Seminario en Línea
Agosto 26, 2015

Productos Mejorados de PTWC para el CARIBE-EWS

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Recomendaciones ICG/CARIBE-EWS-X

Enhanced PTWC Products for the CARIBE-EWS

The Intergovernmental Coordination Group for the for the Tsunami and Other Coastal Hazards Warning System for the Caribbean and Adjacent Regions (ICG/CARIBE-EWS),

Recalling Recommendation ICG/CARIBE-EWS-IX.7 "Enhanced PTWC Products for the CARIBE-EWS",

Acknowledging the scientific and technological advances that have been made since the formation of the CARIBE-EWS to better forecast tsunami impacts in real time and to present forecast information graphically;

Recognizing that PTWC has developed and offered to the CARIBE-EWS a new suite of enhanced operational tsunami forecast products based upon such advances and upon TOWS-WG recommendations for more globally consistent and useful TSP products;

Recognizing that similar products have now been implemented in the Pacific by PTWC for the PTWS and that some Central and South America CARIBE-EWS Member States have coasts in both systems;

Considering that multiple trainings about and exercises using the Enhanced Products have been conducted in the region over the past few years to help prepare Member States for the implementation of these products;

Accepting that the Enhanced Products do not contain alert levels and that Member States will now be fully responsible for tsunami alerts in their own countries and territories according to their SOPs;

Agrees with the PTWC proposed implementation schedule that begins issuance of the Enhanced Products in parallel with current products on 1 October 2015 and fully transitions to the new products on 1 March 2016;

Recommends that additional training on the products be made available prior to full implementation that will at least include several webinars conducted in English, Spanish and French as well as in-person trainings, and encourages Member States and donors to support such trainings;

Recommends that during parallel issuance, all new products be disseminated exclusively by email and only to the designated TWFPs, and National Tsunami Warning Centres (NTWC) and then when fully implemented only the main text product and its derivatives such as an SMS, Facebook, or Twitter statement be distributed more widely via the internet, GTS, AISR/AFTN, and IOC distribution lists, etc.;

Recommends that during the overlap period PTWC generates and sends some sample products by email to the TWFPs and NTWCs, not as an exercise but as a way to aid in preparing for full implementation since the likelihood of having real events during the overlap period is small;

Recommends that in consideration of some TWFP and NTWC internet bandwidth limitations for email, the main text product be sent separately, and that the graphical and statistical products be divided as necessary in emails to minimize their size.

Generalidades de los Productos Mejorados de PTWC

Cambio de Paradigma

- PTWC provee pronósticos de amenaza
- Los Países convierten los pronósticos a niveles de alerta

Productos Existentes

- Texto solamente
- Un Nivel de Alerta (Vigilancia o Nada)
- ETAs pero no Indican Impactos Esperados

Productos Mejorados

- Mensajes con Texto
- Mapa de Polígonos de los Pronósticos de Niveles de Amenaza
- Pronóstico de Amplitudes en Océano-Profundo
- Pronóstico de Amplitudes en la Costa
- Archivos KMZ de Amplitudes en la Costa
- Tabla de Estadística para Cada Polígono

Fechas de Implementación

Octubre 1, 2015 – Inicio en paralelo con los productos existentes

- Actualizar la Guía de Usuario para los Productos Mejorados
- Emitir productos mejorados a la par con productos existentes en caso de un evento

Octubre 2015 – Febrero 2016 Prueba de Productos Simulados

- Reconocer la posibilidad de eventos para los cuales los Productos Mejorados pueden ser emitidos
- Emitir productos mejorados para algunos eventos simulados (email)

A partir de Marzo 1, 2016

- Emitir SOLO Productos Mejorados

Marzo 17, 2016 – CARIBE WAVE 2016

- Solo productos mejorados para los dos escenarios: Norte de La Española y Venezuela

Límites para los Productos
Octubre 1, 2015-Febrero 29, 2016

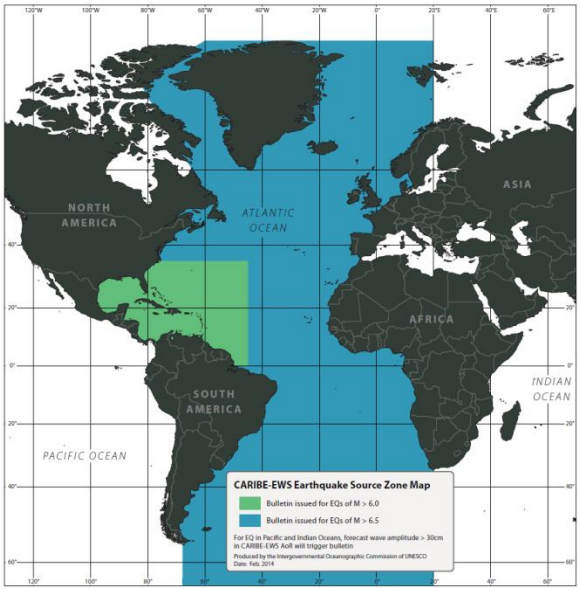
Productos Vigentes hasta Feb. 29, 2016

Magnitude	Message Type	WMO	AWIPS	NWW
≥7.9	Caribbean Sea-wide Tsunami Watch Message	WECA41 PHEB	TSUCAX	HFOTSUCAX
7.6-7.8	Regional Tsunami Watch Message (sample)	WECA41 PHEB	TSUCAX	HFOTSUCAX
7.1-7.5	Local Tsunami Watch Message	WECA41 PHEB	TSUCAX	HFOTSUCAX
6.0-7.0 or 6.5-7.8 in Atlantic	Tsunami Information Statement (sample)	WECA43 PHEB	TIBCAX	HFOTIBCAX

Productos Mejorados – por Email solamente

Productos con Texto, Gráficas, Tabla Estadística y KMZ

Se emitirá el producto con texto mejorado.



Productos con Texto Mejorados

Formato de viñetas con las siguientes secciones

- ID del Producto
- Número de Mensaje, Emitido por, Tiempo de Emisión
- Encabezado
- Destinado a
- Actualización(es) en este Mensaje
- Parámetros Preliminares del Terremoto
- Evaluación General de la Situación
- Pronóstico de Amenaza, a partir del 2do boletín (rangos >3m, 1-3m, 0.3-1m, <0.3m)
- Acciones Recomendadas
- Tiempos de Arribo Estimado
- Descripción de Impactos Potenciales
- Observaciones del Tsunami
- Próxima Actualización e Información Adicional

EJEMPLO DEL PRODUCTO CON TEXTO
Mensaje Número 1

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EXPERIMENTAL TSUNAMI MESSAGE NUMBER 1
NOT FOR DISTRIBUTION
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
1405 UTC THU MAR 17 2016

...TSUNAMI THREAT MESSAGE...


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

 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.

