



UNITED STATES DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND
ATMOSPHERIC ADMINISTRATION



NOAA/NWS Tsunami Program

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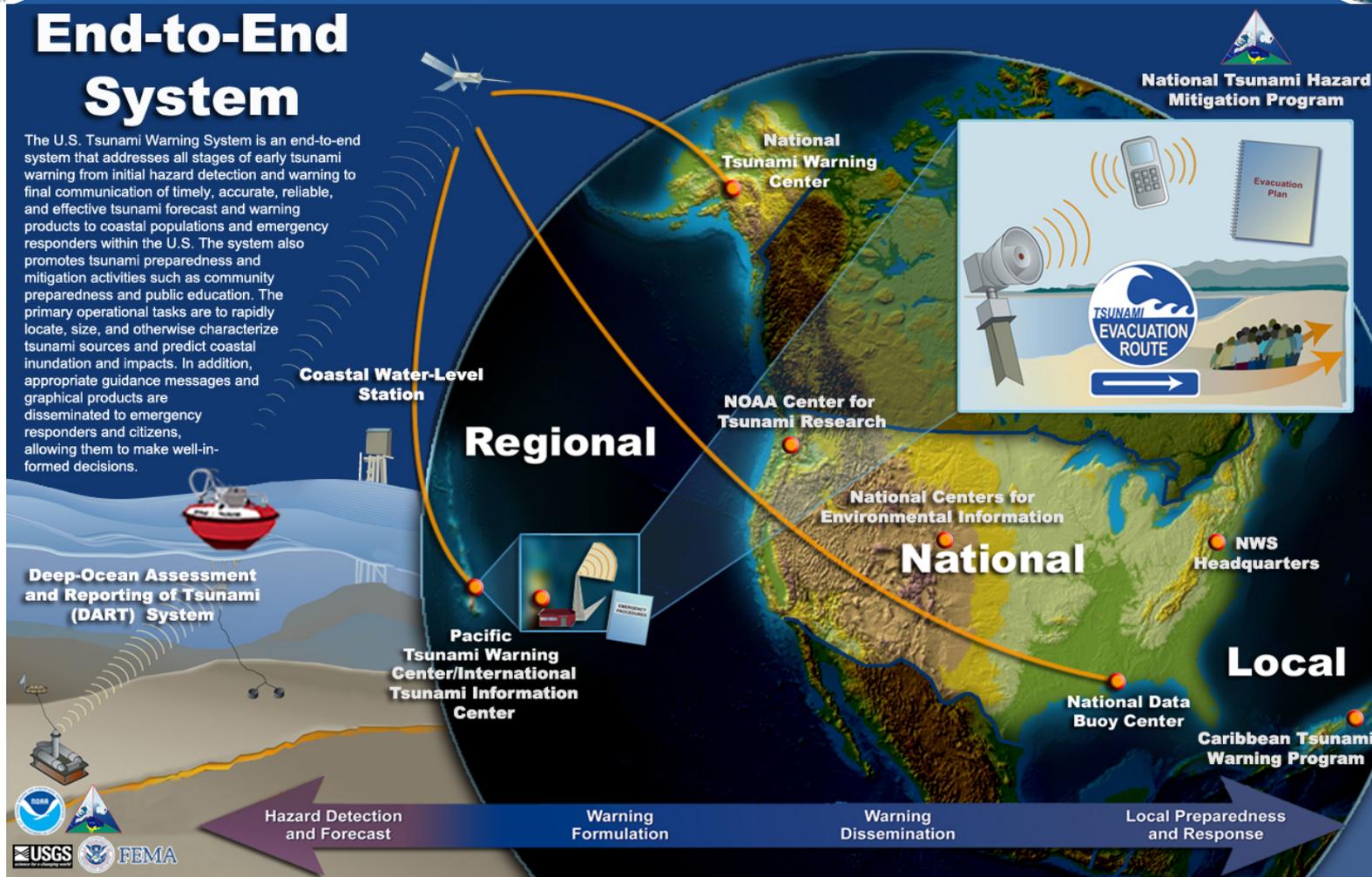
NTHMP Annual Meeting
August 2019



U.S. Tsunami Warning System

End-to-End System

The U.S. Tsunami Warning System is an end-to-end system that addresses all stages of early tsunami warning from initial hazard detection and warning to final communication of timely, accurate, reliable, and effective tsunami forecast and warning products to coastal populations and emergency responders within the U.S. The system also promotes tsunami preparedness and mitigation activities such as community preparedness and public education. The primary operational tasks are to rapidly locate, size, and otherwise characterize tsunami sources and predict coastal inundation and impacts. In addition, appropriate guidance messages and graphical products are disseminated to emergency responders and citizens, allowing them to make well-informed decisions.



