

# Introduction and Assessment Indicators of Tsunami Ready



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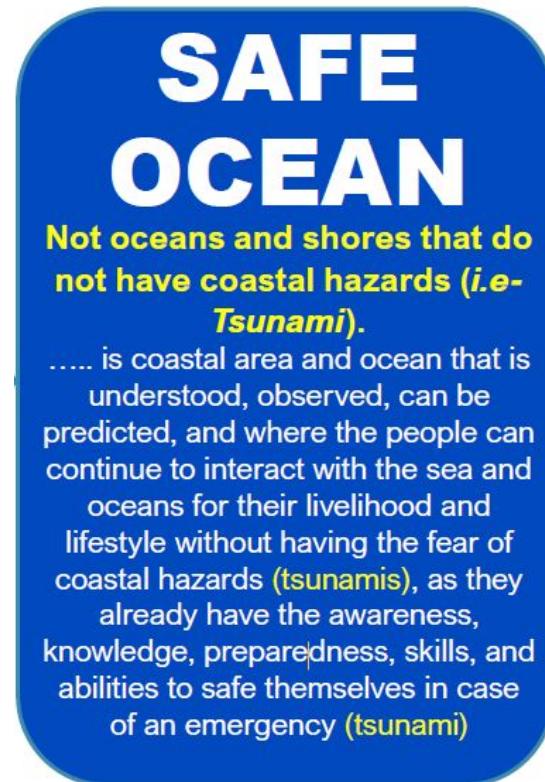
# Tsunami Ready and Global Framework



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



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**

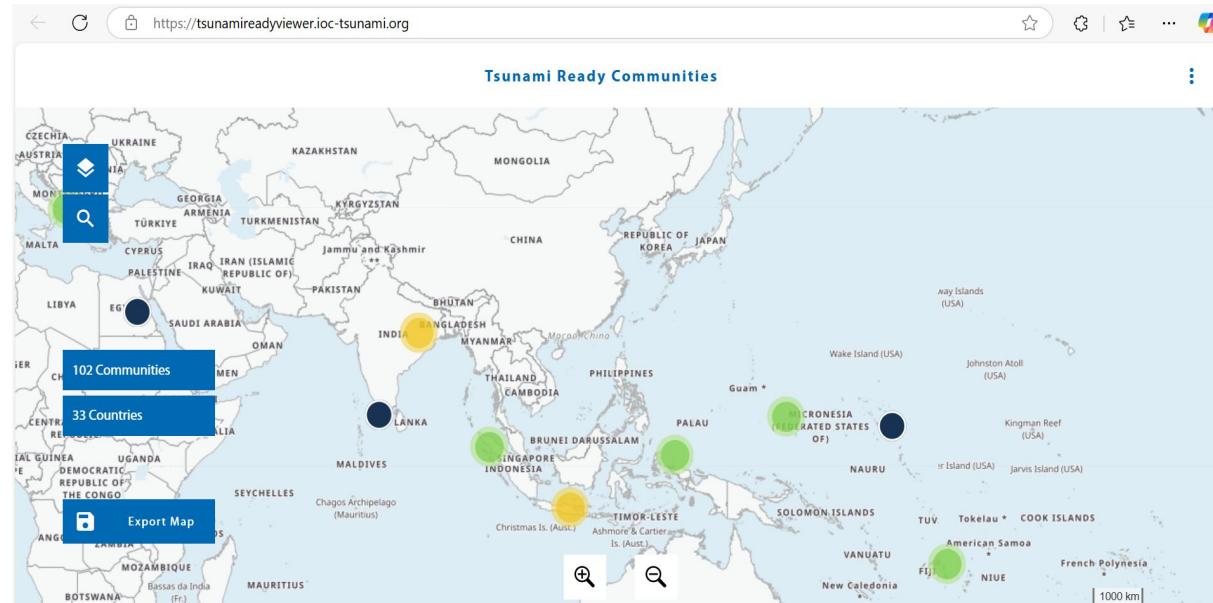
# UNESCO IOC Tsunami Ready Recognition Programme

