







UNESCO/IOC – NOAA ITIC Training Program in Hawaii (ITP-Hawaii)

TSUNAMI EARLY WARNING SYSTEMS

AND THE PACIFIC TSUNAMI WARNING CENTER (PTWC) ENHANCED PRODUCTS

TSUNAMI EVACUATION PLANNING AND UNESCO IOC TSUNAMI READY PROGRAMME

7-18 August 2023. Honolulu, Hawaii USA

#### **UNESCO IOC Global Tsunami System**

ICGs, Roles of Tsunami National Contacts, Regional Tsunami Service Providers and Tsunami Information Centers, Tsunami Warning Focal Points, National Tsunami Warning Centers, TICs

Dr. Charles McCreery
Director, PTWC





## Intergovernmental Oceanographic Commission

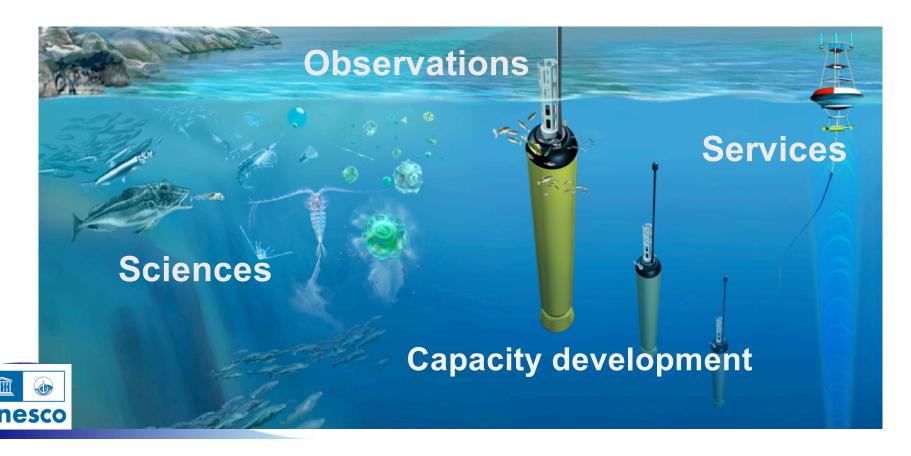
- □ Focal point in UN for ocean observations, ocean science, ocean services and data exchange
- ☐ Competent international organization for marine science
- Marine and Coastal hazards
- ☐ Climate change and variability
- ☐ Health of ocean ecosystems
- ☐ Sustainability of coastal and ocean environment and resources



image: NASA

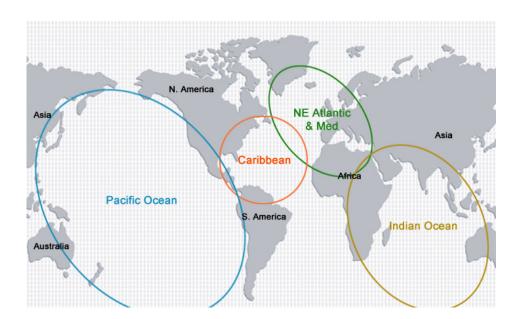
## Intergovernmental Oceanographic Commission

- Promote international cooperation and coordinate programmes
- Apply knowledge for improvement

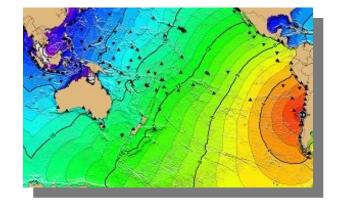


### Tsunami Warning Systems

- Pacific since 1965
- 2004 tsunami in Indian Ocean illustrated need for more
- IOC established three more TWS
  - ICG IOTWS
  - ICG CARIBE EWS and
  - ICG NEAMTWS







#### IOC ICG/PTWS STRUCTURE - WORKING GROUPS AND TASK TEAMS 2021-2023

SC Task Team **Future Goals** and Performance Monitoring

C: Sarah-Jayne McCurrach (NZ) VC: Mary Luiz Rengifo (CO)

**Inter-Governmental Coordination Group** for the Pacific Tsunami Warning and Mitigation System (ICG/PTWS)

Chair: Mr. Yuji Nishimae (Japan)

Vice-Chairs: Mr. David Coetzee (New Zealand)

Dr. Wilfried Strauch (Nicaragua)

Steering Committee: Chair, Vice-Chairs, Working Group and Task Team Chairs

PTWC, NWPTAC, ITIC

SC Task Team UN Decade

Co-C:

Carlos Zuniga (CL) François Schindele (FR) Yuji Nishimae (JP)

