4FT	28
PONTA DELGADA PT	37.7N	25.7W	1604	3.82M/12.5FT	22
FERROL ES	43.5N	8.3W	1600	1.46M/ 4.8FT	16
ELHIERRO ES	27.8N	17.9W	1554	1.78M/ 5.9FT	22
FUERTEVENTURA ES	28.5N	13.9W	1551	2.39M/ 7.9FT	28
LAGOMERA ES	28.1N	17.1W	1545	1.89M/ 6.2FT	16
LA PALMA ES	28.7N	17.8W	1543	2.99M/ 9.8FT	18
TENERIFE ES	28.5N	16.2W	1540	3.00M/ 9.8FT	20
ARRECIFE ES	29.0N	13.5W	1529	2.72M/ 8.9FT	24
LASPALMAS ES	28.1N	15.4W	1532	3.80M/12.5FT	18
ALGECIRAS ES	36.2N	5.4W	1534	1.27M/ 4.2FT	26
CADIZ ES	36.5N	6.3W	1528	8.34M/27.4FT	20
HUELVA ES	37.1N	6.8W	1526	11.04M/36.2FT	22
ALBUFEIRA PT	37.1N	8.3W	1505	15.43M/50.6FT	16
PORTO SANTO PT	33.1N	16.3W	1503	10.23M/33.6FT	14

TEST...NEXT UPDATE AND ADDITIONAL INFORMATION...TEST

-
- * THIS IS A TEST MESSAGE. THE NEXT MESSAGE WILL BE ISSUED IN ONE HOUR... OR SOONER IF THE SITUATION WARRANTS.
 - * THIS IS A TEST MESSAGE. AUTHORITATIVE INFORMATION ABOUT THE EARTHQUAKE FROM THE U.S. GEOLOGICAL SURVEY CAN BE FOUND ON THE INTERNET AT EARTHQUAKE.USGS.GOV/EARTHQUAKES -ALL IN LOWERCASE LETTERS-.
 - * THIS IS A TEST MESSAGE. FURTHER INFORMATION ABOUT THIS EVENT MAY BE FOUND AT WWW.TSUNAMI.GOV.
 - * THIS IS A TEST MESSAGE. COASTAL REGIONS OF THE US GULF COAST... US EAST COAST... AND THE MARITIME PROVINCES OF CANADA SHOULD REFER TO U.S. NATIONAL TSUNAMI WARNING CENTER MESSAGES THAT CAN BE FOUND AT WWW.TSUNAMI.GOV.

THIS IS A TEST MESSAGE. DO NOT TAKE ACTION BASED ON THIS TEST MESSAGE.

\$\$

NNNN

PTWC Message #13

ZCZC
WECA41 PHEB 192300
TSUCAX

TEST...TSUNAMI MESSAGE NUMBER 13...TEST
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
2300 UTC THU MAR 19 2020

...THIS MESSAGE IS FOR TEST PURPOSES ONLY...
...TEST TSUNAMI THREAT MESSAGE TEST...

**** NOTICE **** NOTICE **** NOTICE **** NOTICE **** NOTICE ****

THIS IS A TEST MESSAGE. THIS MESSAGE IS ISSUED FOR INFORMATION
ONLY IN SUPPORT OF THE UNESCO/IOC TSUNAMI AND OTHER COASTAL
HAZARDS WARNING SYSTEM FOR THE CARIBBEAN AND ADJACENT REGIONS
AND IS MEANT FOR NATIONAL AUTHORITIES IN EACH COUNTRY OF THAT
SYSTEM.

THIS IS A TEST MESSAGE. NATIONAL AUTHORITIES WILL DETERMINE THE
APPROPRIATE LEVEL OF ALERT FOR EACH COUNTRY AND MAY ISSUE
ADDITIONAL OR MORE REFINED INFORMATION.

**** NOTICE **** NOTICE **** NOTICE **** NOTICE **** NOTICE ****

TEST... PRELIMINARY EARTHQUAKE PARAMETERS ...TEST

* MAGNITUDE	8.5
* ORIGIN TIME	1400 UTC MAR 19 2020
* COORDINATES	36.0 NORTH 10.8 WEST
* DEPTH	5 KM / 3 MILES
* LOCATION	AZORES-CAPE ST. VINCENT RIDGE

TEST... EVALUATION ...TEST

* THIS IS A TEST MESSAGE. AN EARTHQUAKE WITH A PRELIMINARY
MAGNITUDE OF 8.5 OCCURRED NEAR THE AZORES-CAPE SAINT VINCENT
RIDGE AT 1400 UTC ON THURSDAY MARCH 19 2020.

* THIS IS A TEST MESSAGE. TSUNAMI WAVES HAVE BEEN OBSERVED.

* THIS IS A TEST MESSAGE. BASED ON ALL AVAILABLE DATA...
HAZARDOUS TSUNAMI WAVES ARE FORECAST FOR SOME COASTS.

TEST... TSUNAMI THREAT FORECAST ...TEST

* THIS IS A TEST MESSAGE. TSUNAMI WAVES REACHING MORE THAN 3
METERS ABOVE THE TIDE LEVEL ARE POSSIBLE ALONG SOME COASTS
OF

BAHAMAS.

- * THIS IS A TEST MESSAGE. TSUNAMI WAVES REACHING 1 TO 3 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE ALONG SOME COASTS OF

BRAZIL... CUBA... DOMINICAN REPUBLIC... FRENCH GUYANE...
GUYANA... HAITI... SURINAME... VENEZUELA... ANGUILLA...
ANTIGUA AND BARBUDA... BARBADOS... BERMUDA... DOMINICA...
GRENADA... GUADELOUPE... MARTINIQUE... PUERTO RICO AND
VIRGIN ISLANDS... SAINT BARTHELEMY... SAINT LUCIA... SAINT
VINCENT AND THE GRENADINES... TRINIDAD AND TOBAGO... AND
TURKS AND CAICOS ISLANDS.

- * THIS IS A TEST MESSAGE. TSUNAMI WAVES REACHING 0.3 TO 1 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE FOR SOME COASTS OF

COLOMBIA... ARUBA... BONAIRE... CURACAO... JAMAICA...
MONTSERRAT... SABA AND SAINT EUSTATIUS... SAINT KITTS AND
NEVIS... SINT MAARTEN... AND SAINT MARTIN.

- * THIS IS A TEST MESSAGE. ACTUAL AMPLITUDES AT THE COAST MAY VARY FROM FORECAST AMPLITUDES DUE TO UNCERTAINTIES IN THE FORECAST AND LOCAL FEATURES. IN PARTICULAR MAXIMUM TSUNAMI AMPLITUDES ON ATOLLS OR SMALL ISLANDS AND AT LOCATIONS WITH FRINGING OR BARRIER REEFS WILL LIKELY BE MUCH SMALLER THAN THE FORECAST INDICATES.

- * THIS IS A TEST MESSAGE. FOR ALL OTHER AREAS COVERED BY THIS MESSAGE... THERE IS NO TSUNAMI THREAT ALTHOUGH SMALL SEA LEVEL CHANGES MAY OCCUR.

TEST... RECOMMENDED ACTIONS ...TEST

- * THIS IS A TEST MESSAGE. GOVERNMENT AGENCIES RESPONSIBLE FOR THREATENED COASTAL AREAS SHOULD TAKE ACTION TO INFORM AND INSTRUCT ANY COASTAL POPULATIONS AT RISK IN ACCORDANCE WITH THEIR OWN EVALUATION... PROCEDURES AND THE LEVEL OF THREAT.
- * THIS IS A TEST MESSAGE. PERSONS LOCATED IN THREATENED COASTAL AREAS SHOULD STAY ALERT FOR INFORMATION AND FOLLOW INSTRUCTIONS FROM NATIONAL AND LOCAL AUTHORITIES.

TEST... ESTIMATED TIMES OF ARRIVAL ...TEST

- * THIS IS A TEST MESSAGE. ESTIMATED TIMES OF ARRIVAL -ETA- OF THE INITIAL TSUNAMI WAVE FOR PLACES WITHIN THREATENED REGIONS ARE GIVEN BELOW. ACTUAL ARRIVAL TIMES MAY DIFFER AND THE INITIAL WAVE MAY NOT BE THE LARGEST. A TSUNAMI IS A SERIES OF WAVES AND THE TIME BETWEEN WAVES CAN BE FIVE MINUTES TO ONE HOUR.

LOCATION	REGION	COORDINATES		ETA (UTC)	
PIRATES BAY	TRINIDAD TOBAGO	11.3N	60.6W	2201	03/19
MAYAGUANA	BAHAMAS	22.3N	73.0W	2202	03/19
CHARLOTTE AMALI	US VIRGIN IS	18.3N	64.9W	2203	03/19
SAINT GEORGES	GRENADA	12.0N	61.8W	2203	03/19
WEST CAICOS	TURKS N CAICOS	21.7N	72.5W	2205	03/19
BAIE BLANCHE	SAINT MARTIN	18.1N	63.0W	2207	03/19
SAN SALVADOR	BAHAMAS	24.1N	74.5W	2208	03/19
CAP HAITEN	HAITI	19.8N	72.2W	2209	03/19
SANTO DOMINGO	DOMINICAN REP	18.5N	69.9W	2216	03/19
LONG ISLAND	BAHAMAS	23.3N	75.1W	2221	03/19
ONIMA	BONAIRE	12.3N	68.3W	2223	03/19
GREAT INAGUA	BAHAMAS	20.9N	73.7W	2223	03/19
EXUMA	BAHAMAS	23.6N	75.9W	2224	03/19
CAT ISLAND	BAHAMAS	24.4N	75.5W	2224	03/19
BARACOA	CUBA	20.4N	74.5W	2227	03/19
ELEUTHERA ISLAN	BAHAMAS	25.2N	76.1W	2229	03/19
CROOKED ISLAND	BAHAMAS	22.7N	74.1W	2234	03/19
JACAMEL	HAITI	18.1N	72.5W	2235	03/19
ANDROS ISLAND	BAHAMAS	25.0N	77.9W	2235	03/19
GIBARA	CUBA	21.1N	76.1W	2237	03/19
ORANJESTAD	ARUBA	12.5N	70.0W	2237	03/19
ROADTOWN	BR VIRGIN IS	18.4N	64.6W	2240	03/19
JEREMIE	HAITI	18.6N	74.1W	2241	03/19
SANTIAGO D CUBA	CUBA	19.9N	75.8W	2244	03/19
NASSAU	BAHAMAS	25.1N	77.4W	2247	03/19
CAYENNE	FRENCH GUYANE	4.9N	52.3W	2247	03/19
MAIQUETIA	VENEZUELA	10.6N	67.0W	2250	03/19
WILLEMSTAD	CURACAO	12.1N	68.9W	2257	03/19
ABACO ISLAND	BAHAMAS	26.6N	77.1W	2258	03/19
FREEPORT	BAHAMAS	26.5N	78.8W	2259	03/19
CUMANA	VENEZUELA	10.5N	64.2W	2303	03/19
PORT OF SPAIN	TRINIDAD TOBAGO	10.6N	61.5W	2308	03/19
BIMINI	BAHAMAS	25.8N	79.3W	2312	03/19
SANTA MARTA	COLOMBIA	11.2N	74.2W	2322	03/19
MONTEGO BAY	JAMAICA	18.5N	77.9W	2326	03/19
PORT AU PRINCE	HAITI	18.5N	72.4W	2334	03/19
CIENFUEGOS	CUBA	22.0N	80.5W	2337	03/19
CARTAGENA	COLOMBIA	10.4N	75.6W	2338	03/19
KINGSTON	JAMAICA	17.9N	76.9W	2343	03/19
BARRANQUILLA	COLOMBIA	11.1N	74.9W	2347	03/19
RIOHACHA	COLOMBIA	11.6N	72.9W	2351	03/19
PUNTA CARIBANA	COLOMBIA	8.6N	76.9W	0022	03/20
GEORGETOWN	GUYANA	6.8N	58.2W	0033	03/20
PARAMARIBO	SURINAME	5.9N	55.2W	0033	03/20
PUNTO FIJO	VENEZUELA	11.7N	70.2W	0104	03/20
PORLAMAR	VENEZUELA	10.9N	63.8W	0157	03/20
SANTA CRZ D SUR	CUBA	20.7N	78.0W	0201	03/20
GOLFO VENEZUELA	VENEZUELA	11.4N	71.2W	0203	03/20
ILHA DE MARACA	BRAZIL	2.2N	50.5W	0210	03/20
NUEVA GERONA	CUBA	21.9N	82.8W	0339	03/20

TEST... POTENTIAL IMPACTS ...TEST

- * THIS IS A TEST MESSAGE. A TSUNAMI IS A SERIES OF WAVES. THE TIME BETWEEN WAVE CRESTS CAN VARY FROM 5 MINUTES TO AN HOUR. THE HAZARD MAY PERSIST FOR MANY HOURS OR LONGER AFTER THE INITIAL WAVE.
- * THIS IS A TEST MESSAGE. IMPACTS CAN VARY SIGNIFICANTLY FROM ONE SECTION OF COAST TO THE NEXT DUE TO LOCAL BATHYMETRY AND THE SHAPE AND ELEVATION OF THE SHORELINE.
- * THIS IS A TEST MESSAGE. IMPACTS CAN ALSO VARY DEPENDING UPON THE STATE OF THE TIDE AT THE TIME OF THE MAXIMUM TSUNAMI WAVES.
- * THIS IS A TEST MESSAGE. PERSONS CAUGHT IN THE WATER OF A TSUNAMI MAY DROWN... BE CRUSHED BY DEBRIS IN THE WATER... OR BE SWEEPED OUT TO SEA.

TEST... TSUNAMI OBSERVATIONS ...TEST

- * THIS IS A TEST MESSAGE. THE FOLLOWING ARE TSUNAMI WAVE OBSERVATIONS FROM COASTAL AND/OR DEEP-OCEAN SEA LEVEL GAUGES AT THE INDICATED LOCATIONS. THE MAXIMUM TSUNAMI HEIGHT IS MEASURED WITH RESPECT TO THE NORMAL TIDE LEVEL.

GAUGE LOCATION	GAUGE COORDINATES		TIME OF MEASURE (UTC)	MAXIMUM TSUNAMI HEIGHT	WAVE PERIOD (MIN)
	LAT	LON			
TORTOLA VI UK	18.4N	64.6W	2251	0.70M/ 2.3FT	24
HATTERAS NC	35.2N	75.7W	2247	1.10M/ 3.6FT	16
ORANGESTAD AW	12.5N	70.0W	2244	0.45M/ 1.5FT	28
BULLEN BAY CURACAO	12.2N	69.0W	2245	0.52M/ 1.7FT	16
BARAHONA DO	18.2N	71.1W	2237	0.34M/ 1.1FT	16
ILE ROYAL GUIANA FR	5.3N	52.6W	2229	1.35M/ 4.4FT	28
CAP HAITIEN HT	19.8N	72.2W	2217	0.93M/ 3.1FT	16
PRICKLEY BAY GD	12.0N	61.8W	2216	0.59M/ 1.9FT	26
DART 42407	15.3N	68.2W	2208	0.04M/ 0.1FT	24
MAGUEYES ISLAND PR	18.0N	67.0W	2213	0.56M/ 1.8FT	28
PUERTO PLATA DO	19.8N	70.7W	2200	0.97M/ 3.2FT	16
GRAND TURK ISLAND T	21.4N	71.1W	2205	1.45M/ 4.8FT	24
LAMESHURBAYSTJOHNVI	18.3N	64.7W	2205	0.83M/ 2.7FT	16
BLOWING POINT AI	18.2N	63.1W	2157	0.93M/ 3.1FT	26
PUNTA CANA DO	18.5N	68.4W	2159	0.85M/ 2.8FT	24
MONA ISLAND PR	18.1N	67.9W	2200	0.69M/ 2.3FT	24
SAINT MARTIN FR	18.1N	63.1W	2158	0.93M/ 3.1FT	14
ISABELII VIEQUES PR	18.2N	65.4W	2201	0.70M/ 2.3FT	16
GANTERS BAY ST LUCI	14.0N	61.0W	2155	0.64M/ 2.1FT	20
MAYAGUEZ PR	18.2N	67.2W	2151	1.21M/ 4.0FT	20
BARBUDA AG	17.6N	61.8W	2146	1.04M/ 3.4FT	18
ESPERANZA VIEQUES P	18.1N	65.5W	2144	0.68M/ 2.2FT	28
CALLIAQUA VC	13.1N	61.2W	2146	0.56M/ 1.8FT	22
YABUCOA PR	18.1N	65.8W	2139	0.70M/ 2.3FT	28
DART 41424	33.0N	72.7W	2141	0.10M/ 0.3FT	24
ARECIBO PR	18.5N	66.7W	2139	1.57M/ 5.1FT	14
LIMETREE VI	17.7N	64.8W	2134	0.62M/ 2.0FT	28
BASSETTERRE KN	17.3N	62.7W	2141	0.84M/ 2.8FT	24

ST CROIX VI	17.7N	64.7W	2138	0.73M/	2.4FT	28
SAN JUAN PR	18.5N	66.1W	2136	1.28M/	4.2FT	28
FORT DE FRANCE MQ	14.6N	61.1W	2135	0.73M/	2.4FT	16
ROSEAU DM	15.3N	61.4W	2131	0.64M/	2.1FT	18
PORTSMOUTH DM	15.6N	61.5W	2128	0.70M/	2.3FT	28
DART 41420	23.4N	67.3W	2125	0.14M/	0.5FT	26
LE ROBERT MARTINIQUE	14.7N	60.9W	2125	1.34M/	4.4FT	28
LE PRECHEUR MARTINI	14.8N	61.2W	2126	0.66M/	2.2FT	26
DESHAIES GUADELOUPE	16.3N	61.8W	2128	0.73M/	2.4FT	22
PORT ST CHARLES BB	13.3N	59.6W	2125	1.61M/	5.3FT	28
DART 44402	39.3N	70.7W	2127	0.10M/	0.3FT	24
SAINT PIERRE MIQUEL	46.5N	56.1W	2119	1.02M/	3.4FT	20
PARHAM AT	17.1N	61.8W	2115	1.31M/	4.3FT	26
DESIRADE GUADELOUPE	16.3N	61.1W	2106	1.21M/	4.0FT	20
DART 41425	28.7N	65.7W	2110	0.25M/	0.8FT	16
DART 41421	23.4N	63.8W	2106	0.14M/	0.5FT	20
BERMUDA UK	32.4N	64.7W	2105	2.30M/	7.6FT	20
SALERNO IT	40.7N	14.8E	1906	0.07M/	0.2FT	24
SETE FR	43.4N	3.7E	1901	0.11M/	0.4FT	28
MALIN HEAD IE	55.4N	7.3W	1854	0.71M/	2.3FT	18
FOS-SUR-MER FR	43.4N	4.9E	1849	0.11M/	0.3FT	20
PORT-VENDRES FR	43.0N	3.1E	1848	0.12M/	0.4FT	22
GENOVA IT	44.4N	8.9E	1837	0.15M/	0.5FT	26
NOUADHIBOU MR	20.8N	17.0W	1835	1.22M/	4.0FT	22
IMPERIA IT	43.9N	8.0E	1820	0.13M/	0.4FT	24
MONACO MC	43.7N	7.4E	1820	0.11M/	0.4FT	28
NICE FR	43.7N	7.3E	1823	0.13M/	0.4FT	18
CARLOFORTE IT	39.1N	8.3E	1816	0.14M/	0.4FT	14
LA FIGUEIRETTE	43.5N	6.9E	1812	0.12M/	0.4FT	18
PORT FERREOL FR	43.4N	6.7E	1811	0.12M/	0.4FT	24
AJACCIO FR	41.9N	8.8E	1814	0.10M/	0.3FT	26
PRAIA CV	14.9N	23.5W	1801	0.78M/	2.6FT	22
LHERBAUDIERE FR	47.0N	2.3W	1801	0.82M/	2.7FT	26
BARCELONA ES	41.3N	2.2E	1754	0.11M/	0.4FT	16
LES SABLES DOLONNE	46.5N	1.8W	1752	0.69M/	2.3FT	22
PALMEIRA CAPE VERDE	16.8N	23.0W	1738	1.07M/	3.5FT	26
CONCARMEAU FR	47.9N	3.9W	1732	0.87M/	2.9FT	22
VALENCIA ES	39.4N	0.3W	1728	0.19M/	0.6FT	18
LE CONQUET FR	48.4N	4.8W	1730	0.93M/	3.0FT	28
MIMIZAN FR	44.2N	1.3W	1702	0.69M/	2.3FT	24
BOUCAU BAYONNE FR	43.5N	1.5W	1645	0.73M/	2.4FT	26
CARTAGENA ES	37.6N	1.0W	1630	0.40M/	1.3FT	28
SAID MA	35.1N	2.3W	1627	0.74M/	2.4FT	28
PONTA DELGADA PT	37.7N	25.7W	1604	3.82M/12.5FT		22
FERROL ES	43.5N	8.3W	1600	1.46M/	4.8FT	16
ELHIERRO ES	27.8N	17.9W	1554	1.78M/	5.9FT	22
FUERTEVENTURA ES	28.5N	13.9W	1551	2.39M/	7.9FT	28
LAGOMERA ES	28.1N	17.1W	1545	1.89M/	6.2FT	16
LA PALMA ES	28.7N	17.8W	1543	2.99M/	9.8FT	18
TENERIFE ES	28.5N	16.2W	1540	3.00M/	9.8FT	20
ARRECIFE ES	29.0N	13.5W	1529	2.72M/	8.9FT	24
LASPALMAS ES	28.1N	15.4W	1532	3.80M/12.5FT		18
ALGECIRAS ES	36.2N	5.4W	1534	1.27M/	4.2FT	26
CADIZ ES	36.5N	6.3W	1528	8.34M/27.4FT		20
HUELVA ES	37.1N	6.8W	1526	11.04M/36.2FT		22
ALBUFEIRA PT	37.1N	8.3W	1505	15.43M/50.6FT		16
PORTO SANTO PT	33.1N	16.3W	1503	10.23M/33.6FT		14

TEST... NEXT UPDATE AND ADDITIONAL INFORMATION ...TEST

- * THIS IS A TEST MESSAGE. THE NEXT MESSAGE WILL BE ISSUED IN ONE HOUR... OR SOONER IF THE SITUATION WARRANTS.
- * THIS IS A TEST MESSAGE. AUTHORITATIVE INFORMATION ABOUT THE EARTHQUAKE FROM THE U.S. GEOLOGICAL SURVEY CAN BE FOUND ON THE INTERNET AT EARTHQUAKE.USGS.GOV/EARTHQUAKES -ALL IN LOWERCASE LETTERS-.
- * THIS IS A TEST MESSAGE. FURTHER INFORMATION ABOUT THIS EVENT MAY BE FOUND AT WWW.TSUNAMI.GOV.
- * THIS IS A TEST MESSAGE. COASTAL REGIONS OF THE US GULF COAST... US EAST COAST... AND THE MARITIME PROVINCES OF CANADA SHOULD REFER TO U.S. NATIONAL TSUNAMI WARNING CENTER MESSAGES THAT CAN BE FOUND AT WWW.TSUNAMI.GOV.

THIS IS A TEST MESSAGE. DO NOT TAKE ACTION BASED ON THIS TEST MESSAGE.

\$\$

NNNN

PTWC Message #14

ZCZC
WECA41 PHEB 200000
TSUCAX

TEST...TSUNAMI MESSAGE NUMBER 14...TEST
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
0000 UTC FRI MAR 20 2020

...THIS MESSAGE IS FOR TEST PURPOSES ONLY...
...TEST TSUNAMI THREAT MESSAGE TEST...

**** NOTICE **** NOTICE **** NOTICE **** NOTICE **** NOTICE ****

THIS IS A TEST MESSAGE. THIS MESSAGE IS ISSUED FOR INFORMATION ONLY IN SUPPORT OF THE UNESCO/IOC TSUNAMI AND OTHER COASTAL HAZARDS WARNING SYSTEM FOR THE CARIBBEAN AND ADJACENT REGIONS AND IS MEANT FOR NATIONAL AUTHORITIES IN EACH COUNTRY OF THAT SYSTEM.

THIS IS A TEST MESSAGE. NATIONAL AUTHORITIES WILL DETERMINE THE APPROPRIATE LEVEL OF ALERT FOR EACH COUNTRY AND MAY ISSUE ADDITIONAL OR MORE REFINED INFORMATION.

**** NOTICE **** NOTICE **** NOTICE **** NOTICE **** NOTICE ****

TEST... PRELIMINARY EARTHQUAKE PARAMETERS ...TEST

* MAGNITUDE	8.5
* ORIGIN TIME	1400 UTC MAR 19 2020
* COORDINATES	36.0 NORTH 10.8 WEST
* DEPTH	5 KM / 3 MILES
* LOCATION	AZORES-CAPE ST. VINCENT RIDGE

TEST... EVALUATION ...TEST

* THIS IS A TEST MESSAGE. AN EARTHQUAKE WITH A PRELIMINARY MAGNITUDE OF 8.5 OCCURRED NEAR THE AZORES-CAPE SAINT VINCENT RIDGE AT 1400 UTC ON THURSDAY MARCH 19 2020.

* THIS IS A TEST MESSAGE. TSUNAMI WAVES HAVE BEEN OBSERVED.

* THIS IS A TEST MESSAGE. BASED ON ALL AVAILABLE DATA...
HAZARDOUS TSUNAMI WAVES ARE FORECAST FOR SOME COASTS.

TEST... TSUNAMI THREAT FORECAST ...TEST

* THIS IS A TEST MESSAGE. TSUNAMI WAVES REACHING MORE THAN 3 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE ALONG SOME COASTS OF

BAHAMAS.

- * THIS IS A TEST MESSAGE. TSUNAMI WAVES REACHING 1 TO 3 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE ALONG SOME COASTS OF

BRAZIL... CUBA... DOMINICAN REPUBLIC... FRENCH GUYANE...
GUYANA... HAITI... SURINAME... VENEZUELA... ANGUILLA...
ANTIGUA AND BARBUDA... BARBADOS... BERMUDA... DOMINICA...
GRENADA... GUADELOUPE... MARTINIQUE... PUERTO RICO AND
VIRGIN ISLANDS... SAINT BARTHELEMY... SAINT LUCIA... SAINT
VINCENT AND THE GRENADINES... TRINIDAD AND TOBAGO... AND
TURKS AND CAICOS ISLANDS.

- * THIS IS A TEST MESSAGE. TSUNAMI WAVES REACHING 0.3 TO 1 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE FOR SOME COASTS OF

COLOMBIA... ARUBA... BONAIRE... CURACAO... JAMAICA...
MONTSERRAT... SABA AND SAINT EUSTATIUS... SAINT KITTS AND
NEVIS... SINT MAARTEN... AND SAINT MARTIN.

- * THIS IS A TEST MESSAGE. ACTUAL AMPLITUDES AT THE COAST MAY VARY FROM FORECAST AMPLITUDES DUE TO UNCERTAINTIES IN THE FORECAST AND LOCAL FEATURES. IN PARTICULAR MAXIMUM TSUNAMI AMPLITUDES ON ATOLLS OR SMALL ISLANDS AND AT LOCATIONS WITH FRINGING OR BARRIER REEFS WILL LIKELY BE MUCH SMALLER THAN THE FORECAST INDICATES.

- * THIS IS A TEST MESSAGE. FOR ALL OTHER AREAS COVERED BY THIS MESSAGE... THERE IS NO TSUNAMI THREAT ALTHOUGH SMALL SEA LEVEL CHANGES MAY OCCUR.

TEST... RECOMMENDED ACTIONS ...TEST

- * THIS IS A TEST MESSAGE. GOVERNMENT AGENCIES RESPONSIBLE FOR THREATENED COASTAL AREAS SHOULD TAKE ACTION TO INFORM AND INSTRUCT ANY COASTAL POPULATIONS AT RISK IN ACCORDANCE WITH THEIR OWN EVALUATION... PROCEDURES AND THE LEVEL OF THREAT.
- * THIS IS A TEST MESSAGE. PERSONS LOCATED IN THREATENED COASTAL AREAS SHOULD STAY ALERT FOR INFORMATION AND FOLLOW INSTRUCTIONS FROM NATIONAL AND LOCAL AUTHORITIES.

TEST... ESTIMATED TIMES OF ARRIVAL ...TEST

- * THIS IS A TEST MESSAGE. ESTIMATED TIMES OF ARRIVAL -ETA- OF THE INITIAL TSUNAMI WAVE FOR PLACES WITHIN THREATENED REGIONS ARE GIVEN BELOW. ACTUAL ARRIVAL TIMES MAY DIFFER AND THE INITIAL WAVE MAY NOT BE THE LARGEST. A TSUNAMI IS A SERIES OF WAVES AND THE TIME BETWEEN WAVES CAN BE FIVE MINUTES TO ONE HOUR.

LOCATION	REGION	COORDINATES		ETA (UTC)	
CUMANA	VENEZUELA	10.5N	64.2W	2303	03/19
PORT OF SPAIN	TRINIDAD TOBAGO	10.6N	61.5W	2308	03/19
BIMINI	BAHAMAS	25.8N	79.3W	2312	03/19
SANTA MARTA	COLOMBIA	11.2N	74.2W	2322	03/19
MONTEGO BAY	JAMAICA	18.5N	77.9W	2326	03/19
PORT AU PRINCE	HAITI	18.5N	72.4W	2334	03/19
CIENFUEGOS	CUBA	22.0N	80.5W	2337	03/19
CARTAGENA	COLOMBIA	10.4N	75.6W	2338	03/19
KINGSTON	JAMAICA	17.9N	76.9W	2343	03/19
BARRANQUILLA	COLOMBIA	11.1N	74.9W	2347	03/19
RIOHACHA	COLOMBIA	11.6N	72.9W	2351	03/19
PUNTA CARIBANA	COLOMBIA	8.6N	76.9W	0022	03/20
GEORGETOWN	GUYANA	6.8N	58.2W	0033	03/20
PARAMARIBO	SURINAME	5.9N	55.2W	0033	03/20
PUNTO FIJO	VENEZUELA	11.7N	70.2W	0104	03/20
PORLAMAR	VENEZUELA	10.9N	63.8W	0157	03/20
SANTA CRZ D SUR	CUBA	20.7N	78.0W	0201	03/20
GOLFO VENEZUELA	VENEZUELA	11.4N	71.2W	0203	03/20
ILHA DE MARACA	BRAZIL	2.2N	50.5W	0210	03/20
NUEVA GERONA	CUBA	21.9N	82.8W	0339	03/20

TEST... POTENTIAL IMPACTS ...TEST

- * THIS IS A TEST MESSAGE. A TSUNAMI IS A SERIES OF WAVES. THE TIME BETWEEN WAVE CRESTS CAN VARY FROM 5 MINUTES TO AN HOUR. THE HAZARD MAY PERSIST FOR MANY HOURS OR LONGER AFTER THE INITIAL WAVE.
- * THIS IS A TEST MESSAGE. IMPACTS CAN VARY SIGNIFICANTLY FROM ONE SECTION OF COAST TO THE NEXT DUE TO LOCAL BATHYMETRY AND THE SHAPE AND ELEVATION OF THE SHORELINE.
- * THIS IS A TEST MESSAGE. IMPACTS CAN ALSO VARY DEPENDING UPON THE STATE OF THE TIDE AT THE TIME OF THE MAXIMUM TSUNAMI WAVES.
- * THIS IS A TEST MESSAGE. PERSONS CAUGHT IN THE WATER OF A TSUNAMI MAY DROWN... BE CRUSHED BY DEBRIS IN THE WATER... OR BE SWEEPED OUT TO SEA.

TEST... TSUNAMI OBSERVATIONS ...TEST

- * THIS IS A TEST MESSAGE. THE FOLLOWING ARE TSUNAMI WAVE OBSERVATIONS FROM COASTAL AND/OR DEEP-OCEAN SEA LEVEL GAUGES AT THE INDICATED LOCATIONS. THE MAXIMUM TSUNAMI HEIGHT IS MEASURED WITH RESPECT TO THE NORMAL TIDE LEVEL.

GAUGE LOCATION	GAUGE COORDINATES		TIME OF MEASURE (UTC)	MAXIMUM TSUNAMI HEIGHT	WAVE PERIOD (MIN)
	LAT	LON			
ISLA NAVAL CO	10.2N	75.8W	2351	0.17M/ 0.6FT	22

PORT ROYAL JM	17.9N	76.8W	2353	0.46M/	1.5FT	26
SANTA MARTA CO	11.2N	74.2W	2334	0.26M/	0.9FT	16
SALVADOR BR	13.0S	38.5W	2331	0.33M/	1.1FT	22
PORT OF SPAIN TT	10.6N	61.5W	2314	1.01M/	3.3FT	26
NANTUCKET ISLAND MA	41.3N	70.1W	2305	0.81M/	2.7FT	18
SAINT HELENA UK	15.9S	5.7W	2307	0.37M/	1.2FT	14
SAINT HELENA RUPERT	15.9S	5.7W	2307	0.37M/	1.2FT	26
TORTOLA VI UK	18.4N	64.6W	2251	0.70M/	2.3FT	24
HATTERAS NC	35.2N	75.7W	2247	1.10M/	3.6FT	16
ORANGESTAD AW	12.5N	70.0W	2244	0.45M/	1.5FT	28
BULLEN BAY CURACAO	12.2N	69.0W	2245	0.52M/	1.7FT	16
BARAHONA DO	18.2N	71.1W	2237	0.34M/	1.1FT	16
ILE ROYAL GUIANA FR	5.3N	52.6W	2229	1.35M/	4.4FT	28
CAP HAITIEN HT	19.8N	72.2W	2217	0.93M/	3.1FT	16
PRICKLEY BAY GD	12.0N	61.8W	2216	0.59M/	1.9FT	26
DART 42407	15.3N	68.2W	2208	0.04M/	0.1FT	24
MAGUEYES ISLAND PR	18.0N	67.0W	2213	0.56M/	1.8FT	28
PUERTO PLATA DO	19.8N	70.7W	2200	0.97M/	3.2FT	16
GRAND TURK ISLAND T	21.4N	71.1W	2205	1.45M/	4.8FT	24
LAMESHURBAYSTJOHNVI	18.3N	64.7W	2205	0.83M/	2.7FT	16
BLOWING POINT AI	18.2N	63.1W	2157	0.93M/	3.1FT	26
PUNTA CANA DO	18.5N	68.4W	2159	0.85M/	2.8FT	24
MONA ISLAND PR	18.1N	67.9W	2200	0.69M/	2.3FT	24
SAINT MARTIN FR	18.1N	63.1W	2158	0.93M/	3.1FT	14
ISABELII VIEQUES PR	18.2N	65.4W	2201	0.70M/	2.3FT	16
GANTERS BAY ST LUCI	14.0N	61.0W	2155	0.64M/	2.1FT	20
MAYAGUEZ PR	18.2N	67.2W	2151	1.21M/	4.0FT	20
BARBUDA AG	17.6N	61.8W	2146	1.04M/	3.4FT	18
ESPERANZA VIEQUES P	18.1N	65.5W	2144	0.68M/	2.2FT	28
CALLIAQUA VC	13.1N	61.2W	2146	0.56M/	1.8FT	22
YABUCOA PR	18.1N	65.8W	2139	0.70M/	2.3FT	28
DART 41424	33.0N	72.7W	2141	0.10M/	0.3FT	24
ARECIBO PR	18.5N	66.7W	2139	1.57M/	5.1FT	14
LIMETREE VI	17.7N	64.8W	2134	0.62M/	2.0FT	28
BASSETERRE KN	17.3N	62.7W	2141	0.84M/	2.8FT	24
ST CROIX VI	17.7N	64.7W	2138	0.73M/	2.4FT	28
SAN JUAN PR	18.5N	66.1W	2136	1.28M/	4.2FT	28
FORT DE FRANCE MQ	14.6N	61.1W	2135	0.73M/	2.4FT	16
ROSEAU DM	15.3N	61.4W	2131	0.64M/	2.1FT	18
PORTSMOUTH DM	15.6N	61.5W	2128	0.70M/	2.3FT	28
DART 41420	23.4N	67.3W	2125	0.14M/	0.5FT	26
LE ROBERT MARTINIQU	14.7N	60.9W	2125	1.34M/	4.4FT	28
LE PRECHEUR MARTINI	14.8N	61.2W	2126	0.66M/	2.2FT	26
DESHAIES GUADELOUPE	16.3N	61.8W	2128	0.73M/	2.4FT	22
PORT ST CHARLES BB	13.3N	59.6W	2125	1.61M/	5.3FT	28
DART 44402	39.3N	70.7W	2127	0.10M/	0.3FT	24
SAINT PIERRE MIQUEL	46.5N	56.1W	2119	1.02M/	3.4FT	20
PARHAM AT	17.1N	61.8W	2115	1.31M/	4.3FT	26
DESIRADE GUADELOUPE	16.3N	61.1W	2106	1.21M/	4.0FT	20
DART 41425	28.7N	65.7W	2110	0.25M/	0.8FT	16
DART 41421	23.4N	63.8W	2106	0.14M/	0.5FT	20
BERMUDA UK	32.4N	64.7W	2105	2.30M/	7.6FT	20
SALERNO IT	40.7N	14.8E	1906	0.07M/	0.2FT	24
SETE FR	43.4N	3.7E	1901	0.11M/	0.4FT	28
MALIN HEAD IE	55.4N	7.3W	1854	0.71M/	2.3FT	18
FOS-SUR-MER FR	43.4N	4.9E	1849	0.11M/	0.3FT	20
PORT-VENDRES FR	43.0N	3.1E	1848	0.12M/	0.4FT	22
GENOVA IT	44.4N	8.9E	1837	0.15M/	0.5FT	26

NOUADHIBOU MR	20.8N	17.0W	1835	1.22M/	4.0FT	22
IMPERIA IT	43.9N	8.0E	1820	0.13M/	0.4FT	24
MONACO MC	43.7N	7.4E	1820	0.11M/	0.4FT	28
NICE FR	43.7N	7.3E	1823	0.13M/	0.4FT	18
CARLOFORTE IT	39.1N	8.3E	1816	0.14M/	0.4FT	14
LA FIGUEIRETTE	43.5N	6.9E	1812	0.12M/	0.4FT	18
PORT FERREOL FR	43.4N	6.7E	1811	0.12M/	0.4FT	24
AJACCIO FR	41.9N	8.8E	1814	0.10M/	0.3FT	26
PRAIA CV	14.9N	23.5W	1801	0.78M/	2.6FT	22
LHERBAUDIERE FR	47.0N	2.3W	1801	0.82M/	2.7FT	26
BARCELONA ES	41.3N	2.2E	1754	0.11M/	0.4FT	16
LES SABLES DOLONNE	46.5N	1.8W	1752	0.69M/	2.3FT	22
PALMEIRA CAPE VERDE	16.8N	23.0W	1738	1.07M/	3.5FT	26
CONCARMEAU FR	47.9N	3.9W	1732	0.87M/	2.9FT	22
VALENCIA ES	39.4N	0.3W	1728	0.19M/	0.6FT	18
LE CONQUET FR	48.4N	4.8W	1730	0.93M/	3.0FT	28
MIMIZAN FR	44.2N	1.3W	1702	0.69M/	2.3FT	24
BOUCAU BAYONNE FR	43.5N	1.5W	1645	0.73M/	2.4FT	26
CARTAGENA ES	37.6N	1.0W	1630	0.40M/	1.3FT	28
SAID MA	35.1N	2.3W	1627	0.74M/	2.4FT	28
PONTA DELGADA PT	37.7N	25.7W	1604	3.82M/12.5FT		22
FERROL ES	43.5N	8.3W	1600	1.46M/	4.8FT	16
ELHIERRO ES	27.8N	17.9W	1554	1.78M/	5.9FT	22
FUERTEVENTURA ES	28.5N	13.9W	1551	2.39M/	7.9FT	28
LAGOMERA ES	28.1N	17.1W	1545	1.89M/	6.2FT	16
LA PALMA ES	28.7N	17.8W	1543	2.99M/	9.8FT	18
TENERIFE ES	28.5N	16.2W	1540	3.00M/	9.8FT	20
ARRECIFE ES	29.0N	13.5W	1529	2.72M/	8.9FT	24
LASPALMAS ES	28.1N	15.4W	1532	3.80M/12.5FT		18
ALGECIRAS ES	36.2N	5.4W	1534	1.27M/	4.2FT	26
CADIZ ES	36.5N	6.3W	1528	8.34M/27.4FT		20
HUELVA ES	37.1N	6.8W	1526	11.04M/36.2FT		22
ALBUFEIRA PT	37.1N	8.3W	1505	15.43M/50.6FT		16
PORTO SANTO PT	33.1N	16.3W	1503	10.23M/33.6FT		14

TEST... NEXT UPDATE AND ADDITIONAL INFORMATION ...TEST

-
- * THIS IS A TEST MESSAGE. THE NEXT MESSAGE WILL BE ISSUED IN ONE HOUR... OR SOONER IF THE SITUATION WARRANTS.
 - * THIS IS A TEST MESSAGE. AUTHORITATIVE INFORMATION ABOUT THE EARTHQUAKE FROM THE U.S. GEOLOGICAL SURVEY CAN BE FOUND ON THE INTERNET AT EARTHQUAKE.USGS.GOV/EARTHQUAKES -ALL IN LOWERCASE LETTERS-.
 - * THIS IS A TEST MESSAGE. FURTHER INFORMATION ABOUT THIS EVENT MAY BE FOUND AT WWW.TSUNAMI.GOV.
 - * THIS IS A TEST MESSAGE. COASTAL REGIONS OF THE US GULF COAST... US EAST COAST... AND THE MARITIME PROVINCES OF CANADA SHOULD REFER TO U.S. NATIONAL TSUNAMI WARNING CENTER MESSAGES THAT CAN BE FOUND AT WWW.TSUNAMI.GOV.