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

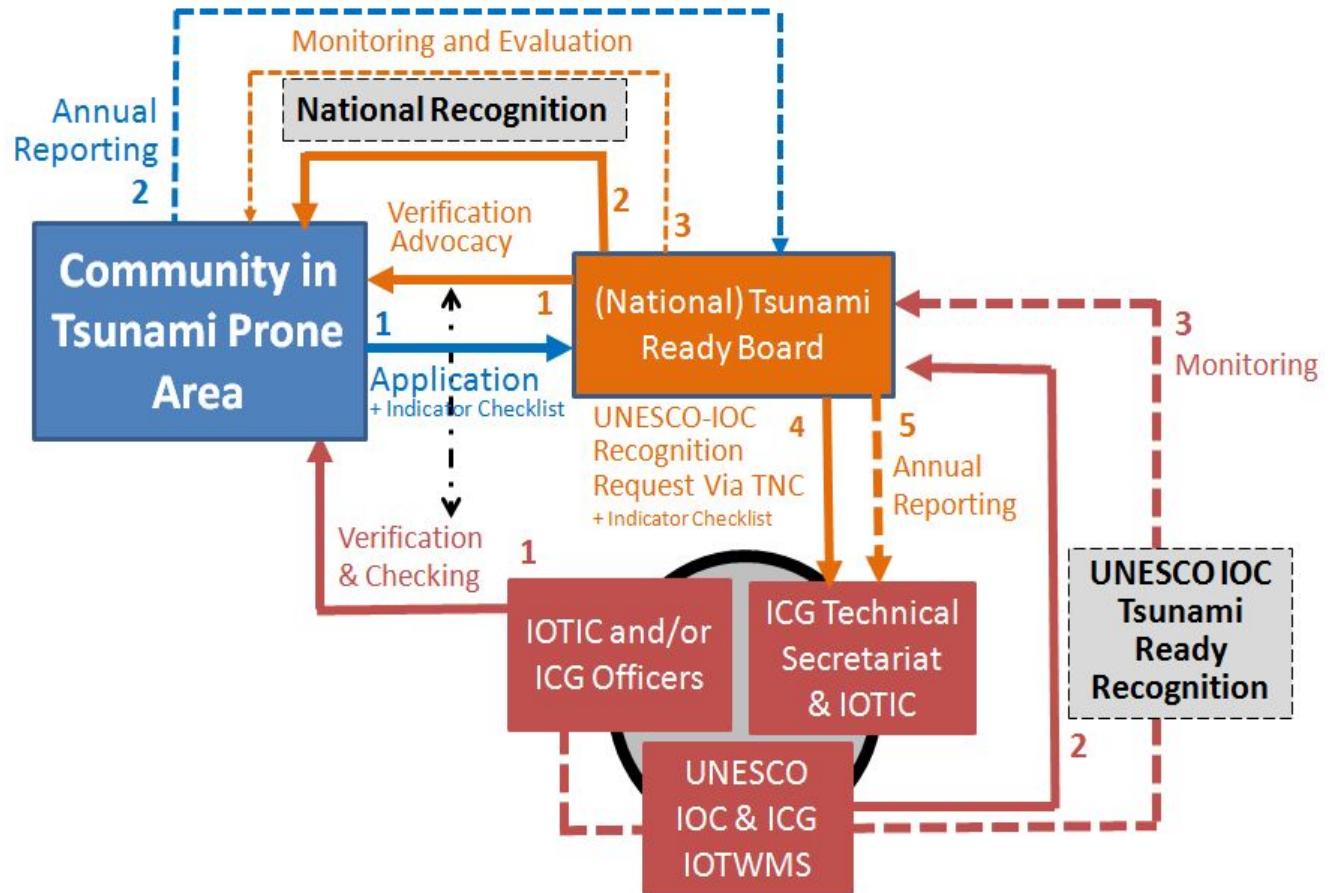
Tsunami Ready consists of 12 key indicators designed to strengthen local tsunami risk reduction capacity. The indicators are grouped into three categories:

