



## *South China Sea Region Tsunami Ready Training*

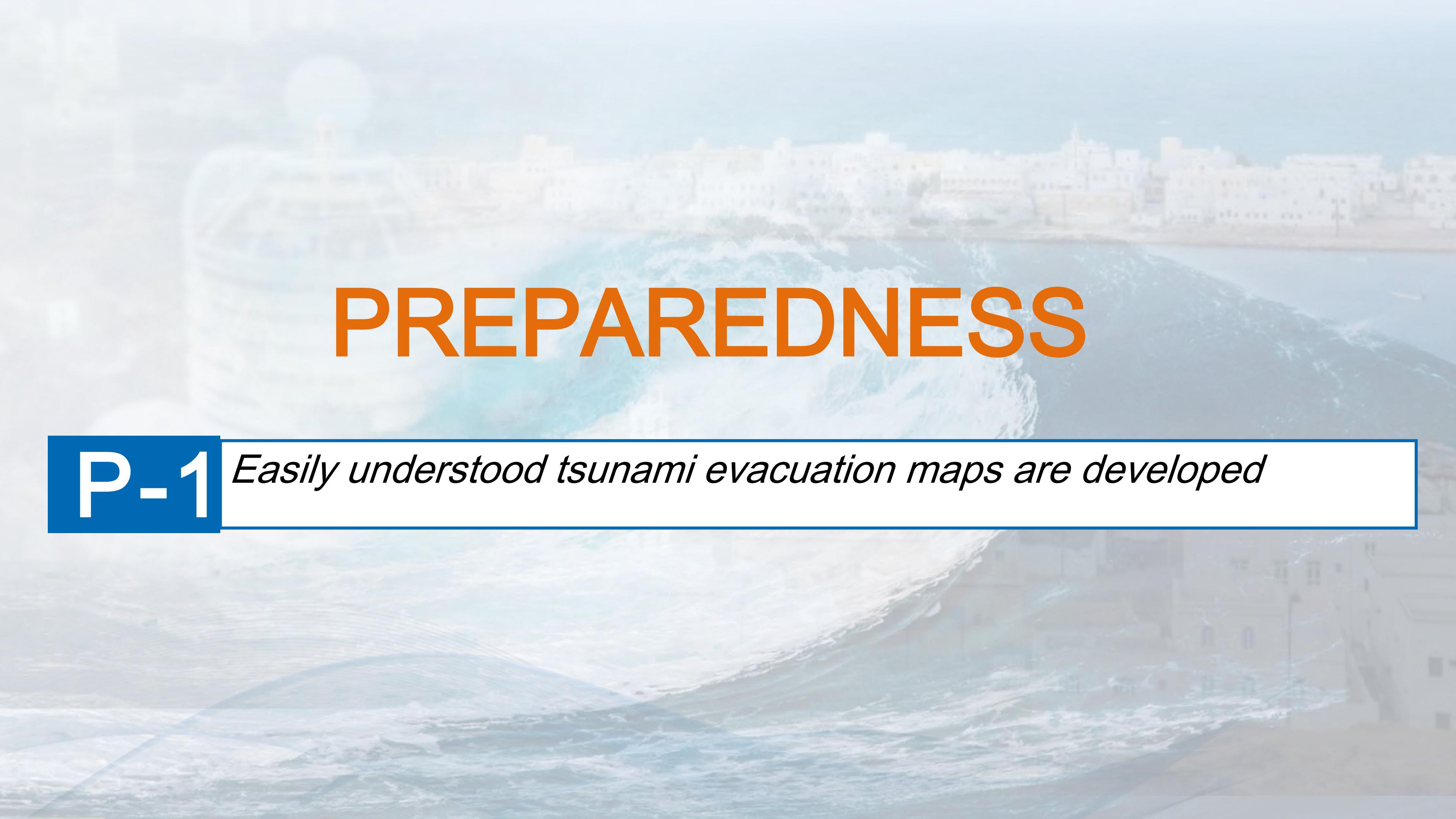
22- 23 Desember 2025

# *UNESCO - IOC TSUNAMI READY INDICATORS*

# **PREPAREDNESS**

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# PREPAREDNESS

**P-1**

*Easily understood tsunami evacuation maps are developed*

## P-1 *Easily understood tsunami evacuation maps are developed*

### Introduction

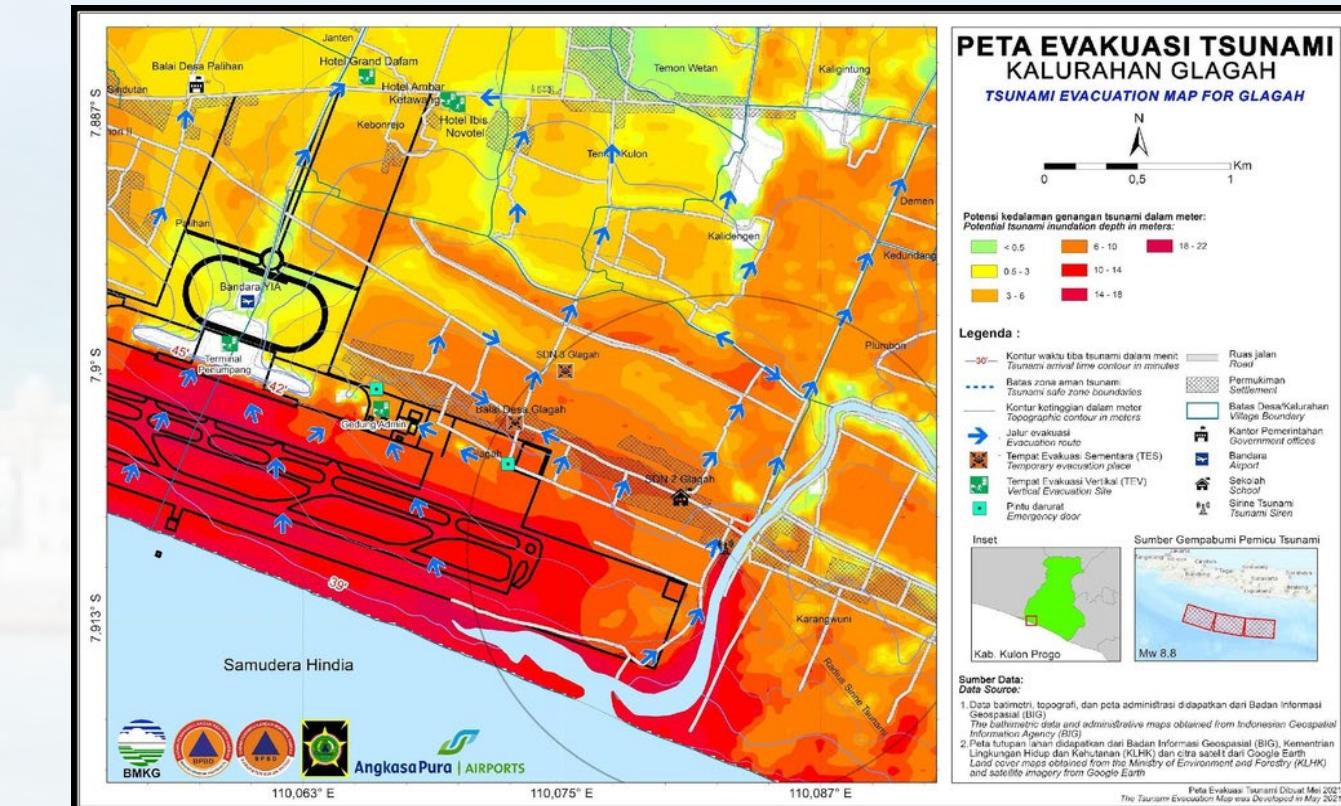
Tsunami Evacuation Map is a map that shows safe routes or evacuation paths that residents must follow when there is a tsunami threat or event.

