

# CARIBBEAN SAFE SCHOOL MINISTERIAL FORUM



3-4 APRIL 2017  
ANTIGUA AND BARBUDA



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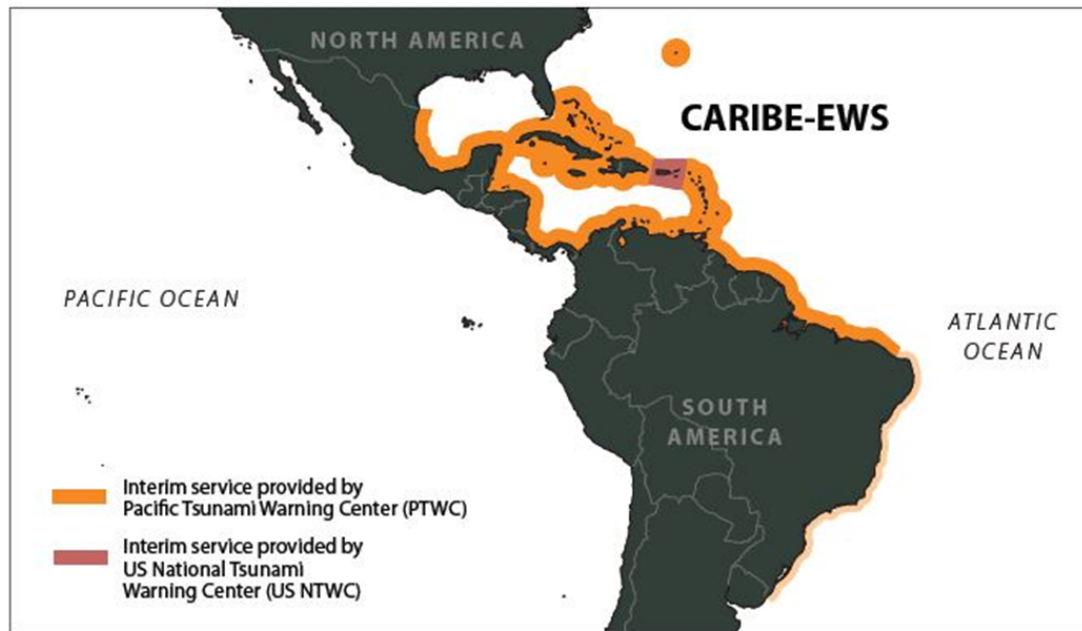
## The ICG/CARIBE EWS

Paul Martens, Disaster Manager  
Sint Maarten Fire Department  
Vice Chair, ICG/CARIBE EWS

*April 4, 2017*



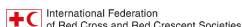
# UNESCO IOC Intergovernmental Coordination Group for Tsunami and Other Coastal Hazards for the Caribbean and Adjacent Regions (CARIBE EWS)



Produced by the Intergovernmental Oceanographic Commission of UNESCO.  
Date: Mar. 13, 2014

32 Member States and 16 Territories  
(6 Associate MS of UNESCO); 16 SIDS

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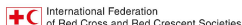
# UNESCO IOC ICG / CARIBE EWS Annual meeting

ICG XI – Cartagena, Colombia, April 5-7, 2015  
(19 Member States and Territories participating)



Next Meeting May 10-12, 2017: San Jose, Costa Rica

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# Caribe EWS Officers



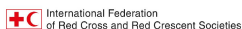
## Chair:

- Christa von Hillebrandt-Andrade (Puerto Rico, USA)

## Vice Chairs:

- Gerard Metayer (Haiti)
- Milton Puentes (Colombia)
- Paul Martens (Sint Maarten, The Netherlands)

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# Caribe Working Groups (WG) and Task Teams (TT)

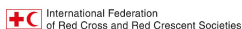
## Working Groups:

1. Tsunami Monitoring and Detection Systems;
2. Tsunami Hazard Assessment;
3. Tsunami Related Services;
4. Preparedness, Readiness and Resilience.

