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UN Ocean Decade Tsunami Programme

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2021 United Nations Decade
2030 of Ocean Science
for Sustainable Development

UN Decade of Ocean Science for Sustainable Development: 2021 - 2030

VISION:

The Decade will harness, **stimulate and coordinate interdisciplinary research efforts** at all levels, in order to support **delivery of the information, action and solutions** needed to achieve the UN's 2030 Agenda for Sustainable Development.

Goals:

Goal 1

To generate **the scientific knowledge and underpinning infrastructure and partnerships** needed for sustainable development of the ocean.

Goal 2:

To provide **ocean science, data and information to inform policies for a well-functioning ocean** in support of all SDG-2030 Agenda.

SOCIETAL OUTCOMES:

- 1. A Clean Ocean;**
- 2. A Healthy and Resilient Ocean;**
- 3. A Predicted Ocean;**
- 4. A Safe Ocean;**
- 5. A Sustainable harvested and productive ocean;**
- 6. A “Transparent and Accessible” Ocean;**



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The Vision of a Safe Ocean

A Safe Ocean is:

- **not** an ocean in which tsunamis do not occur;
- **is** an ocean in which tsunamis are understood, observed, and their impact is **accurately predicted before** they reach the coast;
- **is** an ocean in which those that live, work, and recreate along it are **armed with knowledge and prepared** to act before a tsunami strikes.



EXISTING GLOBAL TSUNAMI WARNING SYSTEM

Intergovernmental Oceanographic Commission of UNESCO
2021 www.ioc-tsunami.org



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The 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

Service provided by
PTWC
Pacific Tsunami Warning Center

Planned

PTWS

Pacific Tsunami Warning
and Mitigation System

NWPTAC/JMA
Northwest Pacific Tsunami
Advisory Center /
Japan Meteorological Agency

PTWC
Pacific Tsunami Warning Center

SCSTAC/NMEFC
South China Sea Tsunami
Advisory Center /
National Marine Environmental
Forecasting Center of P. R. China