This map is usually prepared by local governments or relevant agencies in coordination with the community, with the aim of helping people avoid tsunami hazards and reach safe locations quickly and efficiently.

The map includes information such as evacuation routes, locations of shelters, and elevation points that are safe from tsunami waves.

#### Tsunami Evacuation Map Location:

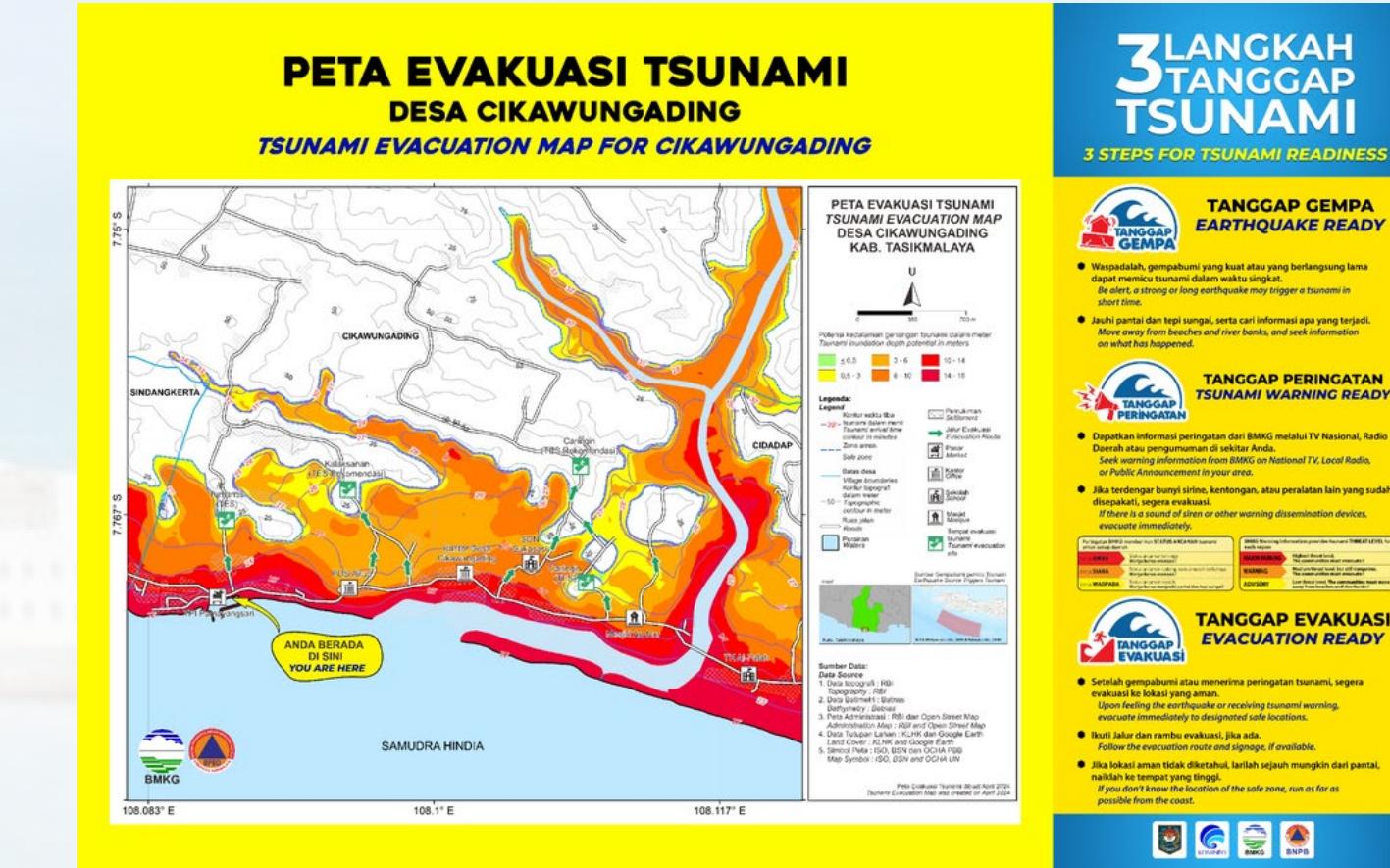
- Tsunami-Resilient Regions
- High-density urban area
- Coastal tourist regions with tsunami potential