**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.

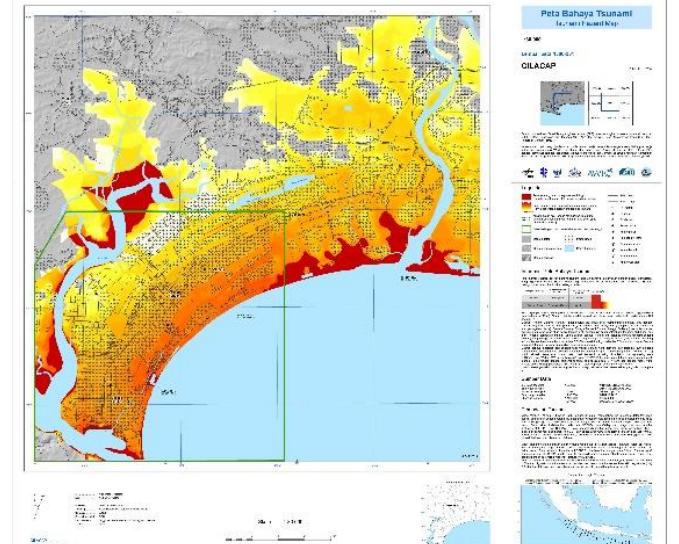
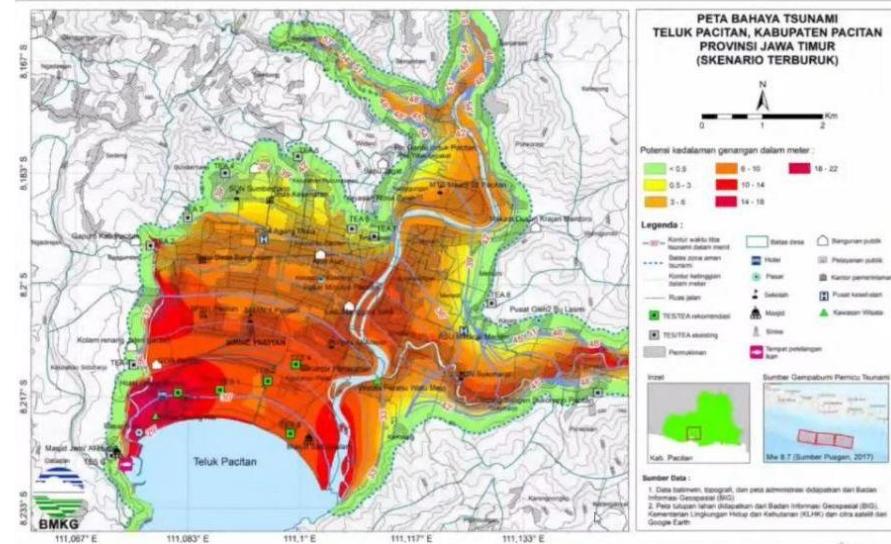
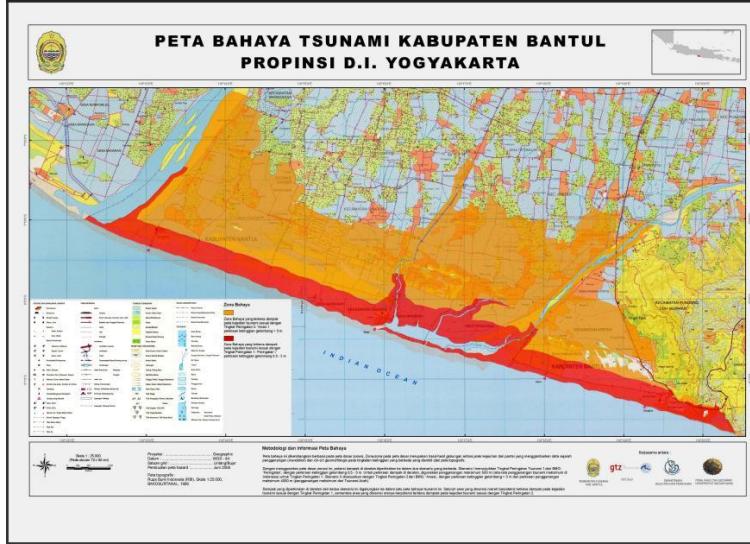