THIS IS A TEST MESSAGE. DO NOT TAKE ACTION BASED ON THIS TEST MESSAGE.

\$\$

NNNN

PTWC Message #15

ZCZC
WECA41 PHEB 200100
TSUCAX

TEST...TSUNAMI MESSAGE NUMBER 15...TEST
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
0100 UTC FRI MAR 20 2020

...THIS MESSAGE IS FOR TEST PURPOSES ONLY...
...TEST TSUNAMI THREAT MESSAGE TEST...

**** NOTICE **** NOTICE **** NOTICE **** NOTICE **** NOTICE ****

THIS IS A TEST MESSAGE. THIS MESSAGE IS ISSUED FOR INFORMATION
ONLY IN SUPPORT OF THE UNESCO/IOC TSUNAMI AND OTHER COASTAL
HAZARDS WARNING SYSTEM FOR THE CARIBBEAN AND ADJACENT REGIONS
AND IS MEANT FOR NATIONAL AUTHORITIES IN EACH COUNTRY OF THAT
SYSTEM.

THIS IS A TEST MESSAGE. NATIONAL AUTHORITIES WILL DETERMINE THE
APPROPRIATE LEVEL OF ALERT FOR EACH COUNTRY AND MAY ISSUE
ADDITIONAL OR MORE REFINED INFORMATION.

**** NOTICE **** NOTICE **** NOTICE **** NOTICE **** NOTICE ****

TEST... PRELIMINARY EARTHQUAKE PARAMETERS ...TEST

* MAGNITUDE 8.5
* ORIGIN TIME 1400 UTC MAR 19 2020
* COORDINATES 36.0 NORTH 10.8 WEST
* DEPTH 5 KM / 3 MILES
* LOCATION AZORES-CAPE ST. VINCENT RIDGE

TEST... EVALUATION ...TEST

* THIS IS A TEST MESSAGE. AN EARTHQUAKE WITH A PRELIMINARY
MAGNITUDE OF 8.5 OCCURRED NEAR THE AZORES-CAPE SAINT VINCENT
RIDGE AT 1400 UTC ON THURSDAY MARCH 19 2020.

* THIS IS A TEST MESSAGE. TSUNAMI WAVES HAVE BEEN OBSERVED.

* THIS IS A TEST MESSAGE. BASED ON ALL AVAILABLE DATA...
HAZARDOUS TSUNAMI WAVES ARE FORECAST FOR SOME COASTS.

TEST... TSUNAMI THREAT FORECAST ...TEST

* THIS IS A TEST MESSAGE. TSUNAMI WAVES REACHING MORE THAN 3
METERS ABOVE THE TIDE LEVEL ARE POSSIBLE ALONG SOME COASTS
OF

BAHAMAS.

- * THIS IS A TEST MESSAGE. TSUNAMI WAVES REACHING 1 TO 3 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE ALONG SOME COASTS OF

BRAZIL... CUBA... DOMINICAN REPUBLIC... FRENCH GUYANE...
GUYANA... HAITI... SURINAME... VENEZUELA... ANGUILLA...
ANTIGUA AND BARBUDA... BARBADOS... BERMUDA... DOMINICA...
GRENADA... GUADELOUPE... MARTINIQUE... PUERTO RICO AND
VIRGIN ISLANDS... SAINT BARTHELEMY... SAINT LUCIA... SAINT
VINCENT AND THE GRENADINES... TRINIDAD AND TOBAGO... AND
TURKS AND CAICOS ISLANDS.

- * THIS IS A TEST MESSAGE. TSUNAMI WAVES REACHING 0.3 TO 1 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE FOR SOME COASTS OF

COLOMBIA... ARUBA... BONAIRE... CURACAO... JAMAICA...
MONTSERRAT... SABA AND SAINT EUSTATIUS... SAINT KITTS AND
NEVIS... SINT MAARTEN... AND SAINT MARTIN.

- * THIS IS A TEST MESSAGE. ACTUAL AMPLITUDES AT THE COAST MAY VARY FROM FORECAST AMPLITUDES DUE TO UNCERTAINTIES IN THE FORECAST AND LOCAL FEATURES. IN PARTICULAR MAXIMUM TSUNAMI AMPLITUDES ON ATOLLS OR SMALL ISLANDS AND AT LOCATIONS WITH FRINGING OR BARRIER REEFS WILL LIKELY BE MUCH SMALLER THAN THE FORECAST INDICATES.

- * THIS IS A TEST MESSAGE. FOR ALL OTHER AREAS COVERED BY THIS MESSAGE... THERE IS NO TSUNAMI THREAT ALTHOUGH SMALL SEA LEVEL CHANGES MAY OCCUR.

TEST... RECOMMENDED ACTIONS ...TEST

- * THIS IS A TEST MESSAGE. GOVERNMENT AGENCIES RESPONSIBLE FOR THREATENED COASTAL AREAS SHOULD TAKE ACTION TO INFORM AND INSTRUCT ANY COASTAL POPULATIONS AT RISK IN ACCORDANCE WITH THEIR OWN EVALUATION... PROCEDURES AND THE LEVEL OF THREAT.
- * THIS IS A TEST MESSAGE. PERSONS LOCATED IN THREATENED COASTAL AREAS SHOULD STAY ALERT FOR INFORMATION AND FOLLOW INSTRUCTIONS FROM NATIONAL AND LOCAL AUTHORITIES.

TEST... ESTIMATED TIMES OF ARRIVAL ...TEST

- * THIS IS A TEST MESSAGE. ESTIMATED TIMES OF ARRIVAL -ETA- OF THE INITIAL TSUNAMI WAVE FOR PLACES WITHIN THREATENED REGIONS ARE GIVEN BELOW. ACTUAL ARRIVAL TIMES MAY DIFFER AND THE INITIAL WAVE MAY NOT BE THE LARGEST. A TSUNAMI IS A SERIES OF WAVES AND THE TIME BETWEEN WAVES CAN BE FIVE MINUTES TO ONE HOUR.

LOCATION	REGION	COORDINATES		ETA (UTC)	
PUNTA CARIBANA	COLOMBIA	8.6N	76.9W	0022	03/20
GEORGETOWN	GUYANA	6.8N	58.2W	0033	03/20
PARAMARIBO	SURINAME	5.9N	55.2W	0033	03/20
PUNTO FIJO	VENEZUELA	11.7N	70.2W	0104	03/20
PORLAMAR	VENEZUELA	10.9N	63.8W	0157	03/20
SANTA CRZ D SUR	CUBA	20.7N	78.0W	0201	03/20
GOLFO VENEZUELA	VENEZUELA	11.4N	71.2W	0203	03/20
ILHA DE MARACA	BRAZIL	2.2N	50.5W	0210	03/20
NUEVA GERONA	CUBA	21.9N	82.8W	0339	03/20

TEST... POTENTIAL IMPACTS ...TEST

- * THIS IS A TEST MESSAGE. A TSUNAMI IS A SERIES OF WAVES. THE TIME BETWEEN WAVE CRESTS CAN VARY FROM 5 MINUTES TO AN HOUR. THE HAZARD MAY PERSIST FOR MANY HOURS OR LONGER AFTER THE INITIAL WAVE.
- * THIS IS A TEST MESSAGE. IMPACTS CAN VARY SIGNIFICANTLY FROM ONE SECTION OF COAST TO THE NEXT DUE TO LOCAL BATHYMETRY AND THE SHAPE AND ELEVATION OF THE SHORELINE.
- * THIS IS A TEST MESSAGE. IMPACTS CAN ALSO VARY DEPENDING UPON THE STATE OF THE TIDE AT THE TIME OF THE MAXIMUM TSUNAMI WAVES.
- * THIS IS A TEST MESSAGE. PERSONS CAUGHT IN THE WATER OF A TSUNAMI MAY DROWN... BE CRUSHED BY DEBRIS IN THE WATER... OR BE SWEEPED OUT TO SEA.

TEST... TSUNAMI OBSERVATIONS ...TEST

- * THIS IS A TEST MESSAGE. THE FOLLOWING ARE TSUNAMI WAVE OBSERVATIONS FROM COASTAL AND/OR DEEP-OCEAN SEA LEVEL GAUGES AT THE INDICATED LOCATIONS. THE MAXIMUM TSUNAMI HEIGHT IS MEASURED WITH RESPECT TO THE NORMAL TIDE LEVEL.

GAUGE LOCATION	GAUGE COORDINATES		TIME OF MEASURE (UTC)	MAXIMUM TSUNAMI HEIGHT	WAVE PERIOD (MIN)
	LAT	LON			
VACA KEY FL	24.7N	81.1W	0059	0.15M/ 0.5FT	28
CEIBA CABOTAGE HN	15.8N	86.8W	0055	0.05M/ 0.2FT	22
LIMON CR	10.0N	83.0W	0051	0.28M/ 0.9FT	14
SIAN KAN MX	19.3N	87.4W	0040	0.07M/ 0.2FT	20
PUERTO MORELOS MX	20.9N	86.9W	0032	0.07M/ 0.2FT	20
PUERTO MORELOS MX	20.9N	86.9W	0034	0.07M/ 0.2FT	24
SAPZURRO CO	8.7N	77.4W	0026	0.18M/ 0.6FT	24
EL PORVENIR PA	9.6N	78.9W	0020	0.21M/ 0.7FT	16
SAN ANDRES CO	12.6N	81.7W	0021	0.20M/ 0.7FT	22
NEWPORT RI	41.5N	71.3W	0003	0.82M/ 2.7FT	22
ISLA NAVAL CO	10.2N	75.8W	2351	0.17M/ 0.6FT	22
PORT ROYAL JM	17.9N	76.8W	2353	0.46M/ 1.5FT	26
SANTA MARTA CO	11.2N	74.2W	2334	0.26M/ 0.9FT	16

IOC Technical Series, 151(1)
Annex VI–page 120

SALVADOR BR	13.0S	38.5W	2331	0.33M/	1.1FT	22
PORT OF SPAIN TT	10.6N	61.5W	2314	1.01M/	3.3FT	26
NANTUCKET ISLAND MA	41.3N	70.1W	2305	0.81M/	2.7FT	18
SAINT HELENA UK	15.9S	5.7W	2307	0.37M/	1.2FT	14
SAINT HELENA RUPERT	15.9S	5.7W	2307	0.37M/	1.2FT	26
TORTOLA VI UK	18.4N	64.6W	2251	0.70M/	2.3FT	24
HATTERAS NC	35.2N	75.7W	2247	1.10M/	3.6FT	16
ORANGESTAD AW	12.5N	70.0W	2244	0.45M/	1.5FT	28
BULLEN BAY CURACAO	12.2N	69.0W	2245	0.52M/	1.7FT	16
BARAHONA DO	18.2N	71.1W	2237	0.34M/	1.1FT	16
ILE ROYAL GUIANA FR	5.3N	52.6W	2229	1.35M/	4.4FT	28
CAP HAITIEN HT	19.8N	72.2W	2217	0.93M/	3.1FT	16
PRICKLEY BAY GD	12.0N	61.8W	2216	0.59M/	1.9FT	26
DART 42407	15.3N	68.2W	2208	0.04M/	0.1FT	24
MAGUEYES ISLAND PR	18.0N	67.0W	2213	0.56M/	1.8FT	28
PUERTO PLATA DO	19.8N	70.7W	2200	0.97M/	3.2FT	16
GRAND TURK ISLAND T	21.4N	71.1W	2205	1.45M/	4.8FT	24
LAMESHURBAYSTJOHNVI	18.3N	64.7W	2205	0.83M/	2.7FT	16
BLOWING POINT AI	18.2N	63.1W	2157	0.93M/	3.1FT	26
PUNTA CANA DO	18.5N	68.4W	2159	0.85M/	2.8FT	24
MONA ISLAND PR	18.1N	67.9W	2200	0.69M/	2.3FT	24
SAINT MARTIN FR	18.1N	63.1W	2158	0.93M/	3.1FT	14
ISABELII VIEQUES PR	18.2N	65.4W	2201	0.70M/	2.3FT	16
GANTERS BAY ST LUCI	14.0N	61.0W	2155	0.64M/	2.1FT	20
MAYAGUEZ PR	18.2N	67.2W	2151	1.21M/	4.0FT	20
BARBUDA AG	17.6N	61.8W	2146	1.04M/	3.4FT	18
ESPERANZA VIEQUES P	18.1N	65.5W	2144	0.68M/	2.2FT	28
CALLIAQUA VC	13.1N	61.2W	2146	0.56M/	1.8FT	22
YABUCOA PR	18.1N	65.8W	2139	0.70M/	2.3FT	28
DART 41424	33.0N	72.7W	2141	0.10M/	0.3FT	24
ARECIBO PR	18.5N	66.7W	2139	1.57M/	5.1FT	14
LIMETREE VI	17.7N	64.8W	2134	0.62M/	2.0FT	28
BASSETERRE KN	17.3N	62.7W	2141	0.84M/	2.8FT	24
ST CROIX VI	17.7N	64.7W	2138	0.73M/	2.4FT	28
SAN JUAN PR	18.5N	66.1W	2136	1.28M/	4.2FT	28
FORT DE FRANCE MQ	14.6N	61.1W	2135	0.73M/	2.4FT	16
ROSEAU DM	15.3N	61.4W	2131	0.64M/	2.1FT	18
PORTSMOUTH DM	15.6N	61.5W	2128	0.70M/	2.3FT	28
DART 41420	23.4N	67.3W	2125	0.14M/	0.5FT	26
LE ROBERT MARTINIQU	14.7N	60.9W	2125	1.34M/	4.4FT	28
LE PRECHEUR MARTINI	14.8N	61.2W	2126	0.66M/	2.2FT	26
DESHAIES GUADELOUPE	16.3N	61.8W	2128	0.73M/	2.4FT	22
PORT ST CHARLES BB	13.3N	59.6W	2125	1.61M/	5.3FT	28
DART 44402	39.3N	70.7W	2127	0.10M/	0.3FT	24
SAINT PIERRE MIQUEL	46.5N	56.1W	2119	1.02M/	3.4FT	20
PARHAM AT	17.1N	61.8W	2115	1.31M/	4.3FT	26
DESIKRADE GUADELOUPE	16.3N	61.1W	2106	1.21M/	4.0FT	20
DART 41425	28.7N	65.7W	2110	0.25M/	0.8FT	16
DART 41421	23.4N	63.8W	2106	0.14M/	0.5FT	20
BERMUDA UK	32.4N	64.7W	2105	2.30M/	7.6FT	20
SALERNO IT	40.7N	14.8E	1906	0.07M/	0.2FT	24
SETE FR	43.4N	3.7E	1901	0.11M/	0.4FT	28
MALIN HEAD IE	55.4N	7.3W	1854	0.71M/	2.3FT	18
FOS-SUR-MER FR	43.4N	4.9E	1849	0.11M/	0.3FT	20
PORT-VENDRES FR	43.0N	3.1E	1848	0.12M/	0.4FT	22
GENOVA IT	44.4N	8.9E	1837	0.15M/	0.5FT	26
NOUADHIBOU MR	20.8N	17.0W	1835	1.22M/	4.0FT	22
IMPERIA IT	43.9N	8.0E	1820	0.13M/	0.4FT	24

MONACO MC	43.7N	7.4E	1820	0.11M/	0.4FT	28
NICE FR	43.7N	7.3E	1823	0.13M/	0.4FT	18
CARLOFORTE IT	39.1N	8.3E	1816	0.14M/	0.4FT	14
LA FIGUEIRETTE	43.5N	6.9E	1812	0.12M/	0.4FT	18
PORT FERREOL FR	43.4N	6.7E	1811	0.12M/	0.4FT	24
AJACCIO FR	41.9N	8.8E	1814	0.10M/	0.3FT	26
PRAIA CV	14.9N	23.5W	1801	0.78M/	2.6FT	22
LHERBAUDIERE FR	47.0N	2.3W	1801	0.82M/	2.7FT	26
BARCELONA ES	41.3N	2.2E	1754	0.11M/	0.4FT	16
LES SABLES DOLONNE	46.5N	1.8W	1752	0.69M/	2.3FT	22
PALMEIRA CAPE VERDE	16.8N	23.0W	1738	1.07M/	3.5FT	26
CONCARMEAU FR	47.9N	3.9W	1732	0.87M/	2.9FT	22
VALENCIA ES	39.4N	0.3W	1728	0.19M/	0.6FT	18
LE CONQUET FR	48.4N	4.8W	1730	0.93M/	3.0FT	28
MIMIZAN FR	44.2N	1.3W	1702	0.69M/	2.3FT	24
BOUCAU BAYONNE FR	43.5N	1.5W	1645	0.73M/	2.4FT	26
CARTAGENA ES	37.6N	1.0W	1630	0.40M/	1.3FT	28
SAID MA	35.1N	2.3W	1627	0.74M/	2.4FT	28
PONTA DELGADA PT	37.7N	25.7W	1604	3.82M/12.5FT		22
FERROL ES	43.5N	8.3W	1600	1.46M/	4.8FT	16
ELHIERRO ES	27.8N	17.9W	1554	1.78M/	5.9FT	22
FUERTEVENTURA ES	28.5N	13.9W	1551	2.39M/	7.9FT	28
LAGOMERA ES	28.1N	17.1W	1545	1.89M/	6.2FT	16
LA PALMA ES	28.7N	17.8W	1543	2.99M/	9.8FT	18
TENERIFE ES	28.5N	16.2W	1540	3.00M/	9.8FT	20
ARRECIFE ES	29.0N	13.5W	1529	2.72M/	8.9FT	24
LASPALMAS ES	28.1N	15.4W	1532	3.80M/12.5FT		18
ALGECIRAS ES	36.2N	5.4W	1534	1.27M/	4.2FT	26
CADIZ ES	36.5N	6.3W	1528	8.34M/27.4FT		20
HUELVA ES	37.1N	6.8W	1526	11.04M/36.2FT		22
ALBUFEIRA PT	37.1N	8.3W	1505	15.43M/50.6FT		16
PORTO SANTO PT	33.1N	16.3W	1503	10.23M/33.6FT		14

TEST... NEXT UPDATE AND ADDITIONAL INFORMATION ...TEST

-
- * THIS IS A TEST MESSAGE. THE NEXT MESSAGE WILL BE ISSUED IN ONE HOUR... OR SOONER IF THE SITUATION WARRANTS.
 - * THIS IS A TEST MESSAGE. AUTHORITATIVE INFORMATION ABOUT THE EARTHQUAKE FROM THE U.S. GEOLOGICAL SURVEY CAN BE FOUND ON THE INTERNET AT EARTHQUAKE.USGS.GOV/EARTHQUAKES -ALL IN LOWERCASE LETTERS-.
 - * THIS IS A TEST MESSAGE. FURTHER INFORMATION ABOUT THIS EVENT MAY BE FOUND AT WWW.TSUNAMI.GOV.
 - * THIS IS A TEST MESSAGE. COASTAL REGIONS OF THE US GULF COAST... US EAST COAST... AND THE MARITIME PROVINCES OF CANADA SHOULD REFER TO U.S. NATIONAL TSUNAMI WARNING CENTER MESSAGES THAT CAN BE FOUND AT WWW.TSUNAMI.GOV.

THIS IS A TEST MESSAGE. DO NOT TAKE ACTION BASED ON THIS TEST MESSAGE.

\$\$

NNNN

PTWC Message #16

ZCZC
WECA41 PHEB 200200
TSUCAX

TEST...TSUNAMI MESSAGE NUMBER 16...TEST
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
0200 UTC FRI MAR 20 2020

...THIS MESSAGE IS FOR TEST PURPOSES ONLY...
...TEST TSUNAMI THREAT MESSAGE TEST...

**** NOTICE **** NOTICE **** NOTICE **** NOTICE **** NOTICE ****

THIS IS A TEST MESSAGE. THIS MESSAGE IS ISSUED FOR INFORMATION
ONLY IN SUPPORT OF THE UNESCO/IOC TSUNAMI AND OTHER COASTAL
HAZARDS WARNING SYSTEM FOR THE CARIBBEAN AND ADJACENT REGIONS
AND IS MEANT FOR NATIONAL AUTHORITIES IN EACH COUNTRY OF THAT
SYSTEM.

THIS IS A TEST MESSAGE. NATIONAL AUTHORITIES WILL DETERMINE THE
APPROPRIATE LEVEL OF ALERT FOR EACH COUNTRY AND MAY ISSUE
ADDITIONAL OR MORE REFINED INFORMATION.

**** NOTICE **** NOTICE **** NOTICE **** NOTICE **** NOTICE ****

TEST... PRELIMINARY EARTHQUAKE PARAMETERS ...TEST

* MAGNITUDE	8.5
* ORIGIN TIME	1400 UTC MAR 19 2020
* COORDINATES	36.0 NORTH 10.8 WEST
* DEPTH	5 KM / 3 MILES
* LOCATION	AZORES-CAPE ST. VINCENT RIDGE

TEST... EVALUATION ...TEST

* THIS IS A TEST MESSAGE. AN EARTHQUAKE WITH A PRELIMINARY
MAGNITUDE OF 8.5 OCCURRED NEAR THE AZORES-CAPE SAINT VINCENT
RIDGE AT 1400 UTC ON THURSDAY MARCH 19 2020.

* THIS IS A TEST MESSAGE. TSUNAMI WAVES HAVE BEEN OBSERVED.

* THIS IS A TEST MESSAGE. BASED ON ALL AVAILABLE DATA...
HAZARDOUS TSUNAMI WAVES ARE FORECAST FOR SOME COASTS.

TEST... TSUNAMI THREAT FORECAST ...TEST

* THIS IS A TEST MESSAGE. TSUNAMI WAVES REACHING MORE THAN 3
METERS ABOVE THE TIDE LEVEL ARE POSSIBLE ALONG SOME COASTS
OF

BAHAMAS.

- * THIS IS A TEST MESSAGE. TSUNAMI WAVES REACHING 1 TO 3 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE ALONG SOME COASTS OF

BRAZIL... CUBA... DOMINICAN REPUBLIC... FRENCH GUYANE...
GUYANA... HAITI... SURINAME... VENEZUELA... ANGUILLA...
ANTIGUA AND BARBUDA... BARBADOS... BERMUDA... DOMINICA...
GRENADA... GUADELOUPE... MARTINIQUE... PUERTO RICO AND
VIRGIN ISLANDS... SAINT BARTHELEMY... SAINT LUCIA... SAINT
VINCENT AND THE GRENADINES... TRINIDAD AND TOBAGO... AND
TURKS AND CAICOS ISLANDS.

- * THIS IS A TEST MESSAGE. TSUNAMI WAVES REACHING 0.3 TO 1 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE FOR SOME COASTS OF

COLOMBIA... ARUBA... BONAIRE... CURACAO... JAMAICA...
MONTSERRAT... SABA AND SAINT EUSTATIUS... SAINT KITTS AND
NEVIS... SINT MAARTEN... AND SAINT MARTIN.

- * THIS IS A TEST MESSAGE. ACTUAL AMPLITUDES AT THE COAST MAY VARY FROM FORECAST AMPLITUDES DUE TO UNCERTAINTIES IN THE FORECAST AND LOCAL FEATURES. IN PARTICULAR MAXIMUM TSUNAMI AMPLITUDES ON ATOLLS OR SMALL ISLANDS AND AT LOCATIONS WITH FRINGING OR BARRIER REEFS WILL LIKELY BE MUCH SMALLER THAN THE FORECAST INDICATES.

- * THIS IS A TEST MESSAGE. FOR ALL OTHER AREAS COVERED BY THIS MESSAGE... THERE IS NO TSUNAMI THREAT ALTHOUGH SMALL SEA LEVEL CHANGES MAY OCCUR.

TEST... RECOMMENDED ACTIONS ...TEST

- * THIS IS A TEST MESSAGE. GOVERNMENT AGENCIES RESPONSIBLE FOR THREATENED COASTAL AREAS SHOULD TAKE ACTION TO INFORM AND INSTRUCT ANY COASTAL POPULATIONS AT RISK IN ACCORDANCE WITH THEIR OWN EVALUATION... PROCEDURES AND THE LEVEL OF THREAT.
- * THIS IS A TEST MESSAGE. PERSONS LOCATED IN THREATENED COASTAL AREAS SHOULD STAY ALERT FOR INFORMATION AND FOLLOW INSTRUCTIONS FROM NATIONAL AND LOCAL AUTHORITIES.

TEST... ESTIMATED TIMES OF ARRIVAL ...TEST

- * THIS IS A TEST MESSAGE. ESTIMATED TIMES OF ARRIVAL -ETA- OF THE INITIAL TSUNAMI WAVE FOR PLACES WITHIN THREATENED REGIONS ARE GIVEN BELOW. ACTUAL ARRIVAL TIMES MAY DIFFER AND THE INITIAL WAVE MAY NOT BE THE LARGEST. A TSUNAMI IS A SERIES OF WAVES AND THE TIME BETWEEN WAVES CAN BE FIVE MINUTES TO ONE HOUR.

LOCATION	REGION	COORDINATES	ETA (UTC)
PUNTO FIJO	VENEZUELA	11.7N 70.2W	0104 03/20
PORLAMAR	VENEZUELA	10.9N 63.8W	0157 03/20

SANTA CRZ D SUR	CUBA	20.7N	78.0W	0201	03/20
GOLFO VENEZUELA	VENEZUELA	11.4N	71.2W	0203	03/20
ILHA DE MARACA	BRAZIL	2.2N	50.5W	0210	03/20
NUEVA GERONA	CUBA	21.9N	82.8W	0339	03/20

TEST... POTENTIAL IMPACTS ...TEST

-
- * THIS IS A TEST MESSAGE. A TSUNAMI IS A SERIES OF WAVES. THE TIME BETWEEN WAVE CRESTS CAN VARY FROM 5 MINUTES TO AN HOUR. THE HAZARD MAY PERSIST FOR MANY HOURS OR LONGER AFTER THE INITIAL WAVE.
 - * THIS IS A TEST MESSAGE. IMPACTS CAN VARY SIGNIFICANTLY FROM ONE SECTION OF COAST TO THE NEXT DUE TO LOCAL BATHYMETRY AND THE SHAPE AND ELEVATION OF THE SHORELINE.
 - * THIS IS A TEST MESSAGE. IMPACTS CAN ALSO VARY DEPENDING UPON THE STATE OF THE TIDE AT THE TIME OF THE MAXIMUM TSUNAMI WAVES.
 - * THIS IS A TEST MESSAGE. PERSONS CAUGHT IN THE WATER OF A TSUNAMI MAY DROWN... BE CRUSHED BY DEBRIS IN THE WATER... OR BE SWEEPED OUT TO SEA.

TEST... TSUNAMI OBSERVATIONS ...TEST

-
- * THIS IS A TEST MESSAGE. THE FOLLOWING ARE TSUNAMI WAVE OBSERVATIONS FROM COASTAL AND/OR DEEP-OCEAN SEA LEVEL GAUGES AT THE INDICATED LOCATIONS. THE MAXIMUM TSUNAMI HEIGHT IS MEASURED WITH RESPECT TO THE NORMAL TIDE LEVEL.

GAUGE LOCATION	GAUGE COORDINATES		TIME OF MEASURE (UTC)	MAXIMUM TSUNAMI HEIGHT		WAVE PERIOD (MIN)
	LAT	LOH				
TRISTAN DA CUNHA UK	37.0S	12.3W	0146	0.27M/	0.9FT	16
WOODS HOLE MA	41.5N	70.7W	0140	0.83M/	2.7FT	14
ARRAIAL DO CABO BR	23.0S	42.0W	0127	0.16M/	0.5FT	18
KEY WEST FL	24.6N	81.8W	0122	0.10M/	0.3FT	26
NEW LONDON CT	41.4N	72.1W	0119	0.89M/	2.9FT	24
ISLA MUJERES MX	21.3N	86.7W	0109	0.06M/	0.2FT	14
BOCAS DEL TORO PA	9.4N	82.3W	0105	0.19M/	0.6FT	24
VACA KEY FL	24.7N	81.1W	0059	0.15M/	0.5FT	28
CEIBA CABOTAGE HN	15.8N	86.8W	0055	0.05M/	0.2FT	22
LIMON CR	10.0N	83.0W	0051	0.28M/	0.9FT	14
SIAN KAN MX	19.3N	87.4W	0040	0.07M/	0.2FT	20
PUERTO MORELOS MX	20.9N	86.9W	0032	0.07M/	0.2FT	20
PUERTO MORELOS MX	20.9N	86.9W	0034	0.07M/	0.2FT	24
SAPZURRO CO	8.7N	77.4W	0026	0.18M/	0.6FT	24
EL PORVENIR PA	9.6N	78.9W	0020	0.21M/	0.7FT	16
SAN ANDRES CO	12.6N	81.7W	0021	0.20M/	0.7FT	22
NEWPORT RI	41.5N	71.3W	0003	0.82M/	2.7FT	22
ISLA NAVAL CO	10.2N	75.8W	2351	0.17M/	0.6FT	22
PORT ROYAL JM	17.9N	76.8W	2353	0.46M/	1.5FT	26
SANTA MARTA CO	11.2N	74.2W	2334	0.26M/	0.9FT	16
SALVADOR BR	13.0S	38.5W	2331	0.33M/	1.1FT	22

PORT OF SPAIN TT	10.6N	61.5W	2314	1.01M/	3.3FT	26
NANTUCKET ISLAND MA	41.3N	70.1W	2305	0.81M/	2.7FT	18
SAINT HELENA UK	15.9S	5.7W	2307	0.37M/	1.2FT	14
SAINT HELENA RUPERT	15.9S	5.7W	2307	0.37M/	1.2FT	26
TORTOLA VI UK	18.4N	64.6W	2251	0.70M/	2.3FT	24
HATTERAS NC	35.2N	75.7W	2247	1.10M/	3.6FT	16
ORANGESTAD AW	12.5N	70.0W	2244	0.45M/	1.5FT	28
BULLEN BAY CURACAO	12.2N	69.0W	2245	0.52M/	1.7FT	16
BARAHONA DO	18.2N	71.1W	2237	0.34M/	1.1FT	16
ILE ROYAL GUIANA FR	5.3N	52.6W	2229	1.35M/	4.4FT	28
CAP HAITIEN HT	19.8N	72.2W	2217	0.93M/	3.1FT	16
PRICKLEY BAY GD	12.0N	61.8W	2216	0.59M/	1.9FT	26
DART 42407	15.3N	68.2W	2208	0.04M/	0.1FT	24
MAGUEYES ISLAND PR	18.0N	67.0W	2213	0.56M/	1.8FT	28
PUERTO PLATA DO	19.8N	70.7W	2200	0.97M/	3.2FT	16
GRAND TURK ISLAND T	21.4N	71.1W	2205	1.45M/	4.8FT	24
LAMESHURBAYSTJOHNVI	18.3N	64.7W	2205	0.83M/	2.7FT	16
BLOWING POINT AI	18.2N	63.1W	2157	0.93M/	3.1FT	26
PUNTA CANA DO	18.5N	68.4W	2159	0.85M/	2.8FT	24
MONA ISLAND PR	18.1N	67.9W	2200	0.69M/	2.3FT	24
SAINT MARTIN FR	18.1N	63.1W	2158	0.93M/	3.1FT	14
ISABELII VIEQUES PR	18.2N	65.4W	2201	0.70M/	2.3FT	16
GANTERS BAY ST LUCI	14.0N	61.0W	2155	0.64M/	2.1FT	20
MAYAGUEZ PR	18.2N	67.2W	2151	1.21M/	4.0FT	20
BARBUDA AG	17.6N	61.8W	2146	1.04M/	3.4FT	18
ESPERANZA VIEQUES P	18.1N	65.5W	2144	0.68M/	2.2FT	28
CALLIAQUA VC	13.1N	61.2W	2146	0.56M/	1.8FT	22
YABUCOA PR	18.1N	65.8W	2139	0.70M/	2.3FT	28
DART 41424	33.0N	72.7W	2141	0.10M/	0.3FT	24
ARECIBO PR	18.5N	66.7W	2139	1.57M/	5.1FT	14
LIMETREE VI	17.7N	64.8W	2134	0.62M/	2.0FT	28
BASSETERRE KN	17.3N	62.7W	2141	0.84M/	2.8FT	24
ST CROIX VI	17.7N	64.7W	2138	0.73M/	2.4FT	28
SAN JUAN PR	18.5N	66.1W	2136	1.28M/	4.2FT	28
FORT DE FRANCE MQ	14.6N	61.1W	2135	0.73M/	2.4FT	16
ROSEAU DM	15.3N	61.4W	2131	0.64M/	2.1FT	18
PORTSMOUTH DM	15.6N	61.5W	2128	0.70M/	2.3FT	28
DART 41420	23.4N	67.3W	2125	0.14M/	0.5FT	26
LE ROBERT MARTINIQUE	14.7N	60.9W	2125	1.34M/	4.4FT	28
LE PRECHEUR MARTINI	14.8N	61.2W	2126	0.66M/	2.2FT	26
DESHAIES GUADELOUPE	16.3N	61.8W	2128	0.73M/	2.4FT	22
PORT ST CHARLES BB	13.3N	59.6W	2125	1.61M/	5.3FT	28
DART 44402	39.3N	70.7W	2127	0.10M/	0.3FT	24
SAINT PIERRE MIQUEL	46.5N	56.1W	2119	1.02M/	3.4FT	20
PARHAM AT	17.1N	61.8W	2115	1.31M/	4.3FT	26
DESIRADE GUADELOUPE	16.3N	61.1W	2106	1.21M/	4.0FT	20
DART 41425	28.7N	65.7W	2110	0.25M/	0.8FT	16
DART 41421	23.4N	63.8W	2106	0.14M/	0.5FT	20
BERMUDA UK	32.4N	64.7W	2105	2.30M/	7.6FT	20
SALERNO IT	40.7N	14.8E	1906	0.07M/	0.2FT	24
SETE FR	43.4N	3.7E	1901	0.11M/	0.4FT	28
MALIN HEAD IE	55.4N	7.3W	1854	0.71M/	2.3FT	18
FOS-SUR-MER FR	43.4N	4.9E	1849	0.11M/	0.3FT	20
PORT-VENDRES FR	43.0N	3.1E	1848	0.12M/	0.4FT	22
GENOVA IT	44.4N	8.9E	1837	0.15M/	0.5FT	26
NOUADHIBOU MR	20.8N	17.0W	1835	1.22M/	4.0FT	22
IMPERIA IT	43.9N	8.0E	1820	0.13M/	0.4FT	24
MONACO MC	43.7N	7.4E	1820	0.11M/	0.4FT	28

NICE FR	43.7N	7.3E	1823	0.13M/	0.4FT	18
CARLOFORTE IT	39.1N	8.3E	1816	0.14M/	0.4FT	14
LA FIGUEIRETTE	43.5N	6.9E	1812	0.12M/	0.4FT	18
PORT FERREOL FR	43.4N	6.7E	1811	0.12M/	0.4FT	24
AJACCIO FR	41.9N	8.8E	1814	0.10M/	0.3FT	26
PRAIA CV	14.9N	23.5W	1801	0.78M/	2.6FT	22
LHERBAUDIERE FR	47.0N	2.3W	1801	0.82M/	2.7FT	26
BARCELONA ES	41.3N	2.2E	1754	0.11M/	0.4FT	16
LES SABLES DOLONNE	46.5N	1.8W	1752	0.69M/	2.3FT	22
PALMEIRA CAPE VERDE	16.8N	23.0W	1738	1.07M/	3.5FT	26
CONCARMEAU FR	47.9N	3.9W	1732	0.87M/	2.9FT	22
VALENCIA ES	39.4N	0.3W	1728	0.19M/	0.6FT	18
LE CONQUET FR	48.4N	4.8W	1730	0.93M/	3.0FT	28
MIMIZAN FR	44.2N	1.3W	1702	0.69M/	2.3FT	24
BOUCAU BAYONNE FR	43.5N	1.5W	1645	0.73M/	2.4FT	26
CARTAGENA ES	37.6N	1.0W	1630	0.40M/	1.3FT	28
SAID MA	35.1N	2.3W	1627	0.74M/	2.4FT	28
PONTA DELGADA PT	37.7N	25.7W	1604	3.82M/	12.5FT	22
FERROL ES	43.5N	8.3W	1600	1.46M/	4.8FT	16
ELHIERRO ES	27.8N	17.9W	1554	1.78M/	5.9FT	22
FUERTEVENTURA ES	28.5N	13.9W	1551	2.39M/	7.9FT	28
LAGOMERA ES	28.1N	17.1W	1545	1.89M/	6.2FT	16
LA PALMA ES	28.7N	17.8W	1543	2.99M/	9.8FT	18
TENERIFE ES	28.5N	16.2W	1540	3.00M/	9.8FT	20
ARRECIFE ES	29.0N	13.5W	1529	2.72M/	8.9FT	24
LASPALMAS ES	28.1N	15.4W	1532	3.80M/	12.5FT	18
ALGECIRAS ES	36.2N	5.4W	1534	1.27M/	4.2FT	26
CADIZ ES	36.5N	6.3W	1528	8.34M/	27.4FT	20
HUELVA ES	37.1N	6.8W	1526	11.04M/	36.2FT	22
ALBUFEIRA PT	37.1N	8.3W	1505	15.43M/	50.6FT	16
PORTO SANTO PT	33.1N	16.3W	1503	10.23M/	33.6FT	14

TEST... NEXT UPDATE AND ADDITIONAL INFORMATION ...TEST

-
- * THIS IS A TEST MESSAGE. THE NEXT MESSAGE WILL BE ISSUED IN ONE HOUR... OR SOONER IF THE SITUATION WARRANTS.
 - * THIS IS A TEST MESSAGE. AUTHORITATIVE INFORMATION ABOUT THE EARTHQUAKE FROM THE U.S. GEOLOGICAL SURVEY CAN BE FOUND ON THE INTERNET AT EARTHQUAKE.USGS.GOV/EARTHQUAKES -ALL IN LOWERCASE LETTERS-.
 - * THIS IS A TEST MESSAGE. FURTHER INFORMATION ABOUT THIS EVENT MAY BE FOUND AT WWW.TSUNAMI.GOV.
 - * THIS IS A TEST MESSAGE. COASTAL REGIONS OF THE US GULF COAST... US EAST COAST... AND THE MARITIME PROVINCES OF CANADA SHOULD REFER TO U.S. NATIONAL TSUNAMI WARNING CENTER MESSAGES THAT CAN BE FOUND AT WWW.TSUNAMI.GOV.