## Task Teams:

- CTIC Business and Sustainability Plan;
- Caribe Wave;
- Volcanic Activity and Potential Tsunami's;
- Expert Group for other Coastal Hazards.

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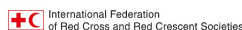
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# Member State Designations

- **Tsunami Warning Focal Points (TWFP)** – 24/7 receipt and dissemination capabilities (all but one country has designated, 40% correspond to Hydromet Offices)
- **National Tsunami Warning Centers (NTWC)** – responsible for issuing the warning, introduced in 2014 (Oftentimes is also the TWFP) – 50% of MS have made this designation
- **Tsunami National Contact** -responsible for representing MS in ICG meetings and decisions
- **Tsunami Advisors**
- **IOC Tsunami Unit** (Bernardo Aliaga) is responsible for maintaining this list

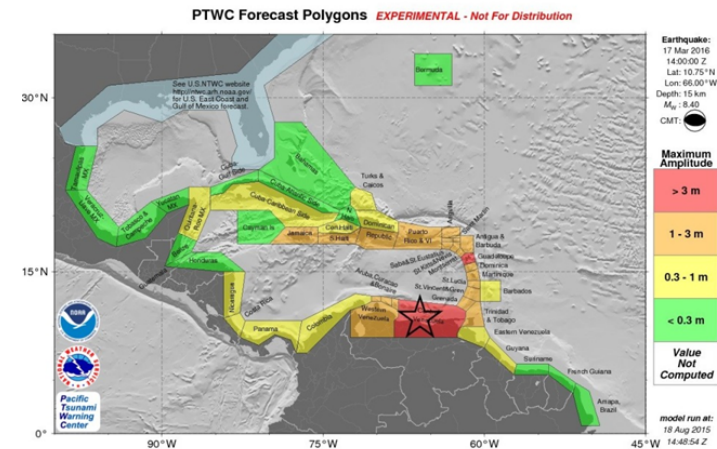


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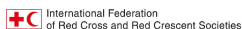


# US PTWC (Hawaii) is the CARIBE EWS Tsunami Service Provider

- PTWC has been the TSP for the CARIBE EWS since 2005;
- Began the issuance of the International Enhanced Products as of March 1, 2016. These include text and graphical products;
- As of April 3, 2017 PTWC has taken over from NTWC the responsibility for issuing tsunami warnings for Puerto Rico and Virgin Islands – becoming the sole provider of the NWS tsunami products for the Caribbean.



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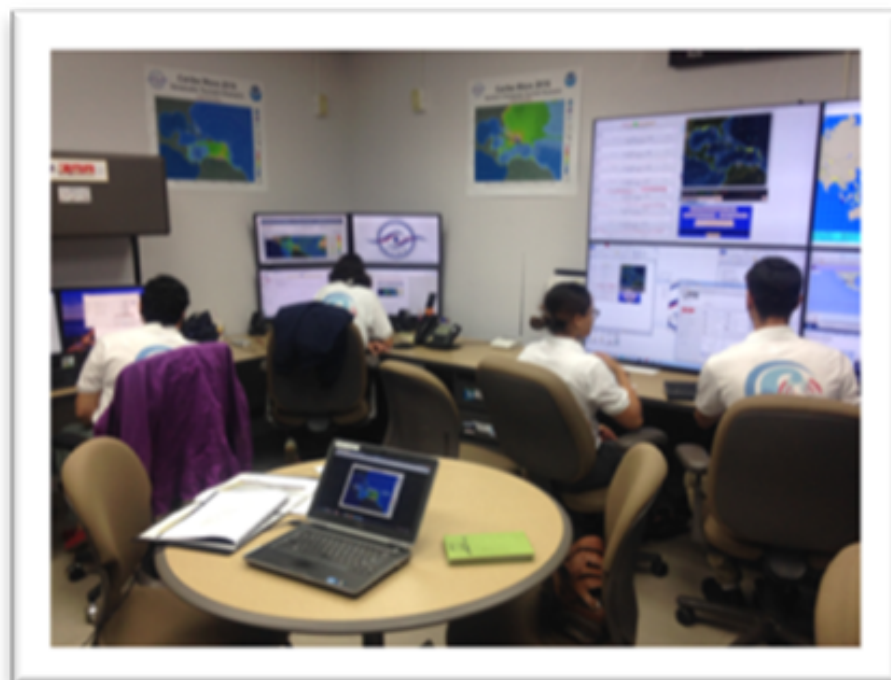
# Paradigm Shift

