The Tsunami and Other Coastal Hazards for the Caribbean and Adjacent Regions (CARIBE-EWS)

Christa G. von Hillebrandt-Andrade
Chair, ICG/CARIBE EWS
Manager, US Caribbean Tsunami Warning Program

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Honolulu, HI
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Thank you PTWS

- Importance of SOP’s
- E and O Products (ITIC, UNESCO)
- Tsunami Threat Products (PTWC)
- Importance of Vertical Evacuation
- Importance of a culture of evacuation/planning for the extreme
- Importance of Practicing
- Scientific Research and Technology
The CARIBE EWS covers 48 Countries and Territories

Population
Islands: 40 Million
Continental: 430 Million

MS in common between PTWS and CARIBE EWS: Colombia, Panama, Costa Rica, Nicaragua, Honduras, Guatemala and Mexico
Over the past 500 years more than 75 tsunamis have occurred killing 4484 people
UNESCO IOC Intergovernmental Coordination Group for Tsunami and Other Coastal Hazards for the Caribbean and Adjacent Regions (CARIBE EWS)
Tsunami Alerts which cover all countries and territories are provided by NOAA NWS PTWC (Hawaii for International) and NOAA NWS NTWC (Alaska for Domestic).

The NOAA Caribbean Tsunami Warning Program in Puerto Rico and the Caribbean Tsunami Information Center in Barbados also support improved Sensing, Education and Outreach, Training and Decision Support capabilities.
Seismic Stations – 88% (86 of 98 of Caribbean stations in implementation plan)
Cuba began sharing data thru IRIS in Feb. 2015 – Almost all major networks are now contributing!!!!!

Challenge: Complete Gaps, Increase data availability, only 65% of stations have at least 90% data availability, Capacity Building, Organize every other year a Meeting/Training of Seismic Network Operators and bimonthly conference calls/webinars
CARIBE EWS Coastal Sea Level Monitoring Stations Progression (1960-2020)

- 64% (69/118) of implementation plan
- Coordinating with GLOSS
- IV CARIBE EWS SL course held Nov. 3-7, 2014 (17 MS/Operators)
- Bimonthly conference calls/webinars w/ operators

CPACC and MACC were Projects executed by the Caribbean Community Center for Climate Change
Ongoing Evaluation of Integration of GPS into Tsunami Warning System (COCONet and TLALOCNet)
To be presented at ICG X

PROPOSED CTWS MODEL

CTWP (Seismic and Sea Level Nets)

RTSP\(\text{\textsubscript{s}}\)

SRTSP\(\text{\textsubscript{s}}\)

NTWC/\text{TWFP}

DMO\(\text{\textsubscript{s}}\)

CONFIRMATION

ADVISORY

EWS (Confirmation)

LOCAL NETWORKS

COMMUNITY

CTIC

PTWC

CATAC
Transition of Tsunami Products

THIS MESSAGE APPLIES TO COUNTRIES WITHIN AND BORDERING THE CARIBBEAN SEA...EXCEPT FOR PUERTO RICO...THE U.S. VIRGIN ISLANDS...AND THE BRITISH VIRGIN ISLANDS.

...A CARIBBEAN-WIDE TSUNAMI WATCH IS IN EFFECT...

A TSUNAMI WATCH IS IN EFFECT FOR


THIS BULLETIN IS ISSUED AS ADVICE TO GOVERNMENT AGENCIES. ONLY NATIONAL AND LOCAL GOVERNMENT AGENCIES HAVE THE AUTHORITY TO MAKE DECISIONS REGARDING THE OFFICIAL STATE OF ALERT IN THEIR AREA AND ANY ACTIONS TO BE TAKEN IN RESPONSE.

AN EARTHQUAKE HAS OCCURRED WITH THESE PRELIMINARY PARAMETERS

ORIGIN TIME - 14:02 25 MAR 2015
COORDINATES - 10.3 NORTH 78.8 WEST
LOCATION - NORTH OF PANAMA
MAGNITUDE - 6.0

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 PANAMA.