THIS IS A TEST MESSAGE. DO NOT TAKE ACTION BASED ON THIS TEST MESSAGE.

\$\$

NNNN

PTWC Message #17

ZCZC
WECA41 PHEB 200300
TSUCAX

TEST...TSUNAMI MESSAGE NUMBER 17...TEST
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
0300 UTC FRI MAR 20 2020

...THIS MESSAGE IS FOR TEST PURPOSES ONLY...
...TEST TSUNAMI THREAT MESSAGE TEST...

**** NOTICE **** NOTICE **** NOTICE **** NOTICE **** NOTICE ****

THIS IS A TEST MESSAGE. THIS MESSAGE IS ISSUED FOR INFORMATION
ONLY IN SUPPORT OF THE UNESCO/IOC TSUNAMI AND OTHER COASTAL
HAZARDS WARNING SYSTEM FOR THE CARIBBEAN AND ADJACENT REGIONS
AND IS MEANT FOR NATIONAL AUTHORITIES IN EACH COUNTRY OF THAT
SYSTEM.

THIS IS A TEST MESSAGE. NATIONAL AUTHORITIES WILL DETERMINE THE
APPROPRIATE LEVEL OF ALERT FOR EACH COUNTRY AND MAY ISSUE
ADDITIONAL OR MORE REFINED INFORMATION.

**** NOTICE **** NOTICE **** NOTICE **** NOTICE **** NOTICE ****

TEST... PRELIMINARY EARTHQUAKE PARAMETERS ...TEST

* MAGNITUDE	8.5
* ORIGIN TIME	1400 UTC MAR 19 2020
* COORDINATES	36.0 NORTH 10.8 WEST
* DEPTH	5 KM / 3 MILES
* LOCATION	AZORES-CAPE ST. VINCENT RIDGE

TEST... EVALUATION ...TEST

* THIS IS A TEST MESSAGE. AN EARTHQUAKE WITH A PRELIMINARY
MAGNITUDE OF 8.5 OCCURRED NEAR THE AZORES-CAPE SAINT VINCENT
RIDGE AT 1400 UTC ON THURSDAY MARCH 19 2020.

* THIS IS A TEST MESSAGE. TSUNAMI WAVES HAVE BEEN OBSERVED.

* THIS IS A TEST MESSAGE. BASED ON ALL AVAILABLE DATA...
HAZARDOUS TSUNAMI WAVES ARE FORECAST FOR SOME COASTS.

TEST... TSUNAMI THREAT FORECAST ...TEST

* THIS IS A TEST MESSAGE. TSUNAMI WAVES REACHING MORE THAN 3
METERS ABOVE THE TIDE LEVEL ARE POSSIBLE ALONG SOME COASTS

OF

BAHAMAS.

- * THIS IS A TEST MESSAGE. TSUNAMI WAVES REACHING 1 TO 3 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE ALONG SOME COASTS OF

BRAZIL... CUBA... DOMINICAN REPUBLIC... FRENCH GUYANE...
GUYANA... HAITI... SURINAME... VENEZUELA... ANGUILLA...
ANTIGUA AND BARBUDA... BARBADOS... BERMUDA... DOMINICA...
GRENADA... GUADELOUPE... MARTINIQUE... PUERTO RICO AND
VIRGIN ISLANDS... SAINT BARTHELEMY... SAINT LUCIA... SAINT
VINCENT AND THE GRENADINES... TRINIDAD AND TOBAGO... AND
TURKS AND CAICOS ISLANDS.

- * THIS IS A TEST MESSAGE. TSUNAMI WAVES REACHING 0.3 TO 1 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE FOR SOME COASTS OF

COLOMBIA... ARUBA... BONAIRE... CURACAO... JAMAICA...
MONTSERRAT... SABA AND SAINT EUSTATIUS... SAINT KITTS AND
NEVIS... SINT MAARTEN... AND SAINT MARTIN.

- * THIS IS A TEST MESSAGE. ACTUAL AMPLITUDES AT THE COAST MAY VARY FROM FORECAST AMPLITUDES DUE TO UNCERTAINTIES IN THE FORECAST AND LOCAL FEATURES. IN PARTICULAR MAXIMUM TSUNAMI AMPLITUDES ON ATOLLS OR SMALL ISLANDS AND AT LOCATIONS WITH FRINGING OR BARRIER REEFS WILL LIKELY BE MUCH SMALLER THAN THE FORECAST INDICATES.

- * THIS IS A TEST MESSAGE. FOR ALL OTHER AREAS COVERED BY THIS MESSAGE... THERE IS NO TSUNAMI THREAT ALTHOUGH SMALL SEA LEVEL CHANGES MAY OCCUR.

TEST... RECOMMENDED ACTIONS ...TEST

- * THIS IS A TEST MESSAGE. GOVERNMENT AGENCIES RESPONSIBLE FOR THREATENED COASTAL AREAS SHOULD TAKE ACTION TO INFORM AND INSTRUCT ANY COASTAL POPULATIONS AT RISK IN ACCORDANCE WITH THEIR OWN EVALUATION... PROCEDURES AND THE LEVEL OF THREAT.
- * THIS IS A TEST MESSAGE. PERSONS LOCATED IN THREATENED COASTAL AREAS SHOULD STAY ALERT FOR INFORMATION AND FOLLOW INSTRUCTIONS FROM NATIONAL AND LOCAL AUTHORITIES.

TEST... ESTIMATED TIMES OF ARRIVAL ...TEST

- * THIS IS A TEST MESSAGE. ESTIMATED TIMES OF ARRIVAL -ETA- OF THE INITIAL TSUNAMI WAVE FOR PLACES WITHIN THREATENED REGIONS ARE GIVEN BELOW. ACTUAL ARRIVAL TIMES MAY DIFFER AND THE INITIAL WAVE MAY NOT BE THE LARGEST. A TSUNAMI IS A SERIES OF WAVES AND THE TIME BETWEEN WAVES CAN BE FIVE MINUTES TO ONE HOUR.

LOCATION	REGION	COORDINATES	ETA(UTC)

SANTA CRZ D SUR	CUBA	20.7N	78.0W	0201	03/20
GOLFO VENEZUELA	VENEZUELA	11.4N	71.2W	0203	03/20
ILHA DE MARACA	BRAZIL	2.2N	50.5W	0210	03/20
NUEVA GERONA	CUBA	21.9N	82.8W	0339	03/20

TEST... POTENTIAL IMPACTS ...TEST

-
- * THIS IS A TEST MESSAGE. A TSUNAMI IS A SERIES OF WAVES. THE TIME BETWEEN WAVE CRESTS CAN VARY FROM 5 MINUTES TO AN HOUR. THE HAZARD MAY PERSIST FOR MANY HOURS OR LONGER AFTER THE INITIAL WAVE.
 - * THIS IS A TEST MESSAGE. IMPACTS CAN VARY SIGNIFICANTLY FROM ONE SECTION OF COAST TO THE NEXT DUE TO LOCAL BATHYMETRY AND THE SHAPE AND ELEVATION OF THE SHORELINE.
 - * THIS IS A TEST MESSAGE. IMPACTS CAN ALSO VARY DEPENDING UPON THE STATE OF THE TIDE AT THE TIME OF THE MAXIMUM TSUNAMI WAVES.
 - * THIS IS A TEST MESSAGE. PERSONS CAUGHT IN THE WATER OF A TSUNAMI MAY DROWN... BE CRUSHED BY DEBRIS IN THE WATER... OR BE SWEEPED OUT TO SEA.

TEST... TSUNAMI OBSERVATIONS ...TEST

-
- * THIS IS A TEST MESSAGE. THE FOLLOWING ARE TSUNAMI WAVE OBSERVATIONS FROM COASTAL AND/OR DEEP-OCEAN SEA LEVEL GAUGES AT THE INDICATED LOCATIONS. THE MAXIMUM TSUNAMI HEIGHT IS MEASURED WITH RESPECT TO THE NORMAL TIDE LEVEL.

GAUGE LOCATION	GAUGE COORDINATES		TIME OF MEASURE (UTC)	MAXIMUM TSUNAMI HEIGHT	WAVE PERIOD (MIN)
	LAT	LON			
GOUGH ISLAND UK	40.3S	9.9W	0230	0.23M/ 0.7FT	26
TRISTAN DA CUNHA UK	37.0S	12.3W	0146	0.27M/ 0.9FT	16
WOODS HOLE MA	41.5N	70.7W	0140	0.83M/ 2.7FT	14
ARRAIAL DO CABO BR	23.0S	42.0W	0127	0.16M/ 0.5FT	18
KEY WEST FL	24.6N	81.8W	0122	0.10M/ 0.3FT	26
NEW LONDON CT	41.4N	72.1W	0119	0.89M/ 2.9FT	24
ISLA MUJERES MX	21.3N	86.7W	0109	0.06M/ 0.2FT	14
BOCAS DEL TORO PA	9.4N	82.3W	0105	0.19M/ 0.6FT	24
VACA KEY FL	24.7N	81.1W	0059	0.15M/ 0.5FT	28
CEIBA CABOTAGE HN	15.8N	86.8W	0055	0.05M/ 0.2FT	22
LIMON CR	10.0N	83.0W	0051	0.28M/ 0.9FT	14
SIAN KAN MX	19.3N	87.4W	0040	0.07M/ 0.2FT	20
PUERTO MORELOS MX	20.9N	86.9W	0032	0.07M/ 0.2FT	20
PUERTO MORELOS MX	20.9N	86.9W	0034	0.07M/ 0.2FT	24
SAPZURRO CO	8.7N	77.4W	0026	0.18M/ 0.6FT	24
EL PORVENIR PA	9.6N	78.9W	0020	0.21M/ 0.7FT	16
SAN ANDRES CO	12.6N	81.7W	0021	0.20M/ 0.7FT	22
NEWPORT RI	41.5N	71.3W	0003	0.82M/ 2.7FT	22
ISLA NAVAL CO	10.2N	75.8W	2351	0.17M/ 0.6FT	22
PORT ROYAL JM	17.9N	76.8W	2353	0.46M/ 1.5FT	26
SANTA MARTA CO	11.2N	74.2W	2334	0.26M/ 0.9FT	16

SALVADOR BR	13.0S	38.5W	2331	0.33M/	1.1FT	22
PORT OF SPAIN TT	10.6N	61.5W	2314	1.01M/	3.3FT	26
NANTUCKET ISLAND MA	41.3N	70.1W	2305	0.81M/	2.7FT	18
SAINT HELENA UK	15.9S	5.7W	2307	0.37M/	1.2FT	14
SAINT HELENA RUPERT	15.9S	5.7W	2307	0.37M/	1.2FT	26
TORTOLA VI UK	18.4N	64.6W	2251	0.70M/	2.3FT	24
HATTERAS NC	35.2N	75.7W	2247	1.10M/	3.6FT	16
ORANGESTAD AW	12.5N	70.0W	2244	0.45M/	1.5FT	28
BULLEN BAY CURACAO	12.2N	69.0W	2245	0.52M/	1.7FT	16
BARAHONA DO	18.2N	71.1W	2237	0.34M/	1.1FT	16
ILE ROYAL GUIANA FR	5.3N	52.6W	2229	1.35M/	4.4FT	28
CAP HAITIEN HT	19.8N	72.2W	2217	0.93M/	3.1FT	16
PRICKLEY BAY GD	12.0N	61.8W	2216	0.59M/	1.9FT	26
DART 42407	15.3N	68.2W	2208	0.04M/	0.1FT	24
MAGUEYES ISLAND PR	18.0N	67.0W	2213	0.56M/	1.8FT	28
PUERTO PLATA DO	19.8N	70.7W	2200	0.97M/	3.2FT	16
GRAND TURK ISLAND T	21.4N	71.1W	2205	1.45M/	4.8FT	24
LAMESHURBAYSTJOHNVI	18.3N	64.7W	2205	0.83M/	2.7FT	16
BLOWING POINT AI	18.2N	63.1W	2157	0.93M/	3.1FT	26
PUNTA CANA DO	18.5N	68.4W	2159	0.85M/	2.8FT	24
MONA ISLAND PR	18.1N	67.9W	2200	0.69M/	2.3FT	24
SAINT MARTIN FR	18.1N	63.1W	2158	0.93M/	3.1FT	14
ISABELII VIEQUES PR	18.2N	65.4W	2201	0.70M/	2.3FT	16
GANTERS BAY ST LUCI	14.0N	61.0W	2155	0.64M/	2.1FT	20
MAYAGUEZ PR	18.2N	67.2W	2151	1.21M/	4.0FT	20
BARBUDA AG	17.6N	61.8W	2146	1.04M/	3.4FT	18
ESPERANZA VIEQUES P	18.1N	65.5W	2144	0.68M/	2.2FT	28
CALLIAQUA VC	13.1N	61.2W	2146	0.56M/	1.8FT	22
YABUCOA PR	18.1N	65.8W	2139	0.70M/	2.3FT	28
DART 41424	33.0N	72.7W	2141	0.10M/	0.3FT	24
ARECIBO PR	18.5N	66.7W	2139	1.57M/	5.1FT	14
LIMETREE VI	17.7N	64.8W	2134	0.62M/	2.0FT	28
BASSETERRE KN	17.3N	62.7W	2141	0.84M/	2.8FT	24
ST CROIX VI	17.7N	64.7W	2138	0.73M/	2.4FT	28
SAN JUAN PR	18.5N	66.1W	2136	1.28M/	4.2FT	28
FORT DE FRANCE MQ	14.6N	61.1W	2135	0.73M/	2.4FT	16
ROSEAU DM	15.3N	61.4W	2131	0.64M/	2.1FT	18
PORTSMOUTH DM	15.6N	61.5W	2128	0.70M/	2.3FT	28
DART 41420	23.4N	67.3W	2125	0.14M/	0.5FT	26
LE ROBERT MARTINIQU	14.7N	60.9W	2125	1.34M/	4.4FT	28
LE PRECHEUR MARTINI	14.8N	61.2W	2126	0.66M/	2.2FT	26
DESHAIES GUADELOUPE	16.3N	61.8W	2128	0.73M/	2.4FT	22
PORT ST CHARLES BB	13.3N	59.6W	2125	1.61M/	5.3FT	28
DART 44402	39.3N	70.7W	2127	0.10M/	0.3FT	24
SAINT PIERRE MIQUEL	46.5N	56.1W	2119	1.02M/	3.4FT	20
PARHAM AT	17.1N	61.8W	2115	1.31M/	4.3FT	26
DESIKRADE GUADELOUPE	16.3N	61.1W	2106	1.21M/	4.0FT	20
DART 41425	28.7N	65.7W	2110	0.25M/	0.8FT	16
DART 41421	23.4N	63.8W	2106	0.14M/	0.5FT	20
BERMUDA UK	32.4N	64.7W	2105	2.30M/	7.6FT	20
SALERNO IT	40.7N	14.8E	1906	0.07M/	0.2FT	24
SETE FR	43.4N	3.7E	1901	0.11M/	0.4FT	28
MALIN HEAD IE	55.4N	7.3W	1854	0.71M/	2.3FT	18
FOS-SUR-MER FR	43.4N	4.9E	1849	0.11M/	0.3FT	20
PORT-VENDRES FR	43.0N	3.1E	1848	0.12M/	0.4FT	22
GENOVA IT	44.4N	8.9E	1837	0.15M/	0.5FT	26
NOUADHIBOU MR	20.8N	17.0W	1835	1.22M/	4.0FT	22
IMPERIA IT	43.9N	8.0E	1820	0.13M/	0.4FT	24

MONACO MC	43.7N	7.4E	1820	0.11M/	0.4FT	28
NICE FR	43.7N	7.3E	1823	0.13M/	0.4FT	18
CARLOFORTE IT	39.1N	8.3E	1816	0.14M/	0.4FT	14
LA FIGUEIRETTE	43.5N	6.9E	1812	0.12M/	0.4FT	18
PORT FERREOL FR	43.4N	6.7E	1811	0.12M/	0.4FT	24
AJACCIO FR	41.9N	8.8E	1814	0.10M/	0.3FT	26
PRAIA CV	14.9N	23.5W	1801	0.78M/	2.6FT	22
LHERBAUDIERE FR	47.0N	2.3W	1801	0.82M/	2.7FT	26
BARCELONA ES	41.3N	2.2E	1754	0.11M/	0.4FT	16
LES SABLES DOLONNE	46.5N	1.8W	1752	0.69M/	2.3FT	22
PALMEIRA CAPE VERDE	16.8N	23.0W	1738	1.07M/	3.5FT	26
CONCARMEAU FR	47.9N	3.9W	1732	0.87M/	2.9FT	22
VALENCIA ES	39.4N	0.3W	1728	0.19M/	0.6FT	18
LE CONQUET FR	48.4N	4.8W	1730	0.93M/	3.0FT	28
MIMIZAN FR	44.2N	1.3W	1702	0.69M/	2.3FT	24
BOUCAU BAYONNE FR	43.5N	1.5W	1645	0.73M/	2.4FT	26
CARTAGENA ES	37.6N	1.0W	1630	0.40M/	1.3FT	28
SAID MA	35.1N	2.3W	1627	0.74M/	2.4FT	28
PONTA DELGADA PT	37.7N	25.7W	1604	3.82M/12.5FT		22
FERROL ES	43.5N	8.3W	1600	1.46M/	4.8FT	16
ELHIERRO ES	27.8N	17.9W	1554	1.78M/	5.9FT	22
FUERTEVENTURA ES	28.5N	13.9W	1551	2.39M/	7.9FT	28
LAGOMERA ES	28.1N	17.1W	1545	1.89M/	6.2FT	16
LA PALMA ES	28.7N	17.8W	1543	2.99M/	9.8FT	18
TENERIFE ES	28.5N	16.2W	1540	3.00M/	9.8FT	20
ARRECIFE ES	29.0N	13.5W	1529	2.72M/	8.9FT	24
LASPALMAS ES	28.1N	15.4W	1532	3.80M/12.5FT		18
ALGECIRAS ES	36.2N	5.4W	1534	1.27M/	4.2FT	26
CADIZ ES	36.5N	6.3W	1528	8.34M/27.4FT		20
HUELVA ES	37.1N	6.8W	1526	11.04M/36.2FT		22
ALBUFEIRA PT	37.1N	8.3W	1505	15.43M/50.6FT		16
PORTO SANTO PT	33.1N	16.3W	1503	10.23M/33.6FT		14

TEST... NEXT UPDATE AND ADDITIONAL INFORMATION ...TEST

-
- * THIS IS A TEST MESSAGE. THE NEXT MESSAGE WILL BE ISSUED IN ONE HOUR... OR SOONER IF THE SITUATION WARRANTS.
 - * THIS IS A TEST MESSAGE. AUTHORITATIVE INFORMATION ABOUT THE EARTHQUAKE FROM THE U.S. GEOLOGICAL SURVEY CAN BE FOUND ON THE INTERNET AT EARTHQUAKE.USGS.GOV/EARTHQUAKES -ALL IN LOWERCASE LETTERS-.
 - * THIS IS A TEST MESSAGE. FURTHER INFORMATION ABOUT THIS EVENT MAY BE FOUND AT WWW.TSUNAMI.GOV.
 - * THIS IS A TEST MESSAGE. COASTAL REGIONS OF THE US GULF COAST... US EAST COAST... AND THE MARITIME PROVINCES OF CANADA SHOULD REFER TO U.S. NATIONAL TSUNAMI WARNING CENTER MESSAGES THAT CAN BE FOUND AT WWW.TSUNAMI.GOV.

THIS IS A TEST MESSAGE. DO NOT TAKE ACTION BASED ON THIS TEST MESSAGE.

\$\$

NNNN

PTWC Message #18

ZCZC
WECA41 PHEB 200400
TSUCAX

TEST...TSUNAMI MESSAGE NUMBER 18...TEST
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
0400 UTC FRI MAR 20 2020

...THIS MESSAGE IS FOR TEST PURPOSES ONLY...
...TEST TSUNAMI THREAT MESSAGE TEST...

**** NOTICE **** NOTICE **** NOTICE **** NOTICE **** NOTICE ****

THIS IS A TEST MESSAGE. THIS MESSAGE IS ISSUED FOR INFORMATION ONLY IN SUPPORT OF THE UNESCO/IOC TSUNAMI AND OTHER COASTAL HAZARDS WARNING SYSTEM FOR THE CARIBBEAN AND ADJACENT REGIONS AND IS MEANT FOR NATIONAL AUTHORITIES IN EACH COUNTRY OF THAT SYSTEM.

THIS IS A TEST MESSAGE. NATIONAL AUTHORITIES WILL DETERMINE THE APPROPRIATE LEVEL OF ALERT FOR EACH COUNTRY AND MAY ISSUE ADDITIONAL OR MORE REFINED INFORMATION.

**** NOTICE **** NOTICE **** NOTICE **** NOTICE **** NOTICE ****

TEST... PRELIMINARY EARTHQUAKE PARAMETERS ...TEST

* MAGNITUDE	8.5
* ORIGIN TIME	1400 UTC MAR 19 2020
* COORDINATES	36.0 NORTH 10.8 WEST
* DEPTH	5 KM / 3 MILES
* LOCATION	AZORES-CAPE ST. VINCENT RIDGE

TEST... EVALUATION ...TEST

* THIS IS A TEST MESSAGE. AN EARTHQUAKE WITH A PRELIMINARY MAGNITUDE OF 8.5 OCCURRED NEAR THE AZORES-CAPE SAINT VINCENT RIDGE AT 1400 UTC ON THURSDAY MARCH 19 2020.

* THIS IS A TEST MESSAGE. TSUNAMI WAVES HAVE BEEN OBSERVED.

* THIS IS A TEST MESSAGE. BASED ON ALL AVAILABLE DATA...
HAZARDOUS TSUNAMI WAVES ARE FORECAST FOR SOME COASTS.

TEST... TSUNAMI THREAT FORECAST ...TEST

* THIS IS A TEST MESSAGE. TSUNAMI WAVES REACHING MORE THAN 3 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE ALONG SOME COASTS OF

BAHAMAS.

- * THIS IS A TEST MESSAGE. TSUNAMI WAVES REACHING 1 TO 3 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE ALONG SOME COASTS OF

BRAZIL... CUBA... DOMINICAN REPUBLIC... FRENCH GUYANE...
GUYANA... HAITI... SURINAME... VENEZUELA... ANGUILLA...
ANTIGUA AND BARBUDA... BARBADOS... BERMUDA... DOMINICA...
GRENADA... GUADELOUPE... MARTINIQUE... PUERTO RICO AND
VIRGIN ISLANDS... SAINT BARTHELEMY... SAINT LUCIA... SAINT
VINCENT AND THE GRENADINES... TRINIDAD AND TOBAGO... AND
TURKS AND CAICOS ISLANDS.

- * THIS IS A TEST MESSAGE. TSUNAMI WAVES REACHING 0.3 TO 1 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE FOR SOME COASTS OF

COLOMBIA... ARUBA... BONAIRE... CURACAO... JAMAICA...
MONTSERRAT... SABA AND SAINT EUSTATIUS... SAINT KITTS AND
NEVIS... SINT MAARTEN... AND SAINT MARTIN.

- * THIS IS A TEST MESSAGE. ACTUAL AMPLITUDES AT THE COAST MAY VARY FROM FORECAST AMPLITUDES DUE TO UNCERTAINTIES IN THE FORECAST AND LOCAL FEATURES. IN PARTICULAR MAXIMUM TSUNAMI AMPLITUDES ON ATOLLS OR SMALL ISLANDS AND AT LOCATIONS WITH FRINGING OR BARRIER REEFS WILL LIKELY BE MUCH SMALLER THAN THE FORECAST INDICATES.

- * THIS IS A TEST MESSAGE. FOR ALL OTHER AREAS COVERED BY THIS MESSAGE... THERE IS NO TSUNAMI THREAT ALTHOUGH SMALL SEA LEVEL CHANGES MAY OCCUR.

TEST... RECOMMENDED ACTIONS ...TEST

- * THIS IS A TEST MESSAGE. GOVERNMENT AGENCIES RESPONSIBLE FOR THREATENED COASTAL AREAS SHOULD TAKE ACTION TO INFORM AND INSTRUCT ANY COASTAL POPULATIONS AT RISK IN ACCORDANCE WITH THEIR OWN EVALUATION... PROCEDURES AND THE LEVEL OF THREAT.
- * THIS IS A TEST MESSAGE. PERSONS LOCATED IN THREATENED COASTAL AREAS SHOULD STAY ALERT FOR INFORMATION AND FOLLOW INSTRUCTIONS FROM NATIONAL AND LOCAL AUTHORITIES.

TEST... ESTIMATED TIMES OF ARRIVAL ...TEST

- * THIS IS A TEST MESSAGE. ESTIMATED TIMES OF ARRIVAL -ETA- OF THE INITIAL TSUNAMI WAVE FOR PLACES WITHIN THREATENED REGIONS ARE GIVEN BELOW. ACTUAL ARRIVAL TIMES MAY DIFFER AND THE INITIAL WAVE MAY NOT BE THE LARGEST. A TSUNAMI IS A SERIES OF WAVES AND THE TIME BETWEEN WAVES CAN BE FIVE MINUTES TO ONE HOUR.

LOCATION	REGION	COORDINATES	ETA (UTC)
NUEVA GERONA	CUBA	21.9N 82.8W	0339 03/20

TEST... POTENTIAL IMPACTS ...TEST

- * THIS IS A TEST MESSAGE. A TSUNAMI IS A SERIES OF WAVES. THE TIME BETWEEN WAVE CRESTS CAN VARY FROM 5 MINUTES TO AN HOUR. THE HAZARD MAY PERSIST FOR MANY HOURS OR LONGER AFTER THE INITIAL WAVE.
- * THIS IS A TEST MESSAGE. IMPACTS CAN VARY SIGNIFICANTLY FROM ONE SECTION OF COAST TO THE NEXT DUE TO LOCAL BATHYMETRY AND THE SHAPE AND ELEVATION OF THE SHORELINE.
- * THIS IS A TEST MESSAGE. IMPACTS CAN ALSO VARY DEPENDING UPON THE STATE OF THE TIDE AT THE TIME OF THE MAXIMUM TSUNAMI WAVES.
- * THIS IS A TEST MESSAGE. PERSONS CAUGHT IN THE WATER OF A TSUNAMI MAY DROWN... BE CRUSHED BY DEBRIS IN THE WATER... OR BE SWEEPED OUT TO SEA.

TEST... TSUNAMI OBSERVATIONS ...TEST

- * THIS IS A TEST MESSAGE. THE FOLLOWING ARE TSUNAMI WAVE OBSERVATIONS FROM COASTAL AND/OR DEEP-OCEAN SEA LEVEL GAUGES AT THE INDICATED LOCATIONS. THE MAXIMUM TSUNAMI HEIGHT IS MEASURED WITH RESPECT TO THE NORMAL TIDE LEVEL.

GAUGE LOCATION	GAUGE COORDINATES		TIME OF MEASURE (UTC)	MAXIMUM TSUNAMI HEIGHT	WAVE PERIOD (MIN)
	LAT	LON			
GOUGH ISLAND UK	40.3S	9.9W	0230	0.23M/ 0.7FT	26
TRISTAN DA CUNHA UK	37.0S	12.3W	0146	0.27M/ 0.9FT	16
WOODS HOLE MA	41.5N	70.7W	0140	0.83M/ 2.7FT	14
ARRAIAL DO CABO BR	23.0S	42.0W	0127	0.16M/ 0.5FT	18
KEY WEST FL	24.6N	81.8W	0122	0.10M/ 0.3FT	26
NEW LONDON CT	41.4N	72.1W	0119	0.89M/ 2.9FT	24
ISLA MUJERES MX	21.3N	86.7W	0109	0.06M/ 0.2FT	14
BOCAS DEL TORO PA	9.4N	82.3W	0105	0.19M/ 0.6FT	24
VACA KEY FL	24.7N	81.1W	0059	0.15M/ 0.5FT	28
CEIBA CABOTAGE HN	15.8N	86.8W	0055	0.05M/ 0.2FT	22
LIMON CR	10.0N	83.0W	0051	0.28M/ 0.9FT	14
SIAN KAN MX	19.3N	87.4W	0040	0.07M/ 0.2FT	20
PUERTO MORELOS MX	20.9N	86.9W	0032	0.07M/ 0.2FT	20
PUERTO MORELOS MX	20.9N	86.9W	0034	0.07M/ 0.2FT	24
SAPZURRO CO	8.7N	77.4W	0026	0.18M/ 0.6FT	24
EL PORVENIR PA	9.6N	78.9W	0020	0.21M/ 0.7FT	16
SAN ANDRES CO	12.6N	81.7W	0021	0.20M/ 0.7FT	22
NEWPORT RI	41.5N	71.3W	0003	0.82M/ 2.7FT	22
ISLA NAVAL CO	10.2N	75.8W	2351	0.17M/ 0.6FT	22

PORT ROYAL JM	17.9N	76.8W	2353	0.46M/	1.5FT	26
SANTA MARTA CO	11.2N	74.2W	2334	0.26M/	0.9FT	16
SALVADOR BR	13.0S	38.5W	2331	0.33M/	1.1FT	22
PORT OF SPAIN TT	10.6N	61.5W	2314	1.01M/	3.3FT	26
NANTUCKET ISLAND MA	41.3N	70.1W	2305	0.81M/	2.7FT	18
SAINT HELENA UK	15.9S	5.7W	2307	0.37M/	1.2FT	14
SAINT HELENA RUPERT	15.9S	5.7W	2307	0.37M/	1.2FT	26
TORTOLA VI UK	18.4N	64.6W	2251	0.70M/	2.3FT	24
HATTERAS NC	35.2N	75.7W	2247	1.10M/	3.6FT	16
ORANGESTAD AW	12.5N	70.0W	2244	0.45M/	1.5FT	28
BULLEN BAY CURACAO	12.2N	69.0W	2245	0.52M/	1.7FT	16
BARAHONA DO	18.2N	71.1W	2237	0.34M/	1.1FT	16
ILE ROYAL GUIANA FR	5.3N	52.6W	2229	1.35M/	4.4FT	28
CAP HAITIEN HT	19.8N	72.2W	2217	0.93M/	3.1FT	16
PRICKLEY BAY GD	12.0N	61.8W	2216	0.59M/	1.9FT	26
DART 42407	15.3N	68.2W	2208	0.04M/	0.1FT	24
MAGUEYES ISLAND PR	18.0N	67.0W	2213	0.56M/	1.8FT	28
PUERTO PLATA DO	19.8N	70.7W	2200	0.97M/	3.2FT	16
GRAND TURK ISLAND T	21.4N	71.1W	2205	1.45M/	4.8FT	24
LAMESHURBAYSTJOHNVI	18.3N	64.7W	2205	0.83M/	2.7FT	16
BLOWING POINT AI	18.2N	63.1W	2157	0.93M/	3.1FT	26
PUNTA CANA DO	18.5N	68.4W	2159	0.85M/	2.8FT	24
MONA ISLAND PR	18.1N	67.9W	2200	0.69M/	2.3FT	24
SAINT MARTIN FR	18.1N	63.1W	2158	0.93M/	3.1FT	14
ISABELII VIEQUES PR	18.2N	65.4W	2201	0.70M/	2.3FT	16
GANTERS BAY ST LUCI	14.0N	61.0W	2155	0.64M/	2.1FT	20
MAYAGUEZ PR	18.2N	67.2W	2151	1.21M/	4.0FT	20
BARBUDA AG	17.6N	61.8W	2146	1.04M/	3.4FT	18
ESPERANZA VIEQUES P	18.1N	65.5W	2144	0.68M/	2.2FT	28
CALLIAQUA VC	13.1N	61.2W	2146	0.56M/	1.8FT	22
YABUCOA PR	18.1N	65.8W	2139	0.70M/	2.3FT	28
DART 41424	33.0N	72.7W	2141	0.10M/	0.3FT	24
ARECIBO PR	18.5N	66.7W	2139	1.57M/	5.1FT	14
LIMETREE VI	17.7N	64.8W	2134	0.62M/	2.0FT	28
BASSETERRE KN	17.3N	62.7W	2141	0.84M/	2.8FT	24
ST CROIX VI	17.7N	64.7W	2138	0.73M/	2.4FT	28
SAN JUAN PR	18.5N	66.1W	2136	1.28M/	4.2FT	28
FORT DE FRANCE MQ	14.6N	61.1W	2135	0.73M/	2.4FT	16
ROSEAU DM	15.3N	61.4W	2131	0.64M/	2.1FT	18
PORTSMOUTH DM	15.6N	61.5W	2128	0.70M/	2.3FT	28
DART 41420	23.4N	67.3W	2125	0.14M/	0.5FT	26
LE ROBERT MARTINIQUE	14.7N	60.9W	2125	1.34M/	4.4FT	28
LE PRECHEUR MARTINI	14.8N	61.2W	2126	0.66M/	2.2FT	26
DESHAIES GUADELOUPE	16.3N	61.8W	2128	0.73M/	2.4FT	22
PORT ST CHARLES BB	13.3N	59.6W	2125	1.61M/	5.3FT	28
DART 44402	39.3N	70.7W	2127	0.10M/	0.3FT	24
SAINT PIERRE MIQUEL	46.5N	56.1W	2119	1.02M/	3.4FT	20
PARHAM AT	17.1N	61.8W	2115	1.31M/	4.3FT	26
DESIRADE GUADELOUPE	16.3N	61.1W	2106	1.21M/	4.0FT	20
DART 41425	28.7N	65.7W	2110	0.25M/	0.8FT	16
DART 41421	23.4N	63.8W	2106	0.14M/	0.5FT	20
BERMUDA UK	32.4N	64.7W	2105	2.30M/	7.6FT	20
SALERNO IT	40.7N	14.8E	1906	0.07M/	0.2FT	24
SETE FR	43.4N	3.7E	1901	0.11M/	0.4FT	28
MALIN HEAD IE	55.4N	7.3W	1854	0.71M/	2.3FT	18
FOS-SUR-MER FR	43.4N	4.9E	1849	0.11M/	0.3FT	20
PORT-VENDRES FR	43.0N	3.1E	1848	0.12M/	0.4FT	22
GENOVA IT	44.4N	8.9E	1837	0.15M/	0.5FT	26

NOUADHIBOU MR	20.8N	17.0W	1835	1.22M/	4.0FT	22
IMPERIA IT	43.9N	8.0E	1820	0.13M/	0.4FT	24
MONACO MC	43.7N	7.4E	1820	0.11M/	0.4FT	28
NICE FR	43.7N	7.3E	1823	0.13M/	0.4FT	18
CARLOFORTE IT	39.1N	8.3E	1816	0.14M/	0.4FT	14
LA FIGUEIRETTE	43.5N	6.9E	1812	0.12M/	0.4FT	18
PORT FERREOL FR	43.4N	6.7E	1811	0.12M/	0.4FT	24
AJACCIO FR	41.9N	8.8E	1814	0.10M/	0.3FT	26
PRAIA CV	14.9N	23.5W	1801	0.78M/	2.6FT	22
LHERBAUDIERE FR	47.0N	2.3W	1801	0.82M/	2.7FT	26
BARCELONA ES	41.3N	2.2E	1754	0.11M/	0.4FT	16
LES SABLES DOLONNE	46.5N	1.8W	1752	0.69M/	2.3FT	22
PALMEIRA CAPE VERDE	16.8N	23.0W	1738	1.07M/	3.5FT	26
CONCARMEAU FR	47.9N	3.9W	1732	0.87M/	2.9FT	22
VALENCIA ES	39.4N	0.3W	1728	0.19M/	0.6FT	18
LE CONQUET FR	48.4N	4.8W	1730	0.93M/	3.0FT	28
MIMIZAN FR	44.2N	1.3W	1702	0.69M/	2.3FT	24
BOUCAU BAYONNE FR	43.5N	1.5W	1645	0.73M/	2.4FT	26
CARTAGENA ES	37.6N	1.0W	1630	0.40M/	1.3FT	28
SAID MA	35.1N	2.3W	1627	0.74M/	2.4FT	28
PONTA DELGADA PT	37.7N	25.7W	1604	3.82M/12.5FT		22
FERROL ES	43.5N	8.3W	1600	1.46M/	4.8FT	16
ELHIERRO ES	27.8N	17.9W	1554	1.78M/	5.9FT	22
FUERTEVENTURA ES	28.5N	13.9W	1551	2.39M/	7.9FT	28
LAGOMERA ES	28.1N	17.1W	1545	1.89M/	6.2FT	16
LA PALMA ES	28.7N	17.8W	1543	2.99M/	9.8FT	18
TENERIFE ES	28.5N	16.2W	1540	3.00M/	9.8FT	20
ARRECIFE ES	29.0N	13.5W	1529	2.72M/	8.9FT	24
LASPALMAS ES	28.1N	15.4W	1532	3.80M/12.5FT		18
ALGECIRAS ES	36.2N	5.4W	1534	1.27M/	4.2FT	26
CADIZ ES	36.5N	6.3W	1528	8.34M/27.4FT		20
HUELVA ES	37.1N	6.8W	1526	11.04M/36.2FT		22
ALBUFEIRA PT	37.1N	8.3W	1505	15.43M/50.6FT		16
PORTO SANTO PT	33.1N	16.3W	1503	10.23M/33.6FT		14

TEST... NEXT UPDATE AND ADDITIONAL INFORMATION ...TEST

- * THIS IS A TEST MESSAGE. THE NEXT MESSAGE WILL BE ISSUED IN ONE HOUR... OR SOONER IF THE SITUATION WARRANTS.
- * THIS IS A TEST MESSAGE. AUTHORITATIVE INFORMATION ABOUT THE EARTHQUAKE FROM THE U.S. GEOLOGICAL SURVEY CAN BE FOUND ON THE INTERNET AT EARTHQUAKE.USGS.GOV/EARTHQUAKES -ALL IN LOWERCASE LETTERS-.
- * THIS IS A TEST MESSAGE. FURTHER INFORMATION ABOUT THIS EVENT MAY BE FOUND AT WWW.TSUNAMI.GOV.
- * THIS IS A TEST MESSAGE. COASTAL REGIONS OF THE US GULF COAST... US EAST COAST... AND THE MARITIME PROVINCES OF CANADA SHOULD REFER TO U.S. NATIONAL TSUNAMI WARNING CENTER MESSAGES THAT CAN BE FOUND AT WWW.TSUNAMI.GOV.