## P-1 *Easily understood tsunami evacuation maps are developed*

The community should have Easily understood tsunami evacuation maps that depict tsunami evacuation routes and assembly areas:

- Based on Tsunami Hazard Zone.
- Prepared with community consultation to incorporate local knowledge.
- Approved by local authorities.
- In accordance with the community's Tsunami Emergency Response Plan



Evacuation map in 2 languages

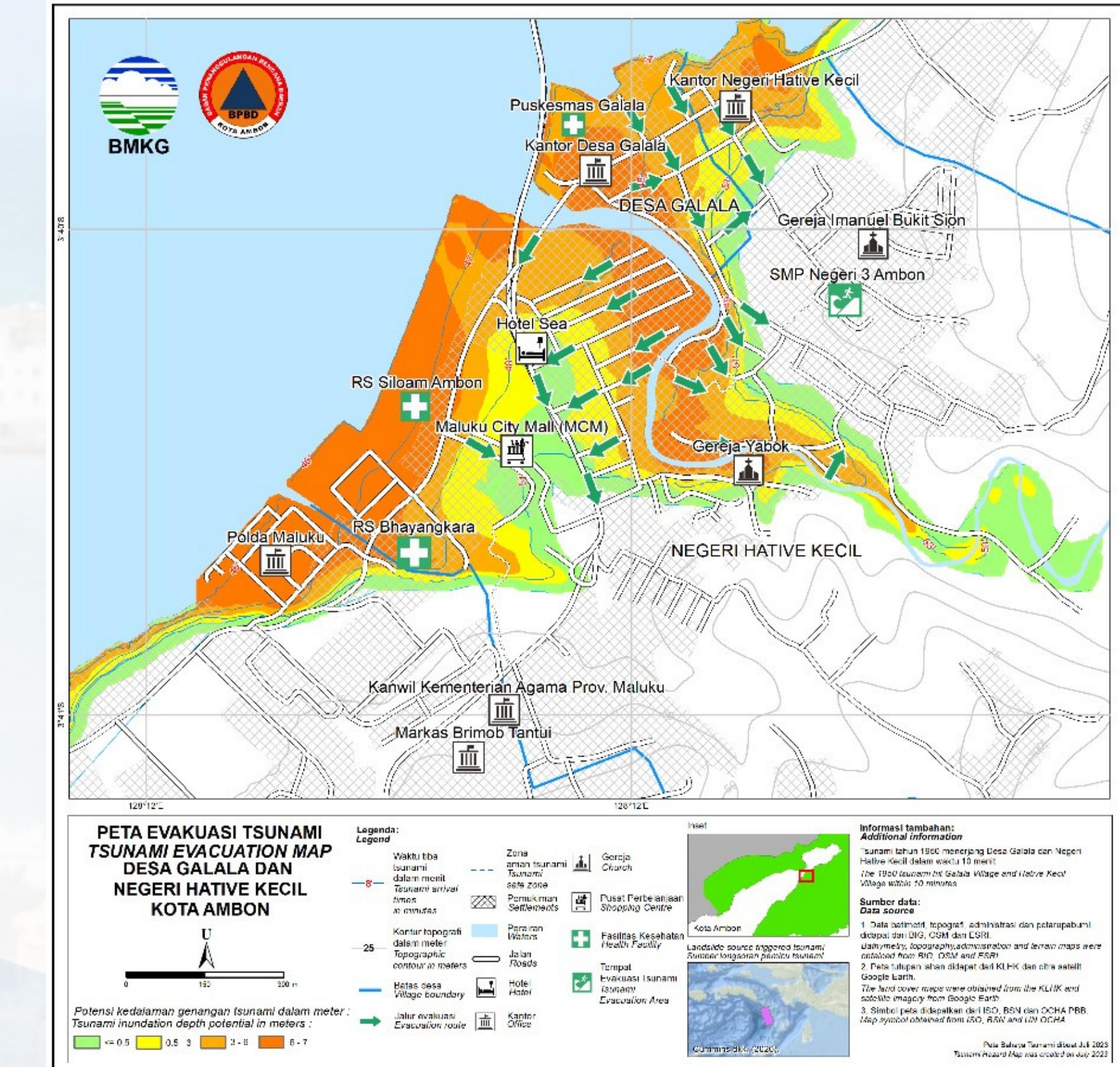
### Key Points in Evacuation Map Development

