



## Global Tsunami Warning and Mitigation System – What is the UNESCO IOC Tsunami Ready Recognition Programme

### 2.2 Pacific Tsunami Warning and Mitigation System (UNESCO-IOC PTWS), PTWS International Alerts by Tsunami Service Providers

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# Mandates of the Key Organizations

## ■ **UNESCO – United Nations Educational, Scientific, and Cultural Organization**

The purpose of UNESCO is to contribute to peace and security by promoting collaboration among the nations through education, science, and culture.

## ■ **IOC – Intergovernmental Oceanographic Commission**

The work of the IOC contributes to the mission of UNESCO by promoting international cooperation in marine sciences through coordinating programmes in capacity development, ocean observations and services, ocean science, tsunami warning and ocean literacy to improve management of the ocean, coasts and marine resources.

## ■ **IOC Tsunami Programme**

The IOC Tsunami Programme, through the coordination of regional meetings, capacity building activities and the support of national and regional projects, aims at reducing the loss of lives and livelihoods due to tsunami. In order to accomplish this, the IOC Tsunami Resilience Section supports IOC Member States in assessing tsunami risk, implementing Tsunami Early Warning Systems (TEWS) and in educating communities at risk about preparedness measures.

# IOC Tsunami Programme Organization

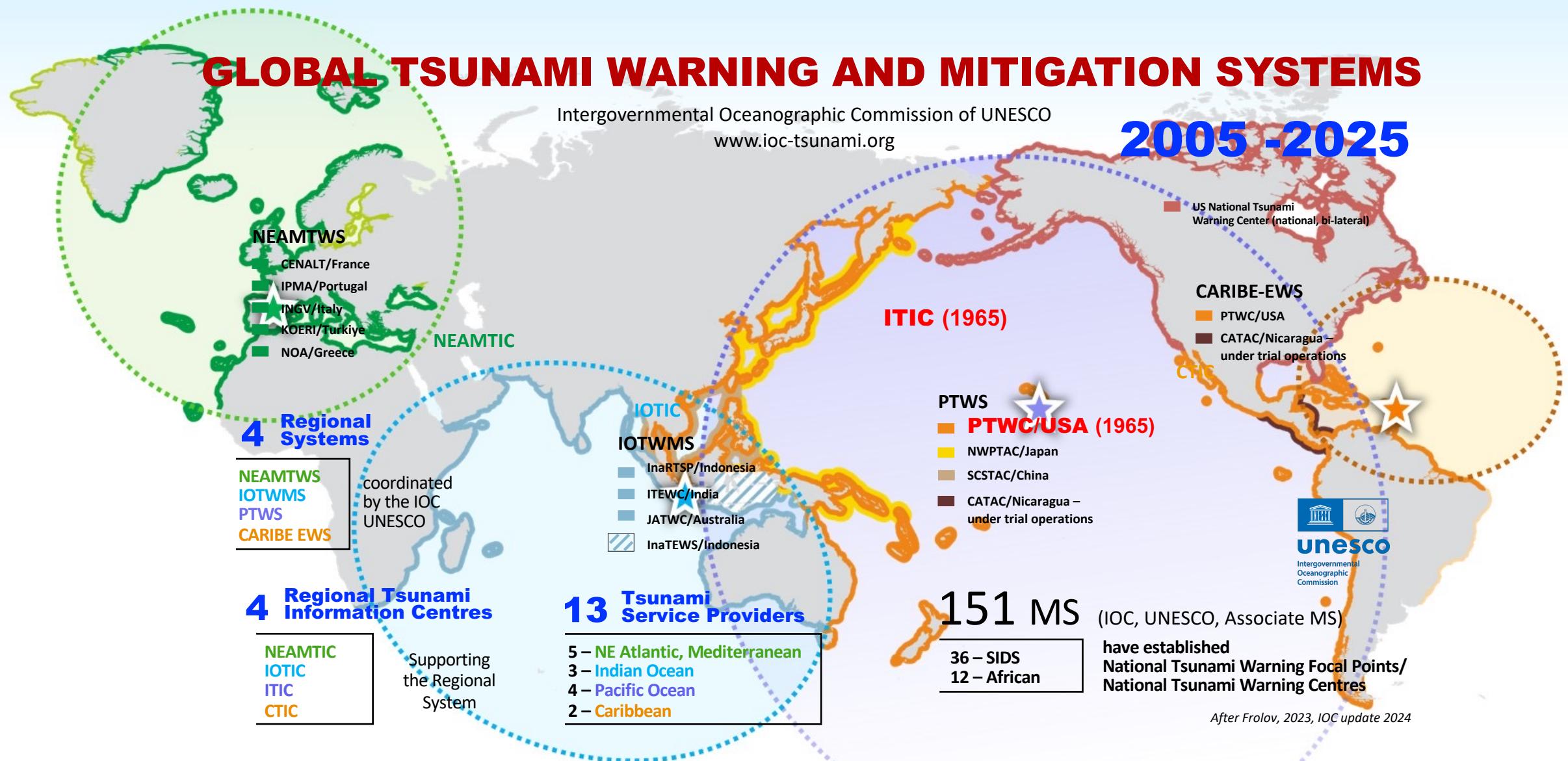
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- **Four Systems – Each Governed by its Intergovernmental Coordination Group (ICG)**
  - PTWS** - Pacific Tsunami Warning and Mitigation System (46 Member States)
  - IOTWMS** – Indian Ocean Tsunami Warning and Mitigation System (27 Member States)
  - NEAMTWS** - Tsunami Early Warning and Mitigation System in the **North-Eastern Atlantic, the Mediterranean and Connected Seas** (40 Member States)
  - CARIBE-EWS** - Tsunami and Other Coastal Hazards Warning System for the **Caribbean and Adjacent Regions** (48 Member States)
- **ICG Coordinating Body – Covers Common Issues of the Four Systems**
  - TOWS-WG** - Working Group on Tsunamis and Other Hazards related to Sea Level Warning and Mitigation Systems (TOWS-WG)
- **IOC Secretariat – Provides Structure, Continuity and Overall Support**
  - Head of the Tsunami Unit and Technical Secretaries for each ICG
- **IOC Governance** – IOC Assembly and IOC Executive Council