 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 *****


PRELIMINARY EARTHQUAKE PARAMETERS
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  * MAGNITUDE       8.5
  * ORIGIN TIME     1400 UTC MAR 17 2016
  * COORDINATES     10.8 NORTH  66.0 WEST
  * DEPTH           15 KM / 9 MILES
  * LOCATION        NEAR THE COAST OF VENEZUELA


EVALUATION
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  * AN EARTHQUAKE WITH A PRELIMINARY MAGNITUDE OF 8.5 OCCURRED
    NEAR THE COAST OF VENEZUELA AT 1400 UTC ON THURSDAY MARCH 17
    2016.

  * BASED ON THE PRELIMINARY EARTHQUAKE PARAMETERS... WIDESPREAD
    HAZARDOUS TSUNAMI WAVES ARE POSSIBLE.
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TSUNAMI THREAT FORECAST
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  * HAZARDOUS TSUNAMI WAVES FROM THIS EARTHQUAKE ARE POSSIBLE
    WITHIN THE NEXT THREE HOURS ALONG SOME COASTS OF

      VENEZUELA... BONAIRE... CURACAO... ARUBA... SAINT
      VINCENT... GRENADA... PUERTO RICO... SAINT LUCIA... US
      VIRGIN ISLANDS... MARTINIQUE... DOMINICA... GUADELOUPE...
      DOMINICAN REP... SABA... MONTSERRAT... SAINT KITTS... SINT
      EUSTATIUS... BARBADOS... HAITI... TRINIDAD TOBAGO... SINT
      MAARTEN... COLOMBIA... ANGUILLA... ANTIGUA... BR VIRGIN
      ISLANDS... BARBUDA... SAINT BARTHELEMY... TURKS N
      CAICOS... CUBA... SAINT MARTIN... JAMAICA... BAHAMAS...
      PANAMA AND CAYMAN ISLANDS


RECOMMENDED ACTIONS
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  * 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.

  * PERSONS LOCATED IN THREATENED COASTAL AREAS SHOULD STAY ALERT
    FOR INFORMATION AND FOLLOW INSTRUCTIONS FROM NATIONAL AND
    LOCAL AUTHORITIES.


ESTIMATED TIMES OF ARRIVAL
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  * ESTIMATED TIMES OF ARRIVAL -ETA- OF THE INITIAL TSUNAMI WAVE
    FOR PLACES LISTED 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)
    ------------------------------------------------------------
    CUMANA            VENEZUELA          10.5N  64.2W   1438 03/17
    MAIQUETIA         VENEZUELA          10.6N  67.0W   1448 03/17
    ONIMA             BONAIRE            12.3N  68.3W   1455 03/17
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EJEMPLO DEL PRODUCTO CON TEXTO

WILLEMSTAD	CURACAO	12.1N	68.9W	1501	03/17
ORANJESTAD	ARUBA	12.5N	70.0W	1519	03/17
KINGSTOWN	SAINT VINCENT	13.1N	61.2W	1519	03/17
SAINT GEORGES	GRENADA	12.0N	61.8W	1519	03/17
CASTRIES	SAINT LUCIA	14.0N	61.0W	1524	03/17
FORT DE FRANCE	MARTINIQUE	14.6N	61.1W	1527	03/17
ROSEAU	DOMINICA	15.3N	61.4W	1529	03/17
BASSE TERRE	GUADELOUPE	16.0N	61.7W	1532	03/17
SANTO DOMINGO	DOMINICAN REP	18.5N	69.9W	1538	03/17
SABA	SABA	17.6N	63.2W	1541	03/17
CABO ENGANO	DOMINICAN REP	18.6N	68.3W	1543	03/17
PLYMOUTH	MONTSERRAT	16.7N	62.2W	1544	03/17
BASSETERRE	SAINT KITTS	17.3N	62.7W	1545	03/17
SINT EUSTATIUS	SINT EUSTATIUS	17.5N	63.0W	1546	03/17
BRIDGETOWN	BARBADOS	13.1N	59.6W	1548	03/17
JACAMEL	HAITI	18.1N	72.5W	1552	03/17
PIRATES BAY	TRINIDAD TOBAGO	11.3N	60.6W	1553	03/17
SIMPSON BAAI	SINT MAARTEN	18.0N	63.1W	1554	03/17
RIOHACHA	COLOMBIA	11.6N	72.9W	1605	03/17
BARRANQUILLA	COLOMBIA	11.1N	74.9W	1611	03/17
PUERTO PLATA	DOMINICAN REP	19.8N	70.7W	1613	03/17
THE VALLEY	ANGUILLA	18.3N	63.1W	1614	03/17
SAINT JOHNS	ANTIGUA	17.1N	61.9W	1618	03/17
PALMETTO POINT	BARBUDA	17.6N	61.9W	1624	03/17
SAINT BARTHELEM	SAINT BARTHELEMY	17.9N	62.8W	1625	03/17
GRAND TURK	TURKS N CAICOS	21.5N	71.1W	1627	03/17
CARTAGENA	COLOMBIA	10.4N	75.6W	1628	03/17
CAP HAITEN	HAITI	19.8N	72.2W	1629	03/17
SANTIAGO D CUBA	CUBA	19.9N	75.8W	1631	03/17
BAIE BLANCHE	SAINT MARTIN	18.1N	63.0W	1632	03/17
KINGSTON	JAMAICA	17.9N	76.9W	1635	03/17
WEST CAICOS	TURKS N CAICOS	21.7N	72.5W	1638	03/17
MAYAGUANA	BAHAMAS	22.3N	73.0W	1639	03/17
GREAT INAGUA	BAHAMAS	20.9N	73.7W	1642	03/17
ALIGANDI	PANAMA	9.2N	78.0W	1645	03/17
BARACOA	CUBA	20.4N	74.5W	1647	03/17
MONTEGO BAY	JAMAICA	18.5N	77.9W	1647	03/17
CROOKED ISLAND	BAHAMAS	22.7N	74.1W	1647	03/17
PORT OF SPAIN	TRINIDAD TOBAGO	10.6N	61.5W	1649	03/17
SANTA MARTA	COLOMBIA	11.2N	74.2W	1652	03/17
PUERTO CARRETO	PANAMA	8.8N	77.6W	1652	03/17
SAN SALVADOR	BAHAMAS	24.1N	74.5W	1652	03/17
LONG ISLAND	BAHAMAS	23.3N	75.1W	1656	03/17
CAYMAN BRAC	CAYMAN ISLANDS	19.7N	79.9W	1702	03/17
PUNTA CARIBANA	COLOMBIA	8.6N	76.9W	1704	03/17

POTENTIAL IMPACTS
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* 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.

* IMPACTS CAN VARY SIGNIFICANTLY FROM ONE SECTION OF COAST TO THE NEXT DUE TO LOCAL BATHYMETRY AND THE SHAPE AND ELEVATION OF THE SHORELINE.