- Evacuation planning is critical for safety and must be authorised by the relevant authority.
- The evacuation map should be developed collaboratively with the community and stakeholders.
- It must show routes and assembly areas, based on the tsunami hazard map and local knowledge.
- The map is only one output of a broader evacuation planning process.

## P-1 *Easily understood tsunami evacuation maps are developed*

# Tsunami Evacuation Map Information

- Potential tsunami inundation is depicted using color coding (red, yellow, green, etc.).
- Evacuation route (arrow)
- Tsunami arrival timetable
- Location of the TES (Temporary Evacuation Site) and TEA (Permanent Evacuation Site)
- Legend offering interpretations of the symbols on the map (minimum 2 languages)
- Government and private entities/infrastructure as a standard for the community
- Ideally, utilize two languages (English/Indonesian) or a regional dialect.
- Map Scale
- Map Maker Emblem



**P-1** *Easily understood tsunami evacuation maps are developed*

## Evacuation Route Planning Guidelines

1. Evacuation routes are established according to the principles of shortest, fastest, safest, and most accessible pathways.
2. Evacuation routes are prioritized based on existing public roads that serve environmental, local, and arterial functions.
3. The responsibility for establishing evacuation routes lies with road operators within their designated jurisdictions, although it may be delegated to the central government under specific conditions.
4. The evacuation route must be capable of accommodating affected residents on foot, including groups with special needs who can be transported by ambulance via an alternative route.
5. The quantity of evacuation routes is dictated by the anticipated number of impacted residents, the duration of warnings, the time required for evacuation, and the flow of evacuees. of the river flow and the bridge's integrity.
6. To prevent congestion during evacuation, multiple evacuation routes were established parallel to the block system, directing away from vulnerable areas such as coastlines, river mouths, and bodies of water, as well as channels that lead to the coast.
7. Evacuation routes should circumvent roads lined with trees and utilities susceptible to collapse. If the evacuation route necessitates crossing a bridge, it is essential to assess the condition of the river flow and the bridge's integrity.



**P-1** *Easily understood tsunami evacuation maps are developed*

## Evacuation Route Planning Guidelines

1. Collecting data for the selected tsunami-prone areas, in coordination with the local Disaster Management Agency (BPBD).
2. Identifying the projected number of affected residents.
3. Determining the arrival time of the tsunami waves (hazard map).
4. Determining the number of evacuation routes, ideally with a road width of 3.5 m.
5. Calculating the reachable distance (the walking speed of elderly people during evacuation is 53 m per minute).
6. Visualizing the evacuation route map:
  - Plotting the planned evacuation routes.
  - Simplifying the map graphics.
  - Coordinating with BPBD and the community.



**P-1***Easily understood tsunami evacuation maps are developed*

## Determining TES (Temporary Evacuation Site)

- Land with high elevation that is not far from areas at risk of tsunami inundation.
- If it is still within the inundation zone, the TES should at minimum be a building with at least three stories (adjusted to the potential inundation depth) and have a strong structure.
- It must have road access that is easy and quick to reach for the community (especially vulnerable groups), and can be easily accessed by ambulances or rescue teams.
- Consultation should be carried out with the local community.

## Determining FES (Final Evacuation Site)

- Land with high elevation that is far from areas at risk of tsunami inundation.
- Government buildings or specially constructed tsunami shelters, provided because there are no hills around the tsunami hazard zone.
- It must have road access that is easy and quick to reach for people from all groups, and can be easily accessed by ambulances or rescue teams.
- It must have sufficient capacity to accommodate evacuees, allowing for the establishment of emergency tents and public kitchens.
- It must have access to clean water and electricity to meet post-disaster needs.



# PREPAREDNESS

**P-2**

*Tsunami information including signage is publicly displayed*

P-2

*Tsunami information including signage is publicly displayed*

## Introduction

A Public Information Board is one form of medium used to deliver information to the public or community.

The Public Information Board (for Earthquake and Tsunami Preparedness) functions as an educational tool for the community, containing outreach materials and awareness messages about tsunami hazards in their area.

Locations for Public Information Boards include:

- Tsunami-prone areas
- Densely populated areas
- Tourist areas

## Objective

Providing information about tsunami hazards and safety guidelines for dealing with tsunamis, and building public awareness and preparedness regarding potential dangers in their area.



