

# Introduction and Assessment Indicators of Tsunami Ready



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# Tsunami Ready and Global Framework



UN Secretary General  
Message on the WTAD 2021  
“We can build on progress  
achieved – ranging from  
better outreach to  
tsunami-exposed  
communities around the  
world, to the inclusion of a  
Tsunami Programme in  
the UN Decade of Ocean  
Science for Sustainable  
Development”



**Safe Ocean:** life and livelihoods are protected from ocean-related hazards

## SAFE OCEAN

**Not oceans and shores that do not have coastal hazards (i.e. Tsunami).**

..... is coastal area and ocean that is understood, observed, can be predicted, and where the people can continue to interact with the sea and oceans for their livelihood and lifestyle without having the fear of coastal hazards (tsunamis), as they already have the awareness, knowledge, preparedness, skills, and abilities to save themselves in case of an emergency (tsunami)

In June 2022, the UNESCO-IOC Assembly approved the establishment of the IOC Ocean Decade Tsunami Programme to contribute to the outcome ‘A Safe Ocean’ of the Ocean Decade, with the aim of **making 100% communities at risk of tsunami prepared for and resilient to tsunami by 2030 through the implementation of UNESCO/IOC Tsunami Ready Program**

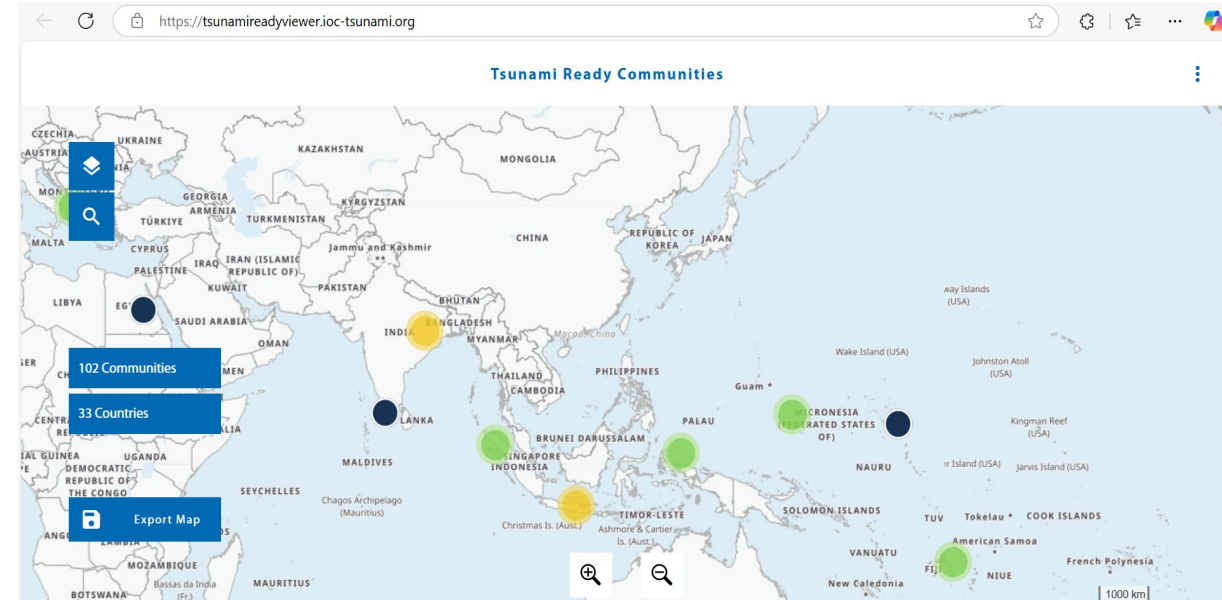
# UNESCO IOC Tsunami Ready Recognition Programme

Tsunami Ready is a **community performance-based programme** that facilitates tsunami preparedness as an **active collaboration** of the public (community), community leaders, and national and local emergency management agencies

The main objective is to **improve coastal community preparedness** for tsunami emergencies, to minimise the loss of life, livelihoods and property, and to ensure a **structural and systematic approach** in building community preparedness

# Why apply for Tsunami Ready recognition?

1. Strengthens tsunami preparedness of coastal communities;
2. Strengthens preparedness for other hazards;
3. Improves community planning;
4. Encourages a consistent and sustainable approach to disaster risk reduction;
5. Contributes to the aims of the Global Frameworks (e.g. Sustainable Development Goals/SDGs);
6. International recognition from UNESCO-IOC as Tsunami Ready Community.