* IMPACTS CAN ALSO VARY DEPENDING UPON THE STATE OF THE TIDE AT THE TIME OF THE MAXIMUM TSUNAMI WAVES.

* PERSONS CAUGHT IN THE WATER OF A TSUNAMI MAY DROWN... BE CRUSHED BY DEBRIS IN THE WATER... OR BE SWEPT OUT TO SEA.

NEXT UPDATE AND ADDITIONAL INFORMATION
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* THE NEXT MESSAGE WILL BE ISSUED IN ONE HOUR... OR SOONER IF THE SITUATION WARRANTS.

* 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-.

* FURTHER INFORMATION ABOUT THIS EVENT MAY BE FOUND AT PTWC.WEATHER.GOV AND AT WWW.TSUNAMI.GOV.

* COASTAL REGIONS OF PUERTO RICO... THE U.S. VIRGIN ISLANDS... AND THE BRITISH VIRGIN ISLANDS SHOULD REFER TO PACIFIC TSUNAMI WARNING CENTER MESSAGES FOR THOSE PLACES THAT CAN BE FOUND AT PTWC.WEATHER.GOV.

* 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 NTWC.ARH.NOAA.GOV.

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EJEMPLO DEL PRODUCTO CON TEXTO
Mensaje Número 2

EXPERIMENTAL TSUNAMI MESSAGE NUMBER 2
NOT FOR DISTRIBUTION
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
1425 UTC THU MAR 17 2016

...TSUNAMI THREAT MESSAGE...

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

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.

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

UPDATES
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* THE ESTIMATED MAGNITUDE OF THE EARTHQUAKE IS REDUCED FROM 8.5 TO 8.4.

* FORECAST TSUNAMI AMPLITUDES ARE NOW INCLUDED.

PRELIMINARY EARTHQUAKE PARAMETERS
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* MAGNITUDE 8.4
* ORIGIN TIME 1400 UTC MAR 17 2016
* COORDINATES 10.8 NORTH 66.0 WEST
* DEPTH 15 KM / 9 MILES
* LOCATION NEAR THE COAST OF VENEZUELA

EVALUATION
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* AN EARTHQUAKE WITH A PRELIMINARY MAGNITUDE OF 8.4 OCCURRED NEAR THE COAST OF VENEZUELA AT 1400 UTC ON THURSDAY MARCH 17 2016.

* BASED ON ALL AVAILABLE DATA... HAZARDOUS TSUNAMI WAVES ARE FORECAST FOR SOME COASTS.

TSUNAMI THREAT FORECAST...UPDATED
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* TSUNAMI WAVES REACHING MORE THAN 3 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE ALONG SOME COASTS OF

  GUADELOUPE... AND VENEZUELA.

* TSUNAMI WAVES REACHING 1 TO 3 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE ALONG SOME COASTS OF

  ARUBA... COLOMBIA... DOMINICAN REPUBLIC... HAITI... PUERTO RICO AND VIRGIN IS... ANGUILLA... ANTIGUA AND BARBUDA... DOMINICA... GRENADA... JAMAICA... MARTINIQUE... MONTSERRAT... CURACAO... BONAIRE... SAINT KITTS AND NEVIS... SAINT LUCIA... SINT MAARTEN... SAINT BARTHELEMY... SAINT MARTIN... SAINT VINCENT AND THE GRENADINES... AND TRINIDAD AND TOBAGO.

* TSUNAMI WAVES REACHING 0.3 TO 1 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE FOR SOME COASTS OF

  COSTA RICA... CUBA... GUYANA... MEXICO... NICARAGUA... PANAMA... BARBADOS... AND TURKS AND CAICOS ISLANDS.

* NON-HAZARDOUS TSUNAMI WAVES ARE FORECAST FOR ALL OTHER AREAS COVERED BY THIS 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 WILL LIKELY BE MUCH SMALLER THAN THE FORECAST INDICATES.

EJEMPLO DEL PRODUCTO CON TEXTO

* FOR OTHER AREAS COVERED BY THIS PRODUCT A FORECAST HAS NOT YET BEEN COMPUTED. THE FORECAST WILL BE EXPANDED AS NECESSARY IN SUBSEQUENT PRODUCTS.

RECOMMENDED ACTIONS
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* 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.

* PERSONS LOCATED IN THREATENED COASTAL AREAS SHOULD STAY ALERT FOR INFORMATION AND FOLLOW INSTRUCTIONS FROM NATIONAL AND LOCAL AUTHORITIES.

ESTIMATED TIMES OF ARRIVAL
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* 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	1438 03/17
MAIQUETIA	VENEZUELA	10.6N 67.0W	1448 03/17
ONIMA	BONAIRE	12.3N 68.3W	1455 03/17
WILLEMSTAD	CURACAO	12.1N 68.9W	1501 03/17
ORANJESTAD	ARUBA	12.5N 70.0W	1519 03/17
KINGSTOWN	SAINT VINCENT	13.1N 61.2W	1519 03/17
SAINT GEORGES	GRENADA	12.0N 61.8W	1519 03/17
CASTRIES	SAINT LUCIA	14.0N 61.0W	1524 03/17
FORT DE FRANCE	MARTINIQUE	14.6N 61.1W	1527 03/17
ROSEAU	DOMINICA	15.3N 61.4W	1529 03/17
BASSE TERRE	GUADELOUPE	16.0N 61.7W	1532 03/17
SANTO DOMINGO	DOMINICAN REP	18.5N 69.9W	1538 03/17
CABO ENGANO	DOMINICAN REP	18.6N 68.3W	1543 03/17
PLYMOUTH	MONTSERRAT	16.7N 62.2W	1544 03/17
BASSETERRE	SAINT KITTS	17.3N 62.7W	1545 03/17
BRIDGETOWN	BARBADOS	13.1N 59.6W	1548 03/17
JACAMEL	HAITI	18.1N 72.5W	1552 03/17
PIRATES BAY	TRINIDAD TOBAGO	11.3N 60.6W	1553 03/17
SIMPSON BAAI	SINT MAARTEN	18.0N 63.1W	1554 03/17
RIOHACHA	COLOMBIA	11.6N 72.9W	1605 03/17
BARRANQUILLA	COLOMBIA	11.1N 74.9W	1611 03/17
PUERTO PLATA	DOMINICAN REP	19.8N 70.7W	1613 03/17
THE VALLEY	ANGUILLA	18.3N 63.1W	1614 03/17
SAINT JOHNS	ANTIGUA	17.1N 61.9W	1618 03/17
PALMETTO POINT	BARBUDA	17.6N 61.9W	1624 03/17
SAINT BARTHELEM	SAINT BARTHELEMY	17.9N 62.8W	1625 03/17
GRAND TURK	TURKS N CAICOS	21.5N 71.1W	1627 03/17
CARTAGENA	COLOMBIA	10.4N 75.6W	1628 03/17
CAP HAITEN	HAITI	19.8N 72.2W	1629 03/17
SANTIAGO D CUBA	CUBA	19.9N 75.8W	1631 03/17
BAIE BLANCHE	SAINT MARTIN	18.1N 63.0W	1632 03/17
KINGSTON	JAMAICA	17.9N 76.9W	1635 03/17
WEST CAICOS	TURKS N CAICOS	21.7N 72.5W	1638 03/17
ALIGANDI	PANAMA	9.2N 78.0W	1645 03/17
MONTEGO BAY	JAMAICA	18.5N 77.9W	1647 03/17
PORT OF SPAIN	TRINIDAD TOBAGO	10.6N 61.5W	1649 03/17
SANTA MARTA	COLOMBIA	11.2N 74.2W	1652 03/17
PUERTO CARRETO	PANAMA	8.8N 77.6W	1652 03/17
PUNTA CARIBANA	COLOMBIA	8.6N 76.9W	1704 03/17
JEREMIE	HAITI	18.6N 74.1W	1713 03/17
PUNTO FIJO	VENEZUELA	11.7N 70.2W	1715 03/17
PUERTO OBALDIA	PANAMA	8.7N 77.4W	1716 03/17
CIENFUEGOS	CUBA	22.0N 80.5W	1725 03/17
PUERTO LIMON	COSTA RICA	10.0N 83.0W	1729 03/17
COLON	PANAMA	9.4N 79.9W	1749 03/17
BOCAS DEL TORO	PANAMA	9.4N 82.2W	1803 03/17
COZUMEL	MEXICO	20.5N 87.0W	1811 03/17
PUNTA GORDA	NICARAGUA	11.4N 83.8W	1815 03/17
PORT AU PRINCE	HAITI	18.5N 72.4W	1816 03/17
GOLFO VENEZUELA	VENEZUELA	11.4N 71.2W	1855 03/17
SANTA CRZ D SUR	CUBA	20.7N 78.0W	1930 03/17
PORLAMAR	VENEZUELA	10.9N 63.8W	1931 03/17
GEORGETOWN	GUYANA	6.8N 58.2W	2014 03/17
NUEVA GERONA	CUBA	21.9N 82.8W	2055 03/17
PUERTO CABEZAS	NICARAGUA	14.0N 83.4W	2154 03/17