Deep-Ocean Assessment and Reporting of Tsunami (DART) System

Regional

National

Local

Hazard Detection and Forecast

Warning Formulation

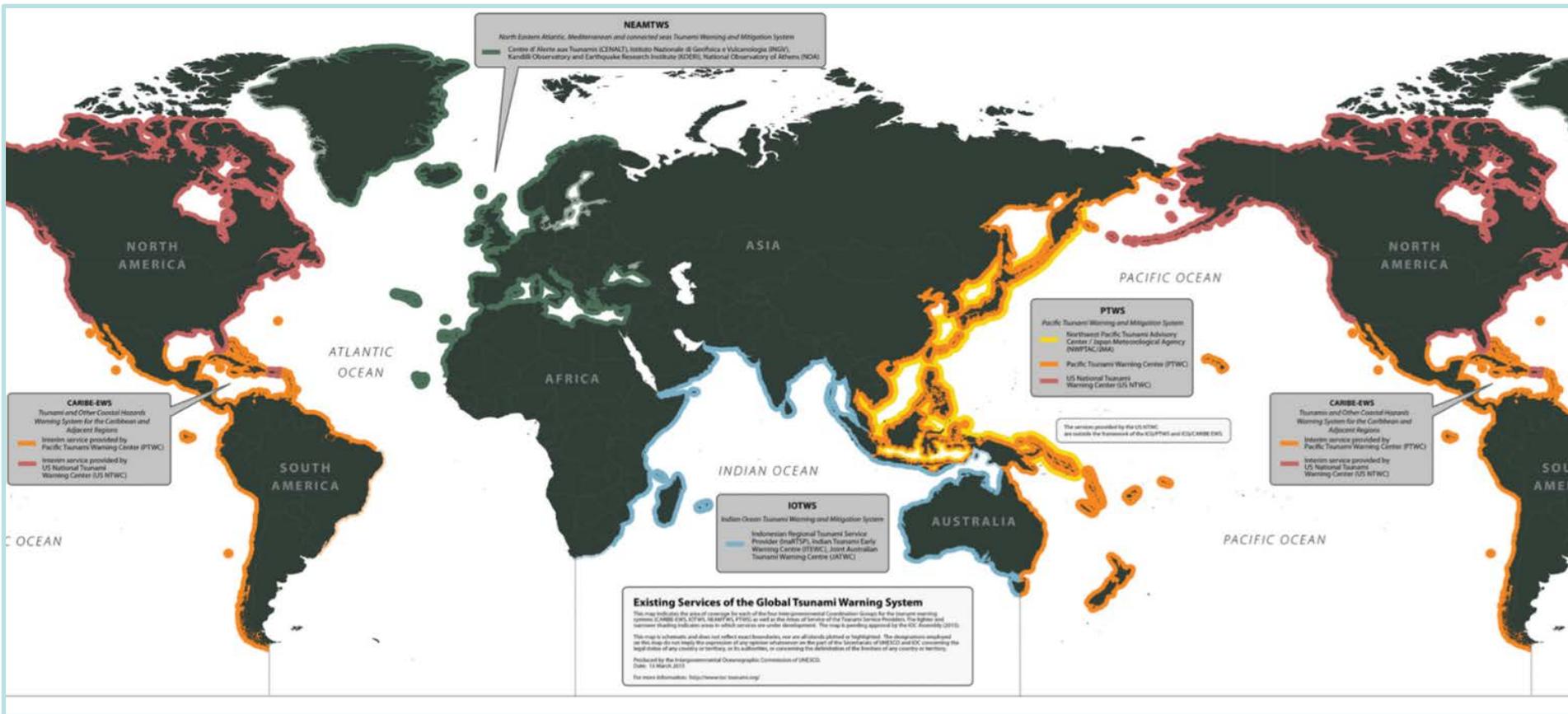
Warning Dissemination

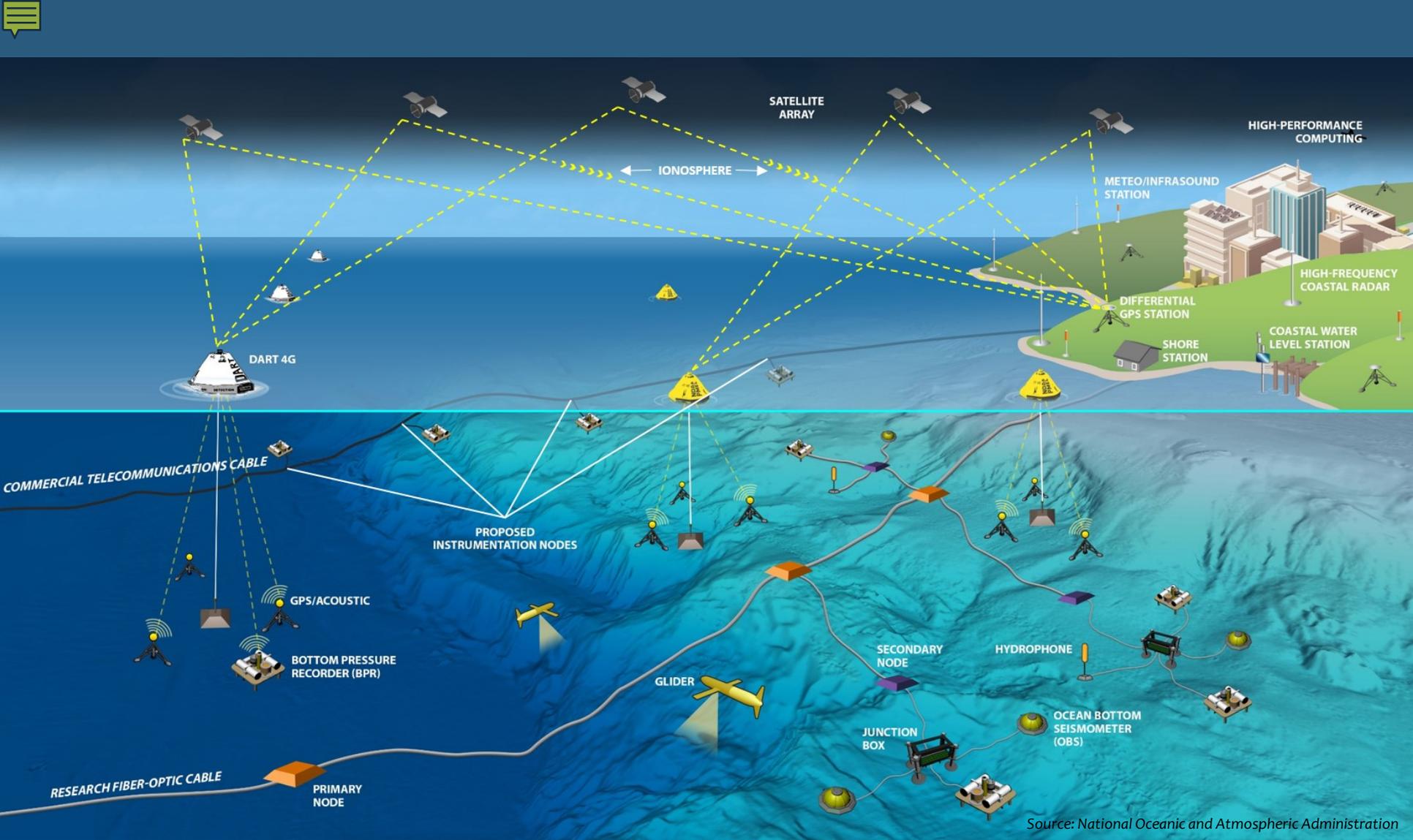
Local Preparedness and Response