<https://tsunamireadyviewer.ioc-tsunami.org/>



# Tsunami Ready Indicators

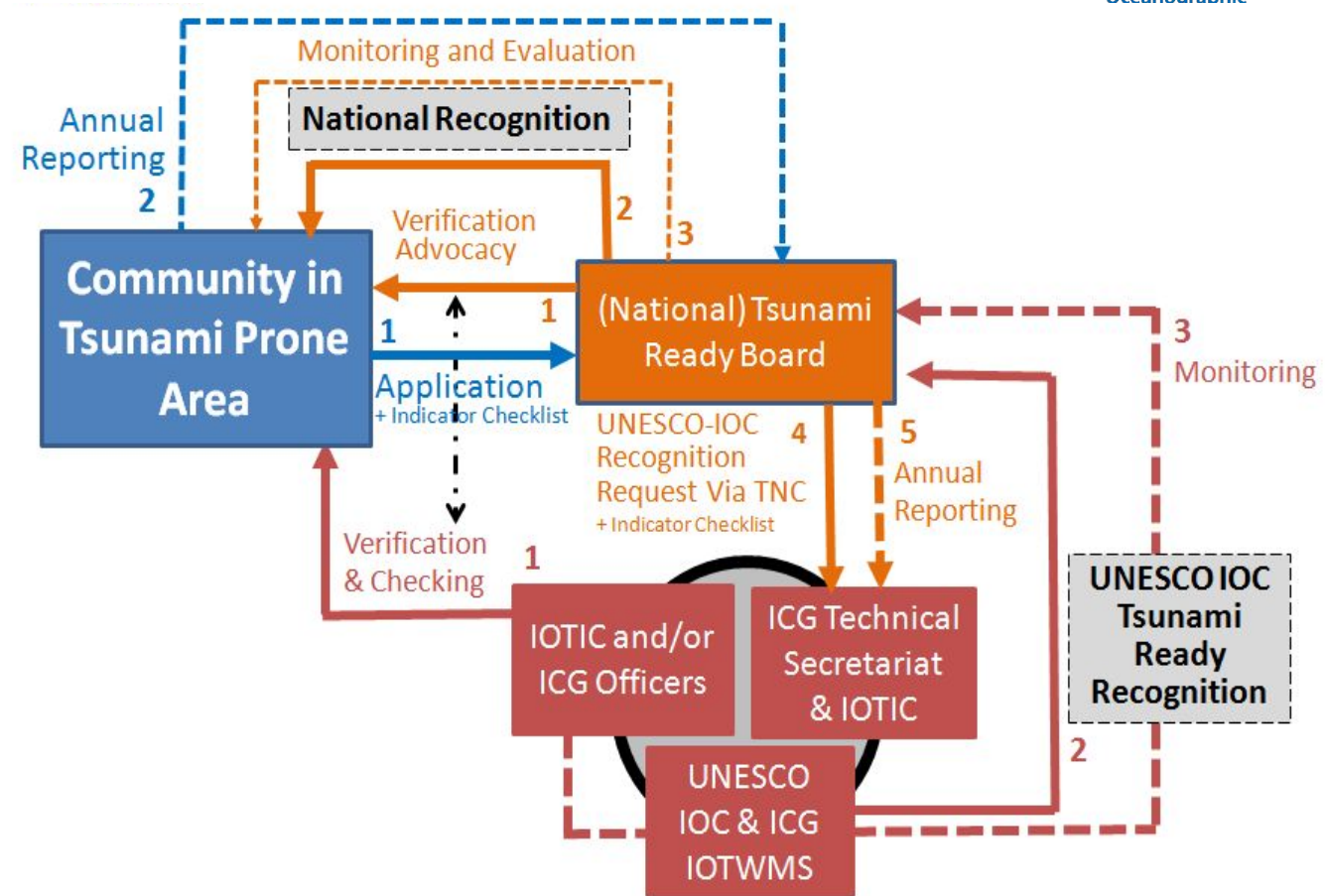
Tsunami Ready consists of 12 key indicators designed to strengthen local tsunami risk reduction capacity. The indicators are grouped into three categories:

**Assessment,  
Preparedness and  
Response**

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

# Tsunami Ready Recognition Process

1. Communities submit applications to the National Tsunami Ready Board (NTRB) for assistance in becoming a Tsunami Ready Community.
2. The NTRB provides assistance and field verification to ensure the completion of the 12 indicators. If these indicators are met, the community will receive a certificate of national recognition from the NTRB.
3. The NTRB will monitor and evaluate the 12-indicator document.
4. The NTRB submits proposals/recommendations to UNESCO for the community to receive recognition as a Tsunami Ready Community by UNESCO-IOC.
5. UNESCO will request to conduct field verification. If the 12 indicators are met, UNESCO will issue a Certificate of Recognition.
6. UNESCO will request the NTRB to monitor and evaluate the 12 Tsunami Ready indicators yearly, and allowed to renew the recognition every 4 years.