THIS IS A TEST MESSAGE. DO NOT TAKE ACTION BASED ON THIS TEST MESSAGE.

\$\$

NNNN

PTWC Message #19

ZCZC
WECA41 PHEB 200500
TSUCAX

TEST...TSUNAMI MESSAGE NUMBER 19...TEST
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
0500 UTC FRI MAR 20 2020

...THIS MESSAGE IS FOR TEST PURPOSES ONLY...
...TEST TSUNAMI THREAT MESSAGE TEST...

**** NOTICE **** NOTICE **** NOTICE **** NOTICE **** NOTICE ****

THIS IS A TEST MESSAGE. THIS MESSAGE IS ISSUED FOR INFORMATION ONLY IN SUPPORT OF THE UNESCO/IOC TSUNAMI AND OTHER COASTAL HAZARDS WARNING SYSTEM FOR THE CARIBBEAN AND ADJACENT REGIONS AND IS MEANT FOR NATIONAL AUTHORITIES IN EACH COUNTRY OF THAT SYSTEM.

THIS IS A TEST MESSAGE. NATIONAL AUTHORITIES WILL DETERMINE THE APPROPRIATE LEVEL OF ALERT FOR EACH COUNTRY AND MAY ISSUE ADDITIONAL OR MORE REFINED INFORMATION.

**** NOTICE **** NOTICE **** NOTICE **** NOTICE **** NOTICE ****

TEST... PRELIMINARY EARTHQUAKE PARAMETERS ...TEST

* MAGNITUDE	8.5
* ORIGIN TIME	1400 UTC MAR 19 2020
* COORDINATES	36.0 NORTH 10.8 WEST
* DEPTH	5 KM / 3 MILES
* LOCATION	AZORES-CAPE ST. VINCENT RIDGE

TEST... EVALUATION ...TEST

* THIS IS A TEST MESSAGE. AN EARTHQUAKE WITH A PRELIMINARY MAGNITUDE OF 8.5 OCCURRED NEAR THE AZORES-CAPE SAINT VINCENT RIDGE AT 1400 UTC ON THURSDAY MARCH 19 2020.

* THIS IS A TEST MESSAGE. TSUNAMI WAVES HAVE BEEN OBSERVED.

* THIS IS A TEST MESSAGE. BASED ON ALL AVAILABLE DATA...
HAZARDOUS TSUNAMI WAVES ARE FORECAST FOR SOME COASTS.

TEST... TSUNAMI THREAT FORECAST ...TEST

* THIS IS A TEST MESSAGE. TSUNAMI WAVES REACHING MORE THAN 3 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE ALONG SOME COASTS OF

BAHAMAS.

- * THIS IS A TEST MESSAGE. TSUNAMI WAVES REACHING 1 TO 3 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE ALONG SOME COASTS OF

BRAZIL... CUBA... DOMINICAN REPUBLIC... FRENCH GUYANE...
GUYANA... HAITI... SURINAME... VENEZUELA... ANGUILLA...
ANTIGUA AND BARBUDA... BARBADOS... BERMUDA... DOMINICA...
GRENADA... GUADELOUPE... MARTINIQUE... PUERTO RICO AND
VIRGIN ISLANDS... SAINT BARTHELEMY... SAINT LUCIA... SAINT
VINCENT AND THE GRENADINES... TRINIDAD AND TOBAGO... AND
TURKS AND CAICOS ISLANDS.

- * THIS IS A TEST MESSAGE. TSUNAMI WAVES REACHING 0.3 TO 1 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE FOR SOME COASTS OF

COLOMBIA... ARUBA... BONAIRE... CURACAO... JAMAICA...
MONTSERRAT... SABA AND SAINT EUSTATIUS... SAINT KITTS AND
NEVIS... SINT MAARTEN... AND SAINT MARTIN.

- * THIS IS A TEST MESSAGE. ACTUAL AMPLITUDES AT THE COAST MAY VARY FROM FORECAST AMPLITUDES DUE TO UNCERTAINTIES IN THE FORECAST AND LOCAL FEATURES. IN PARTICULAR MAXIMUM TSUNAMI AMPLITUDES ON ATOLLS OR SMALL ISLANDS AND AT LOCATIONS WITH FRINGING OR BARRIER REEFS WILL LIKELY BE MUCH SMALLER THAN THE FORECAST INDICATES.

- * THIS IS A TEST MESSAGE. FOR ALL OTHER AREAS COVERED BY THIS MESSAGE... THERE IS NO TSUNAMI THREAT ALTHOUGH SMALL SEA LEVEL CHANGES MAY OCCUR.

TEST... RECOMMENDED ACTIONS ...TEST

- * THIS IS A TEST MESSAGE. GOVERNMENT AGENCIES RESPONSIBLE FOR THREATENED COASTAL AREAS SHOULD TAKE ACTION TO INFORM AND INSTRUCT ANY COASTAL POPULATIONS AT RISK IN ACCORDANCE WITH THEIR OWN EVALUATION... PROCEDURES AND THE LEVEL OF THREAT.
- * THIS IS A TEST MESSAGE. PERSONS LOCATED IN THREATENED COASTAL AREAS SHOULD STAY ALERT FOR INFORMATION AND FOLLOW INSTRUCTIONS FROM NATIONAL AND LOCAL AUTHORITIES.

TEST... POTENTIAL IMPACTS ...TEST

- * THIS IS A TEST MESSAGE. A TSUNAMI IS A SERIES OF WAVES. THE TIME BETWEEN WAVE CRESTS CAN VARY FROM 5 MINUTES TO AN HOUR. THE HAZARD MAY PERSIST FOR MANY HOURS OR LONGER AFTER THE INITIAL WAVE.
- * THIS IS A TEST MESSAGE. IMPACTS CAN VARY SIGNIFICANTLY FROM

ONE SECTION OF COAST TO THE NEXT DUE TO LOCAL BATHYMETRY AND THE SHAPE AND ELEVATION OF THE SHORELINE.

- * THIS IS A TEST MESSAGE. IMPACTS CAN ALSO VARY DEPENDING UPON THE STATE OF THE TIDE AT THE TIME OF THE MAXIMUM TSUNAMI WAVES.
- * THIS IS A TEST MESSAGE. PERSONS CAUGHT IN THE WATER OF A TSUNAMI MAY DROWN... BE CRUSHED BY DEBRIS IN THE WATER... OR BE SWEEPED OUT TO SEA.

TEST... TSUNAMI OBSERVATIONS ...TEST

- * THIS IS A TEST MESSAGE. THE FOLLOWING ARE TSUNAMI WAVE OBSERVATIONS FROM COASTAL AND/OR DEEP-OCEAN SEA LEVEL GAUGES AT THE INDICATED LOCATIONS. THE MAXIMUM TSUNAMI HEIGHT IS MEASURED WITH RESPECT TO THE NORMAL TIDE LEVEL.

GAUGE LOCATION	GAUGE COORDINATES		TIME OF MEASURE (UTC)	MAXIMUM TSUNAMI HEIGHT	WAVE PERIOD (MIN)
	LAT	LON			
KING EDWARD POINT U	54.3S	36.5W	0422	0.18M/ 0.6FT	22
GOUGH ISLAND UK	40.3S	9.9W	0230	0.23M/ 0.7FT	26
TRISTAN DA CUNHA UK	37.0S	12.3W	0146	0.27M/ 0.9FT	16
WOODS HOLE MA	41.5N	70.7W	0140	0.83M/ 2.7FT	14
ARRAIAL DO CABO BR	23.0S	42.0W	0127	0.16M/ 0.5FT	18
KEY WEST FL	24.6N	81.8W	0122	0.10M/ 0.3FT	26
NEW LONDON CT	41.4N	72.1W	0119	0.89M/ 2.9FT	24
ISLA MUJERES MX	21.3N	86.7W	0109	0.06M/ 0.2FT	14
BOCAS DEL TORO PA	9.4N	82.3W	0105	0.19M/ 0.6FT	24
VACA KEY FL	24.7N	81.1W	0059	0.15M/ 0.5FT	28
CEIBA CABOTAGE HN	15.8N	86.8W	0055	0.05M/ 0.2FT	22
LIMON CR	10.0N	83.0W	0051	0.28M/ 0.9FT	14
SIAN KAN MX	19.3N	87.4W	0040	0.07M/ 0.2FT	20
PUERTO MORELOS MX	20.9N	86.9W	0032	0.07M/ 0.2FT	20
PUERTO MORELOS MX	20.9N	86.9W	0034	0.07M/ 0.2FT	24
SAPZURRO CO	8.7N	77.4W	0026	0.18M/ 0.6FT	24
EL PORVENIR PA	9.6N	78.9W	0020	0.21M/ 0.7FT	16
SAN ANDRES CO	12.6N	81.7W	0021	0.20M/ 0.7FT	22
NEWPORT RI	41.5N	71.3W	0003	0.82M/ 2.7FT	22
ISLA NAVAL CO	10.2N	75.8W	2351	0.17M/ 0.6FT	22
PORT ROYAL JM	17.9N	76.8W	2353	0.46M/ 1.5FT	26
SANTA MARTA CO	11.2N	74.2W	2334	0.26M/ 0.9FT	16
SALVADOR BR	13.0S	38.5W	2331	0.33M/ 1.1FT	22
PORT OF SPAIN TT	10.6N	61.5W	2314	1.01M/ 3.3FT	26
NANTUCKET ISLAND MA	41.3N	70.1W	2305	0.81M/ 2.7FT	18
SAINT HELENA UK	15.9S	5.7W	2307	0.37M/ 1.2FT	14
SAINT HELENA RUPERT	15.9S	5.7W	2307	0.37M/ 1.2FT	26
TORTOLA VI UK	18.4N	64.6W	2251	0.70M/ 2.3FT	24
HATTERAS NC	35.2N	75.7W	2247	1.10M/ 3.6FT	16
ORANGESTAD AW	12.5N	70.0W	2244	0.45M/ 1.5FT	28
BULLEN BAY CURACAO	12.2N	69.0W	2245	0.52M/ 1.7FT	16
BARAHONA DO	18.2N	71.1W	2237	0.34M/ 1.1FT	16
ILE ROYAL GUIANA FR	5.3N	52.6W	2229	1.35M/ 4.4FT	28
CAP HAITIEN HT	19.8N	72.2W	2217	0.93M/ 3.1FT	16

IOC Technical Series, 151(1)
Annex VI–page 140

PRICKLEY BAY GD	12.0N	61.8W	2216	0.59M/	1.9FT	26
DART 42407	15.3N	68.2W	2208	0.04M/	0.1FT	24
MAGUEYES ISLAND PR	18.0N	67.0W	2213	0.56M/	1.8FT	28
PUERTO PLATA DO	19.8N	70.7W	2200	0.97M/	3.2FT	16
GRAND TURK ISLAND T	21.4N	71.1W	2205	1.45M/	4.8FT	24
LAMESHURBAYSTJOHNVI	18.3N	64.7W	2205	0.83M/	2.7FT	16
BLOWING POINT AI	18.2N	63.1W	2157	0.93M/	3.1FT	26
PUNTA CANA DO	18.5N	68.4W	2159	0.85M/	2.8FT	24
MONA ISLAND PR	18.1N	67.9W	2200	0.69M/	2.3FT	24
SAINT MARTIN FR	18.1N	63.1W	2158	0.93M/	3.1FT	14
ISABELII VIEQUES PR	18.2N	65.4W	2201	0.70M/	2.3FT	16
GANTERS BAY ST LUCI	14.0N	61.0W	2155	0.64M/	2.1FT	20
MAYAGUEZ PR	18.2N	67.2W	2151	1.21M/	4.0FT	20
BARBUDA AG	17.6N	61.8W	2146	1.04M/	3.4FT	18
ESPERANZA VIEQUES P	18.1N	65.5W	2144	0.68M/	2.2FT	28
CALLIAQUA VC	13.1N	61.2W	2146	0.56M/	1.8FT	22
YABUCOA PR	18.1N	65.8W	2139	0.70M/	2.3FT	28
DART 41424	33.0N	72.7W	2141	0.10M/	0.3FT	24
ARECIBO PR	18.5N	66.7W	2139	1.57M/	5.1FT	14
LIMETREE VI	17.7N	64.8W	2134	0.62M/	2.0FT	28
BASSETERRE KN	17.3N	62.7W	2141	0.84M/	2.8FT	24
ST CROIX VI	17.7N	64.7W	2138	0.73M/	2.4FT	28
SAN JUAN PR	18.5N	66.1W	2136	1.28M/	4.2FT	28
FORT DE FRANCE MQ	14.6N	61.1W	2135	0.73M/	2.4FT	16
ROSEAU DM	15.3N	61.4W	2131	0.64M/	2.1FT	18
PORTSMOUTH DM	15.6N	61.5W	2128	0.70M/	2.3FT	28
DART 41420	23.4N	67.3W	2125	0.14M/	0.5FT	26
LE ROBERT MARTINIQUE	14.7N	60.9W	2125	1.34M/	4.4FT	28
LE PRECHEUR MARTINI	14.8N	61.2W	2126	0.66M/	2.2FT	26
DESHAIES GUADELOUPE	16.3N	61.8W	2128	0.73M/	2.4FT	22
PORT ST CHARLES BB	13.3N	59.6W	2125	1.61M/	5.3FT	28
DART 44402	39.3N	70.7W	2127	0.10M/	0.3FT	24
SAINT PIERRE MIQUEL	46.5N	56.1W	2119	1.02M/	3.4FT	20
PARHAM AT	17.1N	61.8W	2115	1.31M/	4.3FT	26
DESIRADE GUADELOUPE	16.3N	61.1W	2106	1.21M/	4.0FT	20
DART 41425	28.7N	65.7W	2110	0.25M/	0.8FT	16
DART 41421	23.4N	63.8W	2106	0.14M/	0.5FT	20
BERMUDA UK	32.4N	64.7W	2105	2.30M/	7.6FT	20
SALERNO IT	40.7N	14.8E	1906	0.07M/	0.2FT	24
SETE FR	43.4N	3.7E	1901	0.11M/	0.4FT	28
MALIN HEAD IE	55.4N	7.3W	1854	0.71M/	2.3FT	18
FOS-SUR-MER FR	43.4N	4.9E	1849	0.11M/	0.3FT	20
PORT-VENDRES FR	43.0N	3.1E	1848	0.12M/	0.4FT	22
GENOVA IT	44.4N	8.9E	1837	0.15M/	0.5FT	26
NOUADHIBOU MR	20.8N	17.0W	1835	1.22M/	4.0FT	22
IMPERIA IT	43.9N	8.0E	1820	0.13M/	0.4FT	24
MONACO MC	43.7N	7.4E	1820	0.11M/	0.4FT	28
NICE FR	43.7N	7.3E	1823	0.13M/	0.4FT	18
CARLOFORTE IT	39.1N	8.3E	1816	0.14M/	0.4FT	14
LA FIGUEIRETTE	43.5N	6.9E	1812	0.12M/	0.4FT	18
PORT FERREOL FR	43.4N	6.7E	1811	0.12M/	0.4FT	24
AJACCIO FR	41.9N	8.8E	1814	0.10M/	0.3FT	26
PRAIA CV	14.9N	23.5W	1801	0.78M/	2.6FT	22
LHERBAUDIERE FR	47.0N	2.3W	1801	0.82M/	2.7FT	26
BARCELONA ES	41.3N	2.2E	1754	0.11M/	0.4FT	16
LES SABLES DOLONNE	46.5N	1.8W	1752	0.69M/	2.3FT	22
PALMEIRA CAPE VERDE	16.8N	23.0W	1738	1.07M/	3.5FT	26
CONCARMEAU FR	47.9N	3.9W	1732	0.87M/	2.9FT	22

VALENCIA ES	39.4N	0.3W	1728	0.19M/ 0.6FT	18
LE CONQUET FR	48.4N	4.8W	1730	0.93M/ 3.0FT	28
MIMIZAN FR	44.2N	1.3W	1702	0.69M/ 2.3FT	24
BOUCAU BAYONNE FR	43.5N	1.5W	1645	0.73M/ 2.4FT	26
CARTAGENA ES	37.6N	1.0W	1630	0.40M/ 1.3FT	28
SAID MA	35.1N	2.3W	1627	0.74M/ 2.4FT	28
PONTA DELGADA PT	37.7N	25.7W	1604	3.82M/12.5FT	22
FERROL ES	43.5N	8.3W	1600	1.46M/ 4.8FT	16
ELHIERRO ES	27.8N	17.9W	1554	1.78M/ 5.9FT	22
FUERTEVENTURA ES	28.5N	13.9W	1551	2.39M/ 7.9FT	28
LAGOMERA ES	28.1N	17.1W	1545	1.89M/ 6.2FT	16
LA PALMA ES	28.7N	17.8W	1543	2.99M/ 9.8FT	18
TENERIFE ES	28.5N	16.2W	1540	3.00M/ 9.8FT	20
ARRECIFE ES	29.0N	13.5W	1529	2.72M/ 8.9FT	24
LASPALMAS ES	28.1N	15.4W	1532	3.80M/12.5FT	18
ALGECIRAS ES	36.2N	5.4W	1534	1.27M/ 4.2FT	26
CADIZ ES	36.5N	6.3W	1528	8.34M/27.4FT	20
HUELVA ES	37.1N	6.8W	1526	11.04M/36.2FT	22
ALBUFEIRA PT	37.1N	8.3W	1505	15.43M/50.6FT	16
PORTO SANTO PT	33.1N	16.3W	1503	10.23M/33.6FT	14

TEST...NEXT UPDATE AND ADDITIONAL INFORMATION...TEST

-
- * THIS IS A TEST MESSAGE. THE NEXT MESSAGE WILL BE ISSUED IN ONE HOUR... OR SOONER IF THE SITUATION WARRANTS.
 - * THIS IS A TEST MESSAGE. AUTHORITATIVE INFORMATION ABOUT THE EARTHQUAKE FROM THE U.S. GEOLOGICAL SURVEY CAN BE FOUND ON THE INTERNET AT EARTHQUAKE.USGS.GOV/EARTHQUAKES -ALL IN LOWERCASE LETTERS-.
 - * THIS IS A TEST MESSAGE. FURTHER INFORMATION ABOUT THIS EVENT MAY BE FOUND AT WWW.TSUNAMI.GOV.
 - * THIS IS A TEST MESSAGE. COASTAL REGIONS OF THE US GULF COAST... US EAST COAST... AND THE MARITIME PROVINCES OF CANADA SHOULD REFER TO U.S. NATIONAL TSUNAMI WARNING CENTER MESSAGES THAT CAN BE FOUND AT WWW.TSUNAMI.GOV.

THIS IS A TEST MESSAGE. DO NOT TAKE ACTION BASED ON THIS TEST MESSAGE.

\$\$

NNNN

PTWC Message #20

ZCZC
WECA41 PHEB 200600
TSUCAX

TEST...TSUNAMI MESSAGE NUMBER 20...TEST
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
0600 UTC FRI MAR 20 2020

...THIS MESSAGE IS FOR TEST PURPOSES ONLY...
...TEST TSUNAMI THREAT MESSAGE TEST...

**** NOTICE **** NOTICE **** NOTICE **** NOTICE **** NOTICE ****

THIS IS A TEST MESSAGE. THIS MESSAGE IS ISSUED FOR INFORMATION ONLY IN SUPPORT OF THE UNESCO/IOC TSUNAMI AND OTHER COASTAL HAZARDS WARNING SYSTEM FOR THE CARIBBEAN AND ADJACENT REGIONS AND IS MEANT FOR NATIONAL AUTHORITIES IN EACH COUNTRY OF THAT SYSTEM.

THIS IS A TEST MESSAGE. NATIONAL AUTHORITIES WILL DETERMINE THE APPROPRIATE LEVEL OF ALERT FOR EACH COUNTRY AND MAY ISSUE ADDITIONAL OR MORE REFINED INFORMATION.

**** NOTICE **** NOTICE **** NOTICE **** NOTICE **** NOTICE ****

TEST... PRELIMINARY EARTHQUAKE PARAMETERS ...TEST

* MAGNITUDE	8.5
* ORIGIN TIME	1400 UTC MAR 19 2020
* COORDINATES	36.0 NORTH 10.8 WEST
* DEPTH	5 KM / 3 MILES
* LOCATION	AZORES-CAPE ST. VINCENT RIDGE

TEST... EVALUATION ...TEST

* THIS IS A TEST MESSAGE. AN EARTHQUAKE WITH A PRELIMINARY MAGNITUDE OF 8.5 OCCURRED NEAR THE AZORES-CAPE SAINT VINCENT RIDGE AT 1400 UTC ON THURSDAY MARCH 19 2020.

* THIS IS A TEST MESSAGE. TSUNAMI WAVES HAVE BEEN OBSERVED.

* THIS IS A TEST MESSAGE. BASED ON ALL AVAILABLE DATA...
HAZARDOUS TSUNAMI WAVES ARE FORECAST FOR SOME COASTS.

TEST... TSUNAMI THREAT FORECAST ...TEST

* THIS IS A TEST MESSAGE. TSUNAMI WAVES REACHING MORE THAN 3 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE ALONG SOME COASTS OF

BAHAMAS.

- * THIS IS A TEST MESSAGE. TSUNAMI WAVES REACHING 1 TO 3 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE ALONG SOME COASTS OF

BRAZIL... CUBA... DOMINICAN REPUBLIC... FRENCH GUYANE...
GUYANA... HAITI... SURINAME... VENEZUELA... ANGUILLA...
ANTIGUA AND BARBUDA... BARBADOS... BERMUDA... DOMINICA...
GRENADA... GUADELOUPE... MARTINIQUE... PUERTO RICO AND
VIRGIN ISLANDS... SAINT BARTHELEMY... SAINT LUCIA... SAINT
VINCENT AND THE GRENADINES... TRINIDAD AND TOBAGO... AND
TURKS AND CAICOS ISLANDS.

- * THIS IS A TEST MESSAGE. TSUNAMI WAVES REACHING 0.3 TO 1 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE FOR SOME COASTS OF

COLOMBIA... ARUBA... BONAIRE... CURACAO... JAMAICA...
MONTSERRAT... SABA AND SAINT EUSTATIUS... SAINT KITTS AND
NEVIS... SINT MAARTEN... AND SAINT MARTIN.

- * THIS IS A TEST MESSAGE. ACTUAL AMPLITUDES AT THE COAST MAY VARY FROM FORECAST AMPLITUDES DUE TO UNCERTAINTIES IN THE FORECAST AND LOCAL FEATURES. IN PARTICULAR MAXIMUM TSUNAMI AMPLITUDES ON ATOLLS OR SMALL ISLANDS AND AT LOCATIONS WITH FRINGING OR BARRIER REEFS WILL LIKELY BE MUCH SMALLER THAN THE FORECAST INDICATES.

- * THIS IS A TEST MESSAGE. FOR ALL OTHER AREAS COVERED BY THIS MESSAGE... THERE IS NO TSUNAMI THREAT ALTHOUGH SMALL SEA LEVEL CHANGES MAY OCCUR.

TEST... RECOMMENDED ACTIONS ...TEST

- * THIS IS A TEST MESSAGE. GOVERNMENT AGENCIES RESPONSIBLE FOR THREATENED COASTAL AREAS SHOULD TAKE ACTION TO INFORM AND INSTRUCT ANY COASTAL POPULATIONS AT RISK IN ACCORDANCE WITH THEIR OWN EVALUATION... PROCEDURES AND THE LEVEL OF THREAT.
- * THIS IS A TEST MESSAGE. PERSONS LOCATED IN THREATENED COASTAL AREAS SHOULD STAY ALERT FOR INFORMATION AND FOLLOW INSTRUCTIONS FROM NATIONAL AND LOCAL AUTHORITIES.

TEST... POTENTIAL IMPACTS ...TEST

- * THIS IS A TEST MESSAGE. A TSUNAMI IS A SERIES OF WAVES. THE TIME BETWEEN WAVE CRESTS CAN VARY FROM 5 MINUTES TO AN HOUR. THE HAZARD MAY PERSIST FOR MANY HOURS OR LONGER AFTER THE INITIAL WAVE.
- * THIS IS A TEST MESSAGE. IMPACTS CAN VARY SIGNIFICANTLY FROM

ONE SECTION OF COAST TO THE NEXT DUE TO LOCAL BATHYMETRY AND THE SHAPE AND ELEVATION OF THE SHORELINE.

* THIS IS A TEST MESSAGE. IMPACTS CAN ALSO VARY DEPENDING UPON THE STATE OF THE TIDE AT THE TIME OF THE MAXIMUM TSUNAMI WAVES.

* THIS IS A TEST MESSAGE. PERSONS CAUGHT IN THE WATER OF A TSUNAMI MAY DROWN... BE CRUSHED BY DEBRIS IN THE WATER... OR BE SWEEPED OUT TO SEA.

TEST... TSUNAMI OBSERVATIONS ...TEST

* THIS IS A TEST MESSAGE. THE FOLLOWING ARE TSUNAMI WAVE OBSERVATIONS FROM COASTAL AND/OR DEEP-OCEAN SEA LEVEL GAUGES AT THE INDICATED LOCATIONS. THE MAXIMUM TSUNAMI HEIGHT IS MEASURED WITH RESPECT TO THE NORMAL TIDE LEVEL.

GAUGE LOCATION	GAUGE COORDINATES		TIME OF MEASURE (UTC)	MAXIMUM TSUNAMI HEIGHT		WAVE PERIOD (MIN)
	LAT	LON				
PORT STANLEY UK	51.8S	57.9W	0544	0.12M/	0.4FT	22
KING EDWARD POINT U	54.3S	36.5W	0422	0.18M/	0.6FT	22
GOUGH ISLAND UK	40.3S	9.9W	0230	0.23M/	0.7FT	26
TRISTAN DA CUNHA UK	37.0S	12.3W	0146	0.27M/	0.9FT	16
WOODS HOLE MA	41.5N	70.7W	0140	0.83M/	2.7FT	14
ARRAIAL DO CABO BR	23.0S	42.0W	0127	0.16M/	0.5FT	18
KEY WEST FL	24.6N	81.8W	0122	0.10M/	0.3FT	26
NEW LONDON CT	41.4N	72.1W	0119	0.89M/	2.9FT	24
ISLA MUJERES MX	21.3N	86.7W	0109	0.06M/	0.2FT	14
BOCAS DEL TORO PA	9.4N	82.3W	0105	0.19M/	0.6FT	24
VACA KEY FL	24.7N	81.1W	0059	0.15M/	0.5FT	28
CEIBA CABOTAGE HN	15.8N	86.8W	0055	0.05M/	0.2FT	22
LIMON CR	10.0N	83.0W	0051	0.28M/	0.9FT	14
SIAN KAN MX	19.3N	87.4W	0040	0.07M/	0.2FT	20
PUERTO MORELOS MX	20.9N	86.9W	0032	0.07M/	0.2FT	20
PUERTO MORELOS MX	20.9N	86.9W	0034	0.07M/	0.2FT	24
SAPZURRO CO	8.7N	77.4W	0026	0.18M/	0.6FT	24
EL PORVENIR PA	9.6N	78.9W	0020	0.21M/	0.7FT	16
SAN ANDRES CO	12.6N	81.7W	0021	0.20M/	0.7FT	22
NEWPORT RI	41.5N	71.3W	0003	0.82M/	2.7FT	22
ISLA NAVAL CO	10.2N	75.8W	2351	0.17M/	0.6FT	22
PORT ROYAL JM	17.9N	76.8W	2353	0.46M/	1.5FT	26
SANTA MARTA CO	11.2N	74.2W	2334	0.26M/	0.9FT	16
SALVADOR BR	13.0S	38.5W	2331	0.33M/	1.1FT	22
PORT OF SPAIN TT	10.6N	61.5W	2314	1.01M/	3.3FT	26
NANTUCKET ISLAND MA	41.3N	70.1W	2305	0.81M/	2.7FT	18
SAINT HELENA UK	15.9S	5.7W	2307	0.37M/	1.2FT	14
SAINT HELENA RUPERT	15.9S	5.7W	2307	0.37M/	1.2FT	26
TORTOLA VI UK	18.4N	64.6W	2251	0.70M/	2.3FT	24
HATTERAS NC	35.2N	75.7W	2247	1.10M/	3.6FT	16
ORANGESTAD AW	12.5N	70.0W	2244	0.45M/	1.5FT	28
BULLEN BAY CURACAO	12.2N	69.0W	2245	0.52M/	1.7FT	16
BARAHONA DO	18.2N	71.1W	2237	0.34M/	1.1FT	16
ILE ROYAL GUIANA FR	5.3N	52.6W	2229	1.35M/	4.4FT	28

CAP HAITIEN HT	19.8N	72.2W	2217	0.93M/	3.1FT	16
PRICKLEY BAY GD	12.0N	61.8W	2216	0.59M/	1.9FT	26
DART 42407	15.3N	68.2W	2208	0.04M/	0.1FT	24
MAGUEYES ISLAND PR	18.0N	67.0W	2213	0.56M/	1.8FT	28
PUERTO PLATA DO	19.8N	70.7W	2200	0.97M/	3.2FT	16
GRAND TURK ISLAND T	21.4N	71.1W	2205	1.45M/	4.8FT	24
LAMESHURBAYSTJOHNVI	18.3N	64.7W	2205	0.83M/	2.7FT	16
BLOWING POINT AI	18.2N	63.1W	2157	0.93M/	3.1FT	26
PUNTA CANA DO	18.5N	68.4W	2159	0.85M/	2.8FT	24
MONA ISLAND PR	18.1N	67.9W	2200	0.69M/	2.3FT	24
SAINT MARTIN FR	18.1N	63.1W	2158	0.93M/	3.1FT	14
ISABELII VIEQUES PR	18.2N	65.4W	2201	0.70M/	2.3FT	16
GANTERS BAY ST LUCI	14.0N	61.0W	2155	0.64M/	2.1FT	20
MAYAGUEZ PR	18.2N	67.2W	2151	1.21M/	4.0FT	20
BARBUDA AG	17.6N	61.8W	2146	1.04M/	3.4FT	18
ESPERANZA VIEQUES P	18.1N	65.5W	2144	0.68M/	2.2FT	28
CALLIAQUA VC	13.1N	61.2W	2146	0.56M/	1.8FT	22
YABUCOA PR	18.1N	65.8W	2139	0.70M/	2.3FT	28
DART 41424	33.0N	72.7W	2141	0.10M/	0.3FT	24
ARECIBO PR	18.5N	66.7W	2139	1.57M/	5.1FT	14
LIMETREE VI	17.7N	64.8W	2134	0.62M/	2.0FT	28
BASSETERRE KN	17.3N	62.7W	2141	0.84M/	2.8FT	24
ST CROIX VI	17.7N	64.7W	2138	0.73M/	2.4FT	28
SAN JUAN PR	18.5N	66.1W	2136	1.28M/	4.2FT	28
FORT DE FRANCE MQ	14.6N	61.1W	2135	0.73M/	2.4FT	16
ROSEAU DM	15.3N	61.4W	2131	0.64M/	2.1FT	18
PORTSMOUTH DM	15.6N	61.5W	2128	0.70M/	2.3FT	28
DART 41420	23.4N	67.3W	2125	0.14M/	0.5FT	26
LE ROBERT MARTINIQU	14.7N	60.9W	2125	1.34M/	4.4FT	28
LE PRECHEUR MARTINI	14.8N	61.2W	2126	0.66M/	2.2FT	26
DESHAIES GUADELOUPE	16.3N	61.8W	2128	0.73M/	2.4FT	22
PORT ST CHARLES BB	13.3N	59.6W	2125	1.61M/	5.3FT	28
DART 44402	39.3N	70.7W	2127	0.10M/	0.3FT	24
SAINT PIERRE MIQUEL	46.5N	56.1W	2119	1.02M/	3.4FT	20
PARHAM AT	17.1N	61.8W	2115	1.31M/	4.3FT	26
DESIRADE GUADELOUPE	16.3N	61.1W	2106	1.21M/	4.0FT	20
DART 41425	28.7N	65.7W	2110	0.25M/	0.8FT	16
DART 41421	23.4N	63.8W	2106	0.14M/	0.5FT	20
BERMUDA UK	32.4N	64.7W	2105	2.30M/	7.6FT	20
SALERNO IT	40.7N	14.8E	1906	0.07M/	0.2FT	24
SETE FR	43.4N	3.7E	1901	0.11M/	0.4FT	28
MALIN HEAD IE	55.4N	7.3W	1854	0.71M/	2.3FT	18
FOS-SUR-MER FR	43.4N	4.9E	1849	0.11M/	0.3FT	20
PORT-VENDRES FR	43.0N	3.1E	1848	0.12M/	0.4FT	22
GENOVA IT	44.4N	8.9E	1837	0.15M/	0.5FT	26
NOUADHIBOU MR	20.8N	17.0W	1835	1.22M/	4.0FT	22
IMPERIA IT	43.9N	8.0E	1820	0.13M/	0.4FT	24
MONACO MC	43.7N	7.4E	1820	0.11M/	0.4FT	28
NICE FR	43.7N	7.3E	1823	0.13M/	0.4FT	18
CARLOFORTE IT	39.1N	8.3E	1816	0.14M/	0.4FT	14
LA FIGUEIRETTE	43.5N	6.9E	1812	0.12M/	0.4FT	18
PORT FERREOL FR	43.4N	6.7E	1811	0.12M/	0.4FT	24
AJACCIO FR	41.9N	8.8E	1814	0.10M/	0.3FT	26
PRAIA CV	14.9N	23.5W	1801	0.78M/	2.6FT	22
LHERBAUDIERE FR	47.0N	2.3W	1801	0.82M/	2.7FT	26
BARCELONA ES	41.3N	2.2E	1754	0.11M/	0.4FT	16
LES SABLES DOLONNE	46.5N	1.8W	1752	0.69M/	2.3FT	22
PALMEIRA CAPE VERDE	16.8N	23.0W	1738	1.07M/	3.5FT	26

CONCARMEAU FR	47.9N	3.9W	1732	0.87M/ 2.9FT	22
VALENCIA ES	39.4N	0.3W	1728	0.19M/ 0.6FT	18
LE CONQUET FR	48.4N	4.8W	1730	0.93M/ 3.0FT	28
MIMIZAN FR	44.2N	1.3W	1702	0.69M/ 2.3FT	24
BOUCAU BAYONNE FR	43.5N	1.5W	1645	0.73M/ 2.4FT	26
CARTAGENA ES	37.6N	1.0W	1630	0.40M/ 1.3FT	28
SAID MA	35.1N	2.3W	1627	0.74M/ 2.4FT	28
PONTA DELGADA PT	37.7N	25.7W	1604	3.82M/12.5FT	22
FERROL ES	43.5N	8.3W	1600	1.46M/ 4.8FT	16
ELHIERRO ES	27.8N	17.9W	1554	1.78M/ 5.9FT	22
FUERTEVENTURA ES	28.5N	13.9W	1551	2.39M/ 7.9FT	28
LAGOMERA ES	28.1N	17.1W	1545	1.89M/ 6.2FT	16
LA PALMA ES	28.7N	17.8W	1543	2.99M/ 9.8FT	18
TENERIFE ES	28.5N	16.2W	1540	3.00M/ 9.8FT	20
ARRECIFE ES	29.0N	13.5W	1529	2.72M/ 8.9FT	24
LASPALMAS ES	28.1N	15.4W	1532	3.80M/12.5FT	18
ALGECIRAS ES	36.2N	5.4W	1534	1.27M/ 4.2FT	26
CADIZ ES	36.5N	6.3W	1528	8.34M/27.4FT	20
HUELVA ES	37.1N	6.8W	1526	11.04M/36.2FT	22
ALBUFEIRA PT	37.1N	8.3W	1505	15.43M/50.6FT	16
PORTO SANTO PT	33.1N	16.3W	1503	10.23M/33.6FT	14

TEST... NEXT UPDATE AND ADDITIONAL INFORMATION ...TEST

-
- * THIS IS A TEST MESSAGE. THE NEXT MESSAGE WILL BE ISSUED IN ONE HOUR... OR SOONER IF THE SITUATION WARRANTS.
 - * THIS IS A TEST MESSAGE. AUTHORITATIVE INFORMATION ABOUT THE EARTHQUAKE FROM THE U.S. GEOLOGICAL SURVEY CAN BE FOUND ON THE INTERNET AT EARTHQUAKE.USGS.GOV/EARTHQUAKES -ALL IN LOWERCASE LETTERS-.
 - * THIS IS A TEST MESSAGE. FURTHER INFORMATION ABOUT THIS EVENT MAY BE FOUND AT WWW.TSUNAMI.GOV.
 - * THIS IS A TEST MESSAGE. COASTAL REGIONS OF THE US GULF COAST... US EAST COAST... AND THE MARITIME PROVINCES OF CANADA SHOULD REFER TO U.S. NATIONAL TSUNAMI WARNING CENTER MESSAGES THAT CAN BE FOUND AT WWW.TSUNAMI.GOV.