# GLOBAL TSUNAMI WARNING AND MITIGATION SYSTEMS

Intergovernmental Oceanographic Commission of UNESCO  
[www.ioc-tsunami.org](http://www.ioc-tsunami.org)

2005 - 2025



# ICG/PTWS Governance Structure

## **Chair, Vice-Chairs, Steering Committee: 4 Regional Working Groups, 3 Technical Working Groups, 9 Task Teams**

**Inter-Governmental Coordination Group for the Pacific Tsunami Warning and Mitigation System (ICG/PTWS)**  
**ORGANISATIONAL STRUCTURE, 2025-2027**

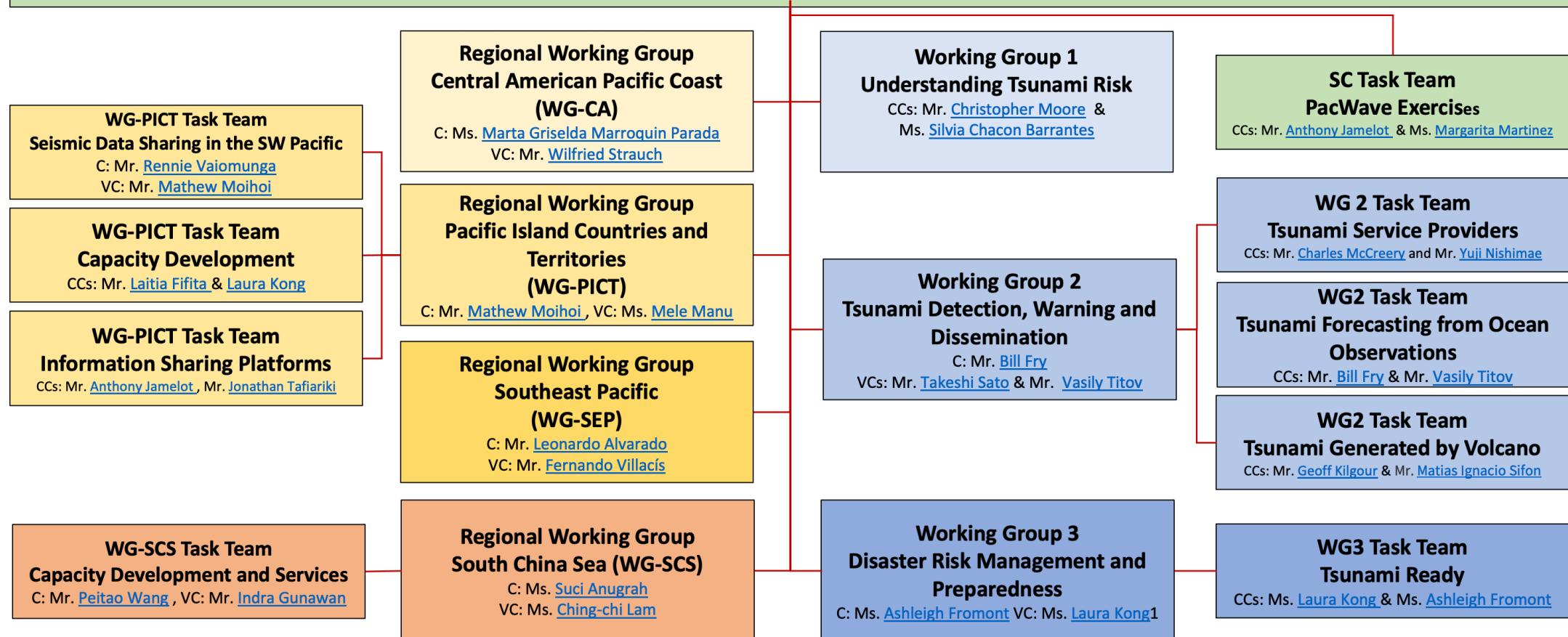
**Chair: Mr. Dakui Wang (China)**

**Vice-Chairs:** Ms. Lara Bland (New Zealand), Ms. Mylene Martinez Villegas (Philippines), Mr. Levu Antfalo (Vanuatu)

**Steering Committee: ICG/PTWS Officers (Chair and the Vice-Chairs), Chairs of the Technical and Regional Working Groups, Directors of the TSPs and ITIC, or their delegates, and other members' representatives by invitation of the Chair.**

**International Tsunami Information Centre (ITIC): Ms. [Laura Kong](#) (Director) & Mr. [Matias Ignacio Sifon](#) (Associate Director)**

**Technical Secretary: Mr. Öcal Necmioğlu**



# TNC, TWFP, and NTWC of each Member State

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- **Tsunami National Contact (TNC) - Dr. Bacolcol (PHIVOLCS) and Dr. Solidum (DOST)**

The person designated by an ICG Member State government to represent his/her country in the coordination of international tsunami warning and mitigation activities. The person is part of the main stakeholders of the national tsunami warning and mitigation system programme. The person may be the Tsunami Warning Focal Point from the national disaster management organization, from a technical or scientific institution, or from another agency with tsunami warning and mitigation responsibilities.

- **Tsunami Warning Focal Point (TWFP) - PHIVOLCS**

A 24x7 point of contact (office, operational unit or position, not a person) officially designated by the NTWC or the government to receive and disseminate tsunami information from an ICG Tsunami Service Provider according to established national Standard Operating Procedures. The TWFP may or not be the NTWC.

