

Hurricanes Irma and Maria – Lessons Learnt

THE PUERTO RICO SEISMIC NETWORK (PRSN)



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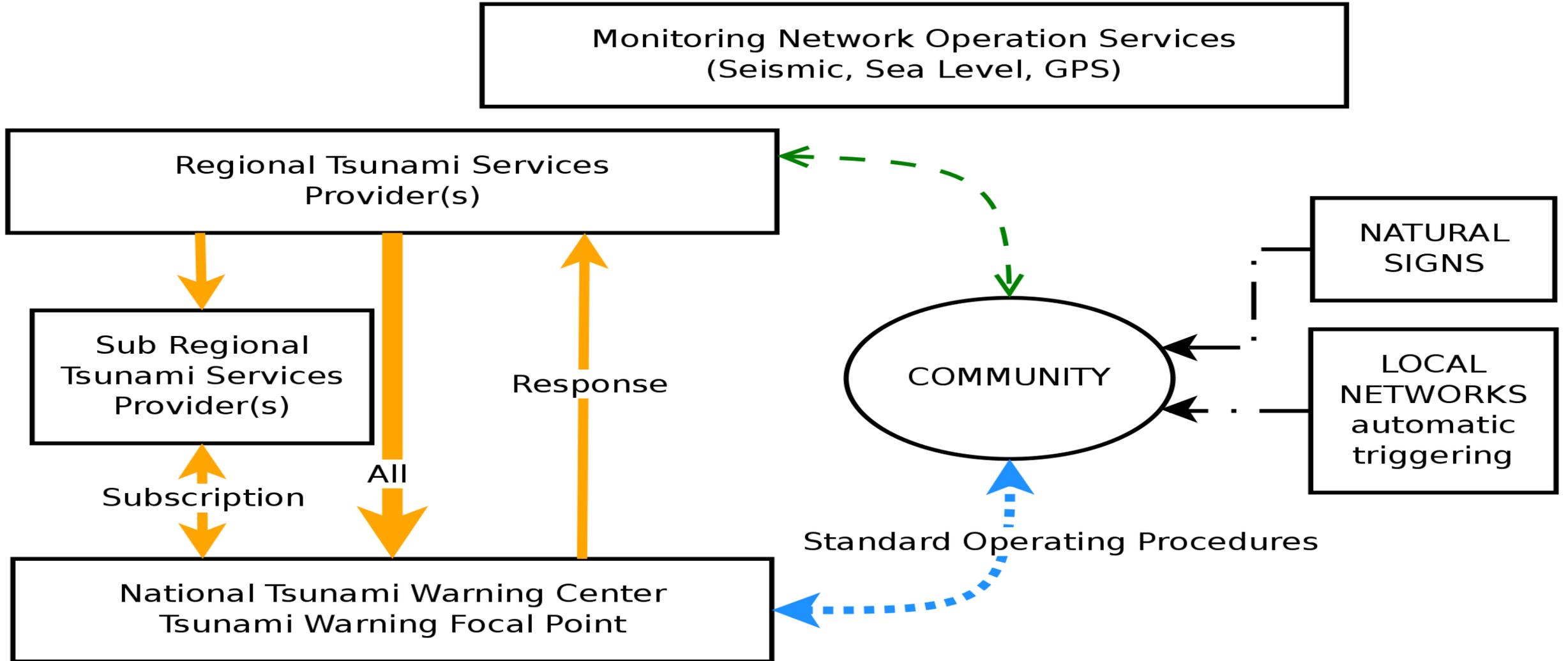
UNIVERSITY OF PUERTO RICO
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GEOLOGY DEPARTMENT