POTENTIAL IMPACTS

EJEMPLO DEL PRODUCTO CON TEXTO

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* 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.

* IMPACTS CAN VARY SIGNIFICANTLY FROM ONE SECTION OF COAST TO THE NEXT DUE TO LOCAL BATHYMETRY AND THE SHAPE AND ELEVATION OF THE SHORELINE.

* IMPACTS CAN ALSO VARY DEPENDING UPON THE STATE OF THE TIDE AT THE TIME OF THE MAXIMUM TSUNAMI WAVES.

* PERSONS CAUGHT IN THE WATER OF A TSUNAMI MAY DROWN... BE CRUSHED BY DEBRIS IN THE WATER... OR BE SWEPT OUT TO SEA.

NEXT UPDATE AND ADDITIONAL INFORMATION
---

* THE NEXT MESSAGE WILL BE ISSUED IN ONE HOUR... OR SOONER IF THE SITUATION WARRANTS.

* 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-.

* FURTHER INFORMATION ABOUT THIS EVENT MAY BE FOUND AT PTWC.WEATHER.GOV AND AT WWW.TSUNAMI.GOV.

* COASTAL REGIONS OF PUERTO RICO... THE U.S. VIRGIN ISLANDS... AND THE BRITISH VIRGIN ISLANDS SHOULD REFER TO PACIFIC TSUNAMI WARNING CENTER MESSAGES FOR THOSE PLACES THAT CAN BE FOUND AT PTWC.WEATHER.GOV.

* 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 NTWC.ARH.NOAA.GOV.