Global Tsunami Warning System





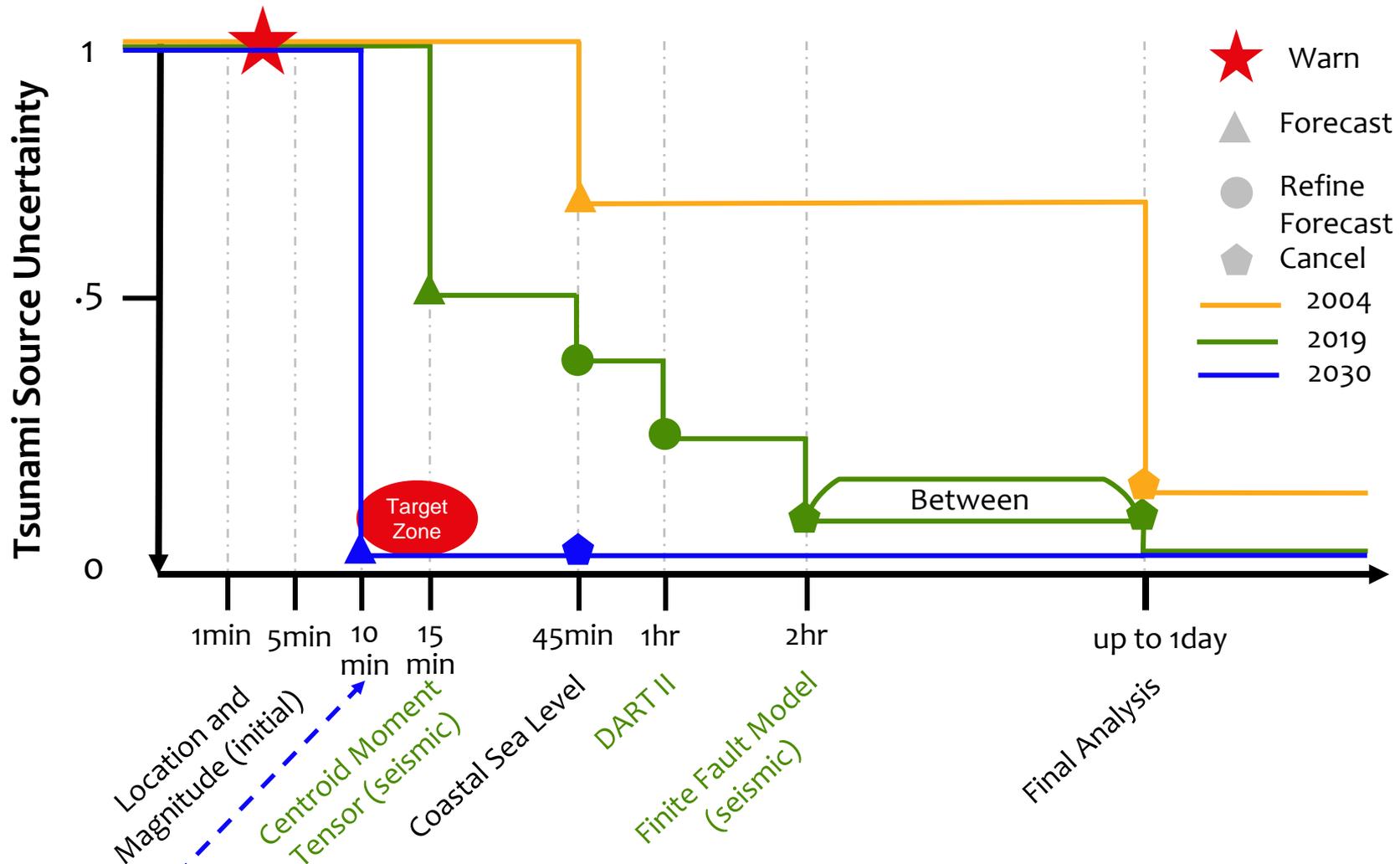
Source: National Oceanic and Atmospheric Administration



UN Decade of Ocean Science:

Reducing Uncertainty in Global Tsunami Forecasts

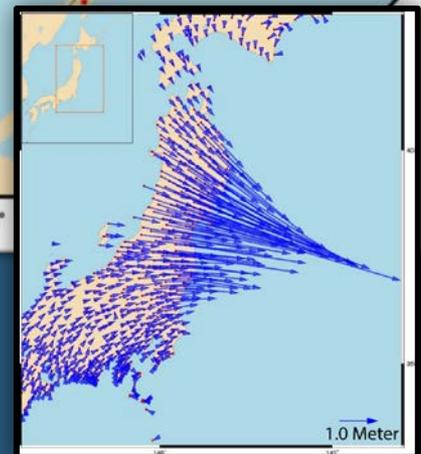
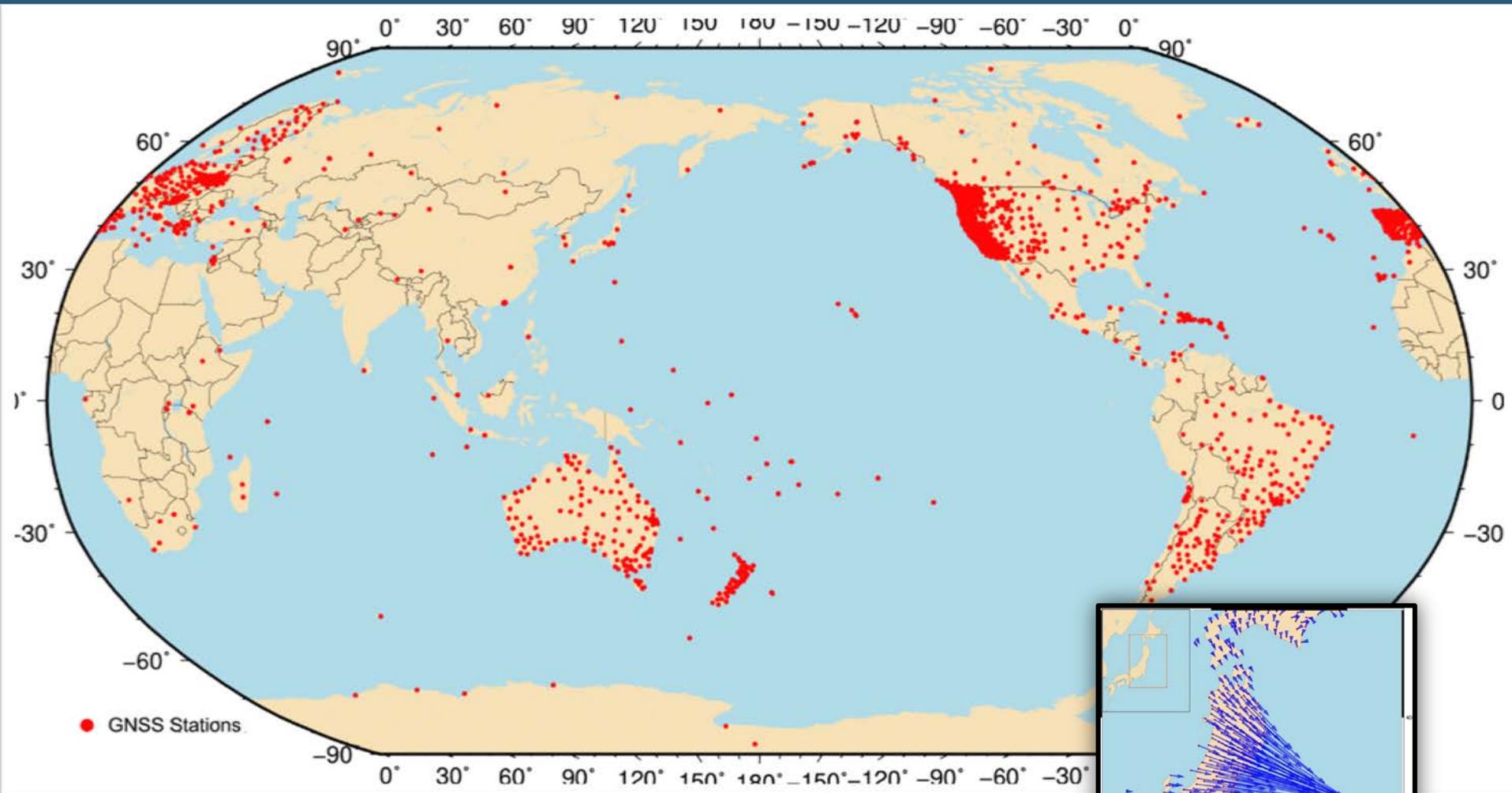
Science Objective: Improving Time to Forecast