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PRSN MISSION

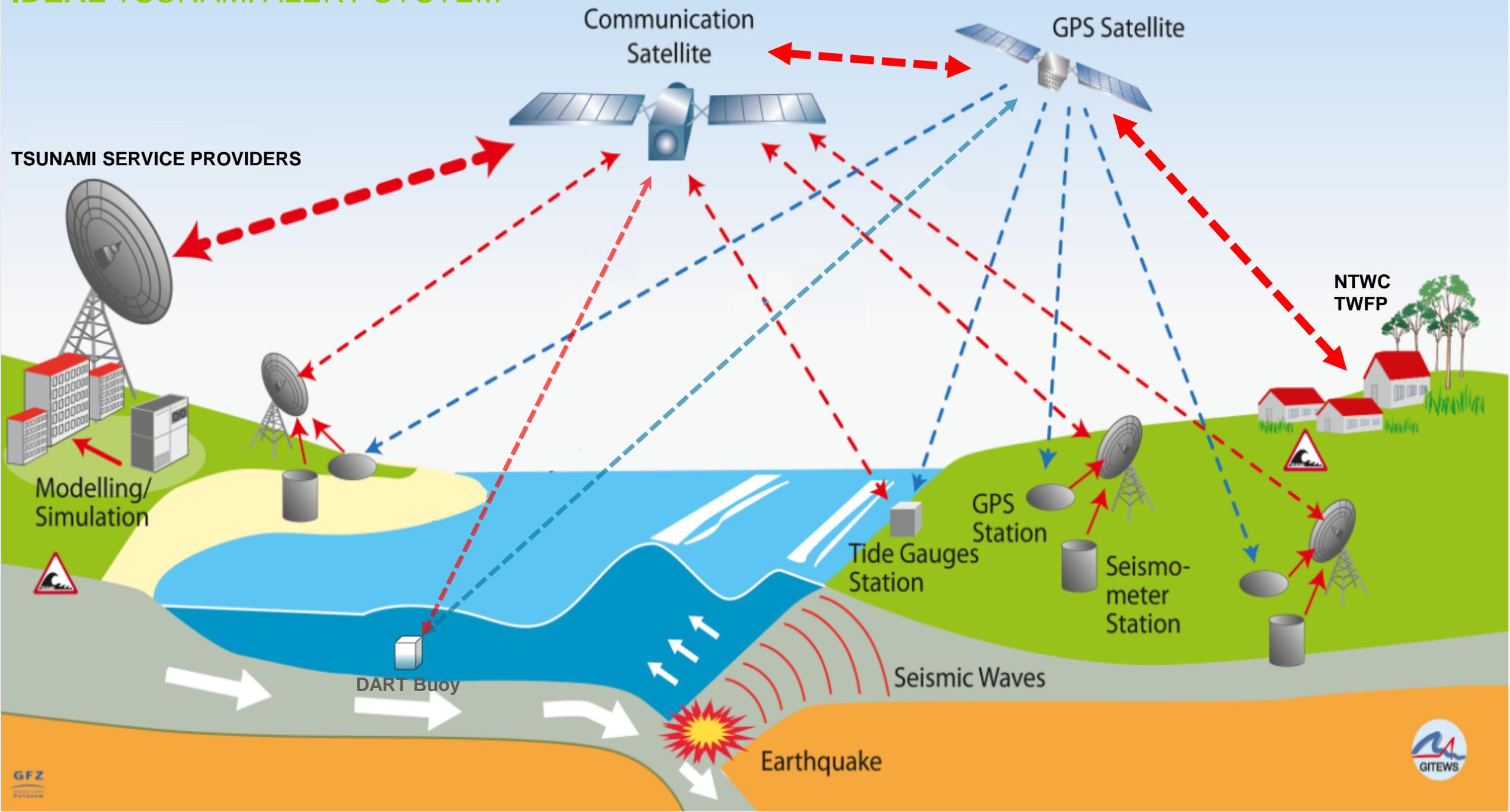
The mission of the Puerto Rico Seismic Network (PRSN) is to monitor and rapidly determine the location and size of all earthquakes and support the TWC to determine the Tsunami alert level in the Area of Responsibility (AOR) and to immediately disseminate this information to concerned agencies, scientists, and the general public. The PRSN compiles and maintains an extensive seismic database of earthquake parameters, continuous waveforms (earthquakes, GPS and sea level) and their effects which serve as a solid foundation for basic and applied earth science/oceanography research in Puerto Rico and the Caribbean.