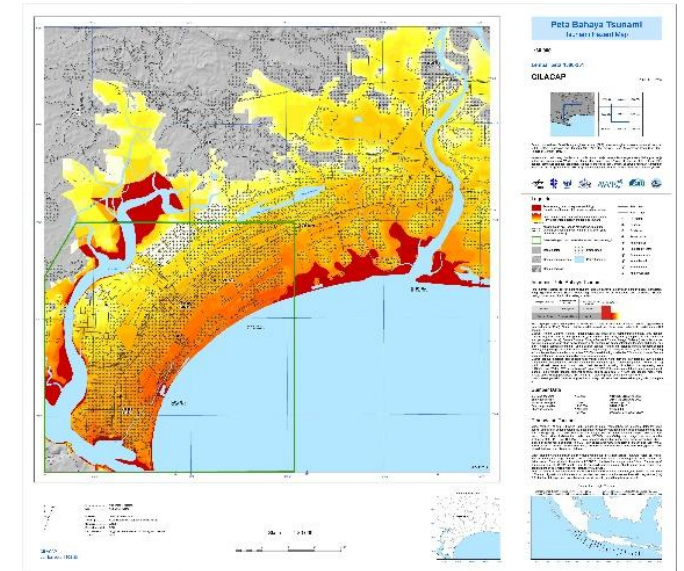
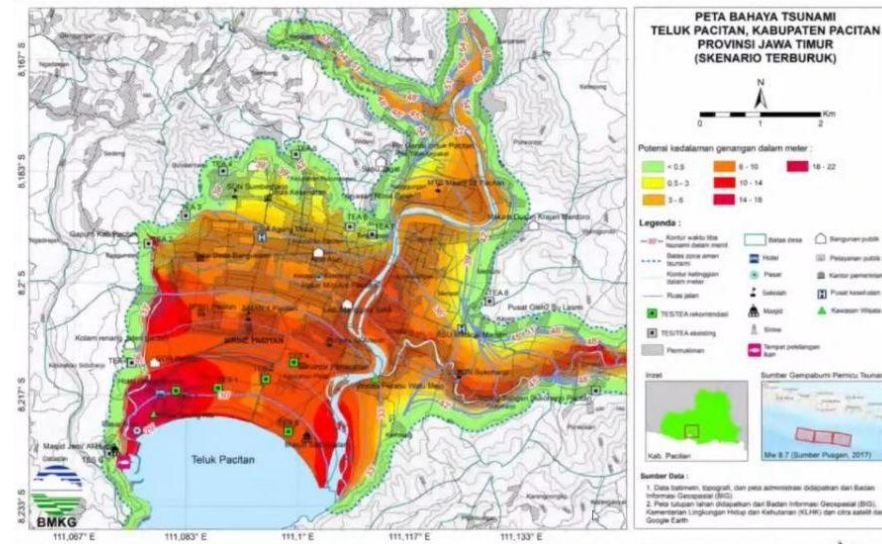
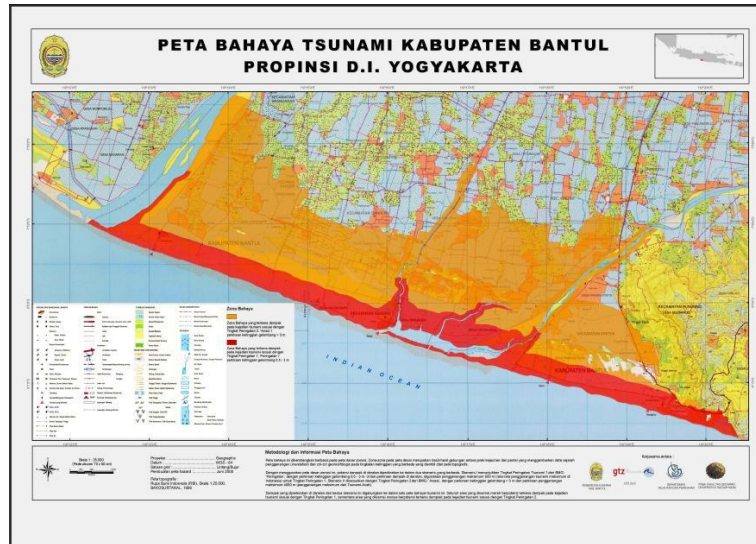
## Indicator 1: Tsunami Hazard Zones are Mapped and Designated