P-2

*Tsunami information including signage is publicly displayed*

The community should have Public displays and signage

- Tsunami hazard zone,
- Tsunami Hazard Map or Tsunami Evacuation Map
- How to respond in case of a tsunami
- Evacuation routes and Assembly area/points
- Informational display providing education on earthquake and tsunami preparedness

Signage should comply with **national or international standards** and **understandable** by residents or international visitors

### Key Points in Public

- Provides tsunami risk & response information
- Educates through visible signboards
- Raises public awareness of tsunami risk
- Guides residents & tourists on hazard zones, routes, and safe areas

with information on among other:



P-2

*Tsunami information including signage is publicly displayed*

## Types of Public Display of Tsunami Information



### Emergency Evacuation Signage

Signage to inform when in a tsunami hazard zone and route to follow in an emergency evacuation. Should be simple, clear, quick to read and easy to understand



### Tsunami Risk Information Signage

Signage that provides more information about tsunami risk. More detailed and should be read outside an emergency situation

### Tsunami hazard zone



### Evacuation routes



### Assembly zones



### Signs painted on road



### Signage Plan



### Public information signage

- Designed to raise awareness in community
- Community should be responsible for designing but can't do it by themselves. Must be a collaborative effort between the community, local authorities, DMO, NTWC, universities etc.
- Can contain information about tsunami risk in the area, tsunami history and facts. Map of tsunami hazard zone can also be included

P-2

*Tsunami information including signage is publicly displayed*

## Effective Public Information Board:

### 1. Information

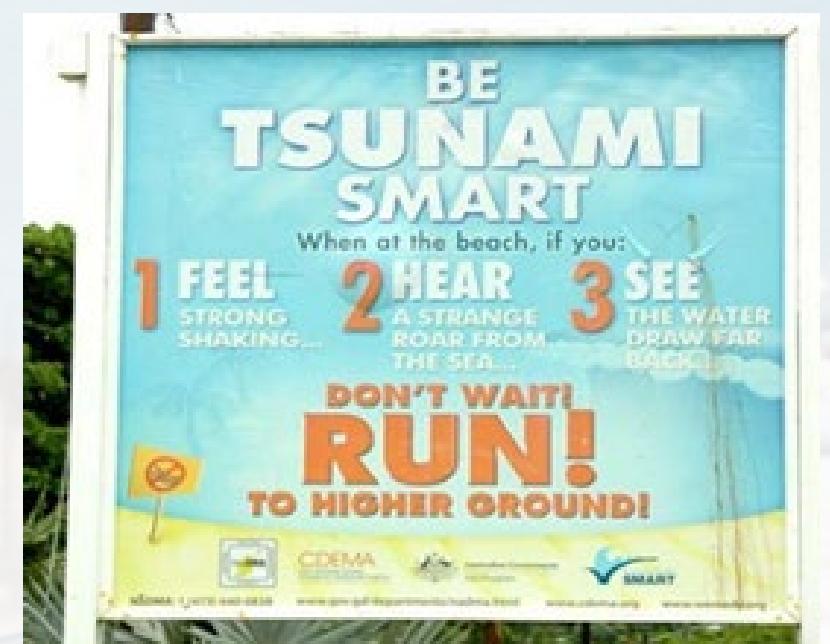
Main (Standard) Information:

- Tsunami-prone areas
- Tsunami hazard map
- Evacuation routes
- Assembly points (TES & TEA)
- How to respond to earthquakes and tsunamis

Additional information:

- Education on how earthquakes and tsunamis occur
- History of tsunamis in the area
- Education on siren or traditional alarm sounds
- Emergency preparedness bag
- Slogans/campaign messages

Note: The information displayed should be adjusted to fit the size of the board (proportionally).



P-2

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## Effective Public Information Board:

### 2. The Use of Language

The information displayed should be presented in two or more languages:

- National Language
- English
- Local language



Note: When signs are installed in tourist areas, they must use English as the standard international language.