THIS IS A TEST MESSAGE. DO NOT TAKE ACTION BASED ON THIS TEST MESSAGE.

\$\$

NNNN

PTWC Message #21

ZCZC
WECA41 PHEB 200700
TSUCAX

TEST...TSUNAMI MESSAGE NUMBER 21...TEST
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
0700 UTC FRI MAR 20 2020

...THIS MESSAGE IS FOR TEST PURPOSES ONLY...
...TEST TSUNAMI THREAT MESSAGE TEST...

**** NOTICE **** NOTICE **** NOTICE **** NOTICE **** NOTICE ****

THIS IS A TEST MESSAGE. THIS MESSAGE IS ISSUED FOR INFORMATION ONLY IN SUPPORT OF THE UNESCO/IOC TSUNAMI AND OTHER COASTAL HAZARDS WARNING SYSTEM FOR THE CARIBBEAN AND ADJACENT REGIONS AND IS MEANT FOR NATIONAL AUTHORITIES IN EACH COUNTRY OF THAT SYSTEM.

THIS IS A TEST MESSAGE. NATIONAL AUTHORITIES WILL DETERMINE THE APPROPRIATE LEVEL OF ALERT FOR EACH COUNTRY AND MAY ISSUE ADDITIONAL OR MORE REFINED INFORMATION.

**** NOTICE **** NOTICE **** NOTICE **** NOTICE **** NOTICE ****

TEST... PRELIMINARY EARTHQUAKE PARAMETERS ...TEST

* MAGNITUDE	8.5
* ORIGIN TIME	1400 UTC MAR 19 2020
* COORDINATES	36.0 NORTH 10.8 WEST
* DEPTH	5 KM / 3 MILES
* LOCATION	AZORES-CAPE ST. VINCENT RIDGE

TEST... EVALUATION ...TEST

* THIS IS A TEST MESSAGE. AN EARTHQUAKE WITH A PRELIMINARY MAGNITUDE OF 8.5 OCCURRED NEAR THE AZORES-CAPE SAINT VINCENT RIDGE AT 1400 UTC ON THURSDAY MARCH 19 2020.

* THIS IS A TEST MESSAGE. TSUNAMI WAVES HAVE BEEN OBSERVED.

* THIS IS A TEST MESSAGE. BASED ON ALL AVAILABLE DATA...
HAZARDOUS TSUNAMI WAVES ARE FORECAST FOR SOME COASTS.

TEST... TSUNAMI THREAT FORECAST ...TEST

* THIS IS A TEST MESSAGE. TSUNAMI WAVES REACHING MORE THAN 3 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE ALONG SOME COASTS OF

BAHAMAS.

- * THIS IS A TEST MESSAGE. TSUNAMI WAVES REACHING 1 TO 3 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE ALONG SOME COASTS OF

BRAZIL... CUBA... DOMINICAN REPUBLIC... FRENCH GUYANE...
GUYANA... HAITI... SURINAME... VENEZUELA... ANGUILLA...
ANTIGUA AND BARBUDA... BARBADOS... BERMUDA... DOMINICA...
GRENADA... GUADELOUPE... MARTINIQUE... PUERTO RICO AND
VIRGIN ISLANDS... SAINT BARTHELEMY... SAINT LUCIA... SAINT
VINCENT AND THE GRENADINES... TRINIDAD AND TOBAGO... AND
TURKS AND CAICOS ISLANDS.

- * THIS IS A TEST MESSAGE. TSUNAMI WAVES REACHING 0.3 TO 1 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE FOR SOME COASTS OF

COLOMBIA... ARUBA... BONAIRE... CURACAO... JAMAICA...
MONTSERRAT... SABA AND SAINT EUSTATIUS... SAINT KITTS AND
NEVIS... SINT MAARTEN... AND SAINT MARTIN.

- * THIS IS A TEST MESSAGE. ACTUAL AMPLITUDES AT THE COAST MAY VARY FROM FORECAST AMPLITUDES DUE TO UNCERTAINTIES IN THE FORECAST AND LOCAL FEATURES. IN PARTICULAR MAXIMUM TSUNAMI AMPLITUDES ON ATOLLS OR SMALL ISLANDS AND AT LOCATIONS WITH FRINGING OR BARRIER REEFS WILL LIKELY BE MUCH SMALLER THAN THE FORECAST INDICATES.

- * THIS IS A TEST MESSAGE. FOR ALL OTHER AREAS COVERED BY THIS MESSAGE... THERE IS NO TSUNAMI THREAT ALTHOUGH SMALL SEA LEVEL CHANGES MAY OCCUR.

TEST... RECOMMENDED ACTIONS ...TEST

- * THIS IS A TEST MESSAGE. GOVERNMENT AGENCIES RESPONSIBLE FOR THREATENED COASTAL AREAS SHOULD TAKE ACTION TO INFORM AND INSTRUCT ANY COASTAL POPULATIONS AT RISK IN ACCORDANCE WITH THEIR OWN EVALUATION... PROCEDURES AND THE LEVEL OF THREAT.
- * THIS IS A TEST MESSAGE. PERSONS LOCATED IN THREATENED COASTAL AREAS SHOULD STAY ALERT FOR INFORMATION AND FOLLOW INSTRUCTIONS FROM NATIONAL AND LOCAL AUTHORITIES.

TEST... POTENTIAL IMPACTS ...TEST

- * THIS IS A TEST MESSAGE. A TSUNAMI IS A SERIES OF WAVES. THE TIME BETWEEN WAVE CRESTS CAN VARY FROM 5 MINUTES TO AN HOUR. THE HAZARD MAY PERSIST FOR MANY HOURS OR LONGER AFTER THE INITIAL WAVE.
- * THIS IS A TEST MESSAGE. IMPACTS CAN VARY SIGNIFICANTLY FROM

ONE SECTION OF COAST TO THE NEXT DUE TO LOCAL BATHYMETRY AND THE SHAPE AND ELEVATION OF THE SHORELINE.

* THIS IS A TEST MESSAGE. IMPACTS CAN ALSO VARY DEPENDING UPON THE STATE OF THE TIDE AT THE TIME OF THE MAXIMUM TSUNAMI WAVES.

* THIS IS A TEST MESSAGE. PERSONS CAUGHT IN THE WATER OF A TSUNAMI MAY DROWN... BE CRUSHED BY DEBRIS IN THE WATER... OR BE SWEEPED OUT TO SEA.

TEST... TSUNAMI OBSERVATIONS ...TEST

* THIS IS A TEST MESSAGE. THE FOLLOWING ARE TSUNAMI WAVE OBSERVATIONS FROM COASTAL AND/OR DEEP-OCEAN SEA LEVEL GAUGES AT THE INDICATED LOCATIONS. THE MAXIMUM TSUNAMI HEIGHT IS MEASURED WITH RESPECT TO THE NORMAL TIDE LEVEL.

GAUGE LOCATION	GAUGE COORDINATES		TIME OF MEASURE (UTC)	MAXIMUM TSUNAMI HEIGHT	WAVE PERIOD (MIN)
	LAT	LON			
PORT STANLEY UK	51.8S	57.9W	0544	0.12M/ 0.4FT	22
KING EDWARD POINT U	54.3S	36.5W	0422	0.18M/ 0.6FT	22
GOUGH ISLAND UK	40.3S	9.9W	0230	0.23M/ 0.7FT	26
TRISTAN DA CUNHA UK	37.0S	12.3W	0146	0.27M/ 0.9FT	16
WOODS HOLE MA	41.5N	70.7W	0140	0.83M/ 2.7FT	14
ARRAIAL DO CABO BR	23.0S	42.0W	0127	0.16M/ 0.5FT	18
KEY WEST FL	24.6N	81.8W	0122	0.10M/ 0.3FT	26
NEW LONDON CT	41.4N	72.1W	0119	0.89M/ 2.9FT	24
ISLA MUJERES MX	21.3N	86.7W	0109	0.06M/ 0.2FT	14
BOCAS DEL TORO PA	9.4N	82.3W	0105	0.19M/ 0.6FT	24
VACA KEY FL	24.7N	81.1W	0059	0.15M/ 0.5FT	28
CEIBA CABOTAGE HN	15.8N	86.8W	0055	0.05M/ 0.2FT	22
LIMON CR	10.0N	83.0W	0051	0.28M/ 0.9FT	14
SIAN KAN MX	19.3N	87.4W	0040	0.07M/ 0.2FT	20
PUERTO MORELOS MX	20.9N	86.9W	0032	0.07M/ 0.2FT	20
PUERTO MORELOS MX	20.9N	86.9W	0034	0.07M/ 0.2FT	24
SAPZURRO CO	8.7N	77.4W	0026	0.18M/ 0.6FT	24
EL PORVENIR PA	9.6N	78.9W	0020	0.21M/ 0.7FT	16
SAN ANDRES CO	12.6N	81.7W	0021	0.20M/ 0.7FT	22
NEWPORT RI	41.5N	71.3W	0003	0.82M/ 2.7FT	22
ISLA NAVAL CO	10.2N	75.8W	2351	0.17M/ 0.6FT	22
PORT ROYAL JM	17.9N	76.8W	2353	0.46M/ 1.5FT	26
SANTA MARTA CO	11.2N	74.2W	2334	0.26M/ 0.9FT	16
SALVADOR BR	13.0S	38.5W	2331	0.33M/ 1.1FT	22
PORT OF SPAIN TT	10.6N	61.5W	2314	1.01M/ 3.3FT	26
NANTUCKET ISLAND MA	41.3N	70.1W	2305	0.81M/ 2.7FT	18
SAINT HELENA UK	15.9S	5.7W	2307	0.37M/ 1.2FT	14
SAINT HELENA RUPERT	15.9S	5.7W	2307	0.37M/ 1.2FT	26
TORTOLA VI UK	18.4N	64.6W	2251	0.70M/ 2.3FT	24
HATTERAS NC	35.2N	75.7W	2247	1.10M/ 3.6FT	16
ORANGESTAD AW	12.5N	70.0W	2244	0.45M/ 1.5FT	28
BULLEN BAY CURACAO	12.2N	69.0W	2245	0.52M/ 1.7FT	16
BARAHONA DO	18.2N	71.1W	2237	0.34M/ 1.1FT	16
ILE ROYAL GUIANA FR	5.3N	52.6W	2229	1.35M/ 4.4FT	28

CAP HAITIEN HT	19.8N	72.2W	2217	0.93M/	3.1FT	16
PRICKLEY BAY GD	12.0N	61.8W	2216	0.59M/	1.9FT	26
DART 42407	15.3N	68.2W	2208	0.04M/	0.1FT	24
MAGUEYES ISLAND PR	18.0N	67.0W	2213	0.56M/	1.8FT	28
PUERTO PLATA DO	19.8N	70.7W	2200	0.97M/	3.2FT	16
GRAND TURK ISLAND T	21.4N	71.1W	2205	1.45M/	4.8FT	24
LAMESHURBAYSTJOHNVI	18.3N	64.7W	2205	0.83M/	2.7FT	16
BLOWING POINT AI	18.2N	63.1W	2157	0.93M/	3.1FT	26
PUNTA CANA DO	18.5N	68.4W	2159	0.85M/	2.8FT	24
MONA ISLAND PR	18.1N	67.9W	2200	0.69M/	2.3FT	24
SAINT MARTIN FR	18.1N	63.1W	2158	0.93M/	3.1FT	14
ISABELII VIEQUES PR	18.2N	65.4W	2201	0.70M/	2.3FT	16
GANTERS BAY ST LUCI	14.0N	61.0W	2155	0.64M/	2.1FT	20
MAYAGUEZ PR	18.2N	67.2W	2151	1.21M/	4.0FT	20
BARBUDA AG	17.6N	61.8W	2146	1.04M/	3.4FT	18
ESPERANZA VIEQUES P	18.1N	65.5W	2144	0.68M/	2.2FT	28
CALLIAQUA VC	13.1N	61.2W	2146	0.56M/	1.8FT	22
YABUCOA PR	18.1N	65.8W	2139	0.70M/	2.3FT	28
DART 41424	33.0N	72.7W	2141	0.10M/	0.3FT	24
ARECIBO PR	18.5N	66.7W	2139	1.57M/	5.1FT	14
LIMETREE VI	17.7N	64.8W	2134	0.62M/	2.0FT	28
BASSETERRE KN	17.3N	62.7W	2141	0.84M/	2.8FT	24
ST CROIX VI	17.7N	64.7W	2138	0.73M/	2.4FT	28
SAN JUAN PR	18.5N	66.1W	2136	1.28M/	4.2FT	28
FORT DE FRANCE MQ	14.6N	61.1W	2135	0.73M/	2.4FT	16
ROSEAU DM	15.3N	61.4W	2131	0.64M/	2.1FT	18
PORTSMOUTH DM	15.6N	61.5W	2128	0.70M/	2.3FT	28
DART 41420	23.4N	67.3W	2125	0.14M/	0.5FT	26
LE ROBERT MARTINIQUE	14.7N	60.9W	2125	1.34M/	4.4FT	28
LE PRECHEUR MARTINI	14.8N	61.2W	2126	0.66M/	2.2FT	26
DESHAIES GUADELOUPE	16.3N	61.8W	2128	0.73M/	2.4FT	22
PORT ST CHARLES BB	13.3N	59.6W	2125	1.61M/	5.3FT	28
DART 44402	39.3N	70.7W	2127	0.10M/	0.3FT	24
SAINT PIERRE MIQUEL	46.5N	56.1W	2119	1.02M/	3.4FT	20
PARHAM AT	17.1N	61.8W	2115	1.31M/	4.3FT	26
DESIRADE GUADELOUPE	16.3N	61.1W	2106	1.21M/	4.0FT	20
DART 41425	28.7N	65.7W	2110	0.25M/	0.8FT	16
DART 41421	23.4N	63.8W	2106	0.14M/	0.5FT	20
BERMUDA UK	32.4N	64.7W	2105	2.30M/	7.6FT	20
SALERNO IT	40.7N	14.8E	1906	0.07M/	0.2FT	24
SETE FR	43.4N	3.7E	1901	0.11M/	0.4FT	28
MALIN HEAD IE	55.4N	7.3W	1854	0.71M/	2.3FT	18
FOS-SUR-MER FR	43.4N	4.9E	1849	0.11M/	0.3FT	20
PORT-VENDRES FR	43.0N	3.1E	1848	0.12M/	0.4FT	22
GENOVA IT	44.4N	8.9E	1837	0.15M/	0.5FT	26
NOUADHIBOU MR	20.8N	17.0W	1835	1.22M/	4.0FT	22
IMPERIA IT	43.9N	8.0E	1820	0.13M/	0.4FT	24
MONACO MC	43.7N	7.4E	1820	0.11M/	0.4FT	28
NICE FR	43.7N	7.3E	1823	0.13M/	0.4FT	18
CARLOFORTE IT	39.1N	8.3E	1816	0.14M/	0.4FT	14
LA FIGUEIRETTE	43.5N	6.9E	1812	0.12M/	0.4FT	18
PORT FERREOL FR	43.4N	6.7E	1811	0.12M/	0.4FT	24
AJACCIO FR	41.9N	8.8E	1814	0.10M/	0.3FT	26
PRAIA CV	14.9N	23.5W	1801	0.78M/	2.6FT	22
LHERBAUDIERE FR	47.0N	2.3W	1801	0.82M/	2.7FT	26
BARCELONA ES	41.3N	2.2E	1754	0.11M/	0.4FT	16
LES SABLES DOLONNE	46.5N	1.8W	1752	0.69M/	2.3FT	22
PALMEIRA CAPE VERDE	16.8N	23.0W	1738	1.07M/	3.5FT	26

CONCARMEAU FR	47.9N	3.9W	1732	0.87M/ 2.9FT	22
VALENCIA ES	39.4N	0.3W	1728	0.19M/ 0.6FT	18
LE CONQUET FR	48.4N	4.8W	1730	0.93M/ 3.0FT	28
MIMIZAN FR	44.2N	1.3W	1702	0.69M/ 2.3FT	24
BOUCAU BAYONNE FR	43.5N	1.5W	1645	0.73M/ 2.4FT	26
CARTAGENA ES	37.6N	1.0W	1630	0.40M/ 1.3FT	28
SAID MA	35.1N	2.3W	1627	0.74M/ 2.4FT	28
PONTA DELGADA PT	37.7N	25.7W	1604	3.82M/12.5FT	22
FERROL ES	43.5N	8.3W	1600	1.46M/ 4.8FT	16
ELHIERRO ES	27.8N	17.9W	1554	1.78M/ 5.9FT	22
FUERTEVENTURA ES	28.5N	13.9W	1551	2.39M/ 7.9FT	28
LAGOMERA ES	28.1N	17.1W	1545	1.89M/ 6.2FT	16
LA PALMA ES	28.7N	17.8W	1543	2.99M/ 9.8FT	18
TENERIFE ES	28.5N	16.2W	1540	3.00M/ 9.8FT	20
ARRECIFE ES	29.0N	13.5W	1529	2.72M/ 8.9FT	24
LASPALMAS ES	28.1N	15.4W	1532	3.80M/12.5FT	18
ALGECIRAS ES	36.2N	5.4W	1534	1.27M/ 4.2FT	26
CADIZ ES	36.5N	6.3W	1528	8.34M/27.4FT	20
HUELVA ES	37.1N	6.8W	1526	11.04M/36.2FT	22
ALBUFEIRA PT	37.1N	8.3W	1505	15.43M/50.6FT	16
PORTO SANTO PT	33.1N	16.3W	1503	10.23M/33.6FT	14

TEST... NEXT UPDATE AND ADDITIONAL INFORMATION ...TEST

-
- * THIS IS A TEST MESSAGE. THE NEXT MESSAGE WILL BE ISSUED IN ONE HOUR... OR SOONER IF THE SITUATION WARRANTS.
 - * THIS IS A TEST MESSAGE. AUTHORITATIVE INFORMATION ABOUT THE EARTHQUAKE FROM THE U.S. GEOLOGICAL SURVEY CAN BE FOUND ON THE INTERNET AT EARTHQUAKE.USGS.GOV/EARTHQUAKES -ALL IN LOWERCASE LETTERS-.
 - * THIS IS A TEST MESSAGE. FURTHER INFORMATION ABOUT THIS EVENT MAY BE FOUND AT WWW.TSUNAMI.GOV.
 - * THIS IS A TEST MESSAGE. COASTAL REGIONS OF THE US GULF COAST... US EAST COAST... AND THE MARITIME PROVINCES OF CANADA SHOULD REFER TO U.S. NATIONAL TSUNAMI WARNING CENTER MESSAGES THAT CAN BE FOUND AT WWW.TSUNAMI.GOV.

THIS IS A TEST MESSAGE. DO NOT TAKE ACTION BASED ON THIS TEST MESSAGE.

\$\$

NNNN

PTWC Message #22

ZCZC
WECA41 PHEB 200800
TSUCAX

TEST...TSUNAMI MESSAGE NUMBER 22...TEST
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
0800 UTC FRI MAR 20 2020

...THIS MESSAGE IS FOR TEST PURPOSES ONLY...
...TEST FINAL TSUNAMI THREAT MESSAGE TEST...

**** NOTICE **** NOTICE **** NOTICE **** NOTICE **** NOTICE ****

THIS IS A TEST MESSAGE. THIS MESSAGE IS ISSUED FOR INFORMATION ONLY IN SUPPORT OF THE UNESCO/IOC TSUNAMI AND OTHER COASTAL HAZARDS WARNING SYSTEM FOR THE CARIBBEAN AND ADJACENT REGIONS AND IS MEANT FOR NATIONAL AUTHORITIES IN EACH COUNTRY OF THAT SYSTEM.

THIS IS A TEST MESSAGE. NATIONAL AUTHORITIES WILL DETERMINE THE APPROPRIATE LEVEL OF ALERT FOR EACH COUNTRY AND MAY ISSUE ADDITIONAL OR MORE REFINED INFORMATION.

**** NOTICE **** NOTICE **** NOTICE **** NOTICE **** NOTICE ****

TEST... PRELIMINARY EARTHQUAKE PARAMETERS ...TEST

* MAGNITUDE	8.5
* ORIGIN TIME	1400 UTC MAR 19 2020
* COORDINATES	36.0 NORTH 10.8 WEST
* DEPTH	5 KM / 3 MILES
* LOCATION	AZORES-CAPE ST. VINCENT RIDGE

TEST... EVALUATION ...TEST

* THIS IS A TEST MESSAGE. AN EARTHQUAKE WITH A PRELIMINARY MAGNITUDE OF 8.5 OCCURRED NEAR THE AZORES-CAPE SAINT VINCENT RIDGE AT 1400 UTC ON THURSDAY MARCH 19 2020.

* THIS IS A TEST MESSAGE. BASED ON ALL AVAILABLE DATA... THE TSUNAMI THREAT FROM THIS EARTHQUAKE HAS PASSED AND THERE IS NO FURTHER THREAT.

TEST... TSUNAMI THREAT FORECAST...UPDATED ...TEST

* THIS IS A TEST MESSAGE. THE TSUNAMI THREAT HAS NOW LARGELY PASSED.

TEST... RECOMMENDED ACTIONS ...TEST

- * THIS IS A TEST MESSAGE. GOVERNMENT AGENCIES RESPONSIBLE FOR ANY IMPACTED COASTAL AREAS SHOULD MONITOR CONDITIONS AT THE COAST TO DETERMINE IF AND WHEN IT IS SAFE TO RESUME NORMAL ACTIVITIES.
- * THIS IS A TEST MESSAGE. PERSONS LOCATED NEAR IMPACTED COASTAL AREAS SHOULD STAY ALERT FOR INFORMATION AND FOLLOW INSTRUCTIONS FROM LOCAL AUTHORITIES.
- * THIS IS A TEST MESSAGE. REMAIN OBSERVANT AND EXERCISE NORMAL CAUTION NEAR THE SEA.

TEST... POTENTIAL IMPACTS ...TEST

- * THIS IS A TEST MESSAGE. MINOR SEA LEVEL FLUCTUATIONS UP TO 30 CM ABOVE AND BELOW THE NORMAL TIDE MAY OCCUR IN COASTAL AREAS NEAR THE EARTHQUAKE OVER THE NEXT FEW HOURS.... AND CONTINUING FOR UP TO SEVERAL HOURS.

TEST... TSUNAMI OBSERVATIONS ...TEST

- * THIS IS A TEST MESSAGE. THE FOLLOWING ARE TSUNAMI WAVE OBSERVATIONS FROM COASTAL AND/OR DEEP-OCEAN SEA LEVEL GAUGES AT THE INDICATED LOCATIONS. THE MAXIMUM TSUNAMI HEIGHT IS MEASURED WITH RESPECT TO THE NORMAL TIDE LEVEL.

GAUGE LOCATION	GAUGE COORDINATES		TIME OF MEASURE (UTC)	MAXIMUM TSUNAMI HEIGHT	WAVE PERIOD (MIN)
	LAT	LON			
PORT STANLEY UK	51.8S	57.9W	0544	0.12M/ 0.4FT	22
KING EDWARD POINT U	54.3S	36.5W	0422	0.18M/ 0.6FT	22
GOUGH ISLAND UK	40.3S	9.9W	0230	0.23M/ 0.7FT	26
TRISTAN DA CUNHA UK	37.0S	12.3W	0146	0.27M/ 0.9FT	16
WOODS HOLE MA	41.5N	70.7W	0140	0.83M/ 2.7FT	14
ARRAIAL DO CABO BR	23.0S	42.0W	0127	0.16M/ 0.5FT	18
KEY WEST FL	24.6N	81.8W	0122	0.10M/ 0.3FT	26
NEW LONDON CT	41.4N	72.1W	0119	0.89M/ 2.9FT	24
ISLA MUJERES MX	21.3N	86.7W	0109	0.06M/ 0.2FT	14
BOCAS DEL TORO PA	9.4N	82.3W	0105	0.19M/ 0.6FT	24
VACA KEY FL	24.7N	81.1W	0059	0.15M/ 0.5FT	28
CEIBA CABOTAGE HN	15.8N	86.8W	0055	0.05M/ 0.2FT	22
LIMON CR	10.0N	83.0W	0051	0.28M/ 0.9FT	14
SIAN KAN MX	19.3N	87.4W	0040	0.07M/ 0.2FT	20
PUERTO MORELOS MX	20.9N	86.9W	0032	0.07M/ 0.2FT	20
PUERTO MORELOS MX	20.9N	86.9W	0034	0.07M/ 0.2FT	24
SAPZURRO CO	8.7N	77.4W	0026	0.18M/ 0.6FT	24
EL PORVENIR PA	9.6N	78.9W	0020	0.21M/ 0.7FT	16
SAN ANDRES CO	12.6N	81.7W	0021	0.20M/ 0.7FT	22
NEWPORT RI	41.5N	71.3W	0003	0.82M/ 2.7FT	22
ISLA NAVAL CO	10.2N	75.8W	2351	0.17M/ 0.6FT	22
PORT ROYAL JM	17.9N	76.8W	2353	0.46M/ 1.5FT	26
SANTA MARTA CO	11.2N	74.2W	2334	0.26M/ 0.9FT	16
SALVADOR BR	13.0S	38.5W	2331	0.33M/ 1.1FT	22
PORT OF SPAIN TT	10.6N	61.5W	2314	1.01M/ 3.3FT	26
NANTUCKET ISLAND MA	41.3N	70.1W	2305	0.81M/ 2.7FT	18

SAINT HELENA UK	15.9S	5.7W	2307	0.37M/	1.2FT	14
SAINT HELENA RUPERT	15.9S	5.7W	2307	0.37M/	1.2FT	26
TORTOLA VI UK	18.4N	64.6W	2251	0.70M/	2.3FT	24
HATTERAS NC	35.2N	75.7W	2247	1.10M/	3.6FT	16
ORANGESTAD AW	12.5N	70.0W	2244	0.45M/	1.5FT	28
BULLEN BAY CURACAO	12.2N	69.0W	2245	0.52M/	1.7FT	16
BARAHONA DO	18.2N	71.1W	2237	0.34M/	1.1FT	16
ILE ROYAL GUIANA FR	5.3N	52.6W	2229	1.35M/	4.4FT	28
CAP HAITIEN HT	19.8N	72.2W	2217	0.93M/	3.1FT	16
PRICKLEY BAY GD	12.0N	61.8W	2216	0.59M/	1.9FT	26
DART 42407	15.3N	68.2W	2208	0.04M/	0.1FT	24
MAGUEYES ISLAND PR	18.0N	67.0W	2213	0.56M/	1.8FT	28
PUERTO PLATA DO	19.8N	70.7W	2200	0.97M/	3.2FT	16
GRAND TURK ISLAND T	21.4N	71.1W	2205	1.45M/	4.8FT	24
LAMESHURBAYSTJOHNVI	18.3N	64.7W	2205	0.83M/	2.7FT	16
BLOWING POINT AI	18.2N	63.1W	2157	0.93M/	3.1FT	26
PUNTA CANA DO	18.5N	68.4W	2159	0.85M/	2.8FT	24
MONA ISLAND PR	18.1N	67.9W	2200	0.69M/	2.3FT	24
SAINT MARTIN FR	18.1N	63.1W	2158	0.93M/	3.1FT	14
ISABELII VIEQUES PR	18.2N	65.4W	2201	0.70M/	2.3FT	16
GANTERS BAY ST LUCI	14.0N	61.0W	2155	0.64M/	2.1FT	20
MAYAGUEZ PR	18.2N	67.2W	2151	1.21M/	4.0FT	20
BARBUDA AG	17.6N	61.8W	2146	1.04M/	3.4FT	18
ESPERANZA VIEQUES P	18.1N	65.5W	2144	0.68M/	2.2FT	28
CALLIAQUA VC	13.1N	61.2W	2146	0.56M/	1.8FT	22
YABUCOA PR	18.1N	65.8W	2139	0.70M/	2.3FT	28
DART 41424	33.0N	72.7W	2141	0.10M/	0.3FT	24
ARECIBO PR	18.5N	66.7W	2139	1.57M/	5.1FT	14
LIMETREE VI	17.7N	64.8W	2134	0.62M/	2.0FT	28
BASSETERRE KN	17.3N	62.7W	2141	0.84M/	2.8FT	24
ST CROIX VI	17.7N	64.7W	2138	0.73M/	2.4FT	28
SAN JUAN PR	18.5N	66.1W	2136	1.28M/	4.2FT	28
FORT DE FRANCE MQ	14.6N	61.1W	2135	0.73M/	2.4FT	16
ROSEAU DM	15.3N	61.4W	2131	0.64M/	2.1FT	18
PORTSMOUTH DM	15.6N	61.5W	2128	0.70M/	2.3FT	28
DART 41420	23.4N	67.3W	2125	0.14M/	0.5FT	26
LE ROBERT MARTINIQU	14.7N	60.9W	2125	1.34M/	4.4FT	28
LE PRECHEUR MARTINI	14.8N	61.2W	2126	0.66M/	2.2FT	26
DESHAIES GUADELOUPE	16.3N	61.8W	2128	0.73M/	2.4FT	22
PORT ST CHARLES BB	13.3N	59.6W	2125	1.61M/	5.3FT	28
DART 44402	39.3N	70.7W	2127	0.10M/	0.3FT	24
SAINT PIERRE MIQUEL	46.5N	56.1W	2119	1.02M/	3.4FT	20
PARHAM AT	17.1N	61.8W	2115	1.31M/	4.3FT	26
DESIRADE GUADELOUPE	16.3N	61.1W	2106	1.21M/	4.0FT	20
DART 41425	28.7N	65.7W	2110	0.25M/	0.8FT	16
DART 41421	23.4N	63.8W	2106	0.14M/	0.5FT	20
BERMUDA UK	32.4N	64.7W	2105	2.30M/	7.6FT	20
SALERNO IT	40.7N	14.8E	1906	0.07M/	0.2FT	24
SETE FR	43.4N	3.7E	1901	0.11M/	0.4FT	28
MALIN HEAD IE	55.4N	7.3W	1854	0.71M/	2.3FT	18
FOS-SUR-MER FR	43.4N	4.9E	1849	0.11M/	0.3FT	20
PORT-VENDRES FR	43.0N	3.1E	1848	0.12M/	0.4FT	22
GENOVA IT	44.4N	8.9E	1837	0.15M/	0.5FT	26
NOUADHIBOU MR	20.8N	17.0W	1835	1.22M/	4.0FT	22
IMPERIA IT	43.9N	8.0E	1820	0.13M/	0.4FT	24
MONACO MC	43.7N	7.4E	1820	0.11M/	0.4FT	28
NICE FR	43.7N	7.3E	1823	0.13M/	0.4FT	18
CARLOFORTE IT	39.1N	8.3E	1816	0.14M/	0.4FT	14

LA FIGUEIRETTE	43.5N	6.9E	1812	0.12M/ 0.4FT	18
PORT FERREOL FR	43.4N	6.7E	1811	0.12M/ 0.4FT	24
AJACCIO FR	41.9N	8.8E	1814	0.10M/ 0.3FT	26
PRAIA CV	14.9N	23.5W	1801	0.78M/ 2.6FT	22
LHERBAUDIERE FR	47.0N	2.3W	1801	0.82M/ 2.7FT	26
BARCELONA ES	41.3N	2.2E	1754	0.11M/ 0.4FT	16
LES SABLES DOLONNE	46.5N	1.8W	1752	0.69M/ 2.3FT	22
PALMEIRA CAPE VERDE	16.8N	23.0W	1738	1.07M/ 3.5FT	26
CONCARMEAU FR	47.9N	3.9W	1732	0.87M/ 2.9FT	22
VALENCIA ES	39.4N	0.3W	1728	0.19M/ 0.6FT	18
LE CONQUET FR	48.4N	4.8W	1730	0.93M/ 3.0FT	28
MIMIZAN FR	44.2N	1.3W	1702	0.69M/ 2.3FT	24
BOUCAU BAYONNE FR	43.5N	1.5W	1645	0.73M/ 2.4FT	26
CARTAGENA ES	37.6N	1.0W	1630	0.40M/ 1.3FT	28
SAID MA	35.1N	2.3W	1627	0.74M/ 2.4FT	28
PONTA DELGADA PT	37.7N	25.7W	1604	3.82M/12.5FT	22
FERROL ES	43.5N	8.3W	1600	1.46M/ 4.8FT	16
ELHIERRO ES	27.8N	17.9W	1554	1.78M/ 5.9FT	22
FUERTEVENTURA ES	28.5N	13.9W	1551	2.39M/ 7.9FT	28
LAGOMERA ES	28.1N	17.1W	1545	1.89M/ 6.2FT	16
LA PALMA ES	28.7N	17.8W	1543	2.99M/ 9.8FT	18
TENERIFE ES	28.5N	16.2W	1540	3.00M/ 9.8FT	20
ARRECIFE ES	29.0N	13.5W	1529	2.72M/ 8.9FT	24
LASPALMAS ES	28.1N	15.4W	1532	3.80M/12.5FT	18
ALGECIRAS ES	36.2N	5.4W	1534	1.27M/ 4.2FT	26
CADIZ ES	36.5N	6.3W	1528	8.34M/27.4FT	20
HUELVA ES	37.1N	6.8W	1526	11.04M/36.2FT	22
ALBUFEIRA PT	37.1N	8.3W	1505	15.43M/50.6FT	16
PORTO SANTO PT	33.1N	16.3W	1503	10.23M/33.6FT	14

TEST... NEXT UPDATE AND ADDITIONAL INFORMATION ...TEST

-
- * THIS IS A TEST MESSAGE. THIS WILL BE THE FINAL STATEMENT ISSUED FOR THIS EVENT UNLESS NEW INFORMATION IS RECEIVED OR THE SITUATION CHANGES.
 - * THIS IS A TEST MESSAGE. AUTHORITATIVE INFORMATION ABOUT THE EARTHQUAKE FROM THE U.S. GEOLOGICAL SURVEY CAN BE FOUND ON THE INTERNET AT EARTHQUAKE.USGS.GOV/EARTHQUAKES -ALL IN LOWERCASE LETTERS-.
 - * THIS IS A TEST MESSAGE. FURTHER INFORMATION ABOUT THIS EVENT MAY BE FOUND AT WWW.TSUNAMI.GOV.
 - * THIS IS A TEST MESSAGE. COASTAL REGIONS OF THE US GULF COAST... US EAST COAST... AND THE MARITIME PROVINCES OF CANADA SHOULD REFER TO U.S. NATIONAL TSUNAMI WARNING CENTER MESSAGES THAT CAN BE FOUND AT WWW.TSUNAMI.GOV.

