

**Inter ICG Task Teams
Tsunami Watch Operations (TWO)
Tsunami Disaster Management and Preparedness (DMP)
Joint session
27 February 2023, UNESCO Headquarters**



unesco

**Intergovernmental
Oceanographic
Commission**

Global Tsunami Early Warning Systems and Remaining Challenges

**B. Aliaga
IOC Tsunami Unit**

We have gone a long way...

ITSU renamed

September 2005, Vina del Mar, Chile
The 20th Session of the ICG/PTWS-XX decides to change its name to the Intergovernmental Coordination Group for the Pacific Tsunami Warning and Mitigation System

ITSU development

2005

3 ICGs established

Indian Ocean (ICG/IOTWS), Caribbean and Adjacent Seas (ICG/CARIBE-EWS), Mediterranean and North Atlantic (ICG/NEAMTWS) (IOC/XXIII-11, 12, 13, **June 2005**)

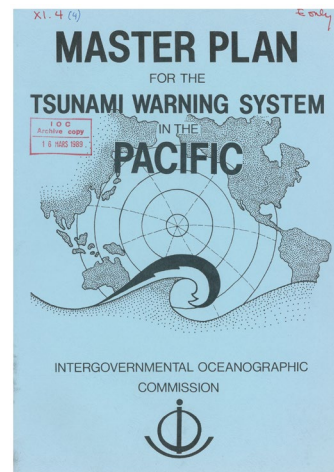
The tragedy brings world attention to the dangers of tsunamis in every nation and initiates the development of warning and mitigation systems in the Indian Ocean

2004

Indian Ocean Tsunami

1989

First Master Plan



1977

The Honolulu Observatory renamed Pacific Tsunami Warning Center PTWC

ITSU

IOC/IV-6, International Aspects of the Tsunami Warning System in the Pacific, Paris, November 1965

1965

1948 the Honolulu Magnetic Observatory, under the US Coast and Geodetic Survey (USCGS) established

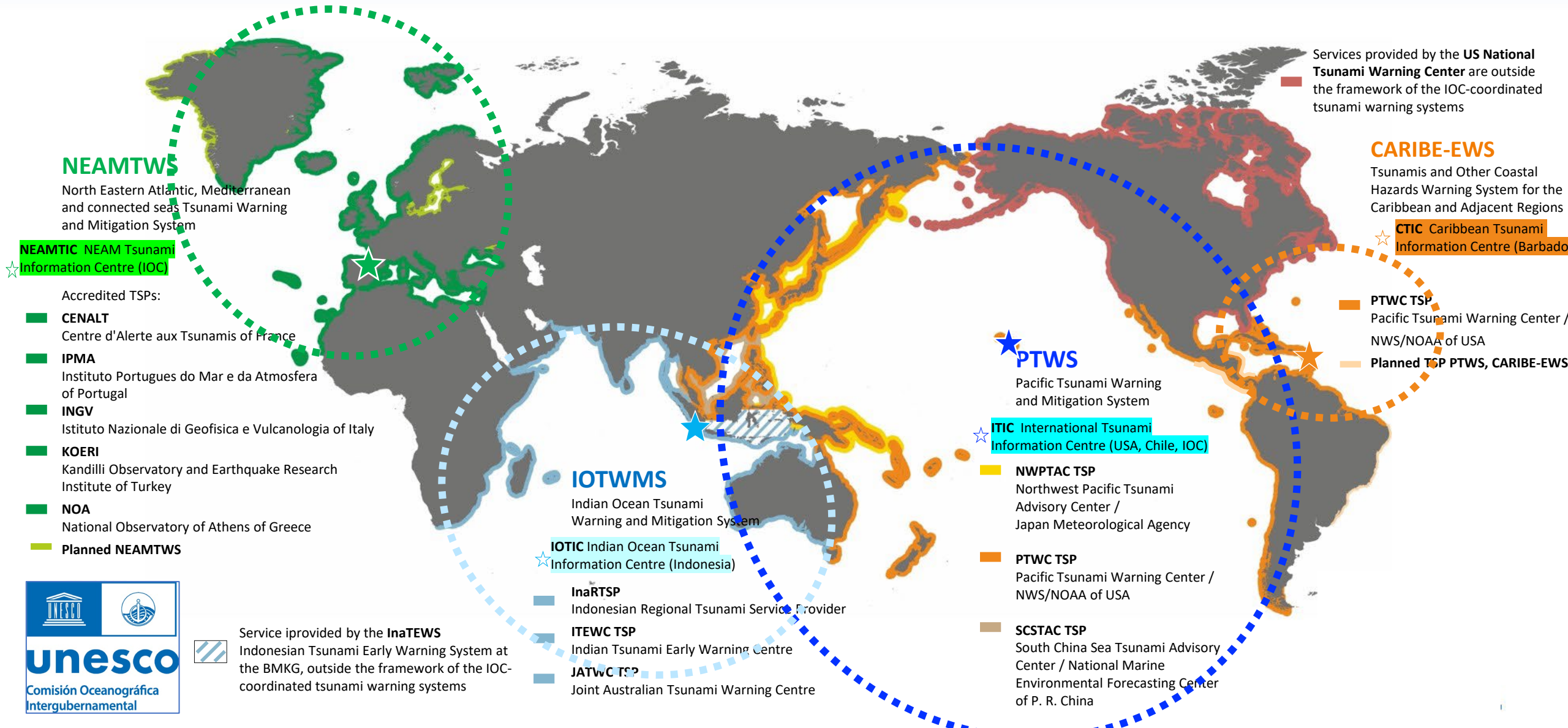
1952. The Japan Meteorological Agency started its national tsunami warning center