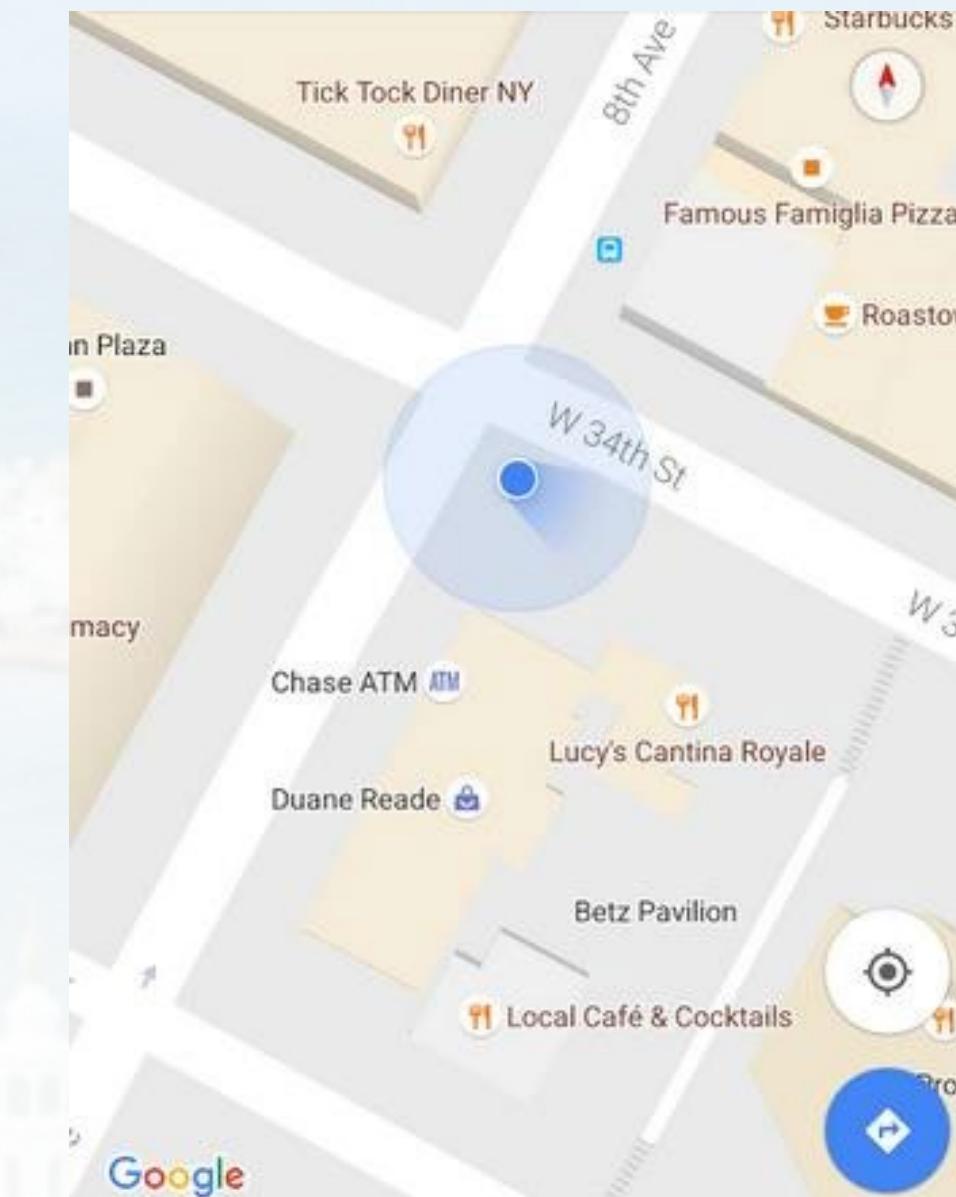
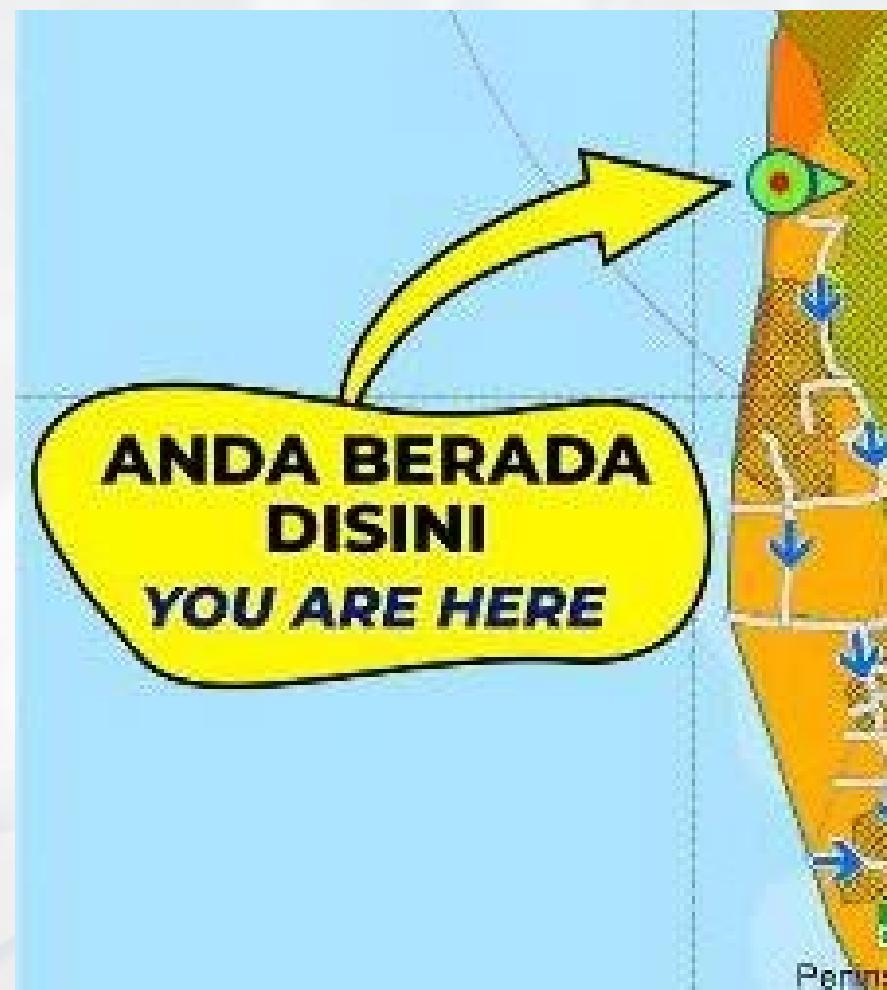
P-2

*Tsunami information including signage is publicly displayed*

## Effective Public Information Board:

### 3. Allocation and Volume

- Clearly Visible (Unobstructed)
- The figure is calibrated to the dimensions of the tsunami-prone region.
- Collaboration with other boards



**Note:** When developing an evacuation map, it is advisable to include a directional view for tourists and new residents.