- Tsunami hazard maps are the basis for planning evacuation routes and location of tsunami shelters
- Mapping the hazard zone raises awareness of the tsunami hazard in the community
- Prepares the community for tsunami events
- Helps and guides the emergency response agencies on evacuation planning
- Guides mitigation measures to minimise the impact of tsunamis



# Indicator 1: Tsunami Hazard Zones are Mapped and Designated

- A map that illustrates **tsunami potential impact** in certain area, that give potential hazard information such as; **(1) Tsunami Arrival Time**; **(2) Inundation Depth**;
- Used as reference for **evacuation route planning** and temporary as well as final **evacuation site/shelter determination**;
- created using **worst-case scenario**.





# Tsunami Hazard Map

Peta Utama:

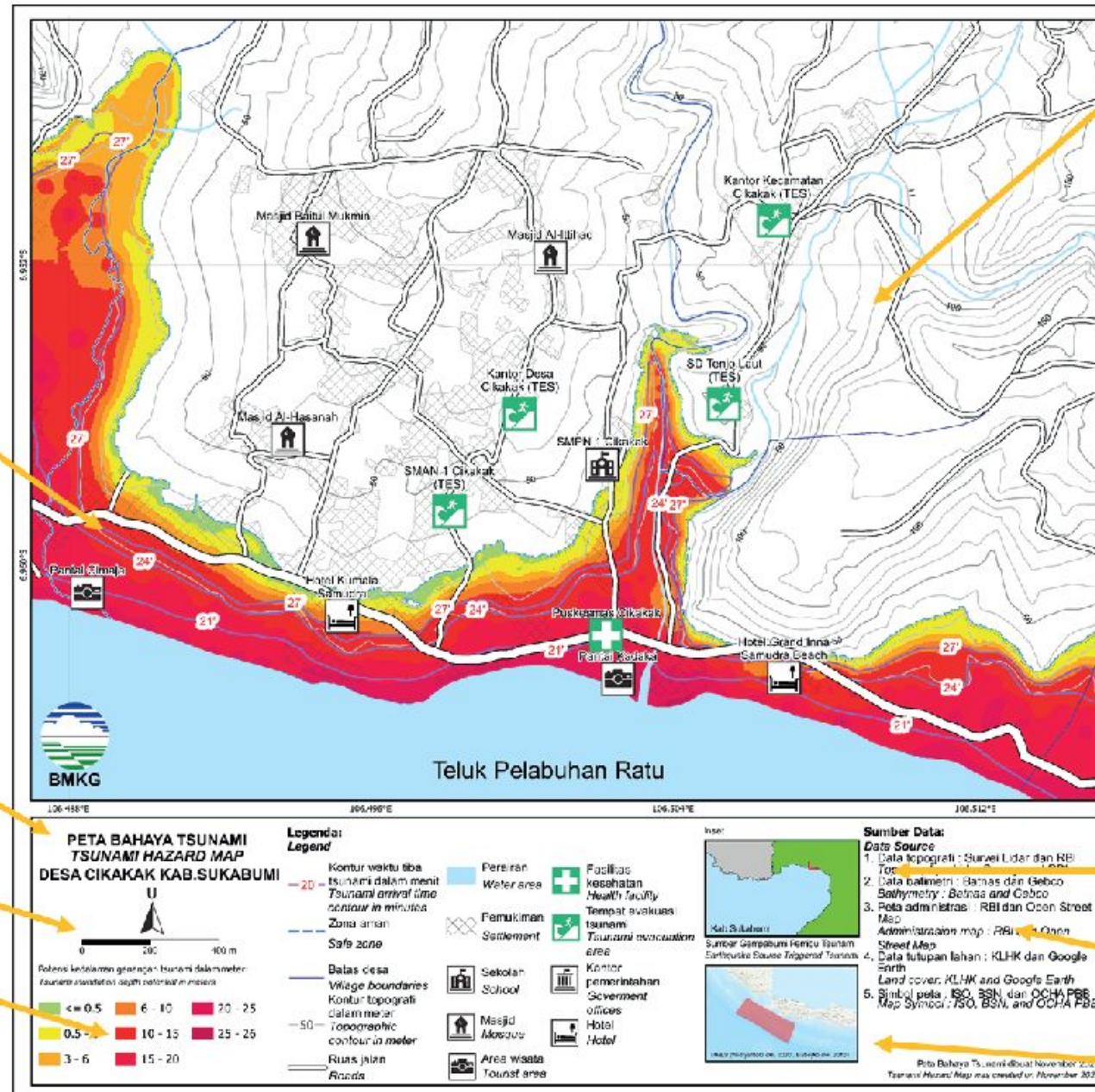
- Area bahaya (zona warna, dengan informasi kedalaman genangan)
- Waktu tiba tsunami
- Markah
- Kontur ketinggian