THIS IS A TEST MESSAGE. DO NOT TAKE ACTION BASED ON THIS TEST MESSAGE.

\$\$

NNNN

ANNEX VII

SAMPLE PRESS RELEASE FOR LOCAL MEDIA

TEMPLATE FOR NEWS RELEASE

USE AGENCY MASTHEAD

Contact: (insert name)

FOR IMMEDIATE RELEASE

(insert phone number)

(insert date)

(insert email address)

CARIBBEAN TSUNAMI EXERCISE TO BE CONDUCTED MARCH 19, 2020

(insert community/county/state name) will join other localities in the Caribbean as a participant in a tsunami response exercise on March 19, 2020. The purpose of this exercise is to evaluate national and local tsunami response plans, increase tsunami preparedness, and improve coordination throughout the region. This exercise includes two simulated scenarios of an earthquake occurrence in Jamaica and Portugal.

(insert a promotional comment from a local official, such as “The 2010 Haiti, 2010, 2014, 2015 Chilean, 2011 Japan, and the recent 2018 Sulawesi earthquakes and tsunamis have reminded the world of the urgent need to be more prepared for such events,” said (insert name of appropriate official). “This important exercise will test the current procedures of the Tsunami Warning System and help identify operational strengths and weaknesses in each community.” (Please modify for uniqueness.))

The exercise, titled CARIBE WAVE 20, will simulate a widespread Tsunami Threat situation throughout the Caribbean, which requires implementation of local tsunami response plans. The exercise will *(insert “include” or “not include”)* public notification.

The exercise will simulate *(insert description of chosen scenario - source and appropriate local time)* on March 19, 2020. A handbook has been prepared which describes the scenarios and contains tsunami messages from the Pacific Tsunami Warning Center (PTWC). The PTWC is the Regional Tsunami Service Provider for the other countries in the Caribbean Sea and Adjacent Regions.

Insert paragraph tailored for specific community. Could identify participating agencies and specific plans. Could describe current early warning program, past tsunami exercises (if any), ongoing mitigation and public education programs, etc. Could describe tsunami threat, history of tsunami hazards, if any.

If any real tsunami threat occurs during the time period of the exercise, the exercise will be terminated.

The exercise is sponsored by the UNESCO/IOC Intergovernmental Coordination Group for Tsunami and Other Coastal Hazards Warning System for the Caribbean and Adjacent Regions (ICG/CARIBE-EWS), the Caribbean Emergency Management Agency (CDEMA), the Centro de Coordinación para la Prevención de los Desastres Naturales en América Central (CEPREDENAC), EMIZ Antillas and the U.S. National Oceanic and Atmospheric Administration (NOAA).

For more information on the U.S. tsunami warning system, see <https://www.tsunami.gov>.

For more information on the ICG/CARIBE-EWS, see http://ioc-tsunami.org/index.php?option=com_oe&task=viewEventRecord&eventID=2359.

###

On the Web:

ICG/CARIBE EWS

<http://www.ioc-tsunami.org>

Pacific Tsunami Warning Center

<https://tsunami.gov>

NOAA Tsunami Program

<https://www.tsunami.gov>

Caribbean Tsunami Warning Program

<https://www.weather.gov/ctwp/>

Caribbean Tsunami Information Centre

<https://www.ctic.ioc-unesco.org>

Insert state/local emergency response URLs

ANNEX VIII

LIST OF ACRONYMS

AISR	Aeronautical Information System Replacement
AWIPS	Advanced Weather Interactive Processing System
CDEMA	Caribbean Disaster Emergency Management Agency
CEPREDENAC	Coordination Centre for the Prevention of Natural Disasters in Central America
CTIC	Caribbean Tsunami Information Centre
CTWP	Caribbean Tsunami Warning Program
CW	Caribe Wave
EAS	Emergency Alert System
EMIZA	État-major Interministériel de la Zone de Défense et de Sécurité Antilles
EMO	Emergency Management Organization
EMWIN	Emergency Managers Weather Information Network
EOC	Emergency Operations Center
EOP	Emergency Operations Plan
EPGFZ	Enriquillo-Plantain Garden Fault Zone
GDP	Gross Domestic Product
GMT	Generic Mapping Tool
GTS	Global Telecommunication System
ICG	Intergovernmental Coordination Group
ICG/CARIBE-EWS	Intergovernmental Coordination Group for the Tsunami and Other Coastal Hazards Warning System for the Caribbean and Adjacent Regions
IOC	Intergovernmental Oceanographic Commission
ITIC	International Tsunami Information Center
MS	Member States
NCEI	National Centers for Environmental Information
NDMO	National Disaster Management Office

NOAA	U.S. National Oceanic and Atmospheric Administration
NTWC	National Tsunami Warning Centre
NWWS	NOAA Weather Wire Service
OEM	Offices of Emergency Management
PAGER	Prompt Assessment of Global Earthquakes for Response
PRSN	Puerto Rico Seismic Network
PTWC	Pacific Tsunami Warning Center
SCDB	Southern Caribbean Deformed Belt
SOP	Standard Operating Procedures
SRC	Seismic Research Centre
TER	Tsunami Emergency Response
TT	Task Team
TWFP	Tsunami Warning Focal Points
UNESCO	United Nations Educational, Scientific, and Cultural Organization
USGS	United States Geological Survey
WMO	World Meteorological Organization

IOC Technical Series

No.	Title	Languages
1	Manual on International Oceanographic Data Exchange. 1965	(out of stock)
2	Intergovernmental Oceanographic Commission (Five years of work). 1966	(out of stock)
3	Radio Communication Requirements of Oceanography. 1967	(out of stock)
4	Manual on International Oceanographic Data Exchange - Second revised edition. 1967	(out of stock)
5	Legal Problems Associated with Ocean Data Acquisition Systems (ODAS). 1969	(out of stock)
6	Perspectives in Oceanography, 1968	(out of stock)
7	Comprehensive Outline of the Scope of the Long-term and Expanded Programme of Oceanic Exploration and Research. 1970	(out of stock)
8	IGOSS (Integrated Global Ocean Station System) - General Plan Implementation Programme for Phase I. 1971	(out of stock)
9	Manual on International Oceanographic Data Exchange - Third Revised Edition. 1973	(out of stock)
10	Bruun Memorial Lectures, 1971	E, F, S, R
11	Bruun Memorial Lectures, 1973	(out of stock)
12	Oceanographic Products and Methods of Analysis and Prediction. 1977	E only
13	International Decade of Ocean Exploration (IDOE), 1971-1980. 1974	(out of stock)
14	A Comprehensive Plan for the Global Investigation of Pollution in the Marine Environment and Baseline Study Guidelines. 1976	E, F, S, R
15	Bruun Memorial Lectures, 1975 - Co-operative Study of the Kuroshio and Adjacent Regions. 1976	(out of stock)
16	Integrated Ocean Global Station System (IGOSS) General Plan and Implementation Programme 1977-1982. 1977	E, F, S, R
17	Oceanographic Components of the Global Atmospheric Research Programme (GARP) . 1977	(out of stock)
18	Global Ocean Pollution: An Overview. 1977	(out of stock)
19	Bruun Memorial Lectures - The Importance and Application of Satellite and Remotely Sensed Data to Oceanography. 1977	(out of stock)
20	A Focus for Ocean Research: The Intergovernmental Oceanographic Commission - History, Functions, Achievements. 1979	(out of stock)
21	Bruun Memorial Lectures, 1979: Marine Environment and Ocean Resources. 1986	E, F, S, R
22	Scientific Report of the Interecalibration Exercise of the IOC-WMO-UNEP Pilot Project on Monitoring Background Levels of Selected Pollutants in Open Ocean Waters. 1982	(out of stock)
23	Operational Sea-Level Stations. 1983	E, F, S, R
24	Time-Series of Ocean Measurements. Vol.1. 1983	E, F, S, R
25	A Framework for the Implementation of the Comprehensive Plan for the Global Investigation of Pollution in the Marine Environment. 1984	(out of stock)
26	The Determination of Polychlorinated Biphenyls in Open-ocean Waters. 1984	E only
27	Ocean Observing System Development Programme. 1984	E, F, S, R
28	Bruun Memorial Lectures, 1982: Ocean Science for the Year 2000. 1984	E, F, S, R
29	Catalogue of Tide Gauges in the Pacific. 1985	E only
30	Time-Series of Ocean Measurements. Vol. 2. 1984	E only
31	Time-Series of Ocean Measurements. Vol. 3. 1986	E only
32	Summary of Radiometric Ages from the Pacific. 1987	E only
33	Time-Series of Ocean Measurements. Vol. 4. 1988	E only
34	Bruun Memorial Lectures, 1987: Recent Advances in Selected Areas of Ocean Sciences in the Regions of the Caribbean, Indian Ocean and the Western Pacific. 1988	Composite E, F, S
35	Global Sea-Level Observing System (GLOSS) Implementation Plan. 1990	E only

(continued)

36	Bruun Memorial Lectures 1989: Impact of New Technology on Marine Scientific Research. 1991	Composite E, F, S
37	Tsunami Glossary - A Glossary of Terms and Acronyms Used in the Tsunami Literature. 1991	E only
38	The Oceans and Climate: A Guide to Present Needs. 1991	E only
39	Bruun Memorial Lectures, 1991: Modelling and Prediction in Marine Science. 1992	E only
40	Oceanic Interdecadal Climate Variability. 1992	E only
41	Marine Debris: Solid Waste Management Action for the Wider Caribbean. 1994	E only
42	Calculation of New Depth Equations for Expendable Bathymetographs Using a Temperature-Error-Free Method (Application to Sippican/TSK T-7, T-6 and T-4 XBTS. 1994	E only
43	IGOSS Plan and Implementation Programme 1996-2003. 1996	E, F, S, R
44	Design and Implementation of some Harmful Algal Monitoring Systems. 1996	E only
45	Use of Standards and Reference Materials in the Measurement of Chlorinated Hydrocarbon Residues. 1996	E only
46	Equatorial Segment of the Mid-Atlantic Ridge. 1996	E only
47	Peace in the Oceans: Ocean Governance and the Agenda for Peace; the Proceedings of <i>Pacem in Maribus</i> XXIII, Costa Rica, 1995. 1997	E only
48	Neotectonics and fluid flow through seafloor sediments in the Eastern Mediterranean and Black Seas - Parts I and II. 1997	E only
49	Global Temperature Salinity Profile Programme: Overview and Future. 1998	E only
50	Global Sea-Level Observing System (GLOSS) Implementation Plan-1997. 1997	E only
51	L'état actuel de l'exploitation des pêcheries maritimes au Cameroun et leur gestion intégrée dans la sous-région du Golfe de Guinée (<i>cancelled</i>)	F only
52	Cold water carbonate mounds and sediment transport on the Northeast Atlantic Margin. 1998	E only
53	The Baltic Floating University: Training Through Research in the Baltic, Barents and White Seas - 1997. 1998	E only
54	Geological Processes on the Northeast Atlantic Margin (8 th training-through-research cruise, June-August 1998). 1999	E only
55	Bruun Memorial Lectures, 1999: Ocean Predictability. 2000	E only
56	Multidisciplinary Study of Geological Processes on the North East Atlantic and Western Mediterranean Margins (9 th training-through-research cruise, June-July 1999). 2000	E only
57	Ad hoc Benthic Indicator Group - Results of Initial Planning Meeting, Paris, France, 6-9 December 1999. 2000	E only
58	Bruun Memorial Lectures, 2001: Operational Oceanography – a perspective from the private sector. 2001	E only
59	Monitoring and Management Strategies for Harmful Algal Blooms in Coastal Waters. 2001	E only
60	Interdisciplinary Approaches to Geoscience on the North East Atlantic Margin and Mid-Atlantic Ridge (10 th training-through-research cruise, July-August 2000). 2001	E only
61	Forecasting Ocean Science? Pros and Cons, Potsdam Lecture, 1999. 2002	E only
62	Geological Processes in the Mediterranean and Black Seas and North East Atlantic (11 th training-through-research cruise, July- September 2001). 2002	E only
63	Improved Global Bathymetry – Final Report of SCOR Working Group 107. 2002	E only
64	R. Revelle Memorial Lecture, 2006: Global Sea Levels, Past, Present and Future. 2007	E only
65	Bruun Memorial Lectures, 2003: Gas Hydrates – a potential source of energy from the oceans. 2003	E only
66	Bruun Memorial Lectures, 2003: Energy from the Sea: the potential and realities of Ocean Thermal Energy Conversion (OTEC). 2003	E only

67	Interdisciplinary Geoscience Research on the North East Atlantic Margin, Mediterranean Sea and Mid-Atlantic Ridge (12 th training-through-research cruise, June-August 2002). 2003	E only
68	Interdisciplinary Studies of North Atlantic and Labrador Sea Margin Architecture and Sedimentary Processes (13 th training-through-research cruise, July-September 2003). 2004	E only
69	Biodiversity and Distribution of the Megafauna / Biodiversité et distribution de la mégafaune. 2006 Vol.1 The polymetallic nodule ecosystem of the Eastern Equatorial Pacific Ocean / Ecosystème de nodules polymétalliques de l'océan Pacifique Est équatorial Vol.2 Annotated photographic Atlas of the echinoderms of the Clarion-Clipperton fracture zone / Atlas photographique annoté des échinodermes de la zone de fractures de Clarion et de Clipperton Vol.3 Options for the management and conservation of the biodiversity — The nodule ecosystem in the Clarion Clipperton fracture zone: scientific, legal and institutional aspects	E F
70	Interdisciplinary geoscience studies of the Gulf of Cadiz and Western Mediterranean Basin (14 th training-through-research cruise, July-September 2004). 2006	E only
71	Indian Ocean Tsunami Warning and Mitigation System, IOTWS. Implementation Plan, 7–9 April 2009 (2 nd Revision). 2009	E only
72	Deep-water Cold Seeps, Sedimentary Environments and Ecosystems of the Black and Tyrrhenian Seas and the Gulf of Cadiz (15 th training-through-research cruise, June–August 2005). 2007	E only
73	Implementation Plan for the Tsunami Early Warning and Mitigation System in the North-Eastern Atlantic, the Mediterranean and Connected Seas (NEAMTWS), 2007–2011. 2007 (<i>electronic only</i>)	E only
74	Bruun Memorial Lectures, 2005: The Ecology and Oceanography of Harmful Algal Blooms – Multidisciplinary approaches to research and management. 2007	E only
75	National Ocean Policy. The Basic Texts from: Australia, Brazil, Canada, China, Colombia, Japan, Norway, Portugal, Russian Federation, United States of America. (Also Law of Sea Dossier 1). 2008	E only
76	Deep-water Depositional Systems and Cold Seeps of the Western Mediterranean, Gulf of Cadiz and Norwegian Continental margins (16 th training-through-research cruise, May–July 2006). 2008	E only
77	Indian Ocean Tsunami Warning and Mitigation System (IOTWS) – 12 September 2007 Indian Ocean Tsunami Event. Post-Event Assessment of IOTWS Performance. 2008	E only
78	Tsunami and Other Coastal Hazards Warning System for the Caribbean and Adjacent Regions (CARIBE EWS) – Implementation Plan 2013–2017 (Version 2.0). 2013	E only
79	Filling Gaps in Large Marine Ecosystem Nitrogen Loadings Forecast for 64 LMEs – GEF/LME global project Promoting Ecosystem-based Approaches to Fisheries Conservation and Large Marine Ecosystems. 2008	E only
80	Models of the World's Large Marine Ecosystems. GEF/LME Global Project Promoting Ecosystem-based Approaches to Fisheries Conservation and Large Marine Ecosystems. 2008	E only
81	Indian Ocean Tsunami Warning and Mitigation System (IOTWS) – Implementation Plan for Regional Tsunami Watch Providers (RTWP). 2008	E only
82	Exercise Pacific Wave 08 – A Pacific-wide Tsunami Warning and Communication Exercise, 28–30 October 2008. 2008	E only
83.	<i>Cancelled</i>	
84.	Global Open Oceans and Deep Seabed (GOODS) Bio-geographic Classification. 2009	E only
85.	Tsunami Glossary	E, F, S
86	Pacific Tsunami Warning System (PTWS) Implementation Plan	<i>Electronic publication</i>

(continued)

87.	Operational Users Guide for the Pacific Tsunami Warning and Mitigation System (PTWS) – Second Edition. 2011	E only
88.	Exercise Indian Ocean Wave 2009 (IOWave09) – An Indian Ocean-wide Tsunami Warning and Communication Exercise – 14 October 2009. 2009	E only
89.	Ship-based Repeat Hydrography: A Strategy for a Sustained Global Programme. 2009	E only
90.	12 January 2010 Haiti Earthquake and Tsunami Event Post-Event Assessment of CARIBE EWS Performance. 2010	E only
91.	Compendium of Definitions and Terminology on Hazards, Disasters, Vulnerability and Risks in a coastal context	<i>Under preparation</i>
92.	27 February 2010 Chile Earthquake and Tsunami Event – Post-Event Assessment of PTWS Performance (Pacific Tsunami Warning System). 2010	E only
93.	Exercise CARIBE WAVE 11 / LANTEX 11—A Caribbean Tsunami Warning Exercise, 23 March 2011	
	Vol. 1 Participant Handbook / Exercise CARIBE WAVE 11 —Exercice d'alerte au tsunami dans les Caraïbes, 23 mars 2011. Manuel du participant / Ejercicio Caribe Wave 11. Un ejercicio de alerta de tsunami en el Caribe, 23 de marzo de 2011. Manual del participante. 2010	E/F/S
	Vol. 2 Report. 2011	E only
	Vol. 3 Supplement: Media Reports. 2011	E/F/S
94.	Cold seeps, coral mounds and deep-water depositional systems of the Alboran Sea, Gulf of Cadiz and Norwegian continental margin (17th training-through-research cruise, June–July 2008)	E only
95.	International Post-Tsunami Survey for the 25 October 2010 Mentawai, Indonesia Tsunami	E only
96.	Pacific Tsunami Warning System (PTWS) 11 March 2011 Off Pacific coast of Tohoku, Japan, Earthquake and Tsunami Event. Post-Event Assessment of PTWS Performance	E only
97.	Exercise PACIFIC WAVE 11: A Pacific-wide Tsunami Warning and Communication Exercise, 9–10 November 2011	
	Vol. 1 Exercise Manual. 2011	E only
	Vol. 2 Report. 2013	E only
98.	Tsunami Early Warning and Mitigation System in the North-Eastern Atlantic, the Mediterranean and connected seas. First Enlarged Communication Test Exercise (ECTE1). Exercise Manual and Evaluation Report. 2011	E only
99.	Exercise INDIAN OCEAN WAVE 2011 – An Indian Ocean-wide Tsunami Warning and Communication Exercise, 12 October 2011	E only
	Vol. 1 Exercise Manual. 2011	
	Supplement: Bulletins from the Regional Tsunami Service Providers	
	Vol. 2 Exercise Report. 2013	
100.	Global Sea Level Observing System (GLOSS) Implementation Plan – 2012. 2012	E only
101.	Exercise Caribe Wave/Lantex 13. A Caribbean Tsunami Warning Exercise, 20 March 2013. Volume 1: Participant Handbook. 2012	E only
102.	Tsunami Early Warning and Mitigation System in the North-Eastern Atlantic, the Mediterranean and Connected Seas — Second Enlarged Communication Test Exercise (CTE2), 22 May 2012.	E only
	Vol. 1 Exercise Manual. 2012	
	Vol. 2 Evaluation Report. 2014	
103.	Exercise NEAMWAVE 12. A Tsunami Warning and Communication Exercise for the North-eastern Atlantic, the Mediterranean, and Connected Seas Region, 27–28 November 2012.	E only
	Vol. 1: Exercise Manual. 2012	
	Vol. 2: Evaluation Report. 2013	
104.	Seísmo y tsunami del 27 de agosto de 2012 en la costa del Pacífico frente a El Salvador, y seísmo del 5 de septiembre de 2012 en la costa del Pacífico frente a Costa Rica. Evaluación subsiguiente sobre el funcionamiento del Sistema de Alerta contra los Tsunamis y Atenuación de sus Efectos en el Pacífico. 2012	Español solamente (resumen en inglés y francés)
105.	Users Guide for the Pacific Tsunami Warning Center Enhanced Products for the Pacific Tsunami Warning System, August 2014. Revised Edition. 2014	E, S

106.	Exercise Pacific Wave 13. A Pacific-wide Tsunami Warning and Enhanced Products Exercise, 1–14 May 2013. Vol. 1 Exercise Manual. 2013 Vol. 2 Summary Report. 2013	E only
107.	Tsunami Public Awareness and Education Strategy for the Caribbean and Adjacent Regions. 2013	E only
108.	Pacific Tsunami Warning and Mitigation System (PTWS) Medium-Term Strategy, 2014–2021. 2013	E only
109.	Exercise Caribe Wave/Lantex 14. A Caribbean and Northwestern Atlantic Tsunami Warning Exercise, 26 March 2014. Vol. 1 Participant Handbook. 2014	E/S
110.	Directory of atmospheric, hydrographic and biological datasets for the Canary Current Large Marine Ecosystem, 3 rd edition: revised and expanded. 2017	E only
111.	Integrated Regional Assessments in support of ICZM in the Mediterranean and Black Sea Basins. 2014	E only
112.	11 April 2012 West of North Sumatra Earthquake and Tsunami Event - Post-event Assessment of IOTWS Performance	E only
113.	Exercise Indian Ocean Wave 2014: An Indian Ocean-wide Tsunami Warning and Communication Exercise. Vol.1 Manual Vol. 2 Exercise Report. 2015	E only
114.	Exercise NEAMWAVE 14. A Tsunami Warning and Communication Exercise for the North-Eastern Atlantic, the Mediterranean, and Connected Seas Region, 28–30 October 2014 Vol. 1 Manual Vol. 2 Evaluation Report – Supplement: Evaluation by Message Providers and Civil Protection Authorities	E only
115.	Oceanographic and Biological Features in the Canary Current Large Marine Ecosystem. 2015 (<i>revised in 2016</i>)	E only
116.	Tsunami Early Warning and Mitigation System in the North-Eastern Atlantic, the Mediterranean and Connected Seas. Third Enlarged Communication Test Exercise (CTE3), 1st October 2013. Vol. 1 Exercise Manual Vol. 2 Evaluation Report	E only
117.	Exercise Pacific Wave 15. A Pacific-wide Tsunami Warning and Enhanced Products Exercise, 2–6 February 2015 Vol. 1: Exercise Manual; Vol. 2: Summary Report	E only
118.	Exercise Caribe Wave/Lantex 15. A Caribbean and Northwestern Atlantic Tsunami Warning Exercise, 25 March 2015 (SW Caribbean Scenario) Vol. 1: Participant Handbook	E only
119.	Transboundary Waters Assessment Programme (TWAP) Assessment of Governance Arrangements for the Ocean Vol 1: Transboundary Large Marine Ecosystems; <u>Supplement</u> : Individual Governance Architecture Assessment for Fifty Transboundary Large Marine Ecosystems Vol 2: Areas Beyond National Jurisdiction	E only
120.	Transboundary Waters Assessment Programme (TWAP) – Status and Trends in Primary Productivity and Chlorophyll from 1996 to 2014 in Large Marine Ecosystems and the Western Pacific Warm Pool, Based on Data from Satellite Ocean Colour Sensors. 2017	E only
121.	Exercise Indian Ocean Wave 14, an Indian Ocean wide Tsunami Warning and Communications Exercise, 9–10 September 2014	<i>In preparation</i>
122.	Tsunami Early Warning and Mitigation System in the North-Eastern Atlantic, the Mediterranean and Connected Seas. Sixth Communication Test Exercise (CTE6), 29 July 2015. Vol. 1: Exercise Manual Vol. 2: Evaluation Report	E only
123	Preparing for the next tsunami in the North-Eastern Atlantic, the Mediterranean and Connected Seas – Ten years of the Tsunami Warning System (NEAMTWS). 2017 — <i>Cancelled</i>	(see IOC/INF-1340)

(continued)

124	Indicadores Marino Costeros del Pacífico Sudeste / Coastal and Marine Indicators of the Southeast Pacific (SPINCAM)	E/S
125	Exercise CARIBE WAVE 2016: A Caribbean and Adjacent Regions Tsunami Warning Exercise, 17 March 2016 (Venezuela and Northern Hispaniola Scenarios) Volume 1: Participant Handbook	E only
126	Exercise Pacific Wave 16. A Pacific-wide Tsunami Warning and Enhanced Products Exercise, 1-5 February 2016. Volume 1: Exercise Manual. Volume 2: Summary Report	E only
127	How to reduce coastal hazard risk in your community – A step by step approach	E only
128.	Exercise Indian Ocean Wave 2016: An Indian Ocean-wide Tsunami Warning and Communications Exercise, 7–8 September 2016 Vol 1: Participant Manual Vol. 2: Exercise Report	E only
129	What are Marine Ecological Time Series telling us about the Ocean – A status report	E only
130	Tsunami Watch Operations – Global Service Definition Document	E only
131	Exercise Pacific Wave 2017. A Pacific-wide Tsunami Warning and Enhanced Products Exercise, 15-17 February 2017. Volume 1: Exercise Manual Volume 2: Exercise Report	E only
132.	2nd March 2016 Southwest of Sumatra Earthquake and Tsunami Event Post-Event Assessment of the Performance of the Indian Ocean Tsunami Warning and Mitigation System; <u>Supplement</u> : Tsunami Service Provider Bulletins and Maps	E only
133.	Exercise CARIBE WAVE 17. A Caribbean and Adjacent Regions Tsunami Warning Exercise, 21 March 2017 (Costa Rica, Cuba and Northeastern Antilles Scenarios). Volume 1: Participant Handbook Volume 2: Final Report	E only
134.	Tsunami Exercise NEAMWave17 – A Tsunami Warning and Communication Exercise for the North-eastern Atlantic, the Mediterranean, and Connected Seas Region, 31 October – 3 November 2017 Volume 1: Exercise Instructions. 2017 Volume 2: Evaluation Report. 2018 Supplement: Evaluation by Message Providers and Civil Protection Authorities	E only
135.	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), October 2017	E only
136.	Exercise CARIBE WAVE 18. Tsunami Warning Exercise, 15 March 2018 (Barbados, Colombia and Puerto Rico Scenarios). Volume 1: Participant Handbook. 2017 Volume 2: Final Report	E only
137.	The Ocean is losing its breath: declining oxygen in the world's ocean and coastal waters	(under preparation)
138.	Exercise Indian Ocean Wave 2018: An Indian Ocean-wide Tsunami Warning and Communication Exercise, 4–5 September 2018 Volume 1: Exercise Manual & Supplements Volume 2: Exercise Report. 2019	E only
139.	Exercise Pacific Wave 2018. A Pacific-wide Tsunami Warning and Enhanced Products Exercise, September to November 2018. Volume 1: Exercise Manual. Volume 2: Summary Report	E only
140	Analysis of transboundary Water Ecosystems and Green and Blue Infrastructures: Intercontinental Biosphere Reserve of the Mediterranean: Andalusia (Spain) – Morocco	E F S
141	Exercise Caribe Wave 2019. A Caribbean and Adjacent Region Tsunami Warning Exercise, 14 March 2019. Volume 1: Participant handbook. Volume 2: Summary Report	E only

142	Users' Guide for the Northwest Pacific Tsunami Advisory Center (NWPTAC) – Enhanced Products for the Pacific Tsunami Warning System. 2019	E only
143	Capacity Assessment of Tsunami Preparedness in the Indian Ocean, Status Report, 2019 + Supplement: National Reports	(under preparation)
144	Indian Ocean Tsunami Warning and Mitigation System (IOTWMS): Medium Term Strategy, 2019–2024	E only
145	IOTWMS Users Guide for National Tsunami Warning Centres	(under preparation)
146	Definition of Services provided by the Tsunami Service Providers of the IOTWMS	E only
147	The Global Ocean Observing System 2030 Strategy	(under preparation)
148	Ejercicio TSUNAMI-CA 19. Un simulacro de tsunami para Centroamérica, 19 de agosto de 2019. Volumen 1, Manual para participantes.	S only
149	User's Guide for the South China Sea Tsunami Advisory Center (SCSTAC) products for the South China Sea Tsunami Warning and Mitigation System	E only
150	Limitations and Challenges of Early Warning Systems: A Case Study from the 28 September 2018 Palu-Donggala Tsunami	E, Bahasa
151	Exercise CARIBE WAVE 20. Tsunami Warning Exercise, 19 March 2020 (Jamaica and Portugal). Volume 1: Participant Handbook	E only

(continued)



EXERCISE CARIBE WAVE 20

A Caribbean and Adjacent Regions Tsunami Warning Exercise

19 March 2020

(Jamaica and Portugal Scenarios)

Volume 2

Summary Report

EXERCISE CARIBE WAVE 20

A Caribbean and Adjacent Regions Tsunami Warning Exercise

19 March 2020

(Jamaica and Portugal Scenarios)

Volume 2

Summary Report

UNESCO 2020

The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of the Secretariats of UNESCO and IOC concerning the legal status of any country or territory, or its authorities, or concerning the delimitation of the frontiers of any country or territory.

NOTE: The United Nations Educational, Scientific and Cultural Organization (UNESCO) and the Intergovernmental Oceanographic Commission (IOC) pattern the contents of this handbook after the CARIBE WAVE [2011](#), [2013](#), [2014](#), [2015](#), [2016](#), [2017](#), [2018](#) and [2019](#) Exercises. Each of these exercises has a handbook published as IOC Technical Series. These CARIBE WAVE exercises followed the Pacific Wave exercises which commenced in 2008 with manual published by the Intergovernmental Oceanographic Commission (*Exercise Pacific Wave 08: A Pacific-wide Tsunami Warning and Communication Exercise, 28–30 October 2008*, [IOC Technical Series, 82](#), Paris, UNESCO 2008). The UNESCO *How to Plan, Conduct and Evaluate Tsunami Wave Exercises*, [IOC Manuals and Guides, 58 rev.](#), Paris, UNESCO 2013 (English and Spanish) is another important reference.

For bibliographic purposes, this document should be cited as follows:

UNESCO/IOC. 2020. *Exercise CARIBE Wave 2020. A Caribbean and Adjacent Region Tsunami Warning Exercise, 19 March 2020 (Jamaica and Portugal). Volume 2: Summary Report*. Paris, UNESCO, IOC Technical Series No 151, Vol. 2. (English only)

Report prepared by: Intergovernmental Coordination Group for the Tsunami and other Coastal Hazards Warning System for the Caribbean and Adjacent Regions (ICG/CARIBE-EWS)

With special thanks to: Stephanie Soto, Elizabeth Vanacore, Christa von Hillebrandt-Andrade, Marcos Gonzalez, and Karina Tañon.

A Supplement to this Summary Report containing the national responses and various documents related to this Exercise are available at the CTWP website: <https://www.weather.gov/ctwp/caribewave20>

Published in 2020
by United Nations Educational, Scientific
and Cultural Organization
7, Place de Fontenoy, 75352 Paris 07 SP

TABLE OF CONTENTS

	page
Summary	1
1. BACKGROUND	2
2. EXERCISE CONCEPT	3
2.1 PURPOSE	3
2.2 OBJECTIVES AND GOALS	4
2.3 TYPE OF EXERCISES	5
3. EXERCISE OUTLINE	6
3.1 GENERAL	6
3.2 MASTER SCHEDULE (EXERCISE SCRIPT)	7
3.3 ACTIONS IN THE CASE OF A REAL EVENT AND FALSE ALARMS	8
3.4 REGISTRATION PROCEDURE	8
3.5 STATUS OF SEA LEVEL STATIONS DURING EXERCISE	11
3.6 RESOURCES	13
3.7 MEDIA ARRANGEMENTS	15
3.8 POST-EXERCISE EVALUATION	16
4. REFERENCES	19
 ANNEX	
I. LIST OF ACRONYMS	

Summary

The CARIBE WAVE exercise is conducted within the framework of the UNESCO Intergovernmental Coordination Group for Tsunamis and other Coastal Hazards for the Caribbean and Adjacent Regions (ICG/CARIBE-EWS) with the purpose of improving and validating tsunami readiness. Given the Covid-19 pandemic, the exercise which took place on 19 March 2020 was conducted under very different circumstances than previous years. Instead of promoting a full tsunami exercise, the ICG/CARIBE-EWS of the IOC of UNESCO agreed to focus on the communication systems at the regional level. It was left up to the Member States and Territories to decide if any additional Warning System activity would be carried out and whether to use the simulated messages for one of the two scenarios: Jamaica and Portugal.

Despite the sudden change in scope of the exercise, CARIBE WAVE 20 was held successfully with a participation of forty-four (44) out of its forty-eight (48) Member States and Territories. The high participation rate reflects the importance the countries are giving to tsunami preparedness despite the occurrence of a pandemic. Given the earthquake activity in Puerto Rico, as well as the M 7.8 earthquake off Jamaica, Cuba and the Cayman Islands in January 2020, the expectation was that CARIBE WAVE 20 would surpass the 800,000 participants from 2019. According to TsunamiZone.org, the official registration site, over 102,000 people across the entire Caribbean basin from Bermuda to Brazil signed up to participate. Registered participants included designated CARIBE-EWS Tsunami Warning Focal Points (TWFPs), National Tsunami Warning Centres (NTWCs), government agencies, preparedness organizations, healthcare, businesses and tourism industry. However, with the Coronavirus outbreak, registrations came to a halt and the number of actual participants was much less than the registered number. According to Member State feedback, 4,622 people were directly engaged in 44 Member States and Territories¹.

For the exercise, the Pacific Tsunami Warning Center (PTWC), issued a “Dummy” message at 14h00 to all officially designated Tsunami Warning Focal Points (TWFPs) and National Tsunami Warning Centres (NTWCs). The methods of communication used to disseminate the message were: the World Meteorological Organization Warning Information System (Global Telecommunication System), the Aeronautical Information Replacement System (AISR), NOAA Weather Wire, AWIPS, Fax, Email and Social Media. According to feedback, as well as social media and web posts, the dummy message was successfully sent and received, validating the communication platforms.

¹ Antigua and Barbuda, Barbados, Belize, Brazil, Colombia, Costa Rica, Cuba, Curacao, Dominica, Dominican Republic, France (Martinique, Guadeloupe, Guyane, St. Barthelemy, St. Martin), Grenada, Guatemala, Guyana, Haiti, Honduras, Jamaica, Mexico, Netherlands (Aruba, Bonaire, Saba and Sint Eustatius), Nicaragua, Panama, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Sint Maarten, Trinidad and Tobago, United Kingdom (Bermuda, British Virgin Islands, Cayman Islands and Turks and Caicos), United States (Puerto Rico and the US Virgin Islands) and Venezuela (Bolivarian Republic of).

1. BACKGROUND

The UNESCO/IOC Intergovernmental Coordination Group for the Tsunami and Other Coastal Hazards Warning System for the Caribbean and Adjacent Regions at its Eighth session ([ICG/CARIBE-EWS-VIII](#), Port of Spain, Trinidad and Tobago, 29 April–1 May 2013), decided to conduct exercises named CARIBE WAVE on an annual basis leaving each Member State to define its level of participation. At its Fourteenth session held in Costa Rica (8–11 April 2019), the ICG/CARIBE-EWS recommended that Exercise CARIBE WAVE 20 take place on 19 March 2020, with two hypothetical tsunami scenarios. The first scenario simulates a tsunami generated by a magnitude 8.0 earthquake located along the Enriquillo-Plantain Garden Fault Zone (EPGFZ) off Jamaica, and the second scenario is generated by an 8.5 magnitude earthquake located approximately 270 km off the Portugal coast.

Historical tsunami records from sources such as the NOAA's (US National Oceanic and Atmospheric Administration) National Centers for Environmental Information (NCEI) show that from 1530 to 2018 tsunamis from earthquake, landslide, and volcanic sources have affected the region. According to NCEI, in the past 500 years, at least 82 tsunamis have been observed and approximately 4,500 people have lost their lives from tsunamis in the Caribbean and adjacent regions. Since the most recent devastating tsunami of 1946, there has been an explosive population growth and influx of tourists along the Caribbean and Western Atlantic coasts increasing the tsunami vulnerability of the region ([von Hillebrandt-Andrade, 2013](#)).

Recognizing the need for an early warning system, especially after the lessons learned from the 2004 Indian Ocean tsunami, the Intergovernmental Coordination Group for the Tsunami and other Coastal Hazards Warning System for the Caribbean and Adjacent Regions (ICG/CARIBE-EWS) was established in 2005 as a subsidiary body of the UNESCO/IOC with the purpose of providing assistance to all Member States of the region to establish their own early tsunami warning system. The main objective of the CARIBE-EWS is to identify and mitigate the hazards posed by local, regional and distant tsunamis. The ultimate goal is to create a fully integrated end-to-end warning system comprising four key components: monitoring and detection systems, hazard assessment, tsunami related services (dissemination), and community preparedness, readiness and resilience.