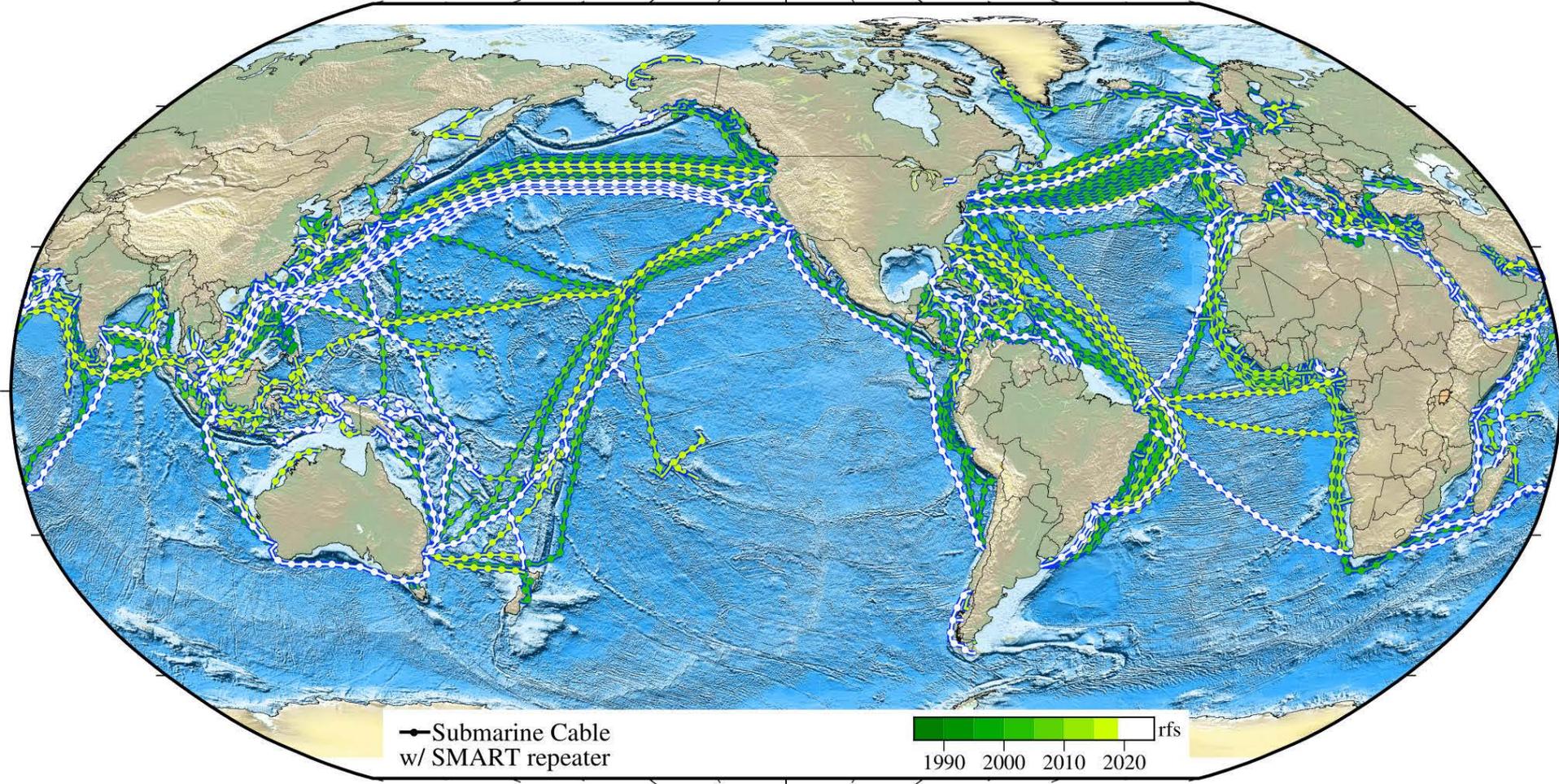
Data Availability
2004—2030

- DART 4G
- GNSS/Finite Fault
- Bottom Pressure Observatories
- Industry Cable Instrumentation





GNSS sensors:
Scaling up?



Instrumentation of Deep-ocean Cables:

Is this the “breakthrough” opportunity of The Decade?



Other Updates for FY19

- IT Modernization of TWC Operational System
- Tsunami.gov website
- Meteotsunami
 - Met Services Alert
 - Tsunami Services Support
- WTAD 2019
 - Target (d): Substantially reduce disaster damage to critical infrastructure and disruption of basic services, among them health and educational facilities, including through developing their resilience by 2030
- International *Tsunami Ready*
- Uncertainties (Administrator, CR, etc)



Q&A

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