CARIBE EWS Tsunami Service Model

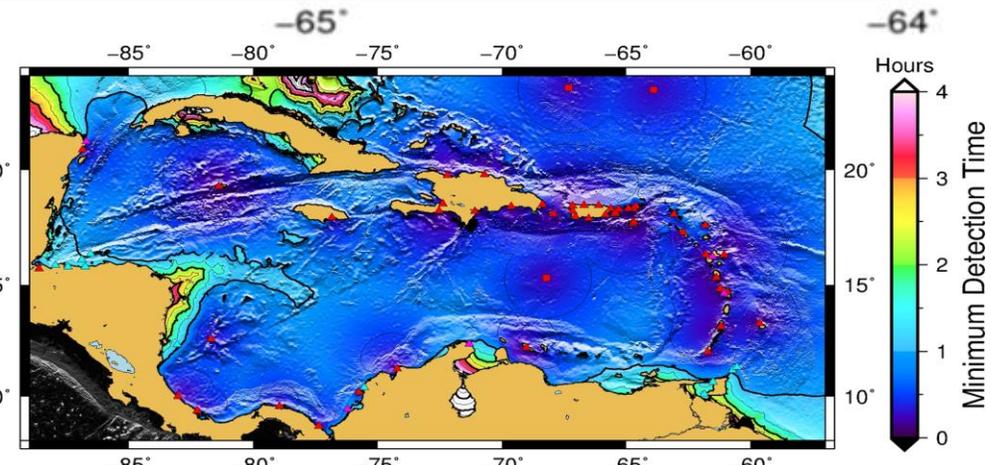
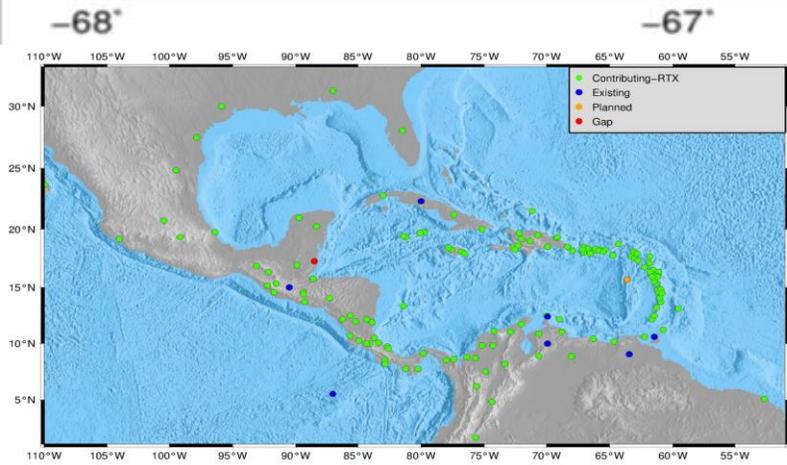
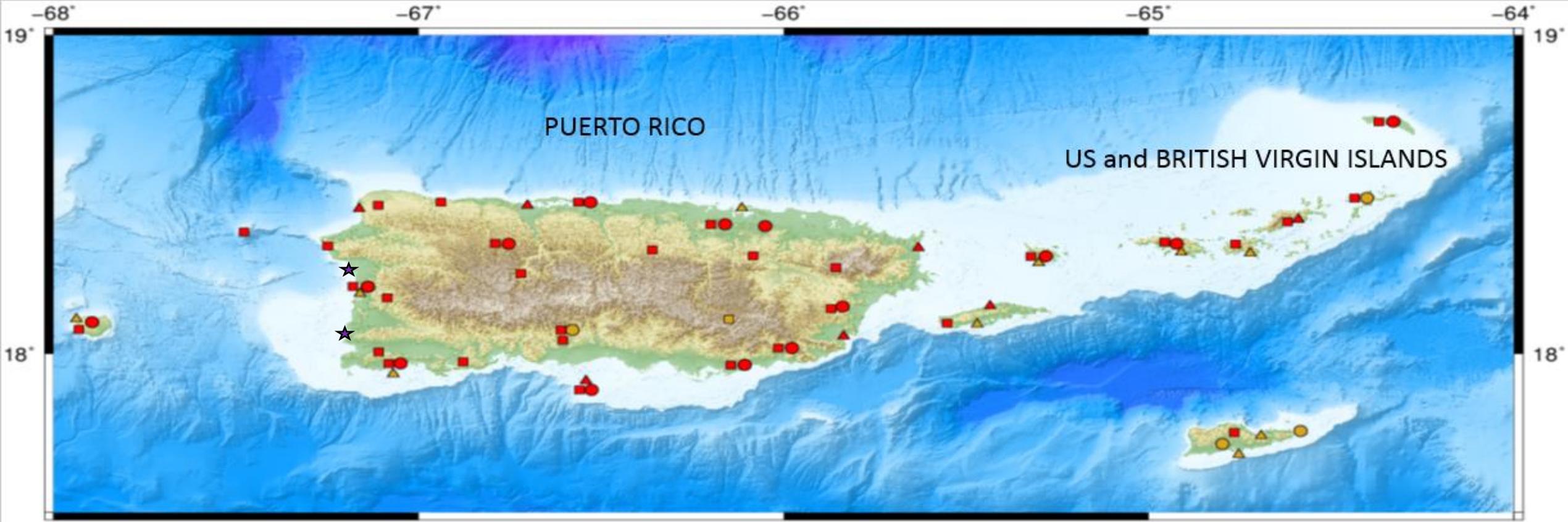