**Regional Working Group Central American** Pacific Coast (WG-CA)

**Regional Working Group South East Pacific** (WG-SEP)

**Regional Working Group Pacific Island Countries** and Territories (WG-PICTs) **Regional Working Group** South China Sea (WG-SCS)

C: Griselda Marroquin (SV) VC: Dr. Silvia Chacon (CR)

C: Jorge Matus (CL), VC: Michael Linthon (EC)

C: Esline Garaebiti (VU). VC: Mathew Moihoi (PG)

C: Dr. Dakui Wang (CN), V.C Suci Anugrah (ID)

**Working Group 1 Understanding** Tsunami Risk

Co-C: Dr. Diego Arcas (US), Sarah-Jayne McCurrach (NZ)

**Working Group 2 Tsunami Detection, Warning** and Dissemination

C: Dr. Bill Fry (NZ)

**Working Group 3 Disaster Risk Management** and Preparedness

C: Ashleigh Fromont (NZ) VC: Dr. Laura Kong (ITIC)

SC Task Team **PacWave Exercises** 

WG 2 Task Team Tsunami Service **Providers** 

WG2 Task Team Seismic Data Sharing in the South West Pacific

WG2 Task Team Minimum Competency Levels for National Tsunami Warning **Centre Operations** 

WG2 Task Team **Integrated PTWS** Sensor Networks for Tsunami Detection and Characterisation

WG-PICTs Task Team Capacity **Development**  WG-SCS Task Team on Capacity Development and Services

Co-C: Margarita Martinez (CL) C: Charles Emilio Talavera (NI)

McCreery (PTWC)

Co-C: Rennie Vaiomounga (TO) Mathew Moihoi (PG)

Co-C: Ofa Fa'anunu (TO) Dr. Laura Kong (ITIC) Co-C: Dr. Bill Fry (NZ) Dr. Tim Melbourne (US) C: 'Ofa Fa'anunu (TO)

C: Dr. Zhiguo Xu (CL)



Approved ICG/PTWS-XXIX Dec 2021, update Dec 2022

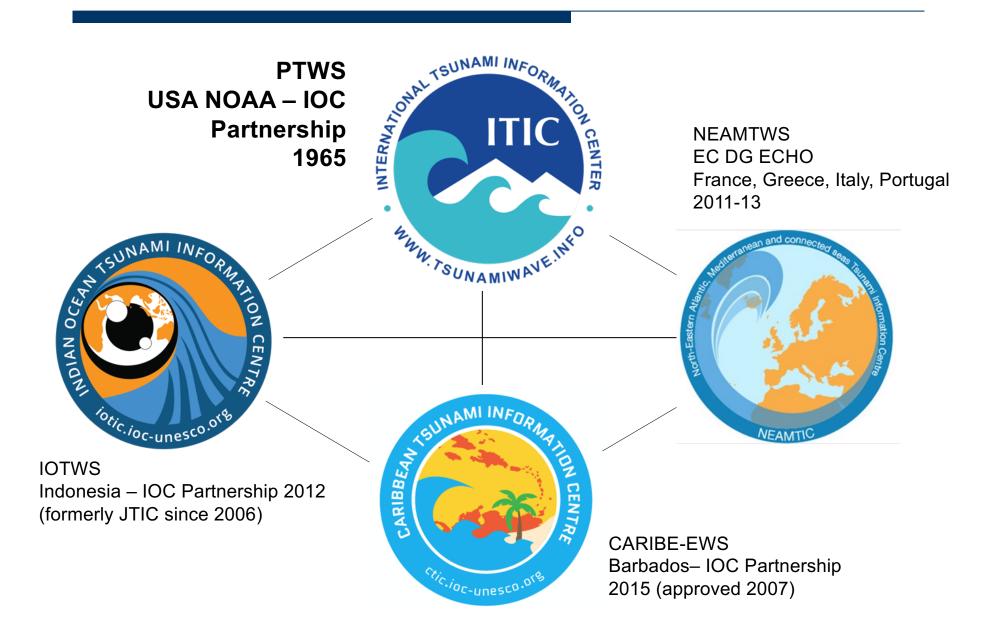
### **Tsunami Warning Centers – Two Types**