## Indicator 1: Tsunami Hazard Zones are Mapped and Designated

- 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

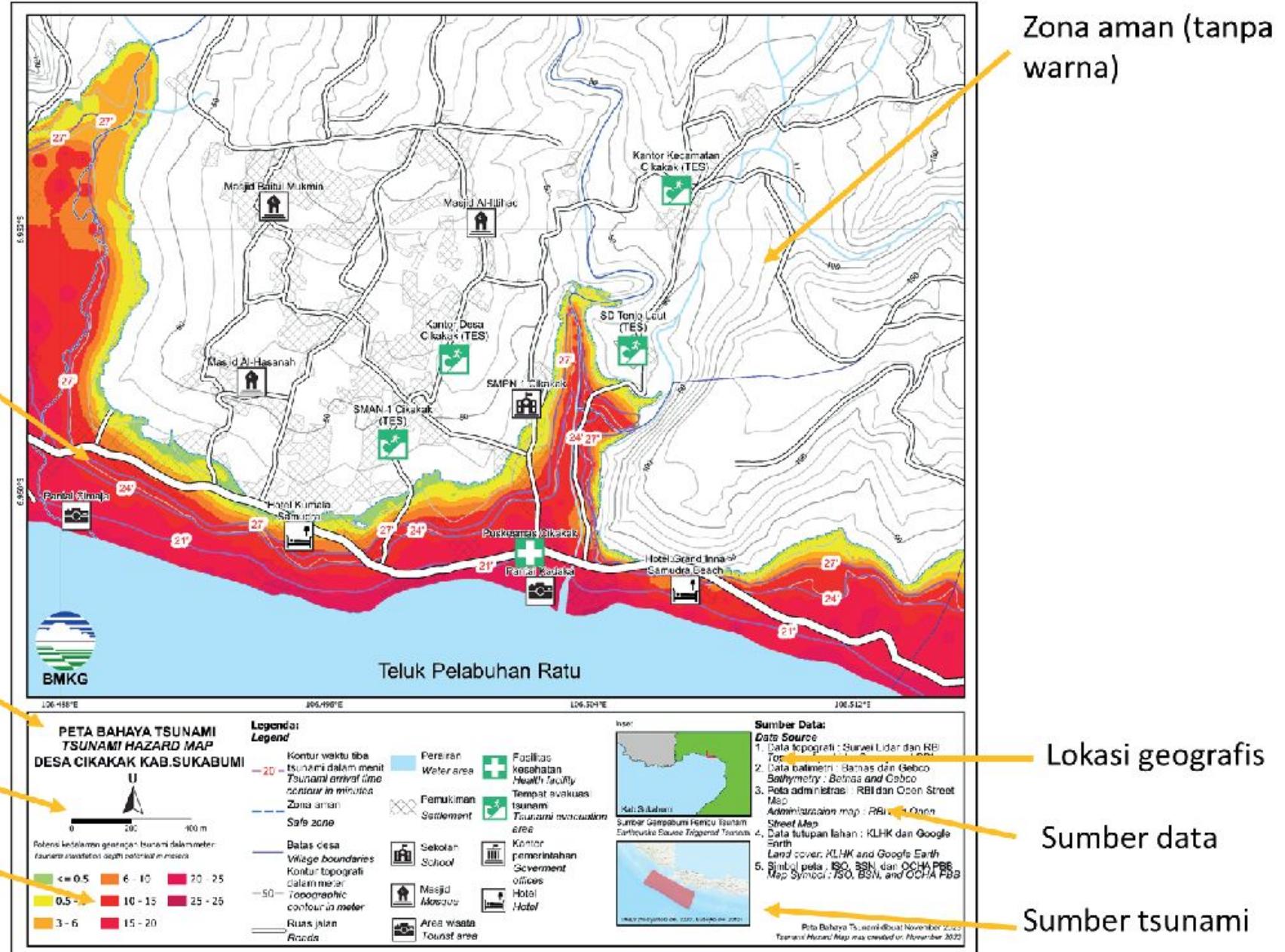
- A map that illustrates **tsunami potential impact** in certain area, that give potential hazard information such as; **(1) Tsunami Arrival Time; (2) Inundation Depth;**
- Used as reference for **evacuation route planning** and temporary as well as final **evacuation site/shelter determination;**
-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



# Tsunami Hazard Map

## Peta Utama:

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



# 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

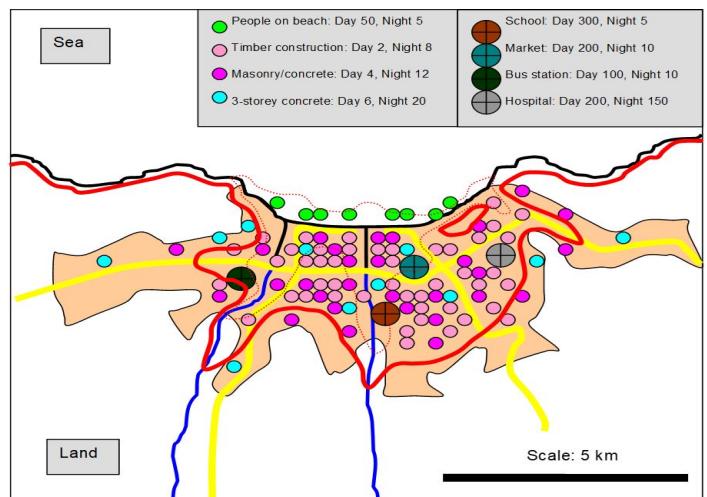
Community needs to have information, knowledge, and understanding of its **vulnerability**, including:

- 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)



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# THANK YOU