IOTWMS

Indian Ocean Tsunami
Warning and Mitigation System

InaRTSP
Indonesian Regional Tsunami Service Provider

ITEWC
Indian Tsunami Early Warning Centre

JATWC
Joint Australian Tsunami Warning Centre

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

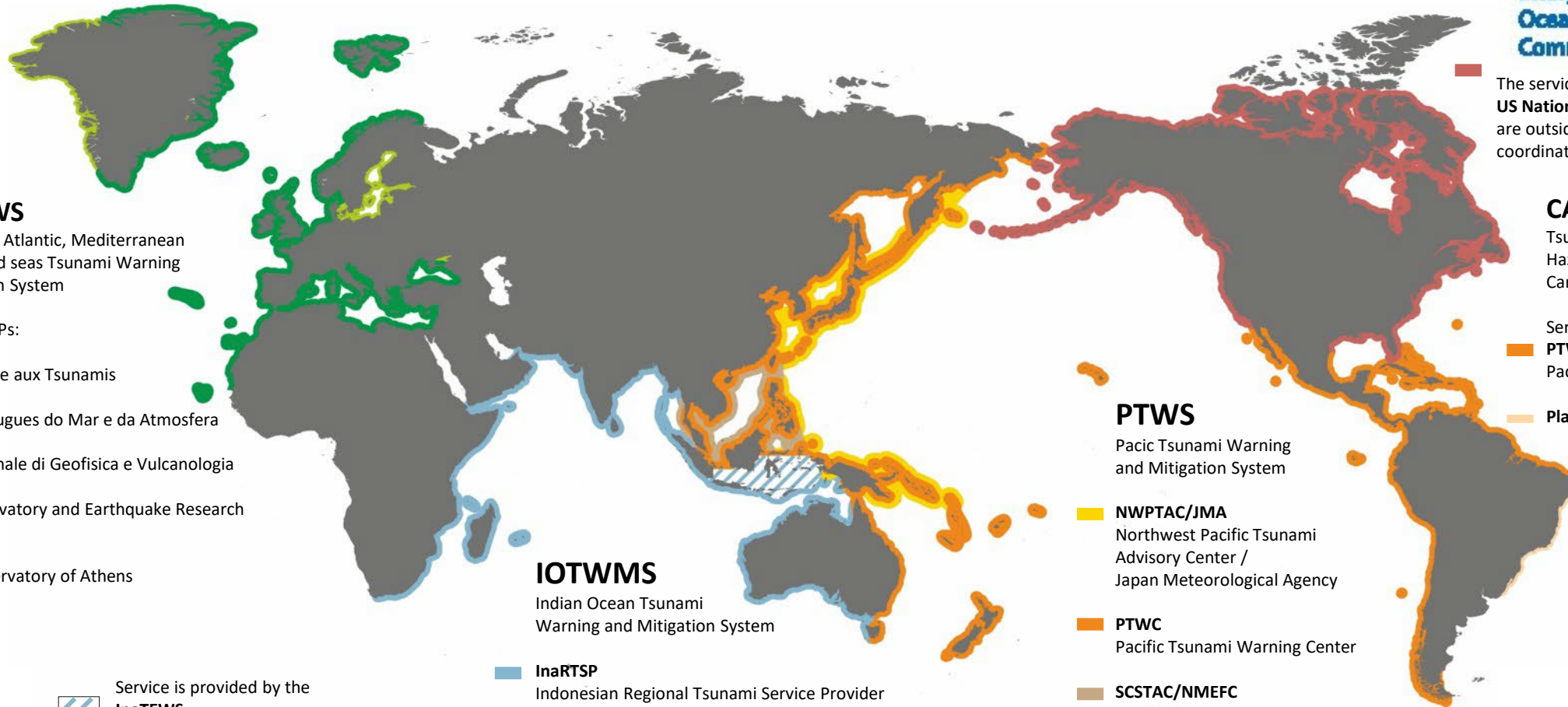
NEAMTWS

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

Accredited TSPs:

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

■ **Planned**

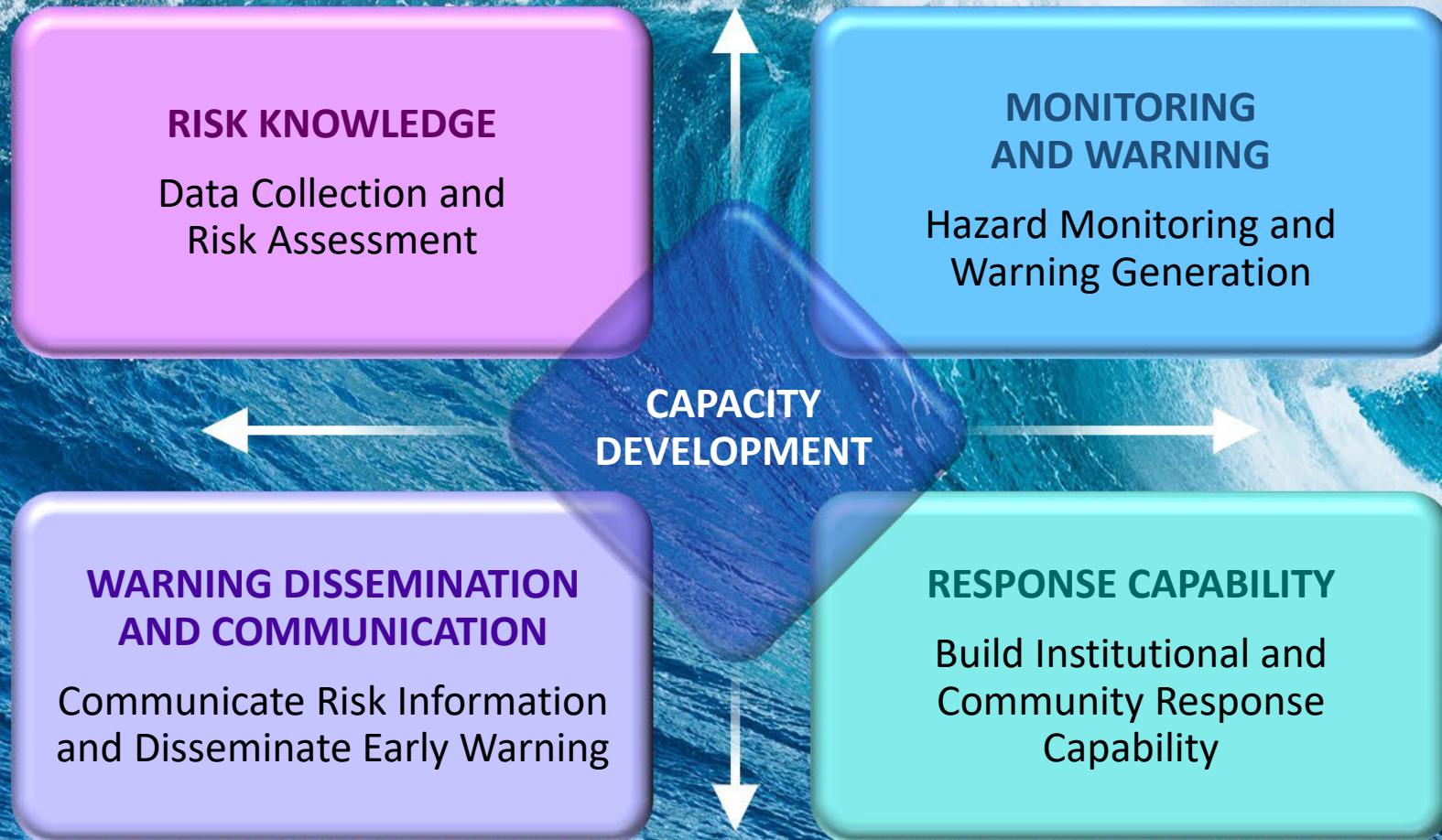


PEOPLE-CENTRED GLOBAL TSUNAMI WARNING AND MITIGATION SYSTEM



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Adapted from ISDR
Platform for the
Promotion of Early
Warning, 2006



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31st Session (14-25 June 2021) of the Assembly for the UNESCO Intergovernmental Oceanographic Commission (IOC) approved the establishment of the **Ocean Decade Tsunami Programme**, including:

- **Scientific Committee** to prepare a **10-Year Research, Development and Implementation Plan**
- **Tsunami Ready Coalition** to help enhance community preparedness

“...this programme will seek to ensure that a country's ability to prepare for, defend against and recover from the tsunami threat is not dependent on what it can afford.”

Alexander Frolov, Jul 2021

OCEAN DECADE TSUNAMI PROGRAMME: Seeking Major Advances in SCIENCE and PREPAREDNESS



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New observational and analysis technologies to move from a **high-uncertainty** assumption-based capability to a **low-uncertainty** dynamic-based capability

RESILIENCE!

Communities respond to tsunami threats by combining accurate **real-time impact forecasts** with **deep community preparedness**.
Tsunami disaster impacts are minimized, enabling rapid restoration of critical infrastructure and services

Comprehensive institutional & community preparedness and capacity building efforts aimed at achieving **IOC Tsunami Ready** designation across all socio-economic categories



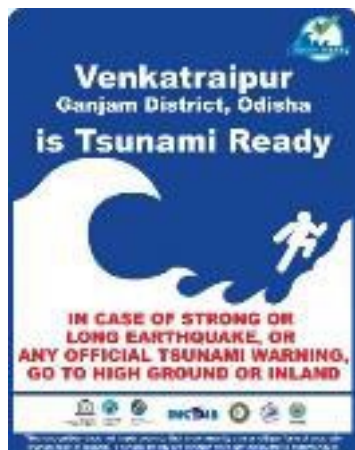
UNESCO-IOC Tsunami Ready Recognition Programme

Community performance-based programme

Active collaboration of the public (community), community leaders, local and national emergency management agencies, and the national tsunami warning centre.

Based on 12 Indicators

Developed from **best practices and lessons learnt** worldwide.



I ASSESSMENT (ASSESS)	
1	ASSESS-1. Tsunami hazard zones are mapped and designated
2	ASSESS-2. The number of people at risk in the tsunami hazard zone is estimated
3	ASSESS-3. Economic, infrastructural, political, and social resources are identified
II PREPAREDNESS (PREP)	
4	PREP-1. Easily understood tsunami evacuation maps are approved.
5	PREP-2. Tsunami information including signage is publicly displayed.
6	PREP-3. Outreach and public awareness and education resources are available and distributed.
7	PREP-4. Outreach or educational activities are held at least 3 times a year.
8	PREP-5. A community tsunami exercise is conducted at least every two years
III RESPONSE (RESP)	
9	RESP-1. A community tsunami emergency response plan is approved.
10	RESP-2. The capacity to manage emergency response operations during a tsunami is in place.
11	RESP-3. Redundant and reliable means to timely receive 24-hour official tsunami alerts are in place.
12	RESP-4. Redundant and reliable means to timely disseminate 24-hour official tsunami alerts to the public are in place.

OCEAN DECADE TSUNAMI PROGRAMME:



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THE MAIN SOCIAL OUTCOME

TO MAKE
100%

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

BY
2030