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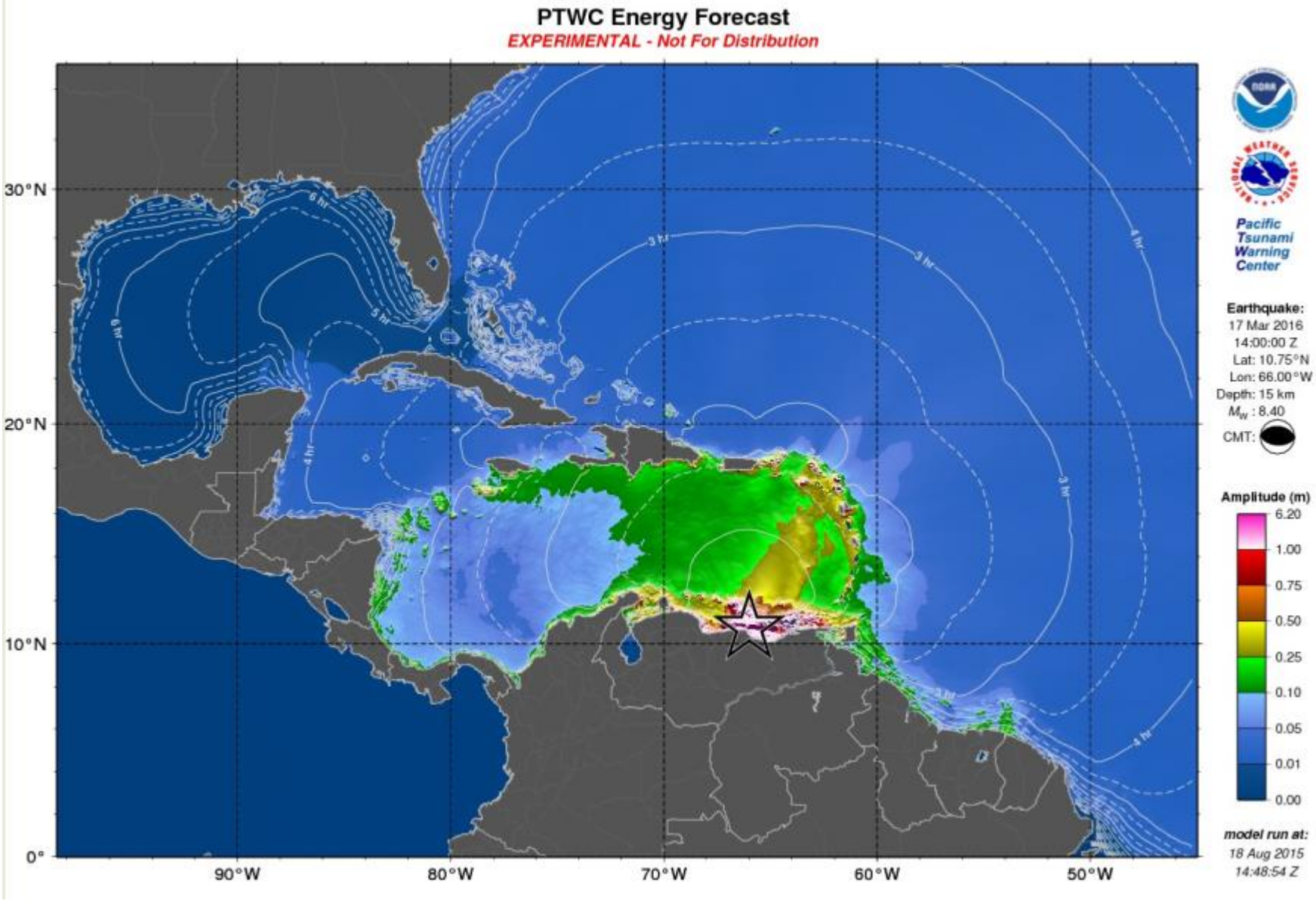
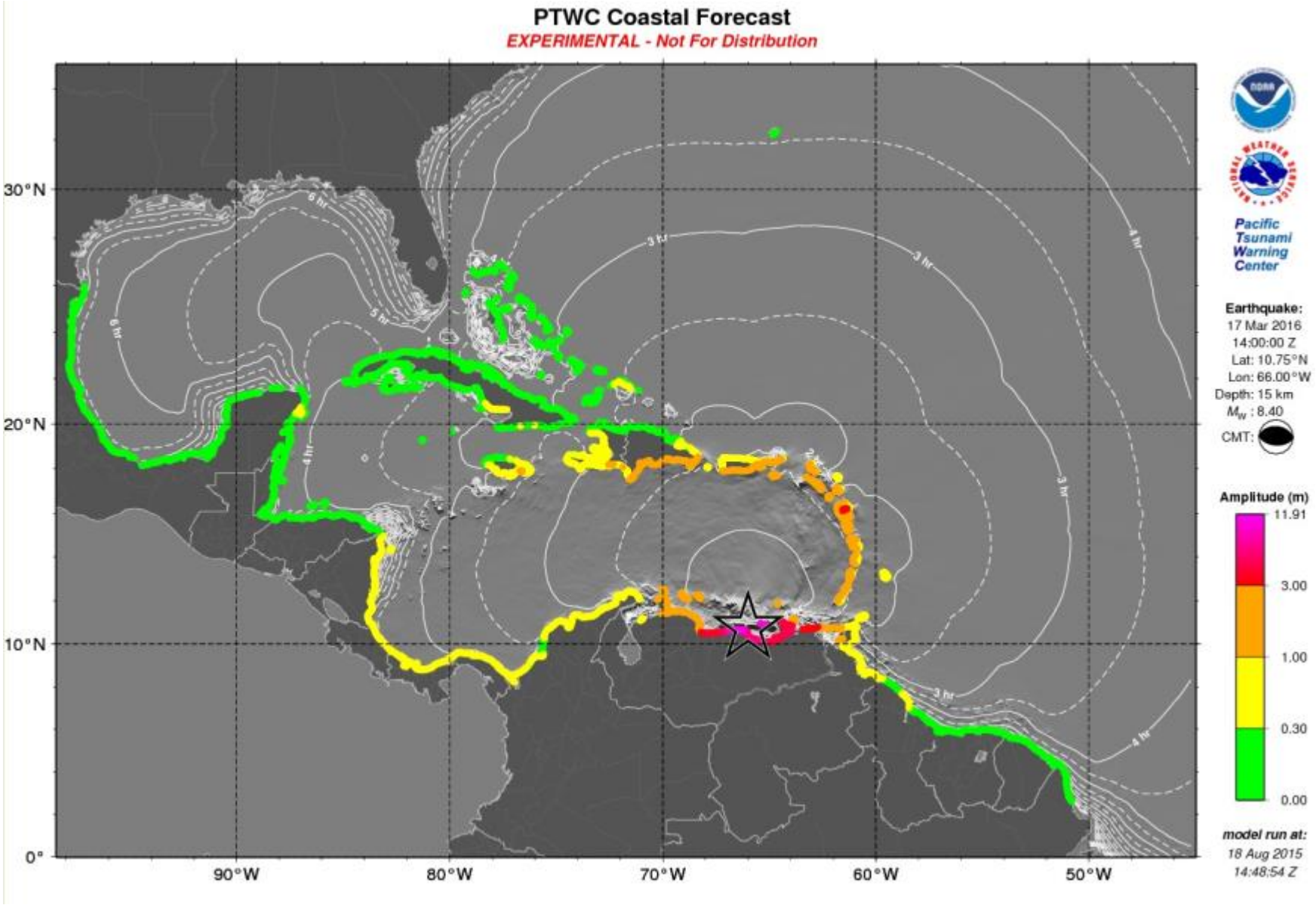
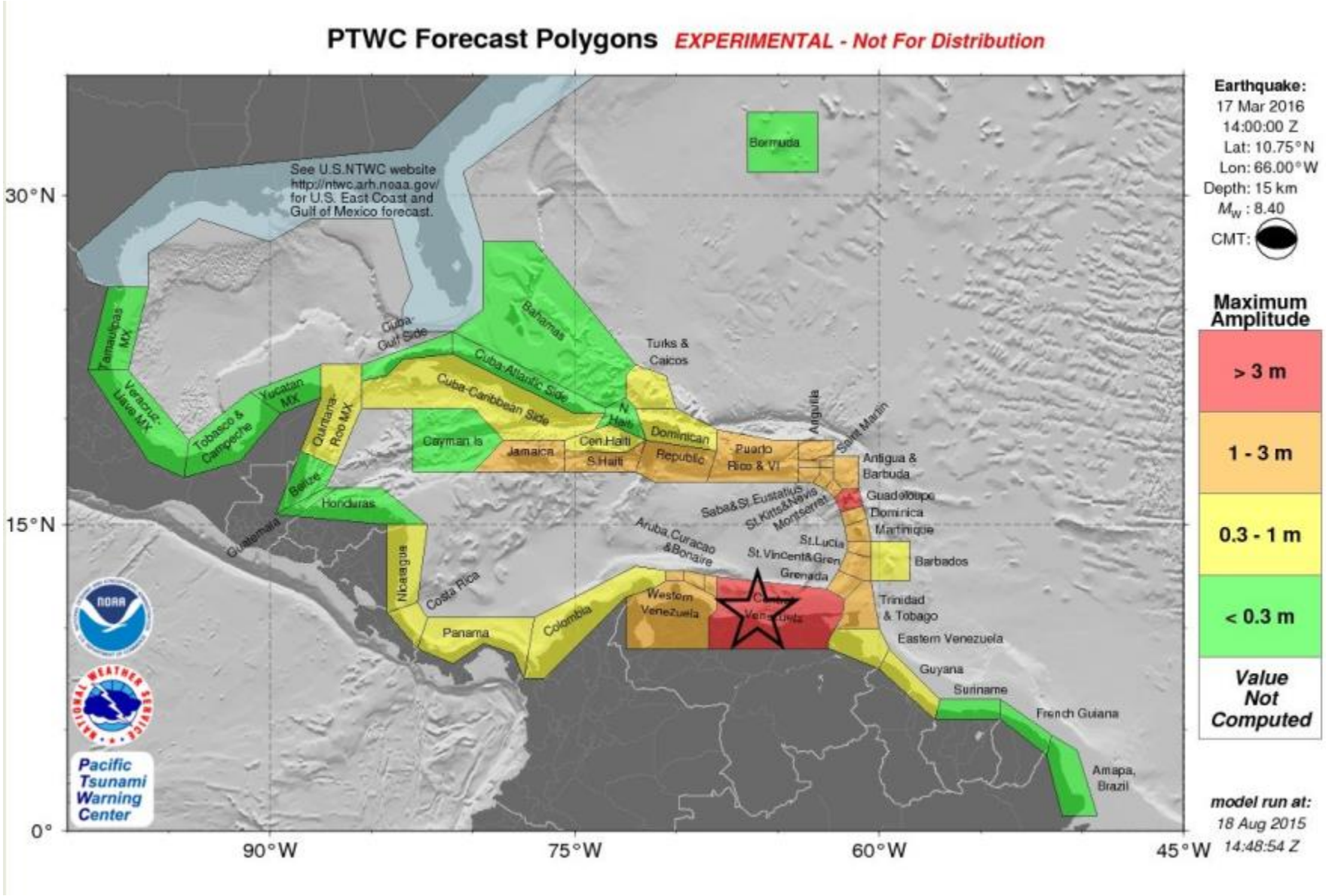
MAPA DE PRONÓSTICO EN OCÉANO-PROFUNDO