1965 - IOC Working Group on the International Aspects of the Tsunami Warning System in the Pacific, organized by the USCGS on behalf of the IOC, Honolulu, 27-30 April 1965

GLOBAL TSUNAMI WARNING AND MITIGATION SYSTEM

Intergovernmental Oceanographic Commission of UNESCO

2022 www.ioc-tsunami.org



NEAMTWS

North Eastern Atlantic, Mediterranean and connected seas Tsunami Warning and Mitigation System

NEAMTIC NEAM Tsunami Information Centre (IOC)

Accredited TSPs:

- **CENALT**
Centre d'Alerte aux Tsunamis of France
- **IPMA**
Instituto Portugues do Mar e da Atmosfera of Portugal
- **INGV**
Istituto Nazionale di Geofisica e Vulcanologia of Italy
- **KOERI**
Kandilli Observatory and Earthquake Research Institute of Turkey
- **NOA**
National Observatory of Athens of Greece
- **Planned NEAMTWS**



Service provided by the **InaTEWS** Indonesian Tsunami Early Warning System at the BMKG, outside the framework of the IOC-coordinated tsunami warning systems

IOTWMS

Indian Ocean Tsunami Warning and Mitigation System

IOTIC Indian Ocean Tsunami Information Centre (Indonesia)

- **InaRTSP**
Indonesian Regional Tsunami Service Provider
- **ITEWC TSP**
Indian Tsunami Early Warning Centre
- **JATWC TSP**
Joint Australian Tsunami Warning Centre

PTWS

Pacific Tsunami Warning and Mitigation System

ITIC International Tsunami Information Centre (USA, Chile, IOC)

- **NWPTAC TSP**
Northwest Pacific Tsunami Advisory Center / Japan Meteorological Agency
- **PTWC TSP**
Pacific Tsunami Warning Center / NWS/NOAA of USA
- **SCSTAC TSP**
South China Sea Tsunami Advisory Center / National Marine Environmental Forecasting Center of P. R. China

Services provided by the **US National Tsunami Warning Center** are outside the framework of the IOC-coordinated tsunami warning systems