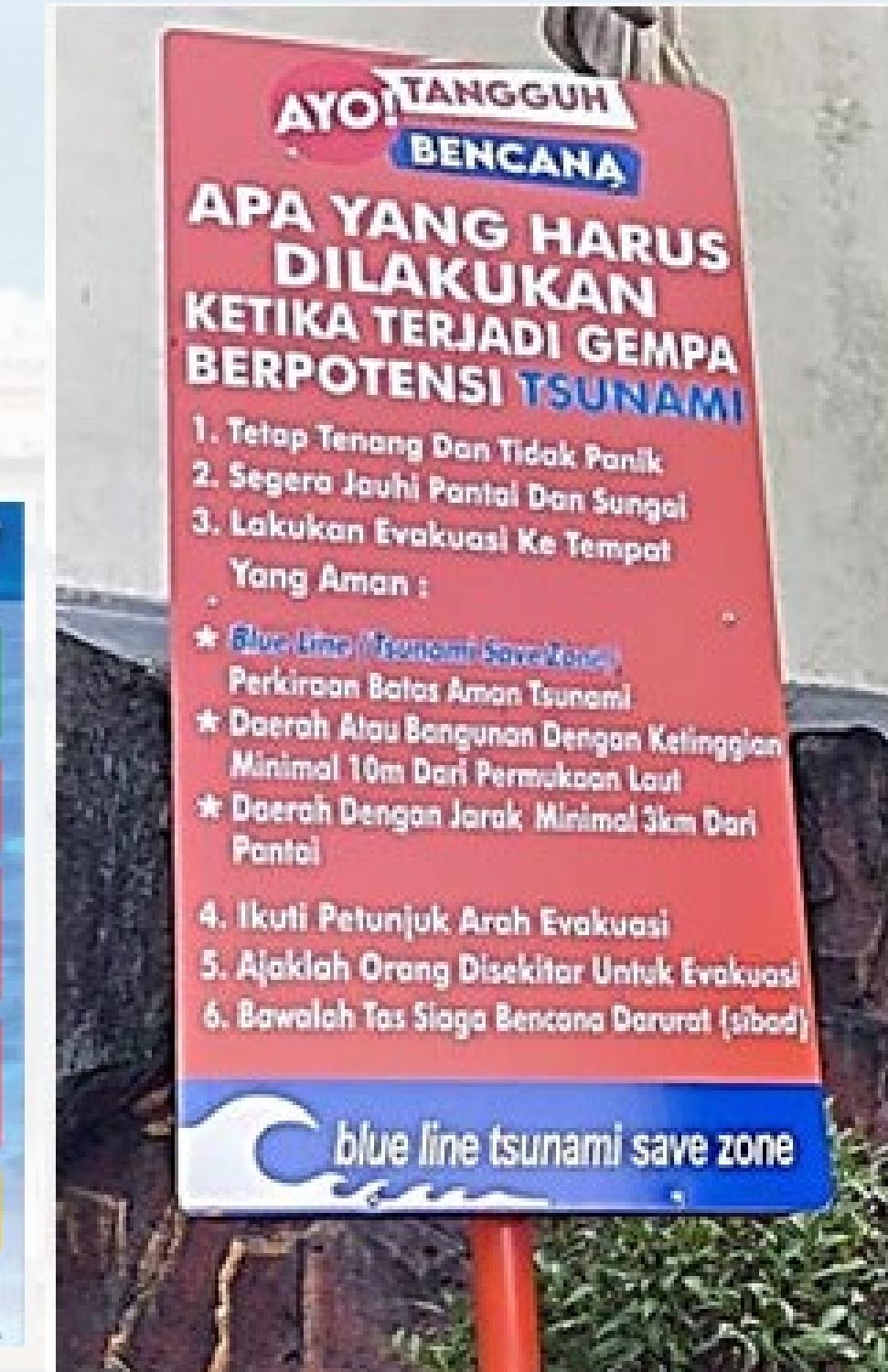
# PREPAREDNESS

P-3

*Outreach and public awareness and education resources are available and distributed*