* TSUNAMI WAVES REACHING 1 TO 3 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE ALONG SOME COASTS OF COLOMBIA...COSTA RICA...CUBA...DOMINICAN REPUBLIC...HAITI...NICARAGUA...AND JAMAICA.

* TSUNAMI WAVES REACHING 0.3 TO 1 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE FOR SOME COASTS OF ARUBA...HONDURAS...MEXICO...PUERTO RICO...ANGUILLA...ANTIGUA AND BARBUDA...BANANAS...CAYMAN ISLANDS...DOMINICA...GRENADA...GUadeloupe...MARTINIQUE...MONTSERRAT...CURACAO...BONAIRE...SAINT KITTS AND NEVIS...SAINT LUCIA...SAINT VINCENT AND THE GRENADINES...US VIRGIN ISLANDS...AND VENEZUELA.

* TSUNAMI WAVES LESS THAN 0.3 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE FOR SOME COASTS OF GUYANA...GUATEMALA...SURINAME...BARBADOS...BELIZE...BERMUDA...FRENCH GUIANA...SINT MAARTEN...SAINT BARTHELEMY...SAINT MARTIN...TRINIDAD AND TOBAGO...AND TURKS AND CAICOS ISLANDS.
Annual Tsunami Exercises
CARIBE WAVE/LANTEX

• Individuals thru major institutions (Shake Out Model)
• Test comms, response plans and community preparedness
• 100% MS Participated
Close to 140,000 registered
• Next exercise March, 2016
Performance Based Community Recognition Program Modelled after TsunamiReady™

- Preparedness, Mitigation and Response Requirements
- Currently 49 TsunamiReady communities in the Caribbean have been recognized by NWS and in the case of non US, by NOAA and UNESCO.
- Transition from Pilot Intl Project to a CARIBE EWS Program will share with PTWS
Proposed Requirements for CARIBE EWS Recognition Program

- Preparedness
  - Evacuation Maps
  - Sustained Public Education, distribution of E and O materials
  - School participation in tsunami education effort
  - Annual Community wide or multiple outreach events
  - Conduct Annual Evacuation Exercises, over three years seek to involve warning officials, EM, schools, community
Cont.

• Mitigation
  • Designated and Mapped Tsunami Hazard Zones (based on tsunami modelling or use baseline tsunami zone)
  • Include tsunamis in the community or national multi hazard mitigation plan
  • Public display of tsunami awareness and response information (eg. signage)
Cont.

- **Response**
  - Tsunamis addressed in community's emergency operations plan
  - Commit to supporting Emergency Operations Center during tsunami incidents
  - 24/7 Tsunami alert reception capability
  - 24/7 Tsunami alert dissemination capability

- **Additional Comments**
  - Tsunami Boards at the Regional, National/Territorial or Sub National/Territorial Level
  - CTIC proposed Administrator
  - Recognition is valid for 3 years
Closing Remarks – Opportunities for Joint PTWS – CARIBE EWS Collaboration

- Coordination of exercises (dates, formats, etc…) – CARIBE WAVE every year in March.
- Access to observational data of mutual interests –, seismic, GPS;
- Capacity building benefitting in common CARIBE EWS and PTWS Member States
- Collaboration of Tsunami Information Centers, topics of mutual interest, eg. tourism, SOP’s, evacuation mapping, materials
- Sharing of best practices for Performance Based Community Recognition Programs
- Learning from PTWS as we move to implement the PTWC Enhanced products
- Consider maybe a joint PTWS – CARIBE EWS WG for Central America
Thank You, Gracias, Mahalo....

Caribbean Tsunami Warning Program

“Protecting lives and securing economic prosperity in the Caribbean and Western Atlantic”

Programa de Alerta de Tsunamis del Caribe

“Protegiendo vidas y salvaguardando prosperidad económica en el Caribe y Atlántico Occidental”

http://caribewave.info