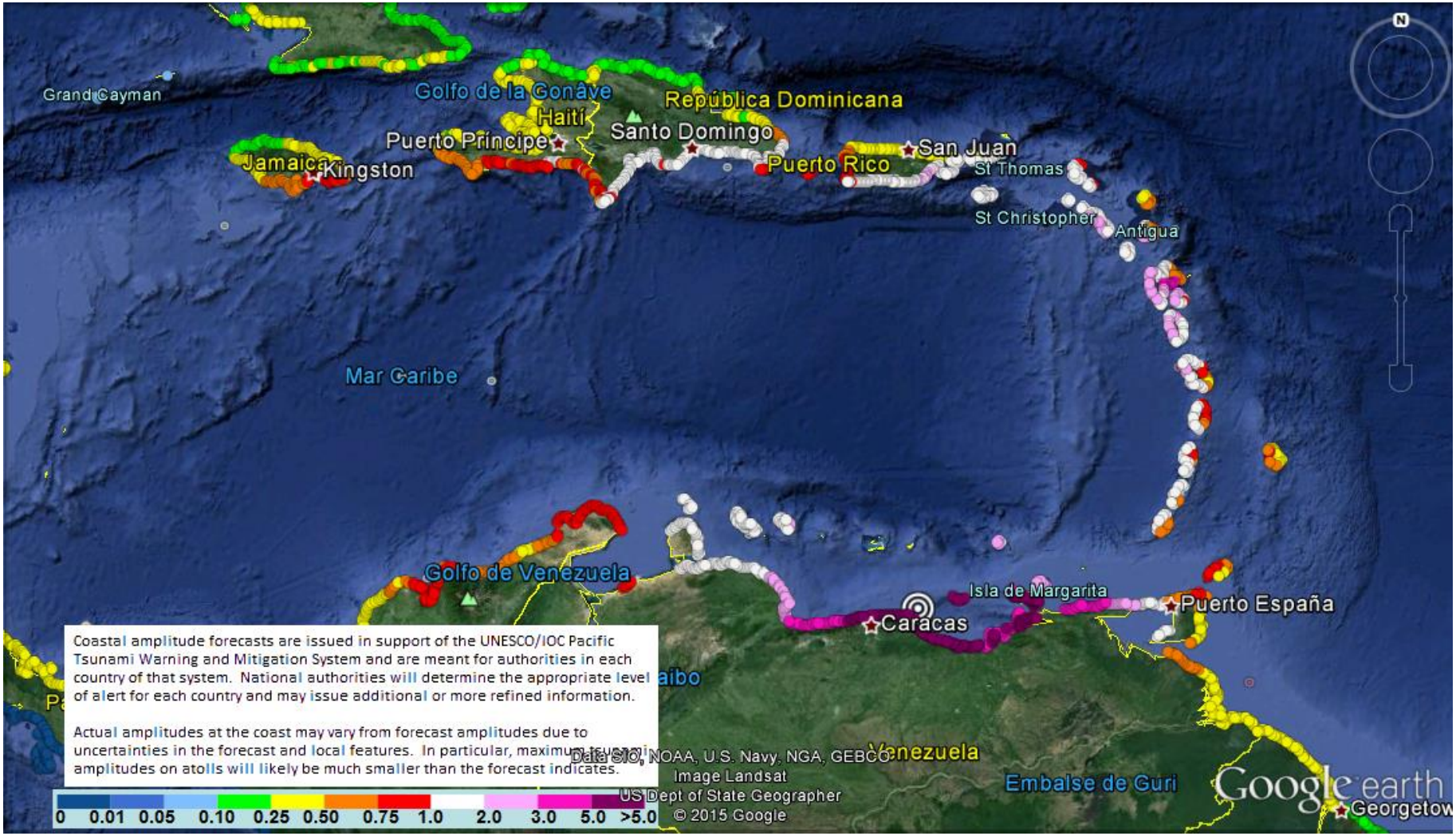
MAPA DE PRONÓSTICO COSTERO



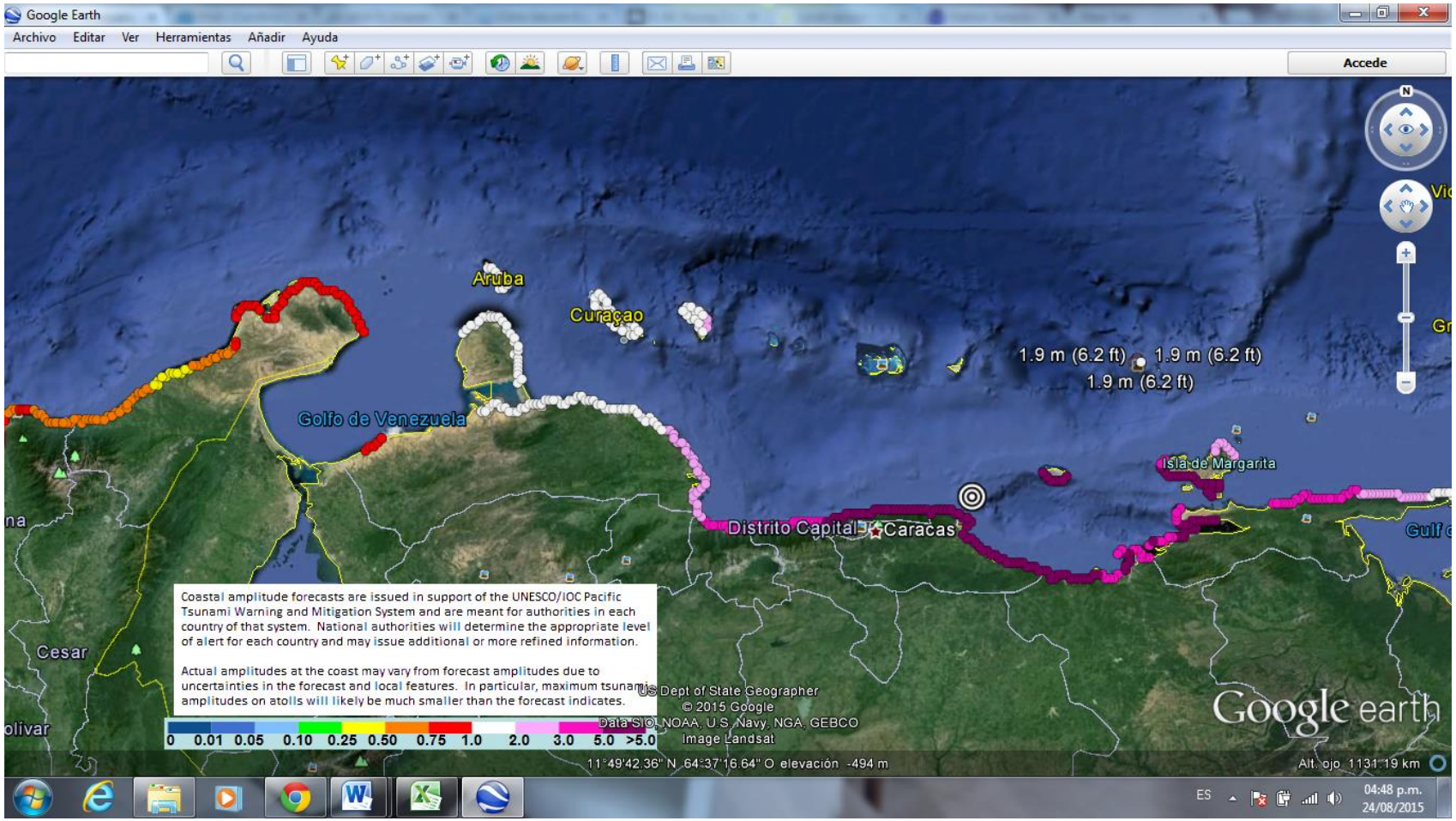
MAPA DE POLÍGONOS DE PRONÓSTICO COSTERO



ARCHIVO KMZ VISTO CON GOOGLE EARTH



ZOOM ARCHIVO KMZ VISTO CON GOOGLE EARTH



EJEMPLO TABLA DE ESTADÍSTICA

EXPERIMENTAL - NOT FOR DISTRIBUTION
PTWC RIFT Tsunami Forecast Model - Run ID: 20150818144854
Earthquake - Origin: 03/17/2016 14:00:00 UTC Coordinates: 10.8N 66.0W Depth: 015km Magnitude: 8.4

Coastal Forecast (meters)				Offshore Forecast (meters)				Total	
Maximum	Mean	Median	STD	Maximum	Mean	Median	STD	Points	Region Name
12.00	5.40	5.10	2.30	6.20	2.30	2.00	1.30	244	Central_Coast_of_Venezuela
3.10	2.00	2.00	0.73	1.50	0.67	0.65	0.29	71	Guadeloupe
2.80	1.80	1.60	0.53	6.10	1.50	1.20	0.98	100	Western_Coast_of_Venezuela
2.60	1.80	1.80	0.44	0.85	0.47	0.46	0.13	31	Dominica
2.50	1.20	0.74	0.75	2.10	0.93	0.66	0.58	28	Antigua_and_Barbuda
2.50	2.00	1.90	0.27	1.50	0.60	0.54	0.24	29	Saint_Kitts_and_Nevis
2.40	1.00	1.10	0.53	1.90	0.56	0.48	0.38	189	Puerto_Rico_and_Virgin_Is
2.30	1.60	1.50	0.40	1.70	0.85	0.83	0.41	15	Bonaire
2.30	1.50	1.80	0.56	1.90	0.60	0.49	0.32	41	Martinique
2.20	1.50	1.50	0.24	0.64	0.40	0.36	0.11	8	Saba_and_Saint_Eustatius
2.20	1.80	1.80	0.20	0.79	0.50	0.45	0.12	11	Montserrat
1.90	1.30	1.40	0.43	1.10	0.40	0.36	0.19	26	Saint_Lucia
1.90	1.40	1.40	0.23	0.70	0.46	0.45	0.13	27	Curacao
1.50	1.20	1.20	0.19	1.40	0.51	0.46	0.23	148	Caribbean_Coast_of_Dominican_Republic
1.50	1.20	1.30	0.20	0.79	0.68	0.70	0.08	6	Saint_Barthelemy
1.50	1.40	1.50	0.06	1.30	0.79	0.73	0.32	6	Sint_Maarten
1.40	1.00	1.10	0.28	1.10	0.45	0.35	0.23	29	Grenada
1.40	1.20	1.20	0.21	0.99	0.40	0.33	0.18	33	Saint_Vincent_and_the_Grenadines
1.40	1.10	1.20	0.31	1.60	1.10	1.10	0.27	8	Anguilla
1.30	1.20	1.20	0.05	0.68	0.46	0.42	0.11	8	Aruba
1.30	1.30	1.30	0.00	1.30	1.20	1.10	0.08	3	Saint_Martin
1.20	0.72	0.66	0.27	0.83	0.39	0.37	0.18	77	Trinidad_and_Tobago
1.10	0.47	0.45	0.24	0.67	0.19	0.13	0.14	146	Jamaica