Each country, territory or jurisdiction is responsible for:

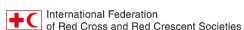
- establishing alert level (warning, advisory, watch, etc.);
- disseminating the products;

AND;

- issuing the Cancellation and All Clear



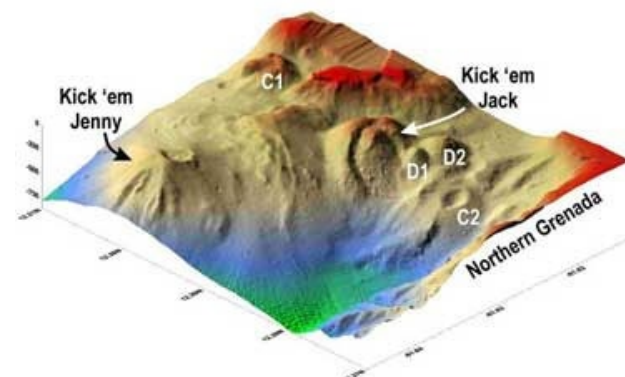
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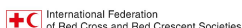


# Non Seismic Sources of Tsunamis

- Kick'Em Jenny sub-marine volcano had a period of heightened seismic activity and degassing in July 2015;
- Given tsunami concerns, and confusion caused by statements issued by monitoring agencies, the CARIBE EWS established a Task Team to make recommendations on how to deal with such situations;
- Will be discussed in CARIBE EWS XII.



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# CARIBE WAVE

## Registration at The *TsunamiZone*

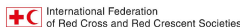
Member States establish their own national task teams to determine the scope of their national participation and testing.



The PTWC will send via email all the simulated enhanced products (text and graphical) to the designated TWFP and NTWC (no need to register to received them but if registered, you will be part of the statistical count of who is participating). To verify the current list of officially designated UNESCO IOC CARIBE EWS TWFP and NTWC check out:

[http://www.ioc-tsunami.org/index.php?option=com\\_content&view=article&id=5&Itemid=22&lang=en](http://www.ioc-tsunami.org/index.php?option=com_content&view=article&id=5&Itemid=22&lang=en)  
Username: tsunami pwd: bigwave

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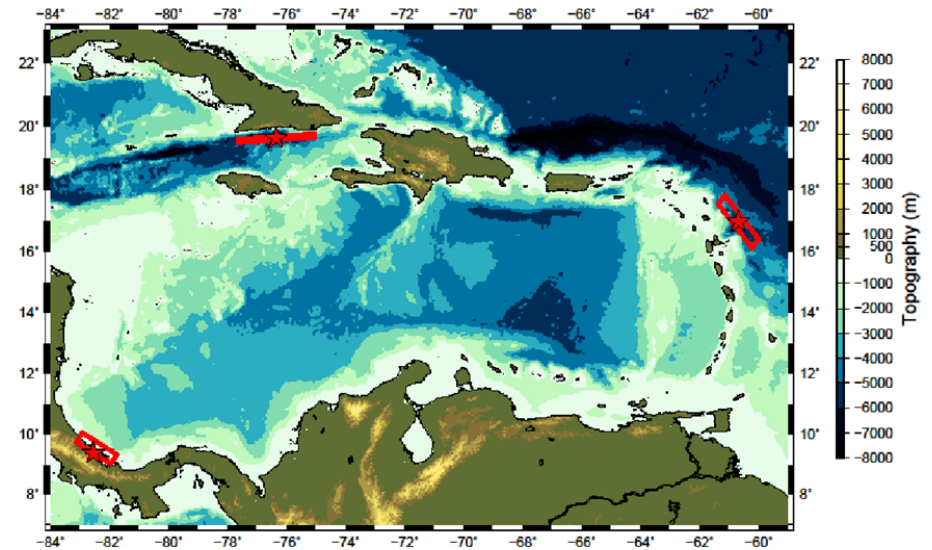