Zona aman (tanpa warna)

Judul

Skala

Legenda



## Indicator 1: Tsunami Hazard Zones are Mapped and Designated

### ADDITIONAL NOTES

- Tsunami modelling could be created using any known program (Comcot, TUNAMI, COMMIT etc);
- Modelling should use best possible data (bathymetry, topography, historical data);
- The community could request external experts (Disaster Management Office, University, Academician, Researcher, and Consultant) to assist in obtaining the tsunami hazard based on inundation modelling.

## Indicator 2:

### The number of people at risk in the Tsunami Hazard Zone are estimated

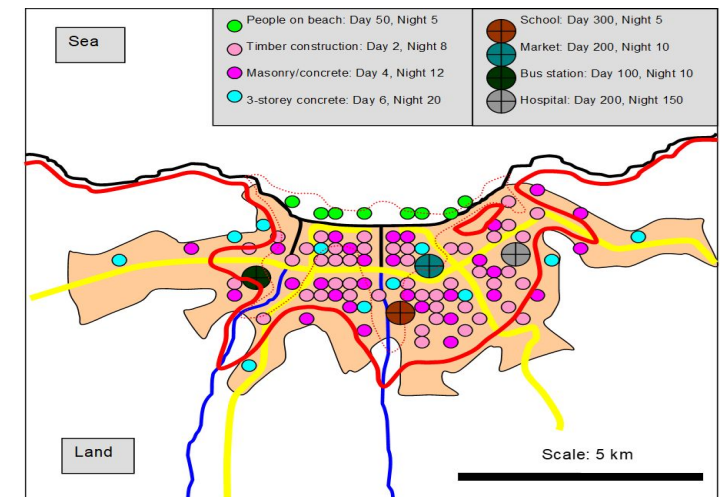
Community needs to have information, knowledge, and understanding of its **vulnerability**, including:

- Total number of population staying in the hazard zone, including detailed number of vulnerable populations (people with disabilities, elderly, young, pregnant women, toddlers, etc.)
- Local resident and Non-resident population (e.g., tourists, commuters)
- Day and nighttime population during different times, e.g., holiday seasons or religious days, etc.
- Number and location of critical and public infrastructure (e.g., Factory, hospitals, schools, etc.)
- Visualizing the exposure on a map helps assess risk

Knowing the number of people and critical infrastructure in the hazard zone is important for evacuation planning and response.



People at-risk of tsunami, including the vulnerable populations  
(Credit: UNESCO-IOC)



Example of community exposure map  
(Credit: UNESCO-IOC & UNDP, 2009)



### Indicator 3:

### Economic, infrastructural, political, and Social Resources are identified

The community should have information, knowledge, and understanding of its **capacity and resources** including:

- Economic (Budget, Funding, Trust fund, Grant);
- Infrastructure (Buildings, Services, Equipment);
- Political (Governance, Networks, Response);
- Social (Social, Professional Organizations, Volunteers, Corporate Social Responsibility (CSR))

Being aware of the local resources and capacities available can strengthen the resilience of the community to cope with tsunamis.



**Figure:** Community resources for tsunami risk reduction, (a) community's emergency equipment; (b) Escape Building of Deah Glumpang community, Banda Aceh, Indonesia; (c) CSR between the private sector and community in Banten, Indonesia (Credit: UNESCO-IOC & BMKG)





**unesco**

Intergovernmental  
Oceanographic  
Commission

**THANK YOU**