1.10	0.76	0.78	0.16	0.71	0.25	0.22	0.12	89	Caribbean_Coast_of_Haiti
1.00	0.54	0.51	0.22	0.94	0.36	0.31	0.17	255	Caribbean_Coast_of_Colombia
0.89	0.60	0.62	0.15	0.31	0.19	0.19	0.06	22	Barbados
0.71	0.26	0.23	0.11	1.50	0.14	0.09	0.19	129	Atlantic_Coast_of_Dominican_Republic
0.55	0.48	0.48	0.04	0.28	0.18	0.18	0.04	48	Caribbean_Coast_of_Costa_Rica
0.50	0.45	0.46	0.03	0.45	0.19	0.18	0.06	82	Atlantic_Coast_of_Venezuela
0.49	0.41	0.40	0.04	0.41	0.19	0.17	0.06	179	Caribbean_Coast_of_Panama
0.47	0.40	0.41	0.03	0.29	0.15	0.15	0.06	139	Caribbean_Coast_of_Nicaragua
0.45	0.36	0.37	0.05	0.26	0.10	0.09	0.04	139	Gulf_of_Gonave_Coast_of_Haiti
0.37	0.27	0.28	0.03	0.26	0.15	0.14	0.04	101	Guyana
0.36	0.21	0.15	0.10	0.14	0.07	0.07	0.03	46	Turks_and_Caicos_Islands
0.35	0.15	0.14	0.09	0.14	0.05	0.05	0.03	166	Quintana_Roo_Mexico
0.31	0.16	0.14	0.08	0.14	0.05	0.04	0.02	472	Caribbean_Coast_of_Cuba
0.30	0.22	0.21	0.04	0.14	0.06	0.06	0.02	66	Atlantic_Coast_of_Haiti
0.27	0.15	0.16	0.03	0.32	0.10	0.08	0.06	84	French_Guiana
0.27	0.24	0.24	0.01	0.34	0.15	0.14	0.06	109	Suriname
0.25	0.12	0.16	0.07	0.09	0.03	0.04	0.02	267	Atlantic_Coast_of_Cuba
0.23	0.11	0.09	0.04	0.24	0.04	0.03	0.02	442	Bahamas
0.20	0.16	0.17	0.02	0.12	0.07	0.07	0.02	90	Belize
0.19	0.13	0.12	0.02	0.19	0.06	0.05	0.02	185	Caribbean_Coast_of_Honduras
0.19	0.18	0.18	0.00	0.07	0.06	0.06	0.01	13	Caribbean_Coast_of_Guatemala
0.16	0.15	0.16	0.00	0.14	0.08	0.06	0.04	7	Bermuda
0.14	0.05	0.02	0.04	0.13	0.02	0.01	0.02	1071	Mainland-Gulf
0.11	0.03	0.03	0.01	0.02	0.01	0.01	0.00	119	Gulf_of_Mexico_Coast_of_Cuba
0.10	0.10	0.10	0.00	0.14	0.05	0.05	0.03	64	Amapa_Brazil
0.09	0.09	0.09	0.01	0.05	0.04	0.03	0.01	5	Cayman_Islands
0.06	0.02	0.01	0.02	0.02	0.00	0.00	0.01	59	Yucatan_Mexico
0.01	0.01	0.01	0.00	0.01	0.00	0.00	0.00	126	Tamaulipas_Mexico
0.01	0.01	0.01	0.00	0.01	0.00	0.00	0.00	152	Veracruz_Mexico
0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	181	Tabasco_and_Campeche_Mexico