-  ICG-CARIBE-EWS SOPs (Communication Plan/PTWC enhanced products manual)
-  Member state and territory SOPs for alert dissemination
-  Public information according to ICG-CARIBE-EWS guidelines

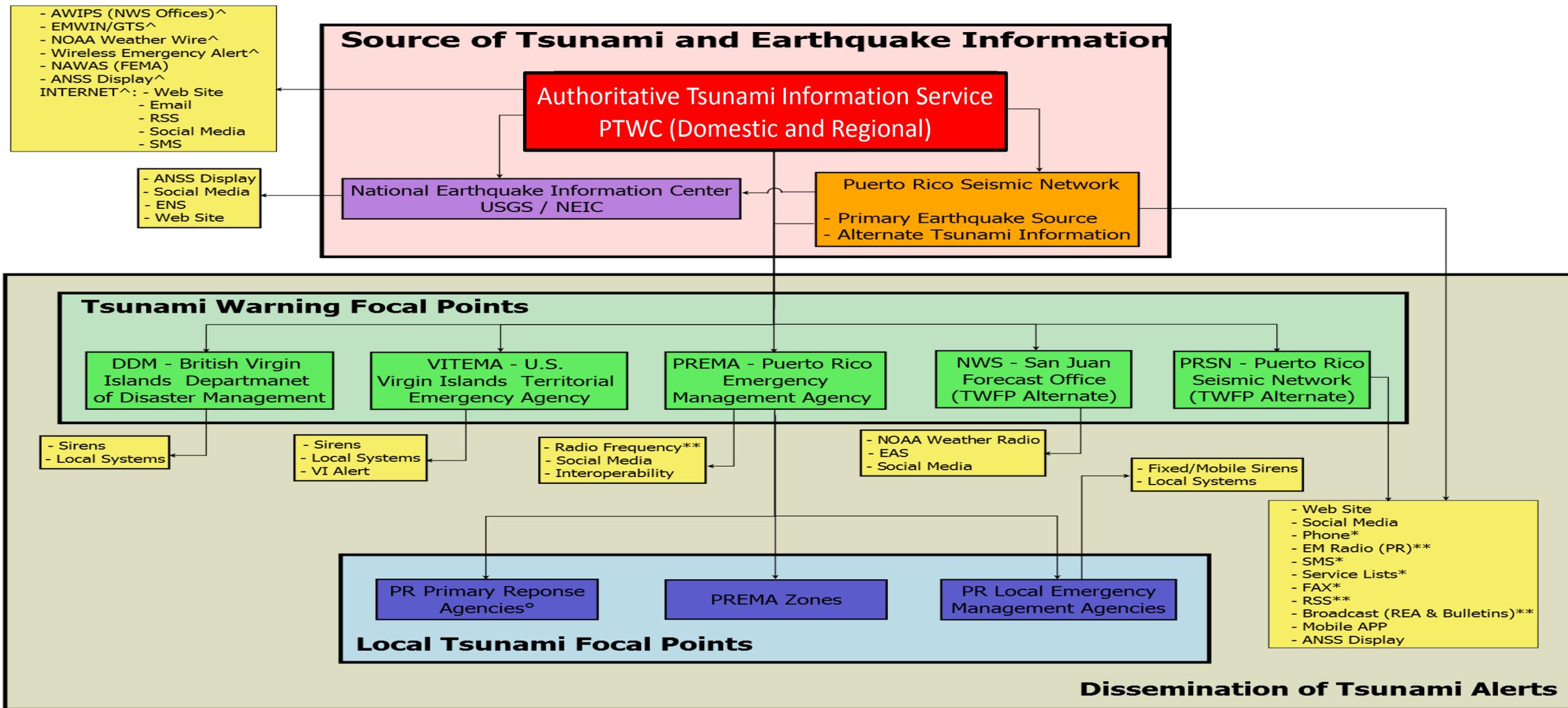
IDEAL TSUNAMI ALERT SYSTEM



Local and Regional Monitoring and Detection Systems



TSUNAMI COMMUNICATION PROTOCOL FOR PUERTO RICO AND THE VIRGIN ISLANDS - Revised Dec/2015



* By Subscription

** Dedicated Services for Responders

^ Messages Transmitted Directly form NWS/TWC

o Includes: - Police Department

- Fire Department
- Emergency MEDical Services
- PR National Guard
- PR Electric Power Authority