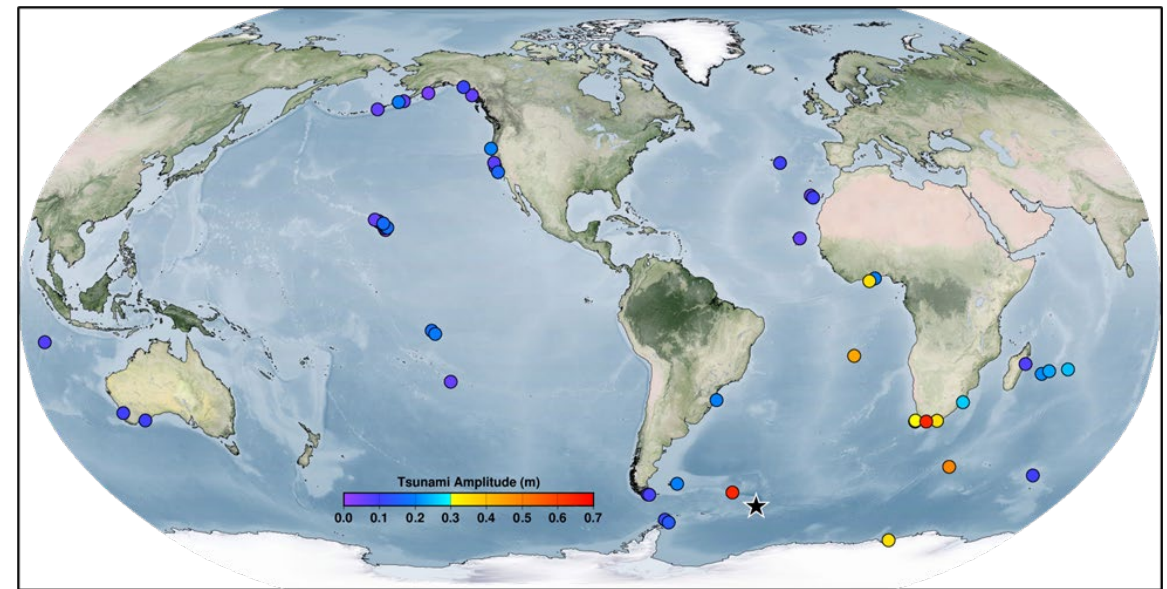
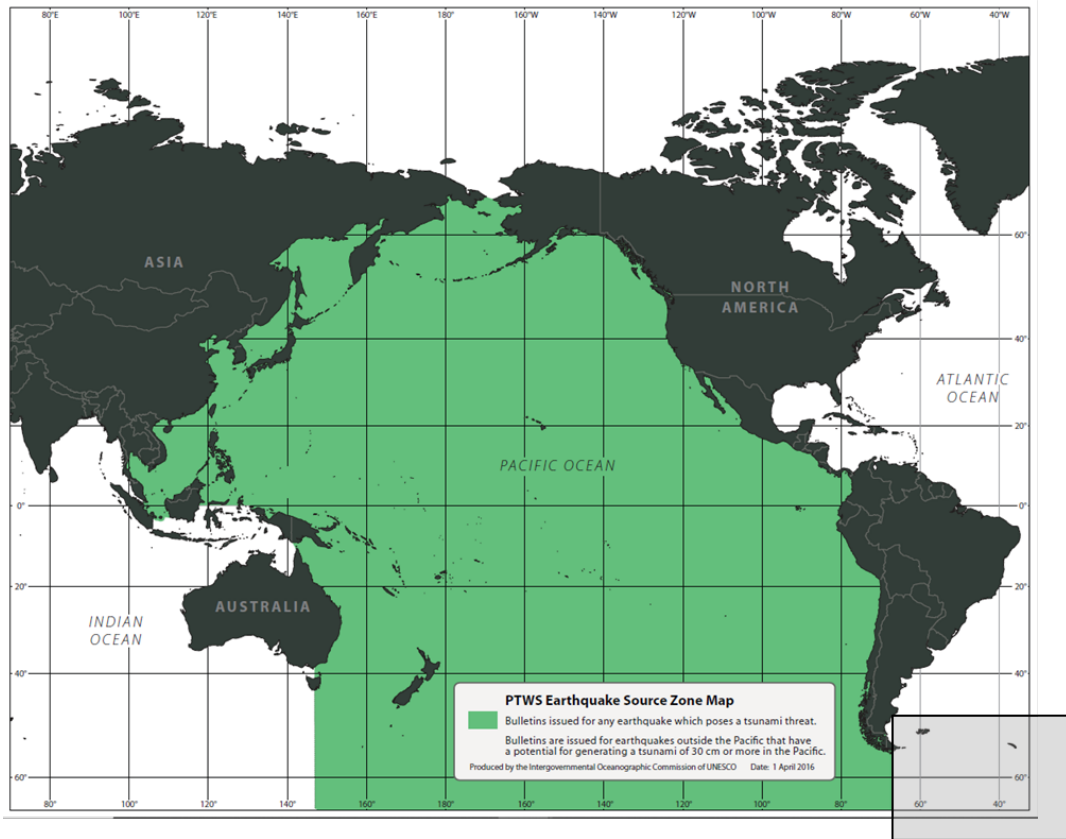
CARIBE-EWS

Tsunamis and Other Coastal Hazards Warning System for the Caribbean and Adjacent Regions

CTIC Caribbean Tsunami Information Centre (Barbados)

- **PTWC TSP**
Pacific Tsunami Warning Center / NWS/NOAA of USA
- **Planned TSP** PTWS, CARIBE-EWS

Expanding borders – regions non-covered



Expanding borders –including other sources



Minamisoma, Fukushima prefecture, Japan. 2011 March 11, Mw 9.0, Honshu, Japan earthquake and tsunami. (Credit: AFP/AFP/Getty Images.)