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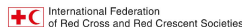
# CARIBE WAVE 17

## Earthquake and Tsunami Scenarios March 21, 2017



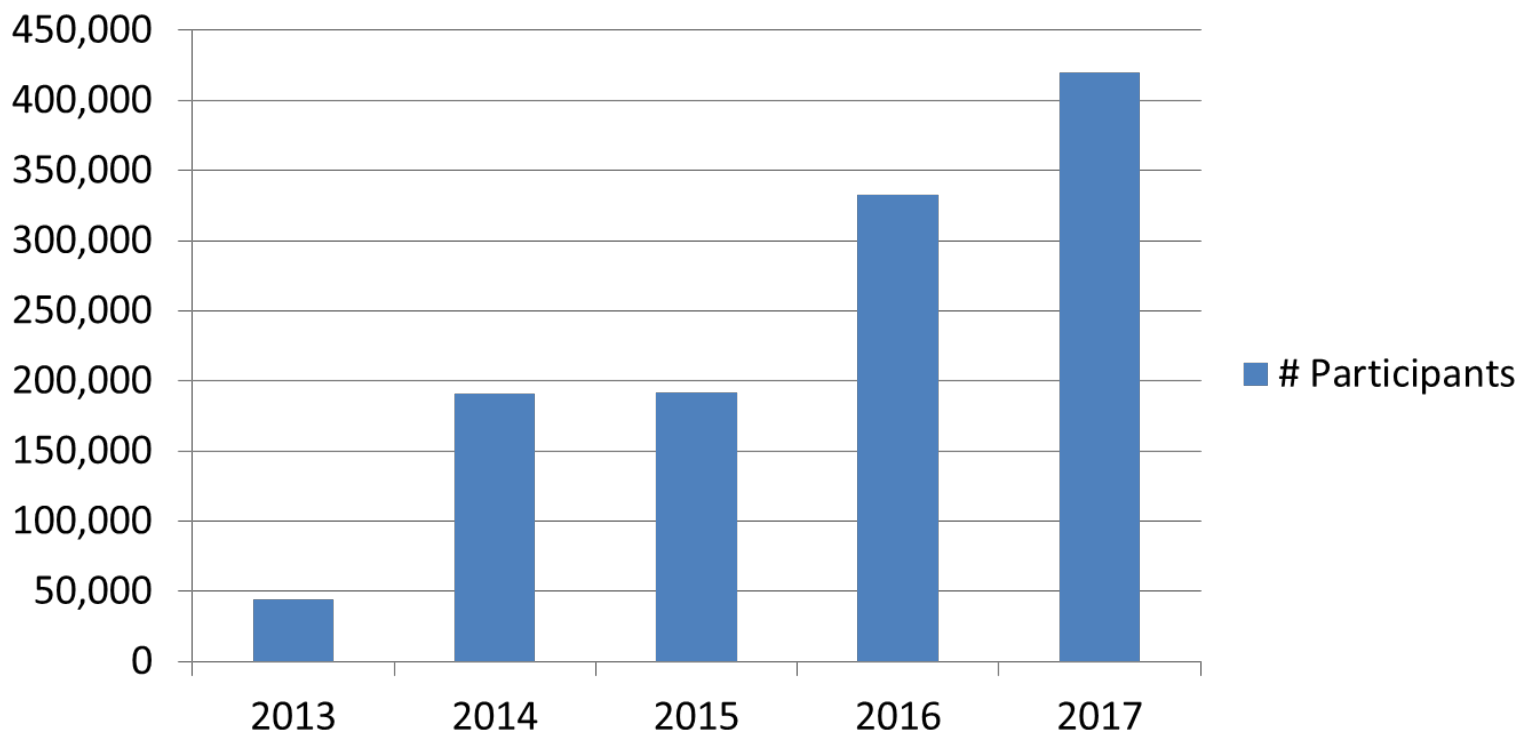
| Scenario                     | Origin Time                 | Mw  | Epicenter        |
|------------------------------|-----------------------------|-----|------------------|
| Costa Rica                   | 14:00:00 UTC March 21, 2017 | 7.9 | 9.37°, -82.54°   |
| Cuba                         |                             | 8.2 | 19.625°, -76.35° |
| Northeastern Lesser Antilles |                             | 8.5 | 16.96°, -60.69°  |