#### **Tsunami Service Provider (TSP)**

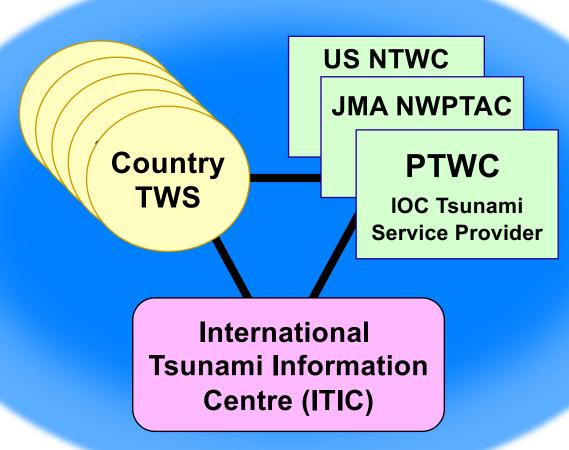
A center like PTWC and NWPTAC (JMA) with the capability to detect and assess tsunami threats over a large region, and that has been accepted by the ICG to disseminate their threat assessment to other Member States



#### **IOC Tsunami Information Centres**



# PACIFIC TSUNAMI WARNING & MITIGATION SYSTEM FOUNDATIONAL ELEMENTS



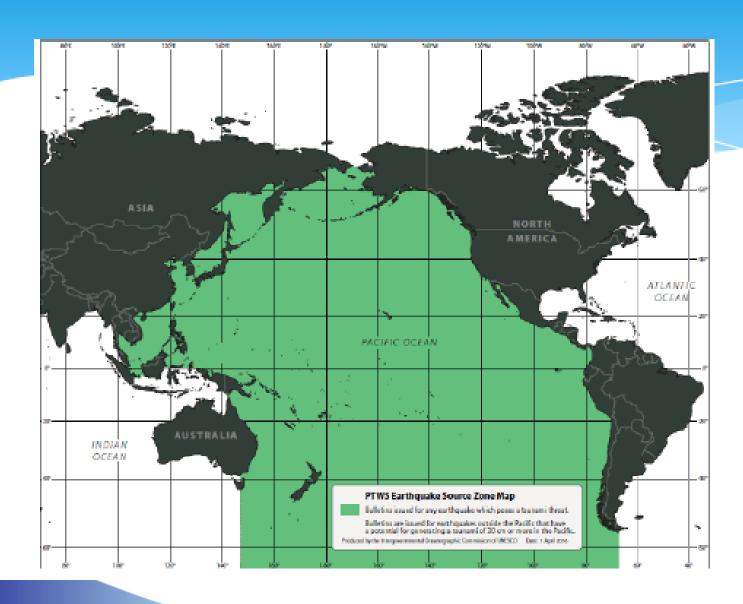




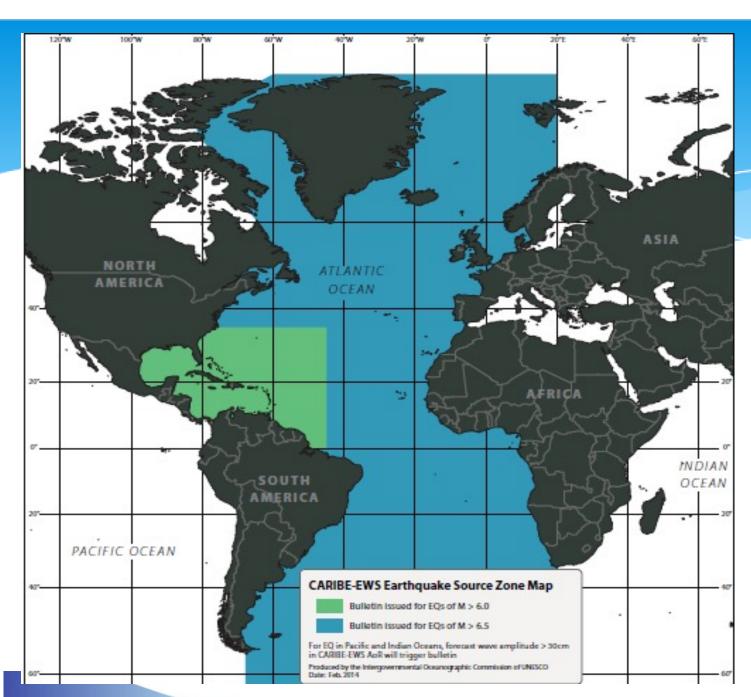




### PTWS Earthquake Source Zone









#### **Tsunami Warning Centers – Two Types**

#### **National Tsunami Warning Center (NTWC)**

- A center operated by a Member State that has the authority by law or otherwise to issue tsunami warnings for the coasts of that Member State.
- Ideally, an NTWC should have some technical capability to aid in decisions.





Fiji Yap









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#### **Thank You**

## Dr. Charles McCreery Director, PTWC