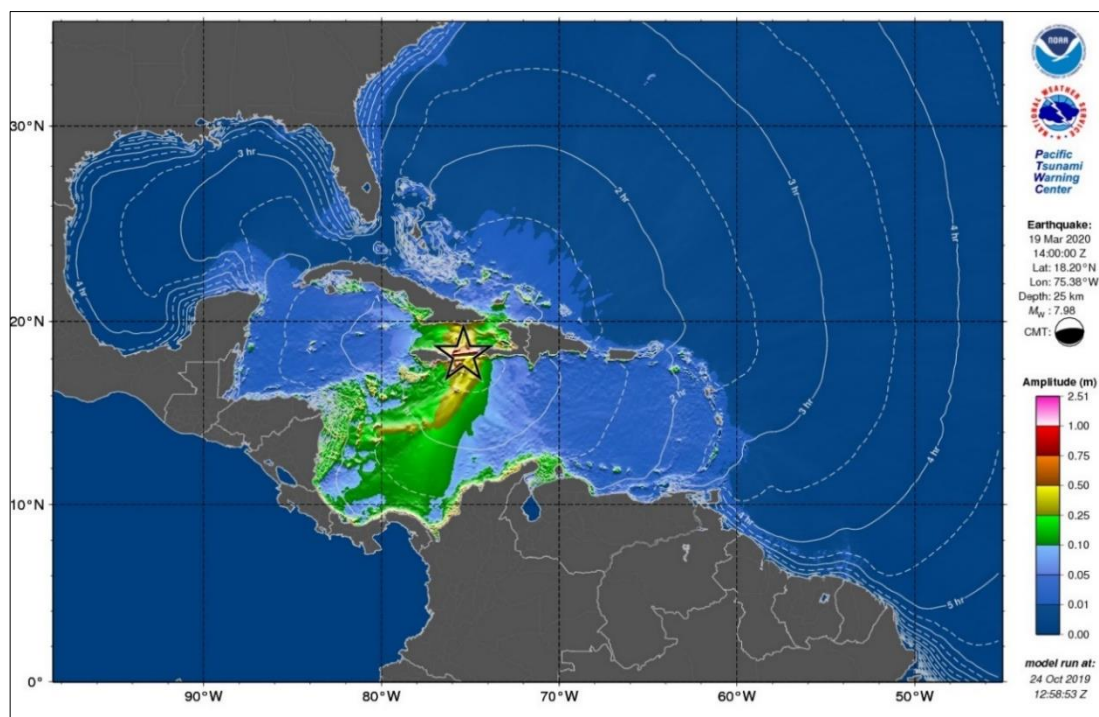


Figure 1. PTWC maximum deep-ocean amplitude map generated using RIFT for Jamaica scenario.

The CARIBE WAVE 20 exercise provided simulated threat tsunami messages from the PTWC triggered by two hypothetical earthquakes: (i) 8.0 Mw with an epicentre at 18.2°N, 75.3°W located at the Enriquillo-Plantain Garden Fault Zone (EPGFZ) off Jamaica ([Figure 1](#)) and (ii) 8.5 Mw with an epicentre at 36.0°N, 10.7°W located approximately 270 km off the Portugal coast ([Figure 2](#)).

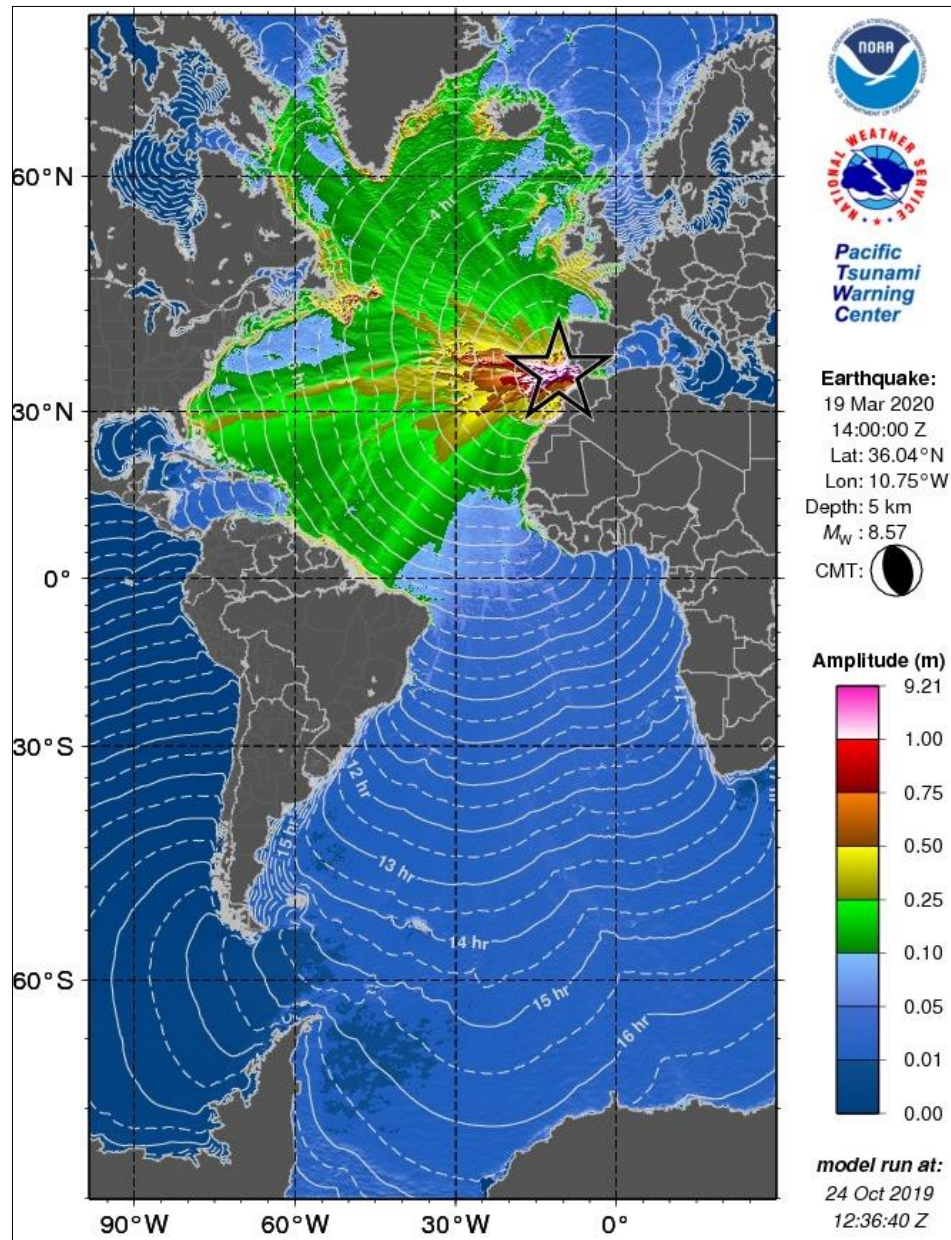


Figure 2. PTWC maximum deep-ocean amplitude map generated using RIFT for Portugal scenario.

2. EXERCISE CONCEPT

2.1 PURPOSE

The purpose of the exercise was to improve tsunami warning system effectiveness in the Caribbean and adjacent regions. The exercise provided an opportunity for emergency management organizations throughout the region to exercise their operational lines of communications, review their tsunami response procedures, and promote tsunami preparedness. Regular exercising of response plans is critical to maintain readiness in case of an emergency. This is particularly true for the Caribbean and adjacent regions, where

tsunamis are infrequent but can be of very high impact. However, given the Covid-19 pandemic situation, the scope of the exercise was reduced to focus on communication lines at a regional level.

2.2 OBJECTIVES AND GOALS

Each organization developed its objectives for the exercise depending on its level of involvement in the scenario. There were two principal overarching objectives for the exercise where only the first objective was addressed during the CARIBE WAVE 20 exercise given the pandemic circumstances.

- 1. Exercise and evaluate communications between Regional Tsunami Service Provider and Members States/Territories.**
 - a. Validate the issuance of Tsunami products from the PTWC.
 - b. Validate receipts of Tsunami products by CARIBE-EWS Tsunami Warning Focal Points (TWFPs) and/or National Tsunami Warning Centres (NTWCs).
- 2. Evaluate the tsunami procedures and programmes within Members States/Territories.**
 - a. Validate readiness to respond to a tsunami.
 - b. Validate the operational readiness of the TWFPs/NTWCs and/or the National Disaster Management Office (NDMO).
 - c. Improve operational readiness. Before the exercise, ensure appropriate tools and response plan(s) have been developed, including public education materials.
 - d. Validate that the dissemination of warnings and information/advice by TWFPs and NTWCs, to relevant in-country agencies and the public is accurate and timely.
 - e. Evaluate the status of the implementation of the pilot CARIBE-EWS Tsunami Ready recognition program.

ICG/CARIBE-EWS has established metrics to evaluate the goals of the exercise ([Table 1](#)). Only 92% of Member States and Territories submitted the Post-Exercise Survey.

Goals	2013 Results	2014 Results	2015 Results	2016 Results	2017 Results	2018 Results	2019 Metrics	2019 Results	2020 Metrics	2020 Results
TWFP receive the dummy message	98%	94%	90%	84%	95%	100%	100%	89%	100%	97%
Participation of Member States of ICG/CARIBE-EWS with designated focal warning point	94%	98% (including two MS/ Territory unofficial)	100%	100%	100%	97%	100%	100%	100%	92%
Community involvement (including agencies beyond TWFP)	75%	75%	66%	73%	82%	77%	95%	66%	95%	38%
Number of participants	44,000	191,000	191,420	332,812	679,985	643,403	+10%	793,353	+10%	4,622
Countries who participate submit exercise questionnaire	90%	100%	91%	100%	100%	91%	100%	82%	100%	92%
Members State and territories are satisfied with exercise								82%	100%	76%

Table 1. Goals and Metrics.

2.3 TYPE OF EXERCISES

The CARIBE WAVE 20 was planned for Caribbean countries to carry exercises at various scales of magnitudes and sophistication. In lights of the implications due to the coronavirus emergency, the exercise only focused on communications. Communication tests were carried out to validate the issuance and receipt of the messages distributed by the Pacific Tsunami Warning Center (PTWC), the Regional Tsunami Service Provider. A majority of National and local Offices of Emergency Management (OEM) decided to postpone the tabletop exercises and drills for when the Covid-19 situation improved.

According to the Member States, the number of participants in the exercise was 4,622 people throughout the Caribbean and Adjacent Regions. The participants in the ninth annual regional tsunami exercise hailed from 44 out of 48 Member States and Territories. It represented a participation rate of 92% of all the Member States of the UNESCO Intergovernmental Coordination Group for Tsunamis and other Coastal Hazards Warning System for the Caribbean and Adjacent Regions (CARIBE-EWS). This year the level of participation was notably impacted by the Covid-19 pandemic, however this level of participation represents the high enthusiasm from the CARIBE-EWS Members States to participate despite the trying situation. The circumstances helped preparedness organizations to develop and test the communication portion of the exercise in light of a current emergency such as a pandemic.

Exercises simulated the development, training, testing, and evaluation of Disaster Plans and Standard Operating Procedures (SOPs). The reported exercises included communication systems tests ([Figure 3](#)).

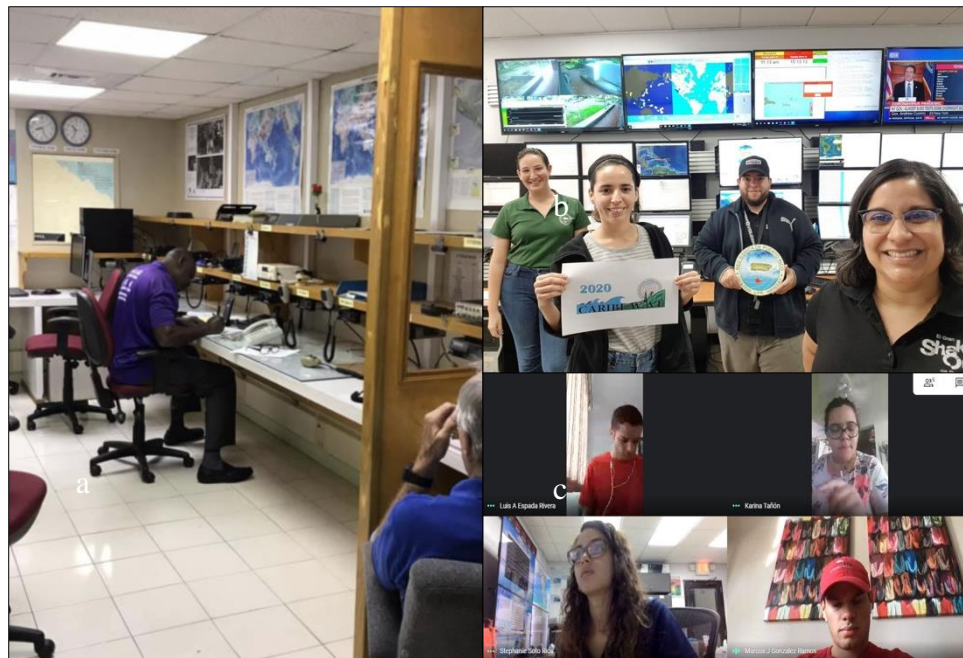


Figure 3. Examples of the communication portion of the exercise as part of the CARIBE WAVE 20: Barbados (a), Puerto Rico Seismic Network (b) and Caribbean Tsunami Warning Program (c).

3. EXERCISE OUTLINE

3.1 GENERAL

The tsunami messages that were issued for this exercise by the PTWC were based on two hypothetical earthquakes ([Figure 4](#)) with the following hypocentre parameters:

(i) Jamaica Earthquake Scenario:

Origin Time	14:00:00 UTC March 19, 2020
Latitude	18.2°N
Longitude	75.3°W
Magnitude	8.0 – M_w
Depth	25 km

(ii) Portugal Earthquake Scenario:

Origin Time	14:00:00 UTC March 19, 2020
Latitude	36.0°N
Longitude	10.7°W
Magnitude	8.5 – M_w
Depth	5 km

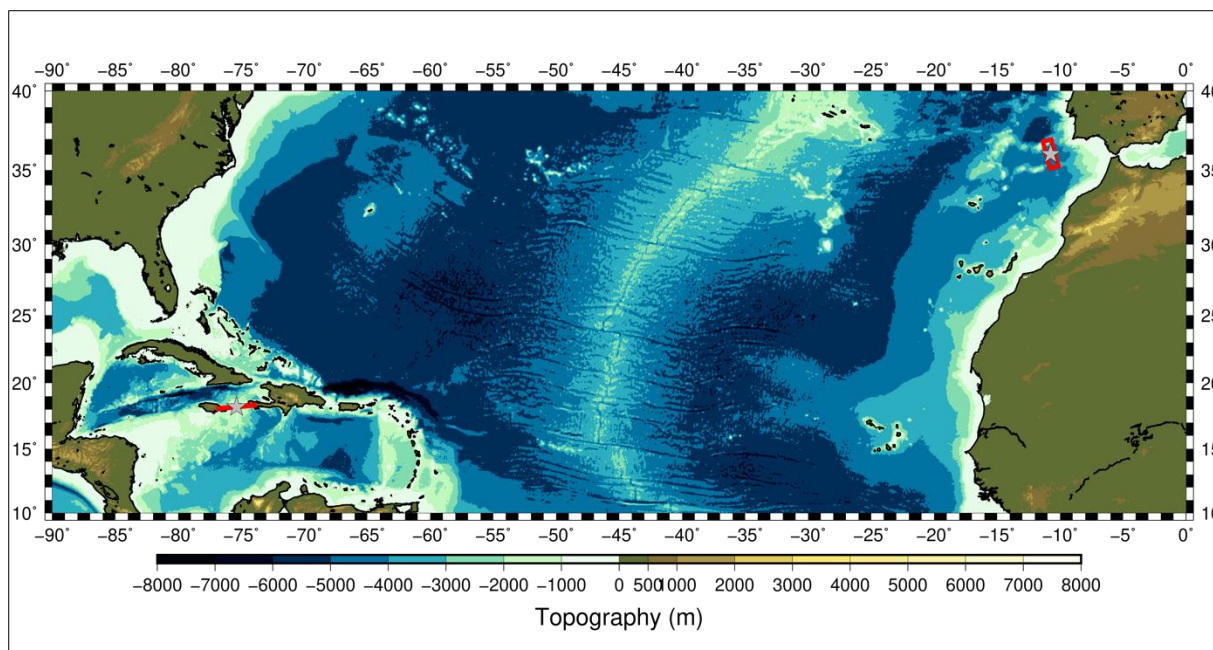


Figure 4. Map of the CARIBE WAVE 20 scenarios. Stars indicate epicentral locations and the red boxes indicate the map view of the ruptured fault segments. The figure is underlain by etopo1 model of [Amante and Eakins \(2009\)](#). This figure was generated using The Generic Mapping Tool (GMT) ([Wessel et al., 2013](#)).

Messages Issued by the PTWC

Member States were required to select one scenario by 6 March for the 2020 exercise. Those who did not select any scenario, the organizers decided for which scenario the PTWC would send the products. Given the sudden change in scope of the exercise, the PTWC issued only the Dummy (start of exercise) message all over the standard broadcast channels (WMO/AWIPS IDs WECA41 PHEB/TSUCAX) to start the CARIBE WAVE 20 exercise at 1400 UTC on 19 March 2020. The simulated messages prepared by PTWC for each of the scenarios were made available in the [Exercise Handbook](#). Any further dissemination and additional activities was left up to the corresponding national and local authorities.

3.2 MASTER SCHEDULE (EXERCISE SCRIPT)

CARIBE-EWS Tsunami Service Provider (PTWC) issued the initial Dummy message on 19 March 2019 at 1400 UTC. This message was used to test communications with Tsunami Warning Focal Points (TWFPs) and National Tsunami Warning Centres (NTWCs). In an ordinary exercise, would have marked the beginning of the exercise. The transmission methods used to send the dummy message were GTS - WIS (WMO Information System), EMWIN, AISR, NWS, Email, Fax and AWIPS (Advanced Weather Interactive Processing System), using header IDs WECA41 PHEB/TSUCAX. As in past years, the most common methods to receive the Dummy message were the Email and Fax ([Figure 5](#)).

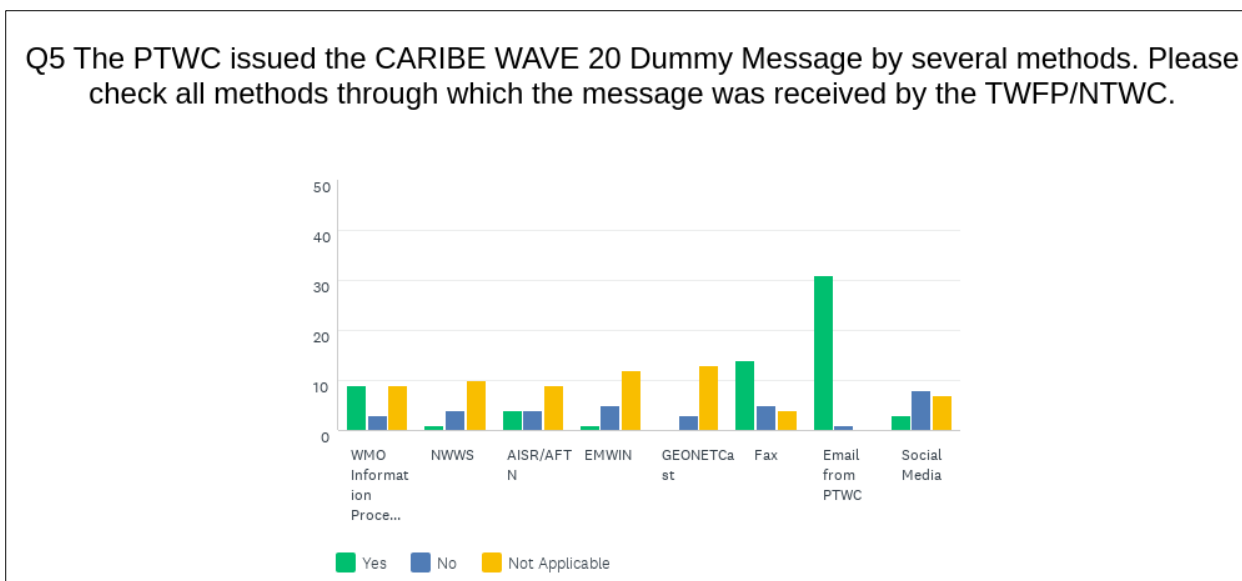


Figure 5. Methods that the CARIBE-EWS TWFPs/NTWCs used to receive the Dummy message by the PTWC.

3.3 ACTIONS IN THE CASE OF A REAL EVENT AND FALSE ALARMS

No significant real events and false alarms were reported by the Member States and Territories during the exercise. No actions were thus required.

3.4 REGISTRATION PROCEDURE

As for past exercises, the CARIBE-EWS teamed up with TsunamiZone.org for online registration ([Figure 6](#)). The link used for the registration was <http://www.tsunamizone.org/register/>. Under the “Register Here” Tab, participants were able to sign up and choose among the three major categories:

1. Myself and/or my family,
2. My school, district, college/university, or childcare centre, and
3. My organization, department, or agency (including TNCs. TWFPs and NTWCs). Emergency Management Organizations (EMOs) were encouraged to promote this registration system.

Most people registered directly on the TsunamiZone.org which is an open registration system available during the whole year. As of 13 April 2020, 102,755 people had registered ([Table 2](#)). Nevertheless, according to Member States who answered the post-exercise survey the estimated number of people actually participating were much less, 4,622 ([Table 3](#)).

Figure 6. Registration by categories and country
for the CARIBE WAVE 20 Regional Tsunami Exercise.

Category	Number of Participants
Individuals/Families	750
Childcare and Pre-Schools	280
K-12 Schools and Districts	14,172
Colleges and Universities	8,216
Government*	40,209
Businesses	2,046
Hotels and Other Lodgings	410
Healthcare	1,308
Senior Facilities/Communities	50
Disability/AFN Organizations	208
Non-Profit Organizations	836
Neighbourhood Groups	166
Preparedness Organizations	32,305
Faith-based Organizations	60
Museums, Libraries, Parks, etc.	15
Volunteer/Service Clubs	1
Youth Organizations	0
Agriculture/Livestock	0
Volunteer Radio Groups	87

*This includes TWFPs and TNCs

Category	Number of Participants
Science/Engineering Organizations	495
Media Organizations	0
Other	1,141
Total	102,755

Table 2. List of registrants and participants by Categories on TsunamiZone.org in the Caribbean (as of 06/02/2020)

Country		Participants according to Member States	Participants according to Tsunami Zone
Antigua and Barbuda		1*	0
Bahamas		0	14
Barbados		2	507
Belize		1*	5
Brazil		5	13
Colombia		1	4
Costa Rica		4	39
Cuba		350	174
Dominica		2	440
Dominican Republic		1,547	1,547
France (Martinique, Guadeloupe, Guyane, St. Barthelemy, St. Martin)		5*	888
Grenada		1,000	21,591
Guatemala		20	30
Guyana		1*	0
Haiti		100	840
Honduras		1*	0
Jamaica		1*	3
Mexico		811	1,001
Netherlands	Aruba	1*	14
	Bonaire, Saba, Sint Eustatius	10	43
	Curacao	500	22

Country		Participants according to Member States	Participants according to Tsunami Zone
	Sint Maarten	1*	0
Nicaragua		90	90
Panama		1*	12
Saint Kitts and Nevis		1*	6,000
Saint Lucia		1*	80
Saint Vincent and the Grenadines		15	200
Suriname		0	0
Trinidad and Tobago		26	60
United Kingdom	Anguilla	0	1,250
	Bermuda	6	12
	British Virgin Islands	1*	264
	Cayman Islands	1*	171
	Montserrat	0	9
	Turks and Caicos	1*	6
United States	Puerto Rico	100	10,994
	US Virgin Island	10	1,177
Venezuela		5	55,255
TOTAL		4,622	102,755

Table 3. List of participants by Country/Territory (as of 06/02/2020)

*Countries that did not provided a participation number but were part of the communication portion of the exercise.

3.5 STATUS OF SEA LEVEL STATIONS DURING EXERCISE

An analysis of sea level stations status was carried out by the NOAA Caribbean Tsunami Warning Program (CTWP) as part of the CARIBE WAVE 20 Regional Tsunami Exercise. This allowed a snapshot of the availability of sea level data. The PTWC provided simulated forecasted maximum wave heights for 45 CARIBE-EWS stations in the simulated bulletins. Only about 73% of these sea level stations were online on the IOC Sea Level facility during the exercise period (Figures 7 and 8). Several stations reported in the simulated products have not been in operation for many years. Similarly, the Tide Tool system used by many Tsunami Warning Centres had around 73% of stations available to display estimated times of arrival (Figures 9 and 10). DART had 4 of 7 stations streaming data in the Caribbean/Gulf and Atlantic thru the National Buoy Centre (Figure 11).

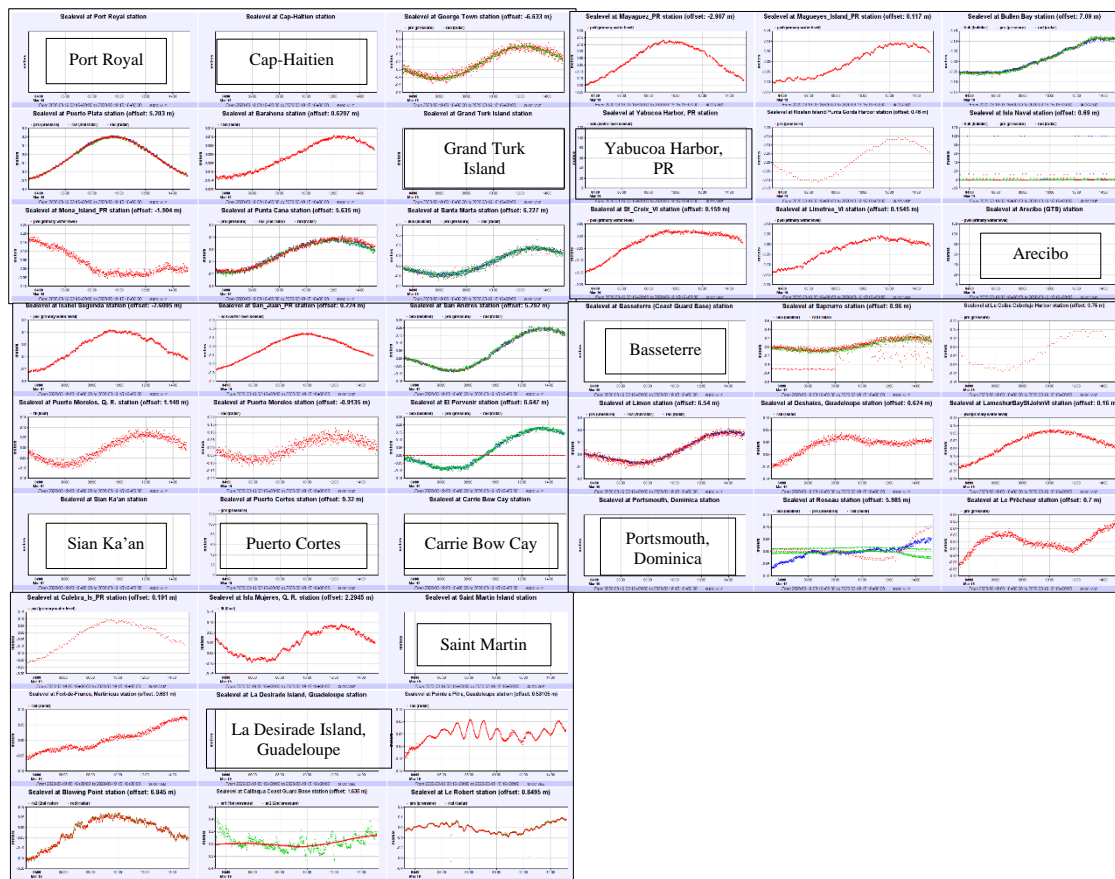


Figure 7. Sea level screen shot from 45 CARIBE-EWS coastal sea level stations during the CARIBE WAVE exercise. Stations for which the name of the station is provided, and not the wave form, are stations that had no data on the IOC Sea Level Monitoring Facility.



Figure 8. Screenshot showing IOC Sea Level facilities operating during the CARIBE WAVE 20 exercise. In green are stations for which data were available, red dots are for station for which there were no data.

3.6 RESOURCES

Although Emergency Management Organizations (EMOs) had advance notice of the exercise and some elected to set up a special dedicated shift to allow normal core business to continue uninterrupted, it was suggested that realistic resource levels be deployed in order to reflect some of the issues that are likely to be faced in a real event. Considering the pandemic, agencies were requested to adjust the exercise to their best convenience.

This year Elizabeth Vanacore was the Exercise Chair; while Alberto Lopez, Ivan Wong, Matt Hornback and Richard D Koehler were the scientific experts that helped in the determination of the Jamaica scenario; and Maria Ana Viana Baptista was the scientific expert for the Portugal scenario. The CTWP coordinated the exercise for CARIBE-EWS.

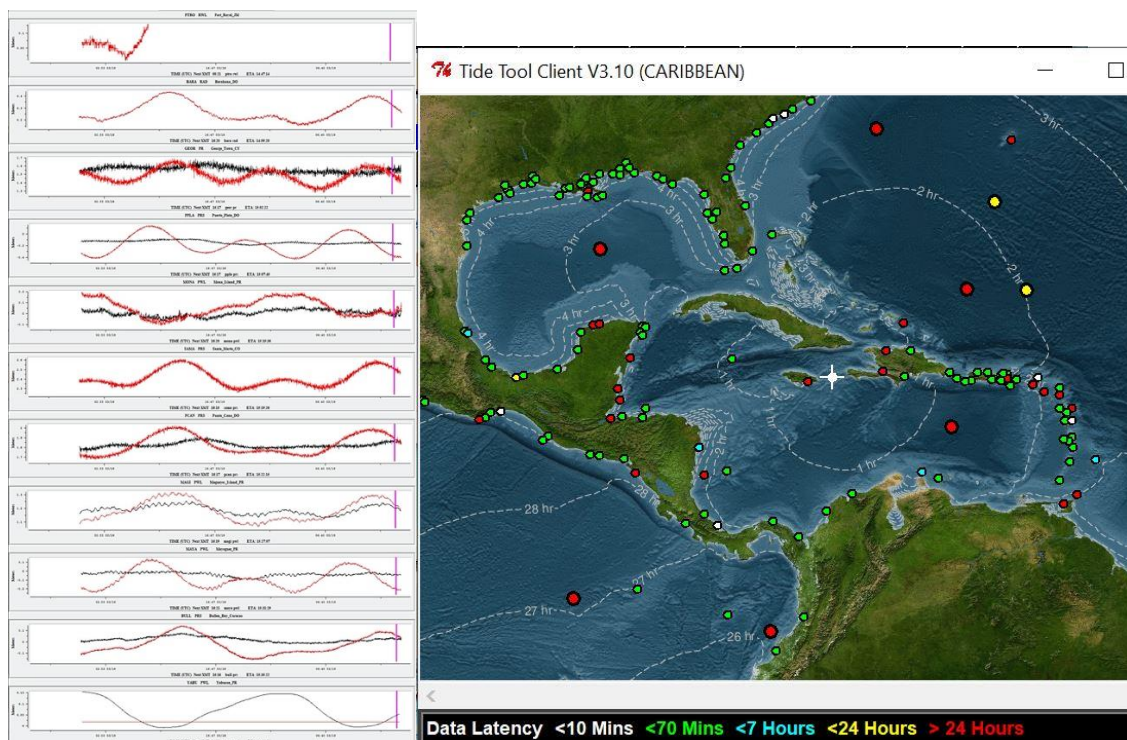


Figure 9. Screenshot from Tide Tool data for the CARIBE WAVE 20 Jamaica Scenario

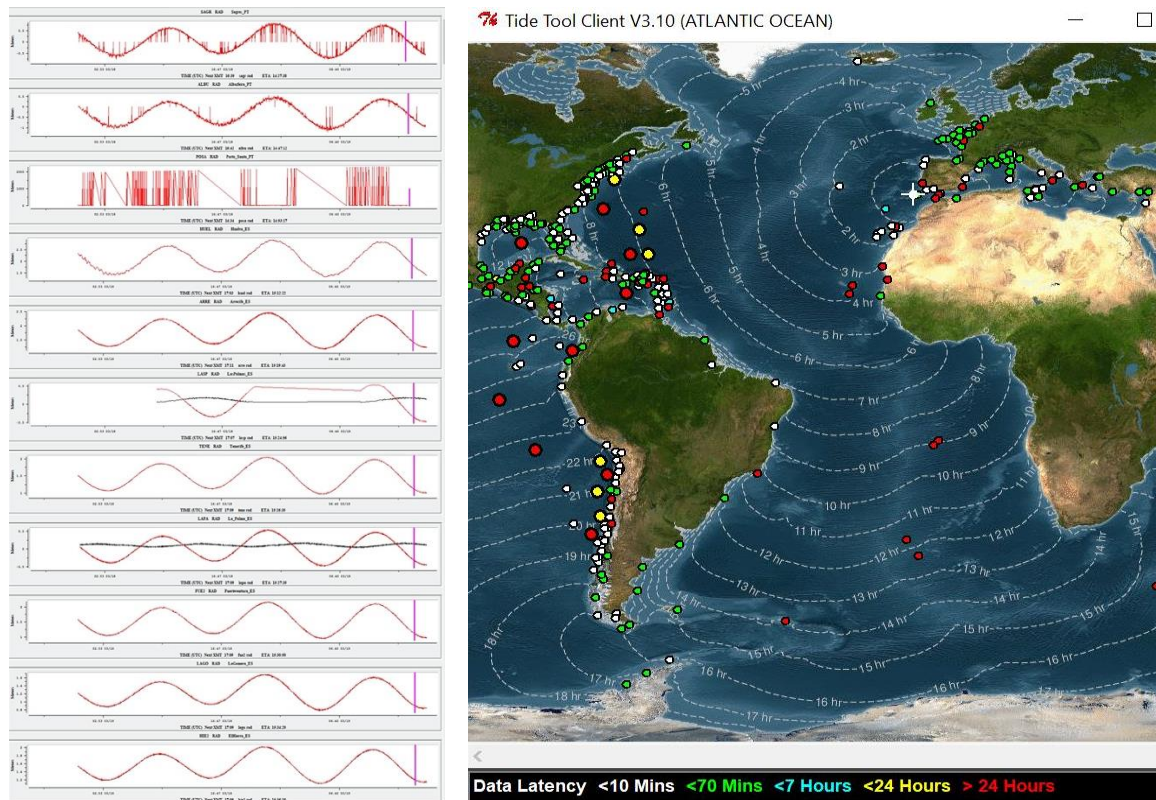


Figure 10. Screenshot from Tide Tool for the CARIBE WAVE 20 Portugal Scenario.

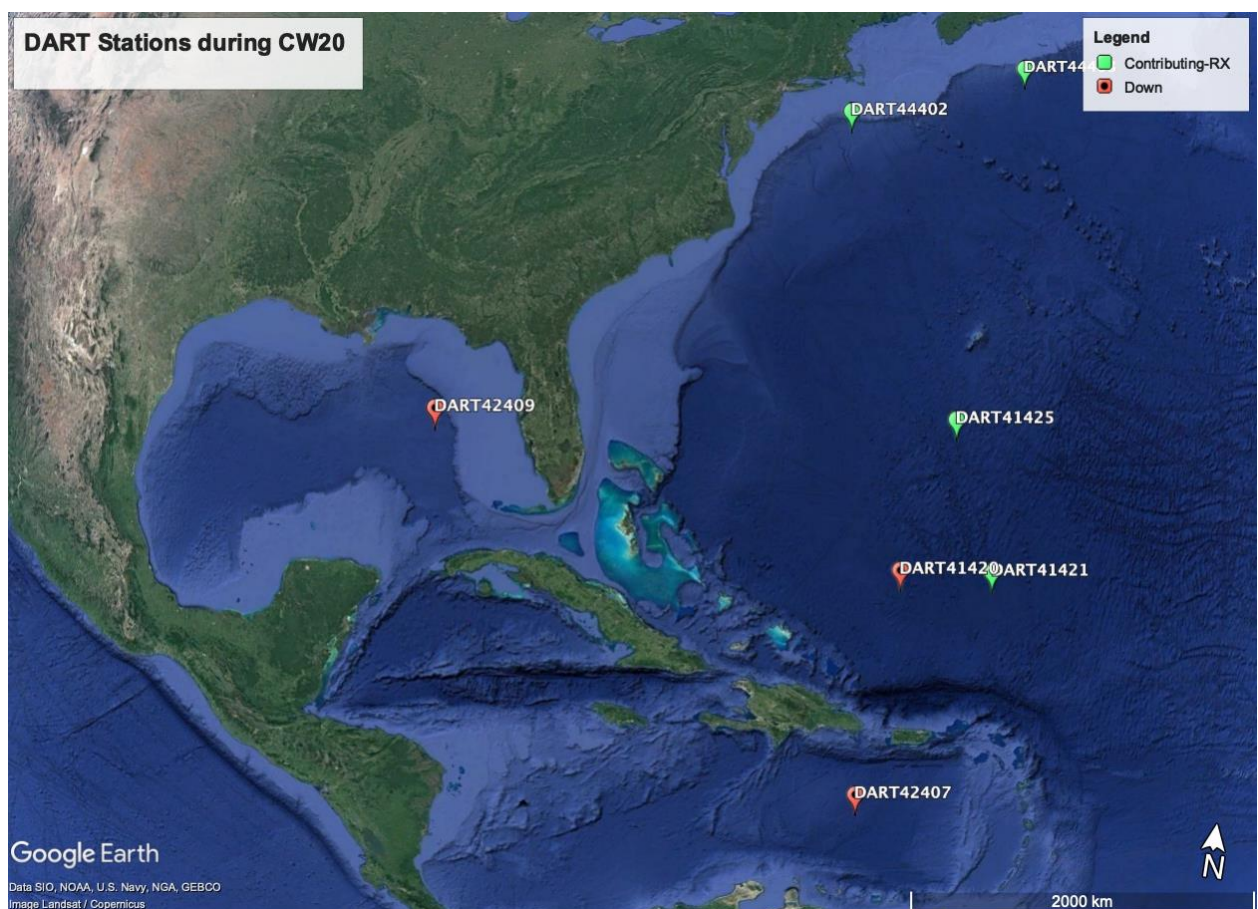


Figure 11. Map of operational and non-operational status of the DART's on 19 March 2020

3.7 MEDIA ARRANGEMENTS

One advantage in conducting exercises is that it provides a venue to promote tsunami awareness. The exercise offers an opportunity to collaborate with the media and disseminate more broadly information on the warning system. However, the 2020 exercise took place under different circumstances than previous years. The beginning of this year was marked by increased seismic activity in the Caribbean region, especially to the south of Puerto Rico and to the east of Jamaica. This seismic activity shed a light on the risk that tsunamis can pose to the Caribbean region in the event of an earthquake. For this reason, it was expected that the CARIBE WAVE exercise would have more participants than previous years. The hashtag tracker Brand24 was used to monitor #CaribeWave20 from 22 February to 23 March and its data supported the high turnout expectations: Social media posts reached over 850,000 people worldwide ([Figure 12](#)). Emergency management agencies from countries such as the British Virgin Islands (UK), Venezuela, and St. Kitts and Nevis informed citizens through online article publications that their country would participate in the exercise on 19 March. The National Weather Service San Juan Forecast Office and the Caribbean Tsunami Warning Program (CTWP), as well as the Puerto Rico Seismic Network (PRSN) also published informative posts related to tsunami awareness in preparation for CARIBE WAVE.