- **National Tsunami Warning Center - PHIVOLCS**

A centre officially designated by the government to monitor and issue tsunami warnings and other related statements within their country according to established national Standard Operating Procedures.

# Roles and Responsibilities of the TSPs

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## ■ **Tsunami Service Provider – PTWC, NWPTAC, SCSTAC**

Centre that monitors seismic and sea level activity and issues timely tsunami threat information within an ICG framework to National Tsunami Warning Centres/Tsunami Warning Focal Points and other TSPs operating within an ocean basin. The NTWCs/TWFPs may use these products to develop and issue tsunami warning for their countries. TSPs may also issue Public messages for an ocean basin and act as National Tsunami Warning Centres providing tsunami warnings for their own countries.

- 4 – Pacific Ocean
- 3 – Indian Ocean
- 2 – Caribbean
- 5 – NE Atlantic and Mediterranean

# Roles and Responsibilities of the TIC

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## ■ Tsunami Information Center

Centres that provide education, outreach, technical and capacity building assistance to Member States and the public in preventing, preparing, and mitigating measures for tsunamis. Among other activities, the centres manage post event performance surveys, serve as a resource for the development, publication, and distribution of tsunami education and preparedness materials and information on tsunami occurrences, and may support risk assessment and mitigation activities. A Tsunami Information Centre has been established in each of the regional tsunami warning systems within the ICG framework.

# IOC Tsunami Information Centers

PTWS  
USA NOAA – IOC  
Partnership  
1965

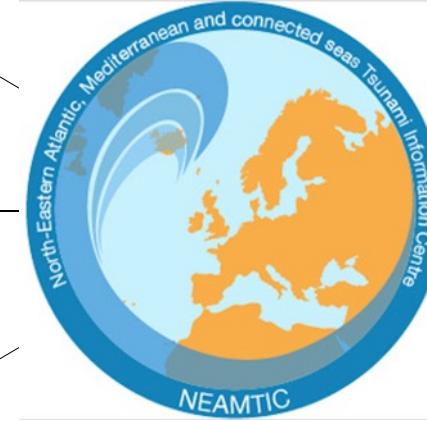


IOTWS  
Indonesia – IOC Partnership 2012  
(formerly JTIC since 2006)