Limitaciones de RIFT

1. Para pequeñas islas (p. ej., islas generalmente de menos de 30 km en diámetro), la ley de Green puede sobre estimar la amplitud costera. En esos casos, un pronóstico de amplitud entre la ley de Green y fuera de la costa puede ser más apropiado.

RIFT

Originalmente: Real Time Inundation Forecasting for Tsunamis

Actualmente: Rapid Inclusive Forecasting for Tsunamis

Limitaciones de RIFT

2. Para resonancia en puertos, la amplitud de la ley de Green puede subestimar la amplitud actual de la ola. La amplitud de la ley de Green debe ser interpretada como un promedio de la amplitud de las olas en la costa expuesta, no necesariamente la amplitud máxima dentro del puerto o la registrada por una estación de nivel del mar.

Limitaciones de RIFT

3. El pronóstico RIFT de amplitudes en la costa no es necesariamente indicativo de profundidad de la inundación, el cual es una función de la topografía local. Una amplitud costera de 30 metros según la ley de Green no significa que la inundación alcanzará 30 metros de profundidad. Pero esto indica impacto de un tsunami mayor.

Limitaciones de RIFT

4. En el campo cercano, la amplitud de la ley de Green no necesariamente considera propagación y disipación de olas. Por lo tanto, una amplitud costera de 20-30 metros puede ser engañosa, esto debe ser simplemente interpretado como un tsunami mayor.

Sistemas de Diseminación

- Productos Existentes con texto (hasta Feb. 29, 2016) - GTS, AFTN, Correo Electrónico (sólo TWFP y TWC), Fax (solo TWFP y TWC), Página, Sistema de mensajes del IOC, Lista de Servicio de Tsunami ("Bulletin Board"), etc.

- Productos Mejorados (Octubre 1, 2015-Febrero 29, 2016) – mensaje con texto, 3 gráficos, archivo kmz y estadísticas sólo por correo electrónico a TWFP y TWCs

- Productos (A partir de Marzo 1, 2016)
  - Texto – Público, Correo electrónico (solo TWFP and TWC), Fax (solo TWFP y TWC), Página, Sistema de mensajes del IOC, Lista de Servicio de Tsunami ("Bulletin Board"), GTS, AISR, EMWIN.
  - Productos Gráficos, archivo kmz file y estadísticas – sólo por correo electrónico a TWFP y TWCs

ATENCIÓN - RECORDATORIO

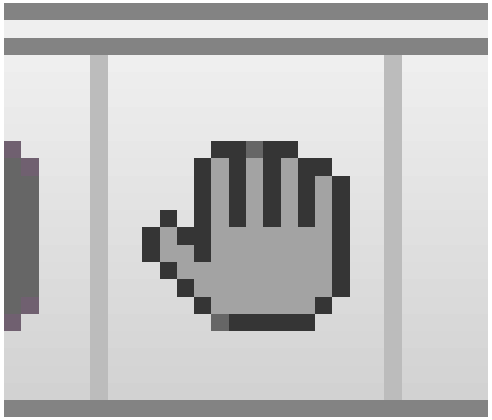
- Todos los productos mejorados de PTWC a ser emitidos en paralelo con los productos existentes (a partir de Oct. 1, 2015) y productos gráficos mejorados, KMZ y tablas de estadística (a partir de Marzo 1, 2016) son sólo para uso interno del TWFP/TWC, NO para diseminación posterior (no medios, no redes sociales, no otras agencias), son como soporte para toma de decisiones , no para público…

Próximos Pasos

- Presentación disponible en CARIBEWAVE.INFO
- Revise la información de contacto de TWFP/TWC, especialmente la dirección de correo electrónico, en la Página de IOC Tsunami TWFP/TWC
  - Nombre de usuario: tsunami
  - Clave: bigwave
- Advertir al personal, no diseminación posterior de Productos Mejorados
- Cambios de información de contacto de TWFP/TWC deben ser enviados a b.aliaga@unesco.org

¿Preguntas?

Herramientas en Webinar para Hacer Preguntas:



Gracias