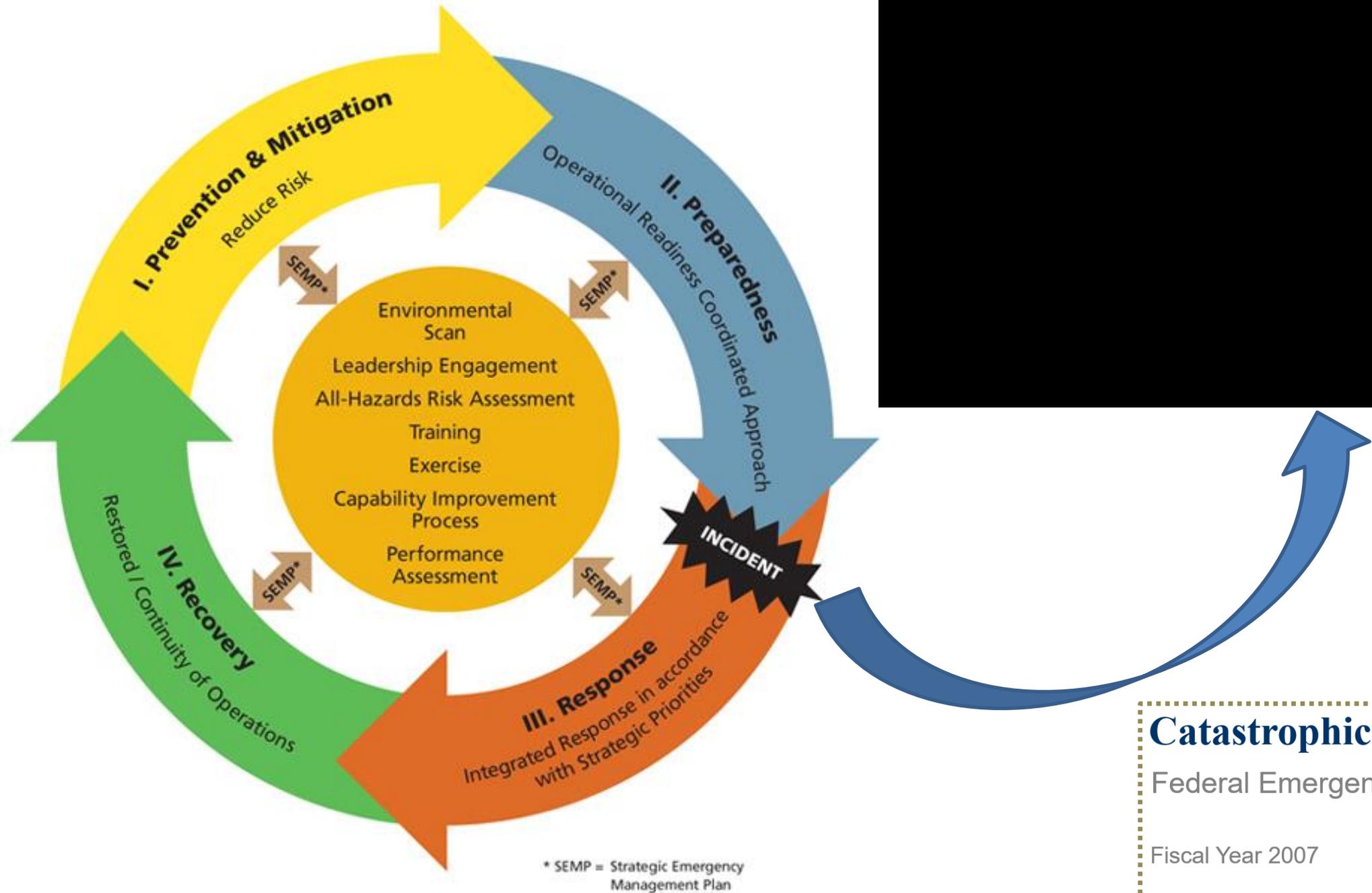
- Caribe Wave

- ShakeOut

- Borinquennier

- Scenario-Driven Catastrophic Planning

Emergency Management Continuum



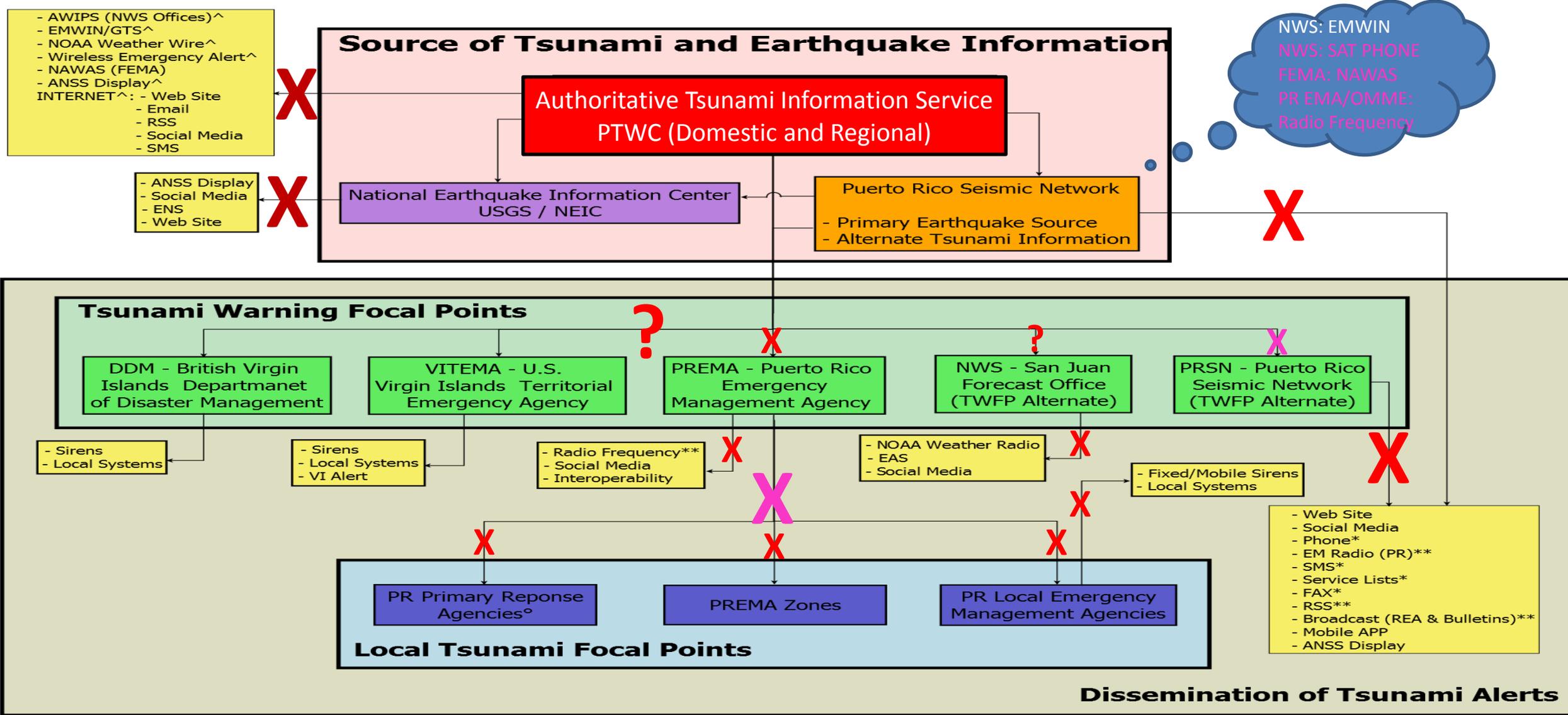
Catastrophic Disaster Planning

Federal Emergency Management Agency

Fiscal Year 2007

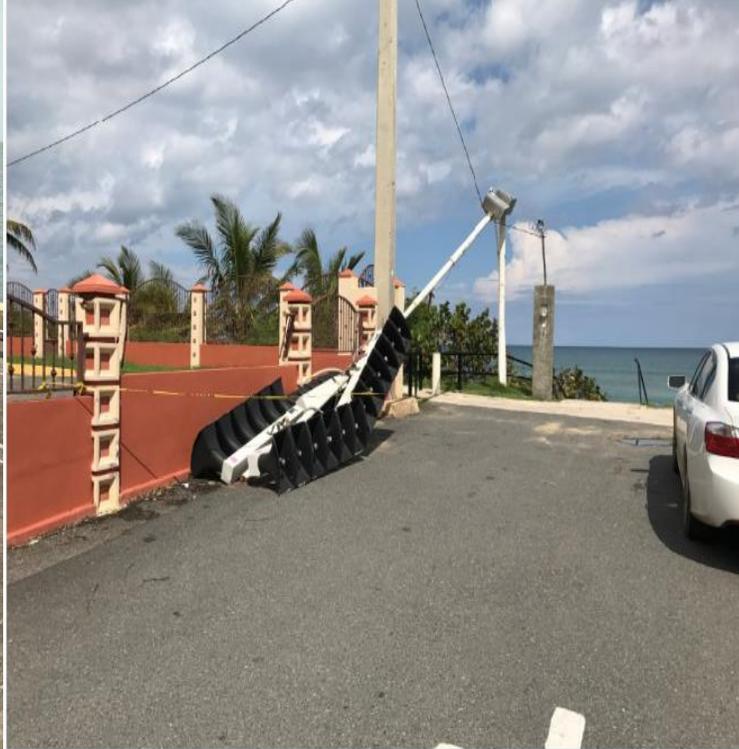


FEMA



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- Partnership



Challenges and Lessons

- Major impact to ALL population
- Large area of impact – ALL THE ISLAND
- Mass Evacuations
- Significant infrastructure impacts – Ports, Routes, etc
- Catastrophic impact to **communications**, and vital services (**Power**, Water, Health, etc..)
- Shortage of supplies and goods
- Breakdown of supply lines -- Regulations
- Evacuee Support & Shelter Management
- Response problems and logistical coordination – NIMS
- Delays in emergency mobilizations – Personnel and Resources
- Associated risk – Pandemics, Social, etc.
- Security and social provisions
- Estimated loss -- > **\$95B**