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# CARIBE WAVE

## # Participants



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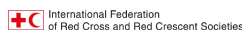
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# Tsunami Ready Recognition Program

- Currently 52 communities in the Caribbean have been recognized TsunamiReady®/Tsunami Ready: 46 in Puerto Rico, 3 in the USVI, British Virgin Islands, Anguilla and St. Kitts and Nevis;
- Piloting of the UNESCO IOC Tsunami Ready continues in Grenada and Haiti with funding from USAID/OFDA through CTWP;
- Supported PTWS for UNESCO IOC TR recognition of Cedeño, Honduras;
- Available to share best practices of CARIBE EWS to other ICGS.

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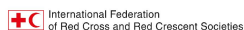
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# Tsunami Ready Guidelines

These guidelines were approved at ICG X in 2015 and further commended by the IOC Executive Council.

| Categories   |
|--|
| <b>MITIGATION</b>  |
| Mit-1. Have designated and mapped tsunami hazard zones   |
| Mit-2. Have a public display of tsunami information  |
| <b>PREPAREDNESS</b>  |
| Prep-1. Produce easily understood tsunami evacuation maps as determined to be appropriate by local authorities in collaboration with communities |
| Prep-2. Develop and distribute outreach and public education materials   |
| Prep-3. Hold at least three outreach or educational activities <u>annually</u>   |
| Prep-4. Conduct an annual tsunami community exercise   |
| <b>RESPONSE</b>  |
| Resp-1. Address tsunami hazards in the community's emergency operations plan (EOP)   |
| Resp-2. Commit to supporting the emergency operations center (EOC) during a tsunami incident if an EOC is opened and activated                   |
| Resp-3. Have redundant and reliable means for a 24-hour warning point (and EOC if activated) <u>to receive</u> official tsunami threats          |
| Resp-4. Have redundant and reliable means for 24-hour warning point and/or EOC <u>to disseminate</u> official tsunami alerts to the public       |

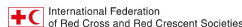
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# TR Preparedness and School Involvement

- Include schools and critical facilities in the emergency operations plan and encourage schools and critical facilities to include tsunamis in their emergency response plans.
- All schools within the community requesting recognition should receive copies of the outreach and public education materials.
- An effort should be made for the schools within the mapped evacuation zone to participate in a tsunami community exercise and by conducting an evacuation drill.

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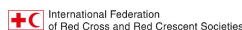
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# Future Focus of Work

- Strengthened communication between PTWC and the TWFP and NTWC's;
- Country SOP's in sync with enhanced PTWC products;
- Maintenance and Strengthening of the Observation system;
- Tsunami Ready-Evacuation mapping and planning;
- Funding for CTIC;
- Group of Experts to Address other Coastal Hazards (reach out to other partners, like WMO);
- Synergy with Sendai Platform ISDR.

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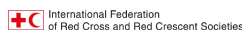
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# Closing Remarks

- 100's of thousands of lives and billions of dollars at risk in the Caribbean and Adjacent Regions from Tsunamis;
- Fortunately the Infrequency of the tsunamis has not disarmed us and CARIBE EWS with its Member States has made very significant advances;
- We are committed to continue developing the best tsunami warning system for the protection of the people and economies;
- Appreciate the engagement of the Member States and support of UNESCO/IOC.

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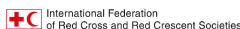


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# Thank You

For more information:  
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Mayaguez, Puerto Rico  
UNESCO-IOC – ICG/CARIBE EWS Chair  
[christa.vonh@noaa.gov](mailto:christa.vonh@noaa.gov)

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