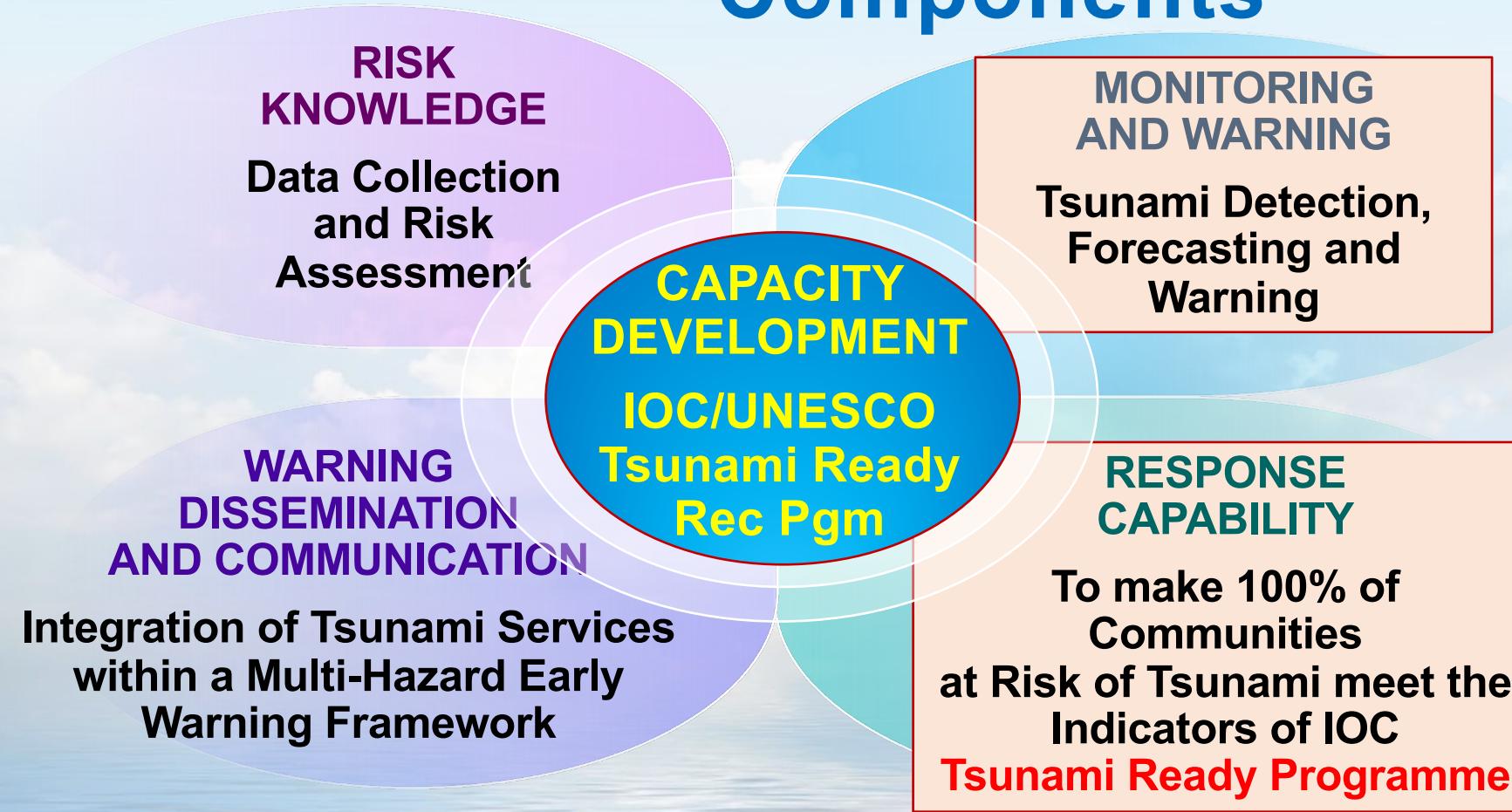
CARIBE-EWS  
Barbados – IOC Partnership  
2015 (approved 2007)

NEAMTWS  
EC DG ECHO  
France, Greece, Italy, Portugal  
2011-13



# UN OCEAN DECADE TSUNAMI PROGRAMME

## Components



Angove M et al (2019)

*Ocean Observations Required to Minimize Uncertainty in Global Tsunami Forecasts, Warnings, and Emergency Response.*  
Front. Mar. Sci. 6:350. doi: 10.3389/fmars.2019.00350



Annex 1 to IOC Circular  
letter, 2825 “*Protecting  
Communities from the  
World’s Most Dangerous  
Waves: A Framework for  
Action under the UN  
Decade of Ocean Science  
for Sustainable  
Development*”  
(6 January 2021)