The outbreak of the Covid-19 virus, however, meant that the original plans for the exercise had become unfeasible. The scope of the exercise was reduced to a communications test. Participating countries then determined if they were going to conduct any follow-up activities. Martinique (France), Guadeloupe (France), Puerto Rico (USA), Barbados, and the British Virgin Islands (UK) disseminated this change of plans and informed the public of their specific situation. Grenada's National Disaster Management Agency (NaDMA), for example, said the exercise would be postponed. These notifications serve as reminders of the importance of tsunami preparedness even though most people could not physically participate in the exercise. The Caribbean Tsunami Warning Program verified that the test message from the Pacific Tsunami Warning Center was issued by contacting a tsunami focal point in Puerto Rico and monitoring PTWC's social media posts.

During the exercise, text messages and tweets about the start of the exercise were displayed on PTWC and CTWP accounts ([Figure 13](#)).

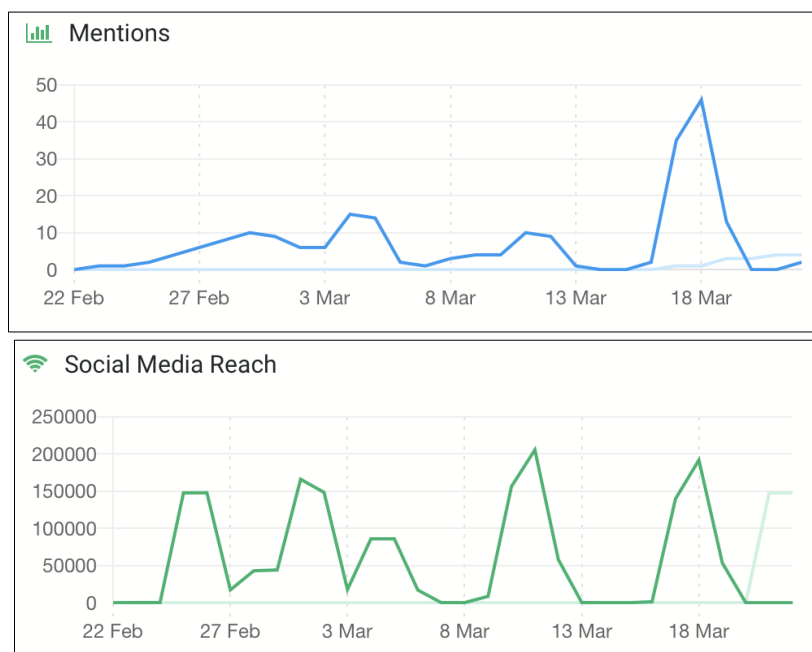


Figure 12. Graphs showing the #CaribeWave and #CaribeWave20 trending between the 22 February and 23 March 2020.

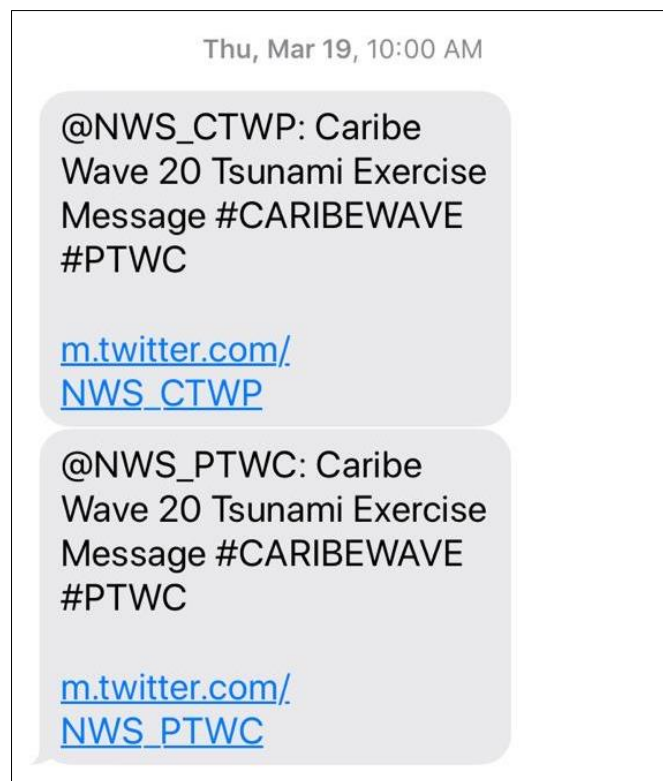


Figure 13. Text Messages about the start of CARIBE Wave 20 exercise.

3.8 POST-EXERCISE EVALUATION

In light of the implications of Covid-19, the questionnaire was reduced for all participating countries to only provide feedback on the exercise communication test portion. This feedback assists the ICG/CARIBE-EWS in the evaluation of CARIBE WAVE 20 and the development of subsequent exercises and helps response agencies document lessons learned. The survey contained 12 questions and was conducted by the IOC/UNESCO using the Survey Monkey service. Thirty-four (34) surveys were completed representing the feedback from 92% of the Member States (MS) and Territories³.

Considering the circumstances of the pandemic, the survey was available from the start of the exercise on 19 March and extended through 11 May. Overall, the results indicated that the Dummy (Start of Exercise) message was received by 33 Member States, representing 97% of the CARIBE-EWS Member States and Territories. There was a strong dependency on email and fax for the reception of products from the PTWC, although several countries indicated problems with the fax. The message was received by most countries within the first 1-2 minutes, and few countries reported delays. Despite Covid-19, 38% of the Member States indicated that the TWFP/NTWC issued messages to relevant in-country agencies. The exercise planning at a regional level went well under extenuating circumstances, resulting in a 76% of satisfaction of Member States and Territories, and a total participation of 4,602 people from the Caribbean. The questions as well as the answers and comments are contained in the Supplement available at the [CTWP website](#). This evaluation contains valuable

³ Countries and Territories answering the post-exercise survey: Antigua and Barbuda, Barbados, Belize, Brazil, Colombia, Costa Rica, Cuba, Curacao, Dominica, Dominican Republic, France (St. Martin), Grenada, Guatemala, Guyana, Haiti, Honduras, Jamaica, Mexico, Netherlands (Aruba, Bonaire, Saba and Saint Eustatius), Nicaragua, Panama, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Sint Maarten, Trinidad and Tobago, United Kingdom (Bermuda, British Virgin Islands, Cayman Islands, Turks and Caicos), United States (Puerto Rico and the US Virgin Islands) and Venezuela (Bolivarian Republic of).

information about the communication test portion and gives to the ICG/CARIBE-EWS group insights to address the objectives of the exercise.

In addition, the survey provided Member States an opportunity to provide additional feedback on the exercise ([Table 4](#)). The comments received confirm how Covid-19 impacted the scope of the national and local exercises. Nevertheless, several countries highlight the opportunity the exercise provided to test tsunami protocols and Dominica and US Virgin Islands were even able to do a tsunami drill/walk.

Country	Comments
Belize	The CARIBE WAVE 20 Tsunami Exercise would have been a joint exercise between the National Meteorological Service of Belize (NMS), National Emergency Management Organization (NEMO) and City Emergency Management Organization (CEMO), but due to the Pandemic, everything was cancelled. These organizations will be looking forward to the CARIBE WAVE 21 Tsunami Exercise.
Brazil	This is the first time I am participating. Therefore, I have many doubts, questions, and uncertainty. I believe with time things can get better. I also believe the exercises help improve the chain of information.
Colombia	Given the Covid-19 situation, Colombia was not able to perform the tabletop exercise with the National Tsunami Warning System, as it was originally planned. However, it was postponed for when the situation improved.
Costa Rica	Unfortunately, we only performed a communication test with CNE and an internal exercise at SINAMOT, due to the State of Emergency the country has right now. Hope to be able to perform more activities later in the year.
Cuba	A virtual exercise was carried out from the source of the earthquake in Jamaica, in Havana, Barbacoa and Santiago de Cuba, during which models were run and the level of preparedness for the possibility of the occurrence of tsunami was evaluated. The improvement of the modelling, seismic and sea level monitoring was carried for early warning and risk studies.
Curacao	We planned an exercise program for the island of Curacao. However, due to the pandemic, we could not proceed with the exercise. We did communicate with our public through social media and local media about Tsunami hazards.
Dominica	The exercise was carried out without any difficulties. A national school earthquake drill was also planned and executed on the 19 th .
Dominican Republic	It is important that the CARIBE WAVE involves through the agencies all the countries of the region that are participating in this exercise.
Grenada	<p>This year's CARIBE WAVE, Grenada did a communication test due to Covid-19. Everyone that registered received the message in a timely manner. Everything went smoothly.</p> <p>Grenada had planned before Covid-19 to fully evacuate western part of the island, including the gas companies and schools along the western part of the island. Also, for the parishes that were tsunami ready to participate and exercise their tsunami plans, including Carricou and Petite Martique.</p>

Country	Comments
	<p>The event was successful and hopefully 2021 will be a better year for everyone.</p> <p>Please stay safe and protect one self.</p>
Guyana	<p>Due to the Covid-19 measures, a decision was made to postpone the exercise to a later date. The local Civil Defense body will be carrying out a multi-hazard exercise at a later date and that opportunity will be used to incorporate the Tsunami information. The TWFP/NTWC did go through the established protocol for a Tsunami event.</p>
Haiti	<p>Sorry. It was impossible to realize the CARIBE WAVE in Haiti. There was going to be a simulation exercise with evacuation in Fort-Liberte. Unfortunately, we couldn't make it because of the situation and awareness for Covid-19.</p>
Jamaica	<p>Fairly good.</p>
Nicaragua	<p>This exercise was carried out only at table level, due to the global problem of the Covid-19.</p>
Netherlands (Aruba)	<p>Hope we do this another time after Covid-19 doing.</p>
Netherlands (Bonaire, Saba, and Sint Eustatius)	<p>Even with the Covid-19 situation, we decided to go ahead with the exercise, basically because it involved just the communications part. The local governments cancelled further exercise activities that involved people gatherings, if any.</p> <p>For the islands that decided to participate, the exercise went well. We could communicate the simulated tsunami threat as expected.</p>
Panama	<p>I needed more information about the procedure. I didn't know we were supposed to receive just one message.</p>
Saint Lucia	<p>Due to the Covid-19 pandemic, focus was shifted to plans for country response and work schedule changes.</p>
Saint Vincent and the Grenadines	<p>The NTWC St. Vincent and the Grenadines conducted a tabletop exercise with key stakeholders and exercised its new protocols with the Meteorological Services and the Police. Several scenarios were developed using the exercise trigger and a warning was given for players to exercise their decision making and actions.</p>
Trinidad and Tobago	<p>As a communications test, everything went as expected. The only limitation was that our secondary medium (via fax), did not receive the message.</p>
UK (Bermuda)	<p>The timing of the arrival of the Dummy message into all expected communications formats was timely. It is a shame the full exercise couldn't be carried out this year, but hopefully a return to normal business by next year.</p>
UK (British Virgin Islands)	<p>Went well.</p>
UK (Cayman Islands)	<p>It seems bizarre and worrying that we didn't receive any messages!</p>
USA (Puerto Rico)	<p>Due to the Covid-19 emergency and the active seismic sequence in Southern Puerto Rico, we decided to run just the communication exercise with the emergency agencies within the region. The exercise ran in a timely manner with good participation of agencies.</p>

Country	Comments
USA (US Virgin Islands)	Even though we were unable to have a mass gathering to participate in the actual group drill, we were able to have a walk-through of evacuation routes and staging areas.

Table 4. General statements on CARIBE WAVE 20 Tsunami Exercise experience from countries that participated.

4. REFERENCES

- Amante, C. and Eakins B.W. 2009. *ETOPO1 1 Arc-Minute Global Relief Model: Procedures, Data Sources and Analysis*. NOAA Technical Memorandum NESDIS NGDC-24. National Geophysical Data Center, NOAA. (doi: [10.7289/V5C8276M](https://doi.org/10.7289/V5C8276M))
- von Hillebrandt-Andrade, C. 2013. Minimizing Caribbean Tsunami Risk. *Science*, Vol. 341, Issue 6149, pp. 966–968. (doi: [10.1126/science.1238943](https://doi.org/10.1126/science.1238943))
- Wessel, P et al. 2013. Generic Mapping Tools: Improved version released. *EOS, Transactions, American Geophysical Union*, Vol. 94, Issue 45, pp. 409–410. (doi: [10.1002/2013EO450001](https://doi.org/10.1002/2013EO450001))

ANNEX I

LIST OF ACRONYMS

AWIPS	Advanced Weather Interactive Processing System
CTWP	US National Weather Service Caribbean Tsunami Warning Program
EMO	Emergency Management Organizations
EMWIN	Emergency Management Weather Information Network
EPGFZ	Enriquillo-Plantain Garden Fault Zone
GTS	Global Telecommunication System
ICG/CARIBE-EWS	Intergovernmental Coordination Group for the Tsunami and Other Coastal Hazards Warning System for the Caribbean and Adjacent Regions
IOC	Intergovernmental Oceanographic Commission of UNESCO
NaDMA	Grenada's National Disaster Management Agency
NCEI	US National Centers for Environmental Information. Previously called National Geophysical Data Center (NGDC)
NDMO	National Disaster Management Office
NOAA	US National Oceanic and Atmospheric Administration
NTWC	National Tsunami Warning Centres
OEM	Offices of Emergency Management
PTWC	Pacific Tsunami Warning Center
SOP	Standard Operating Procedures
TNC	Tsunami National Contact
TWFP	Tsunami Warning Focal Point
UNESCO	United National Educational, Scientific, and Cultural Organization

IOC Technical Series

No.	Title	Languages
1	Manual on International Oceanographic Data Exchange. 1965	(out of stock)
2	Intergovernmental Oceanographic Commission (Five years of work). 1966	(out of stock)
3	Radio Communication Requirements of Oceanography. 1967	(out of stock)
4	Manual on International Oceanographic Data Exchange - Second revised edition. 1967	(out of stock)
5	Legal Problems Associated with Ocean Data Acquisition Systems (ODAS). 1969	(out of stock)
6	Perspectives in Oceanography, 1968	(out of stock)
7	Comprehensive Outline of the Scope of the Long-term and Expanded Programme of Oceanic Exploration and Research. 1970	(out of stock)
8	IGOSS (Integrated Global Ocean Station System) - General Plan Implementation Programme for Phase I. 1971	(out of stock)
9	Manual on International Oceanographic Data Exchange - Third Revised Edition. 1973	(out of stock)
10	Bruun Memorial Lectures, 1971	E, F, S, R
11	Bruun Memorial Lectures, 1973	(out of stock)
12	Oceanographic Products and Methods of Analysis and Prediction. 1977	E only
13	International Decade of Ocean Exploration (IDOE), 1971-1980. 1974	(out of stock)
14	A Comprehensive Plan for the Global Investigation of Pollution in the Marine Environment and Baseline Study Guidelines. 1976	E, F, S, R
15	Bruun Memorial Lectures, 1975 - Co-operative Study of the Kuroshio and Adjacent Regions. 1976	(out of stock)
16	Integrated Ocean Global Station System (IGOSS) General Plan and Implementation Programme 1977-1982. 1977	E, F, S, R
17	Oceanographic Components of the Global Atmospheric Research Programme (GARP) . 1977	(out of stock)
18	Global Ocean Pollution: An Overview. 1977	(out of stock)
19	Bruun Memorial Lectures - The Importance and Application of Satellite and Remotely Sensed Data to Oceanography. 1977	(out of stock)
20	A Focus for Ocean Research: The Intergovernmental Oceanographic Commission - History, Functions, Achievements. 1979	(out of stock)
21	Bruun Memorial Lectures, 1979: Marine Environment and Ocean Resources. 1986	E, F, S, R
22	Scientific Report of the Interecalibration Exercise of the IOC-WMO-UNEP Pilot Project on Monitoring Background Levels of Selected Pollutants in Open Ocean Waters. 1982	(out of stock)
23	Operational Sea-Level Stations. 1983	E, F, S, R
24	Time-Series of Ocean Measurements. Vol.1. 1983	E, F, S, R
25	A Framework for the Implementation of the Comprehensive Plan for the Global Investigation of Pollution in the Marine Environment. 1984	(out of stock)
26	The Determination of Polychlorinated Biphenyls in Open-ocean Waters. 1984	E only
27	Ocean Observing System Development Programme. 1984	E, F, S, R
28	Bruun Memorial Lectures, 1982: Ocean Science for the Year 2000. 1984	E, F, S, R
29	Catalogue of Tide Gauges in the Pacific. 1985	E only
30	Time-Series of Ocean Measurements. Vol. 2. 1984	E only
31	Time-Series of Ocean Measurements. Vol. 3. 1986	E only
32	Summary of Radiometric Ages from the Pacific. 1987	E only
33	Time-Series of Ocean Measurements. Vol. 4. 1988	E only
34	Bruun Memorial Lectures, 1987: Recent Advances in Selected Areas of Ocean Sciences in the Regions of the Caribbean, Indian Ocean and the Western Pacific. 1988	Composite E, F, S
35	Global Sea-Level Observing System (GLOSS) Implementation Plan. 1990	E only

(continued)

36	Bruun Memorial Lectures 1989: Impact of New Technology on Marine Scientific Research. 1991	Composite E, F, S
37	Tsunami Glossary - A Glossary of Terms and Acronyms Used in the Tsunami Literature. 1991	E only
38	The Oceans and Climate: A Guide to Present Needs. 1991	E only
39	Bruun Memorial Lectures, 1991: Modelling and Prediction in Marine Science. 1992	E only
40	Oceanic Interdecadal Climate Variability. 1992	E only
41	Marine Debris: Solid Waste Management Action for the Wider Caribbean. 1994	E only
42	Calculation of New Depth Equations for Expendable Bathymetographs Using a Temperature-Error-Free Method (Application to Sippican/TSK T-7, T-6 and T-4 XBTS. 1994	E only
43	IGOSS Plan and Implementation Programme 1996-2003. 1996	E, F, S, R
44	Design and Implementation of some Harmful Algal Monitoring Systems. 1996	E only
45	Use of Standards and Reference Materials in the Measurement of Chlorinated Hydrocarbon Residues. 1996	E only
46	Equatorial Segment of the Mid-Atlantic Ridge. 1996	E only
47	Peace in the Oceans: Ocean Governance and the Agenda for Peace; the Proceedings of <i>Pacem in Maribus</i> XXIII, Costa Rica, 1995. 1997	E only
48	Neotectonics and fluid flow through seafloor sediments in the Eastern Mediterranean and Black Seas - Parts I and II. 1997	E only
49	Global Temperature Salinity Profile Programme: Overview and Future. 1998	E only
50	Global Sea-Level Observing System (GLOSS) Implementation Plan-1997. 1997	E only
51	L'état actuel de l'exploitation des pêcheries maritimes au Cameroun et leur gestion intégrée dans la sous-région du Golfe de Guinée (<i>cancelled</i>)	F only
52	Cold water carbonate mounds and sediment transport on the Northeast Atlantic Margin. 1998	E only
53	The Baltic Floating University: Training Through Research in the Baltic, Barents and White Seas - 1997. 1998	E only
54	Geological Processes on the Northeast Atlantic Margin (8 th training-through-research cruise, June-August 1998). 1999	E only
55	Bruun Memorial Lectures, 1999: Ocean Predictability. 2000	E only
56	Multidisciplinary Study of Geological Processes on the North East Atlantic and Western Mediterranean Margins (9 th training-through-research cruise, June-July 1999). 2000	E only
57	Ad hoc Benthic Indicator Group - Results of Initial Planning Meeting, Paris, France, 6-9 December 1999. 2000	E only
58	Bruun Memorial Lectures, 2001: Operational Oceanography – a perspective from the private sector. 2001	E only
59	Monitoring and Management Strategies for Harmful Algal Blooms in Coastal Waters. 2001	E only
60	Interdisciplinary Approaches to Geoscience on the North East Atlantic Margin and Mid-Atlantic Ridge (10 th training-through-research cruise, July-August 2000). 2001	E only
61	Forecasting Ocean Science? Pros and Cons, Potsdam Lecture, 1999. 2002	E only
62	Geological Processes in the Mediterranean and Black Seas and North East Atlantic (11 th training-through-research cruise, July- September 2001). 2002	E only
63	Improved Global Bathymetry – Final Report of SCOR Working Group 107. 2002	E only
64	R. Revelle Memorial Lecture, 2006: Global Sea Levels, Past, Present and Future. 2007	E only
65	Bruun Memorial Lectures, 2003: Gas Hydrates – a potential source of energy from the oceans. 2003	E only
66	Bruun Memorial Lectures, 2003: Energy from the Sea: the potential and realities of Ocean Thermal Energy Conversion (OTEC). 2003	E only

67	Interdisciplinary Geoscience Research on the North East Atlantic Margin, Mediterranean Sea and Mid-Atlantic Ridge (12 th training-through-research cruise, June-August 2002). 2003	E only
68	Interdisciplinary Studies of North Atlantic and Labrador Sea Margin Architecture and Sedimentary Processes (13 th training-through-research cruise, July-September 2003). 2004	E only
69	Biodiversity and Distribution of the Megafauna / Biodiversité et distribution de la mégafaune. 2006 Vol.1 The polymetallic nodule ecosystem of the Eastern Equatorial Pacific Ocean / Ecosystème de nodules polymétalliques de l'océan Pacifique Est équatorial Vol.2 Annotated photographic Atlas of the echinoderms of the Clarion-Clipperton fracture zone / Atlas photographique annoté des échinodermes de la zone de fractures de Clarion et de Clipperton Vol.3 Options for the management and conservation of the biodiversity — The nodule ecosystem in the Clarion Clipperton fracture zone: scientific, legal and institutional aspects	E F
70	Interdisciplinary geoscience studies of the Gulf of Cadiz and Western Mediterranean Basin (14 th training-through-research cruise, July-September 2004). 2006	E only
71	Indian Ocean Tsunami Warning and Mitigation System, IOTWS. Implementation Plan, 7–9 April 2009 (2 nd Revision). 2009	E only
72	Deep-water Cold Seeps, Sedimentary Environments and Ecosystems of the Black and Tyrrhenian Seas and the Gulf of Cadiz (15 th training-through-research cruise, June–August 2005). 2007	E only
73	Implementation Plan for the Tsunami Early Warning and Mitigation System in the North-Eastern Atlantic, the Mediterranean and Connected Seas (NEAMTWS), 2007–2011. 2007 (<i>electronic only</i>)	E only
74	Bruun Memorial Lectures, 2005: The Ecology and Oceanography of Harmful Algal Blooms – Multidisciplinary approaches to research and management. 2007	E only
75	National Ocean Policy. The Basic Texts from: Australia, Brazil, Canada, China, Colombia, Japan, Norway, Portugal, Russian Federation, United States of America. (Also Law of Sea Dossier 1). 2008	E only
76	Deep-water Depositional Systems and Cold Seeps of the Western Mediterranean, Gulf of Cadiz and Norwegian Continental margins (16 th training-through-research cruise, May–July 2006). 2008	E only
77	Indian Ocean Tsunami Warning and Mitigation System (IOTWS) – 12 September 2007 Indian Ocean Tsunami Event. Post-Event Assessment of IOTWS Performance. 2008	E only
78	Tsunami and Other Coastal Hazards Warning System for the Caribbean and Adjacent Regions (CARIBE EWS) – Implementation Plan 2013–2017 (Version 2.0). 2013	E only
79	Filling Gaps in Large Marine Ecosystem Nitrogen Loadings Forecast for 64 LMEs – GEF/LME global project Promoting Ecosystem-based Approaches to Fisheries Conservation and Large Marine Ecosystems. 2008	E only
80	Models of the World's Large Marine Ecosystems. GEF/LME Global Project Promoting Ecosystem-based Approaches to Fisheries Conservation and Large Marine Ecosystems. 2008	E only
81	Indian Ocean Tsunami Warning and Mitigation System (IOTWS) – Implementation Plan for Regional Tsunami Watch Providers (RTWP). 2008	E only
82	Exercise Pacific Wave 08 – A Pacific-wide Tsunami Warning and Communication Exercise, 28–30 October 2008. 2008	E only
83.	<i>Cancelled</i>	
84.	Global Open Oceans and Deep Seabed (GOODS) Bio-geographic Classification. 2009	E only
85.	Tsunami Glossary	E, F, S
86	Pacific Tsunami Warning System (PTWS) Implementation Plan	<i>Electronic publication</i>

(continued)

87.	Operational Users Guide for the Pacific Tsunami Warning and Mitigation System (PTWS) – Second Edition. 2011	E only
88.	Exercise Indian Ocean Wave 2009 (IOWave09) – An Indian Ocean-wide Tsunami Warning and Communication Exercise – 14 October 2009. 2009	E only
89.	Ship-based Repeat Hydrography: A Strategy for a Sustained Global Programme. 2009	E only
90.	12 January 2010 Haiti Earthquake and Tsunami Event Post-Event Assessment of CARIBE EWS Performance. 2010	E only
91.	Compendium of Definitions and Terminology on Hazards, Disasters, Vulnerability and Risks in a coastal context	<i>Under preparation</i>
92.	27 February 2010 Chile Earthquake and Tsunami Event – Post-Event Assessment of PTWS Performance (Pacific Tsunami Warning System). 2010	E only
93.	Exercise CARIBE WAVE 11 / LANTEX 11—A Caribbean Tsunami Warning Exercise, 23 March 2011	
	Vol. 1 Participant Handbook / Exercice CARIBE WAVE 11 —Exercice d'alerte au tsunami dans les Caraïbes, 23 mars 2011. Manuel du participant / Ejercicio Caribe Wave 11. Un ejercicio de alerta de tsunami en el Caribe, 23 de marzo de 2011. Manual del participante. 2010	E/F/S
	Vol. 2 Report. 2011	E only
	Vol. 3 Supplement: Media Reports. 2011	E/F/S
94.	Cold seeps, coral mounds and deep-water depositional systems of the Alboran Sea, Gulf of Cadiz and Norwegian continental margin (17th training-through-research cruise, June–July 2008)	E only
95.	International Post-Tsunami Survey for the 25 October 2010 Mentawai, Indonesia Tsunami	E only
96.	Pacific Tsunami Warning System (PTWS) 11 March 2011 Off Pacific coast of Tohoku, Japan, Earthquake and Tsunami Event. Post-Event Assessment of PTWS Performance	E only
97.	Exercise PACIFIC WAVE 11: A Pacific-wide Tsunami Warning and Communication Exercise, 9–10 November 2011	
	Vol. 1 Exercise Manual. 2011	E only
	Vol. 2 Report. 2013	E only
98.	Tsunami Early Warning and Mitigation System in the North-Eastern Atlantic, the Mediterranean and connected seas. First Enlarged Communication Test Exercise (ECTE1). Exercise Manual and Evaluation Report. 2011	E only
99.	Exercise INDIAN OCEAN WAVE 2011 – An Indian Ocean-wide Tsunami Warning and Communication Exercise, 12 October 2011	E only
	Vol. 1 Exercise Manual. 2011	
	Supplement: Bulletins from the Regional Tsunami Service Providers	
	Vol. 2 Exercise Report. 2013	
100.	Global Sea Level Observing System (GLOSS) Implementation Plan – 2012. 2012	E only
101.	Exercise Caribe Wave/Lantex 13. A Caribbean Tsunami Warning Exercise, 20 March 2013. Volume 1: Participant Handbook. 2012	E only
102.	Tsunami Early Warning and Mitigation System in the North-Eastern Atlantic, the Mediterranean and Connected Seas — Second Enlarged Communication Test Exercise (CTE2), 22 May 2012.	E only
	Vol. 1 Exercise Manual. 2012	
	Vol. 2 Evaluation Report. 2014	
103.	Exercise NEAMWAVE 12. A Tsunami Warning and Communication Exercise for the North-eastern Atlantic, the Mediterranean, and Connected Seas Region, 27–28 November 2012.	E only
	Vol. 1: Exercise Manual. 2012	
	Vol. 2: Evaluation Report. 2013	
104.	Seísmo y tsunami del 27 de agosto de 2012 en la costa del Pacífico frente a El Salvador, y seísmo del 5 de septiembre de 2012 en la costa del Pacífico frente a Costa Rica. Evaluación subsiguiente sobre el funcionamiento del Sistema de Alerta contra los Tsunamis y Atenuación de sus Efectos en el Pacífico. 2012	Español solamente (resumen en inglés y francés)
105.	Users Guide for the Pacific Tsunami Warning Center Enhanced Products for the Pacific Tsunami Warning System, August 2014. Revised Edition. 2014	E, S

106.	Exercise Pacific Wave 13. A Pacific-wide Tsunami Warning and Enhanced Products Exercise, 1–14 May 2013. Vol. 1 Exercise Manual. 2013 Vol. 2 Summary Report. 2013	E only
107.	Tsunami Public Awareness and Education Strategy for the Caribbean and Adjacent Regions. 2013	E only
108.	Pacific Tsunami Warning and Mitigation System (PTWS) Medium-Term Strategy, 2014–2021. 2013	E only
109.	Exercise Caribe Wave/Lantex 14. A Caribbean and Northwestern Atlantic Tsunami Warning Exercise, 26 March 2014. Vol. 1 Participant Handbook. 2014	E/S
110.	Directory of atmospheric, hydrographic and biological datasets for the Canary Current Large Marine Ecosystem, 3 rd edition: revised and expanded. 2017	E only
111.	Integrated Regional Assessments in support of ICZM in the Mediterranean and Black Sea Basins. 2014	E only
112.	11 April 2012 West of North Sumatra Earthquake and Tsunami Event - Post-event Assessment of IOTWS Performance	E only
113.	Exercise Indian Ocean Wave 2014: An Indian Ocean-wide Tsunami Warning and Communication Exercise. Vol.1 Manual Vol. 2 Exercise Report. 2015	E only
114.	Exercise NEAMWAVE 14. A Tsunami Warning and Communication Exercise for the North-Eastern Atlantic, the Mediterranean, and Connected Seas Region, 28–30 October 2014 Vol. 1 Manual Vol. 2 Evaluation Report – Supplement: Evaluation by Message Providers and Civil Protection Authorities	E only
115.	Oceanographic and Biological Features in the Canary Current Large Marine Ecosystem. 2015 (<i>revised in 2016</i>)	E only
116.	Tsunami Early Warning and Mitigation System in the North-Eastern Atlantic, the Mediterranean and Connected Seas. Third Enlarged Communication Test Exercise (CTE3), 1st October 2013. Vol. 1 Exercise Manual Vol. 2 Evaluation Report	E only
117.	Exercise Pacific Wave 15. A Pacific-wide Tsunami Warning and Enhanced Products Exercise, 2–6 February 2015 Vol. 1: Exercise Manual; Vol. 2: Summary Report	E only
118.	Exercise Caribe Wave/Lantex 15. A Caribbean and Northwestern Atlantic Tsunami Warning Exercise, 25 March 2015 (SW Caribbean Scenario) Vol. 1: Participant Handbook	E only
119.	Transboundary Waters Assessment Programme (TWAP) Assessment of Governance Arrangements for the Ocean Vol 1: Transboundary Large Marine Ecosystems; <u>Supplement</u> : Individual Governance Architecture Assessment for Fifty Transboundary Large Marine Ecosystems Vol 2: Areas Beyond National Jurisdiction	E only
120.	Transboundary Waters Assessment Programme (TWAP) – Status and Trends in Primary Productivity and Chlorophyll from 1996 to 2014 in Large Marine Ecosystems and the Western Pacific Warm Pool, Based on Data from Satellite Ocean Colour Sensors. 2017	E only
121.	Exercise Indian Ocean Wave 14, an Indian Ocean wide Tsunami Warning and Communications Exercise, 9–10 September 2014	<i>In preparation</i>
122.	Tsunami Early Warning and Mitigation System in the North-Eastern Atlantic, the Mediterranean and Connected Seas. Sixth Communication Test Exercise (CTE6), 29 July 2015. Vol. 1: Exercise Manual Vol. 2: Evaluation Report	E only
123	Preparing for the next tsunami in the North-Eastern Atlantic, the Mediterranean and Connected Seas – Ten years of the Tsunami Warning System (NEAMTWS). 2017 — <i>Cancelled</i>	(see <i>IOC/INF-1340</i>)

(continued)

124	Indicadores Marino Costeros del Pacífico Sudeste / Coastal and Marine Indicators of the Southeast Pacific (SPINCAM)	E/S
125	Exercise CARIBE WAVE 2016: A Caribbean and Adjacent Regions Tsunami Warning Exercise, 17 March 2016 (Venezuela and Northern Hispaniola Scenarios) Volume 1: Participant Handbook	E only
126	Exercise Pacific Wave 16. A Pacific-wide Tsunami Warning and Enhanced Products Exercise, 1-5 February 2016. Volume 1: Exercise Manual. Volume 2: Summary Report	E only
127	How to reduce coastal hazard risk in your community – A step by step approach	E only
128.	Exercise Indian Ocean Wave 2016: An Indian Ocean-wide Tsunami Warning and Communications Exercise, 7–8 September 2016 Vol 1: Participant Manual Vol. 2: Exercise Report	E only
129	What are Marine Ecological Time Series telling us about the Ocean – A status report	E only
130	Tsunami Watch Operations – Global Service Definition Document	E only
131	Exercise Pacific Wave 2017. A Pacific-wide Tsunami Warning and Enhanced Products Exercise, 15-17 February 2017. Volume 1: Exercise Manual Volume 2: Exercise Report	E only
132.	2nd March 2016 Southwest of Sumatra Earthquake and Tsunami Event Post-Event Assessment of the Performance of the Indian Ocean Tsunami Warning and Mitigation System; <u>Supplement</u> : Tsunami Service Provider Bulletins and Maps	E only
133.	Exercise CARIBE WAVE 17. A Caribbean and Adjacent Regions Tsunami Warning Exercise, 21 March 2017 (Costa Rica, Cuba and Northeastern Antilles Scenarios). Volume 1: Participant Handbook Volume 2: Final Report	E only
134.	Tsunami Exercise NEAMWave17 – A Tsunami Warning and Communication Exercise for the North-eastern Atlantic, the Mediterranean, and Connected Seas Region, 31 October – 3 November 2017 Volume 1: Exercise Instructions. 2017 Volume 2: Evaluation Report. 2018 Supplement: Evaluation by Message Providers and Civil Protection Authorities	E only
135.	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), October 2017	E only
136.	Exercise CARIBE WAVE 18. Tsunami Warning Exercise, 15 March 2018 (Barbados, Colombia and Puerto Rico Scenarios). Volume 1: Participant Handbook. 2017 Volume 2: Final Report	E only
137.	The Ocean is losing its breath: declining oxygen in the world's ocean and coastal waters	(under preparation)
138.	Exercise Indian Ocean Wave 2018: An Indian Ocean-wide Tsunami Warning and Communication Exercise, 4–5 September 2018 Volume 1: Exercise Manual & Supplements Volume 2: Exercise Report. 2019	E only
139.	Exercise Pacific Wave 2018. A Pacific-wide Tsunami Warning and Enhanced Products Exercise, September to November 2018. Volume 1: Exercise Manual. Volume 2: Summary Report	E only
140	Analysis of transboundary Water Ecosystems and Green and Blue Infrastructures: Intercontinental Biosphere Reserve of the Mediterranean: Andalusia (Spain) – Morocco	E F S
141	Exercise Caribe Wave 2019. A Caribbean and Adjacent Region Tsunami Warning Exercise, 14 March 2019. Volume 1: Participant handbook. Volume 2: Summary Report	E only

142	Users' Guide for the Northwest Pacific Tsunami Advisory Center (NWPTAC) – Enhanced Products for the Pacific Tsunami Warning System. 2019	E only
143	Capacity Assessment of Tsunami Preparedness in the Indian Ocean, Status Report, 2018 + Supplement: National Reports	E only
144	Indian Ocean Tsunami Warning and Mitigation System (IOTWMS): Medium Term Strategy, 2019–2024	E only
145	IOTWMS Users Guide for National Tsunami Warning Centres	(under preparation)
146	Definition of Services provided by the Tsunami Service Providers of the IOTWMS	E only
147	<i>The Global Ocean Observing System 2030 Strategy</i> (IOC Brochure 2019-5)	(See GOOS Report 239)
148	Ejercicio TSUNAMI-CA 19. Un simulacro de tsunami para Centroamérica, 19 de agosto de 2019. Volumen 1, Manual para participantes.	S only
149	User's Guide for the South China Sea Tsunami Advisory Center (SCSTAC) products for the South China Sea Tsunami Warning and Mitigation System	E only
150	Limitations and Challenges of Early Warning Systems: A Case Study from the 28 September 2018 Palu-Donggala Tsunami	E, Bahasa
151	Exercise CARIBE WAVE 20. Tsunami Warning Exercise, 19 March 2020 (Jamaica and Portugal). Volume 1: Participant Handbook Volume 2: Summary Report	E only
152	Technical Report on the status of coastal vulnerability in central African countries (ICAM Dossier N° 9)	E, F
153	Exercise Indian Ocean Wave 2020: An Indian Ocean-wide Tsunami Warning and Communication Exercise, 6–20 October 2020. Volume 1: Exercise Manual Supplement 1: TSP Bulletins for Scenario 1 South of Java Supplement 2: TSP Bulletins for Scenario 2 Andaman Islands Supplement 3: TSP Bulletins for Scenario 3 Off Coast of Pakistan Volume 2: Exercise Report	E only

(continued)