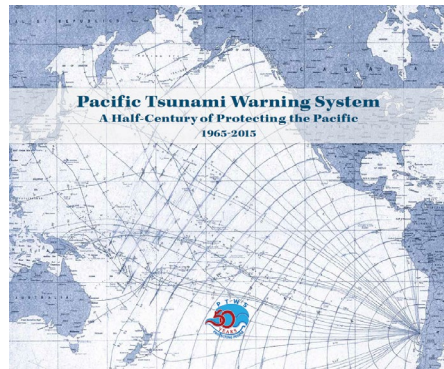
2011 Tōhoku earthquake and tsunami

2011

Inter-ICG Task Team on Hazard Assessment Related to Highest Potential Tsunami Source Areas



2016 ->Recent case studies demonstrated complexity and variability, as well as importance of other types of tsunami sources and that earthquake generated Tsunamis can happen in any subduction zones.



50th anniversary of TSU/PWTS

2015



2018

Palu, Indonesia

Landslide generated tsunami



December 18, 2018 December 30, 2018



Volcano generated tsunami

Sunda strait, Indonesia

2018



UN Ocean Decade Tsunami Programme

2022

TOWS Task Teams

The Group decided to establish a specific Ad Hoc Team on Meteo-tsunamis & Ad Hoc Team on Tsunamis Generated by Volcanoes

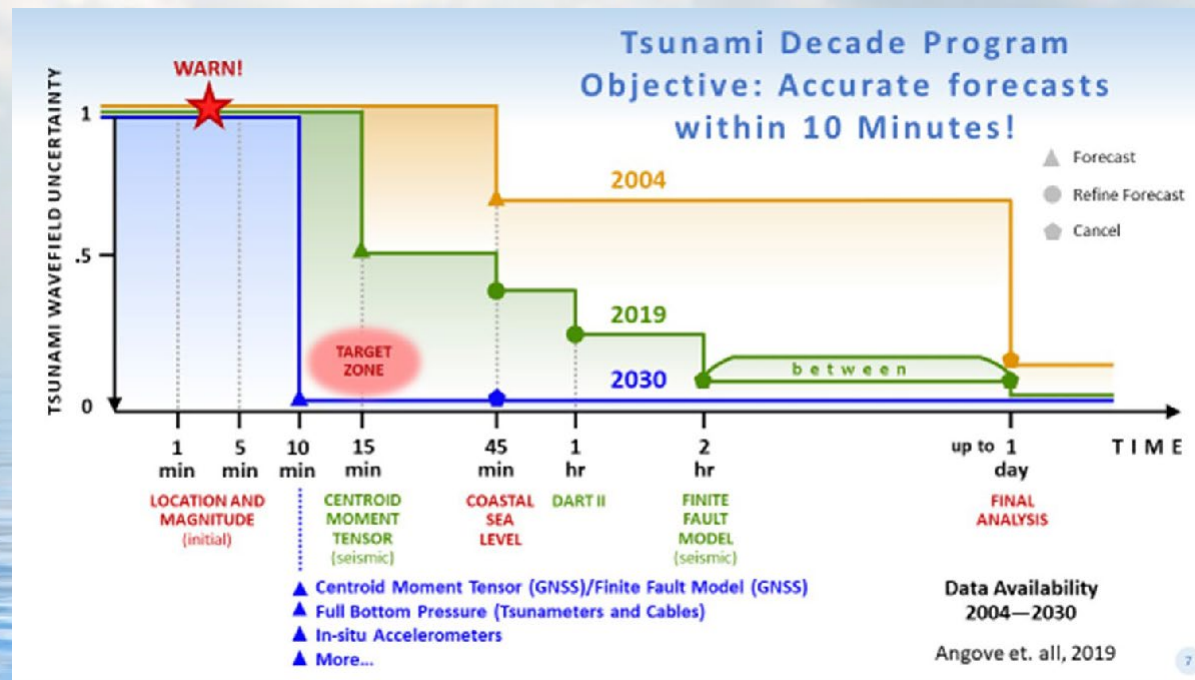
Expanding borders –increasing efficiency

UN OCEAN DECADE TSUNAMI PROGRAMME THE MAIN SOCIAL OUTCOME

TO MAKE
100%

OF COMMUNITIES AT RISK OF TSUNAMI
PREPARED FOR AND RESILIENT TO TSUNAMIS

BY
2030



MHEWS

EWS4ALL

THANK YOU



unesco