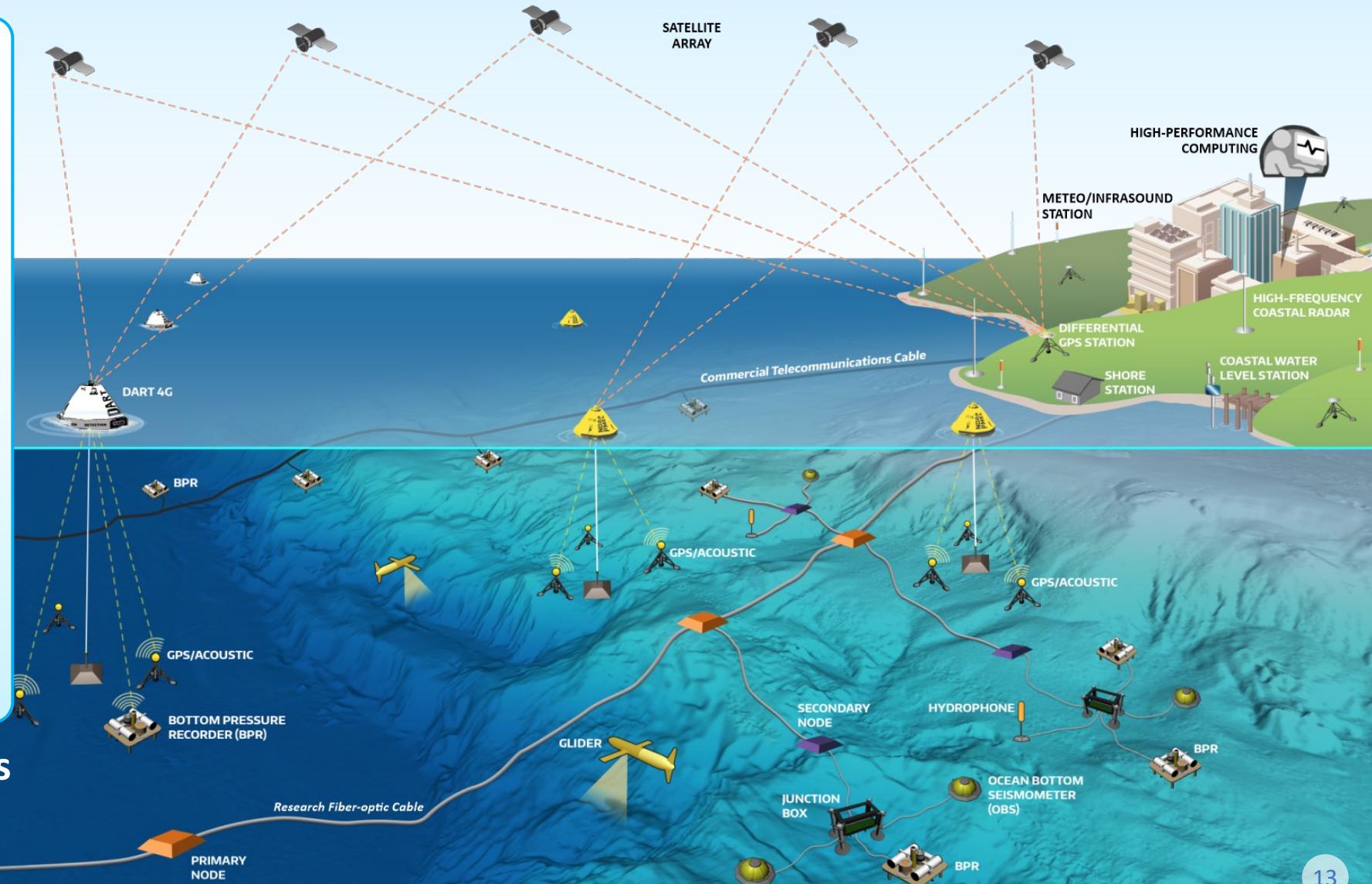


# OCEAN DECADE TSUNAMI PROGRAMME: the Focus Areas Related to Tsunami Warning Capabilities

- Expansion of existing observational systems to fill identified gaps
- Deploy new technologies such SMART cable
- Wide expansion of data access, availability and analysis capability for real-time sea level, seismic and GNSS-derived land motion data
- Increase access and regularly update the collection of coastal topographic and bathymetric data
- Ensure all NWCs have access to data, tools and communication platforms, protocols and training

## Rethinking Ocean Observations

Source:  
National Oceanic and Atmospheric Administration



# Thank you Salamat po

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