Eighth Session of the Intergovernmental Coordination Group for the Tsunami and Other Coastal Hazards Warning System for the Caribbean and Adjacent Regions

29 April - 1 May 2013   Port of Spain, Trinidad

PTWC Interim Advisory Services for the CARIBE-EWS

Michael Angove
Director (Acting), NOAA Tsunami Program

Charles McCreery
Director, NOAA Pacific Tsunami Warning Center
Nearby Seismic Stations Monitored by PTWC

Stations added since ICG/CARIBE-EWS-VII
Black indicates data not being received.
Seismic Overview

- Seismic Station Distribution and Density
  - Sufficient to determine a preliminary location and magnitude within a few minutes for large earthquakes across the entire region.
  - Provides enough redundancy so that outages of a few stations do not significantly affect performance.
  - New/additional seismic data is incorporated as capacities allow—particularly welcome in those areas with less dense coverage.
Nearby Sea Level Stations Monitored by PTWC

Stations added since ICG/CARIBE-EWS-VII
Black indicates gauge not operating properly.
Sea Level Overview

- Sea Level Station distribution and density
  - Coverage in NE Caribbean is sufficient for verification and measurement of a tsunami generated in that region in advance of the tsunami striking other nearby coasts.
  - Coverage along South and Central American coasts is improved, but still insufficient to ensure prior warning in all areas.
  - Coverage in NW Caribbean is non-existent. A tsunami forecast generated in that region will be based on seismic analysis only and will likely not be directly observed prior to landfall.
PTWC Intersessional Activities

- Responded to >500 global earthquakes
- Issued Observatory Messages for 339 global earthquakes.
- Issued Caribbean Tsunami Bulletins for 2 earthquakes
  - Tsunami Information Statement on May 24, 2012, for a magnitude 6.5 earthquake in the Norwegian Sea.
  - Basin-wide Tsunami Watch on September 5, 2012, for a magnitude 7.9 earthquake off the coast of Costa Rica
Other PTWC Intersessional Activities

- Continued development of enhanced products
  - Similar for the CARIBE-EWS and PTWS
  - Following recommendations from TOWS Task Team on Tsunami Watch Operations

- Participated in CaribeWave13 Exercise.
  - Created suite of existing products for scenario
  - Created suite of enhanced products for scenario
  - Created Users Guide for enhanced products
  - Issued dummy message to initiate exercise

- Communication Testing
  - 12 scheduled tests – a few TWFP changes
  - 2 unscheduled tests – still a low response
Summary

- Another quiet year in the Caribbean and Atlantic (this is normal, on average)
- Still need more sea level gauges, particularly along the southern and western borders of the Caribbean
- Continue towards implementation of PTWC enhanced products for the CARIBE-EWS.
Thank You
Preliminary earthquake location was on the Caribbean side of Costa Rica.
Initial location determination was complicated by signals from a smaller nearby earthquake.
Preliminary magnitude of 7.9 prompted quick decision and action by duty staff.
Location moved to Pacific side just as initial Caribbean Watch message was being issued - 5 minutes after the earthquake.
Caribbean Watch was cancelled 3 minutes later and Pacific Warning issued.
Tsunami only observed on Caribbean side - 3 cm at Limon, Costa Rica.