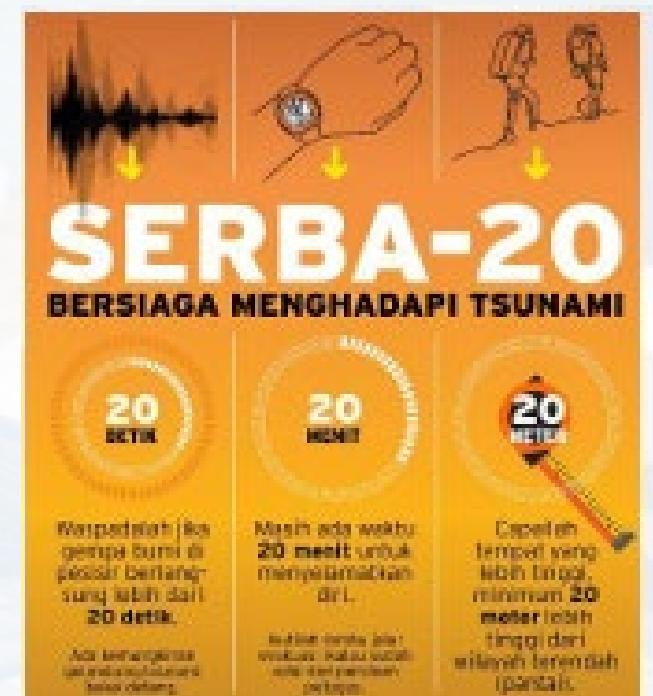
## Introduction

This section describes the evolution and various methods used to distribute educational outreach materials on earthquake and tsunami disaster preparedness to communities, drawing on experiences gained in many regions of Indonesia and in countries around the world.



## Types and Content of Outreach Materials

- Public outreach materials include essential information such as tsunami evacuation maps, evacuation routes, safety tips, and guidance on when and how to respond to warnings from any official agency regarding local tsunami threats.
- These outreach materials must always be tailored to local information needs and should be based on the specific tsunami threats present at particular locations.
- Outreach materials may take the form of:
  - Leaflets
  - Brochures
  - Posters
  - Comics
  - Books and magazines
  - Billboards/large outdoor banners
  - Videos/games
  - Websites
  - Social media
  - Merchandise (mugs, T-shirts, jackets, and so on)



## Possible physical locations for distribution of material

Locations for the distribution of outreach material will depend on the nature of the material, for example if it is in brochure, leaflet or poster format or in electronic media format. Schools are good locations to distribute educational material and every school requesting recognition should receive copies of all material.

### Examples

- Schools
- Visitor centres and local tourist businesses (e.g. restaurants, bars etc)
- Hotels, motels and campgrounds
- Public libraries
- Community centres
- Kiosks or information centres (e.g. malls, stores etc)
- Childcare centres
- Banks
- Utility companies
- Health centres
- Ports of entry

### Locations for Distributing Tsunami Material

- Selection depends on local context; TRLC and experts should assess the most effective sites.
- Schools are highly receptive and ensure sustainability, as children can pass knowledge to their families.
- Some places, such as tourist facilities, may resist displaying materials; TRLC must use careful judgement in dissemination.

### Useful sources of information

ITIC – International Tsunami Information Center

<http://itic.ioc-unesco.org>

IOTIC – Indian Ocean Tsunami Information Centre

<http://iotic.ioc-unesco.org>

CTIC – Caribbean Tsunami Information Centre

<http://ctic.ioc-unesco.org>

NEAMTIC – North East Atlantic and Mediterranean Tsunami Information Centre

<http://neamtic.ioc-unesco.org>



P-3

*Outreach and public awareness and education resources are available and distributed*

## Outreach Materials in Schools, Libraries, and Children's Play Areas

- Use language that is easy to understand (avoid technical and overly complex terms).
- Use attractive pictures or animations (mascots).
- Allow variation in the text while maintaining good readability.
- Use appealing colors.
- Examples:
  - Posters
  - Flyers/leaflets
  - Comics
  - Books (serials)
  - Educational computer games
  - Bags and stationery
  - And others.



P-3

*Outreach and public awareness and education resources are available and distributed*

## Outreach Materials in Public Places

- Use everyday language, with minimal technical terms.
- Use standard fonts that ensure a high level of readability.
- Use striking colors to attract people's attention.
- Adjust the amount of content to the level of crowding at the location and to how quickly people can grasp the message.
- Use slogans or campaign phrases (such as 20.20.20, Drop, Cover and Hold, Strong or Long, Get Gone).



P-3

*Outreach and public awareness and education resources are available and distributed*

## Outreach Materials in Health Facilities, Public Service Offices, and Transport Hubs

- Use everyday, easy-to-follow language suitable for all age groups.
- Use standard fonts that provide a high level of readability.
- Use striking colors to attract attention.
- Content may be varied and present a wide range of information.
- Content can also be delivered through interactive media.
- Examples:
  - Roll-up banners and X-banners
  - Brochures
  - Posters
  - Interactive digital signage
  - Television videos
  - Games



# PREPAREDNESS

P-4

*Outreach or educational activities are held at least 3 times a year*

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*Outreach or educational activities are held at least 3 times a year*

The community should have **outreach and educational activities** :

- To educate community residents, businesses, and visitors, especially in the tsunami hazard zone.
- Educate on hazards, evacuation warning, and response.
- Hold three or more activities annually of which one is community wide.
- Multi-hazard that includes tsunami.
- These activities can be workshops, exhibits, school campaign, cultural activities, etc



## Community Educational Outreach Activities

- *Radio Programmes*
- *Tsunami Smart Campaigns*
- *Jingles, Songs, Poetry, Drama*
- *Puppetry*
- *Posters, Pamphlets*
- *Public Service Announcements (PSA's)*
- *Social Media*
- *Presentations in Schools*
- *Presentations in Faith Based Organizations*
- *Community talks*



P-4

*Outreach or educational activities are held at least 3 times a year**Social media messaging**Presentations in Schools*

# PREPAREDNESS

P-5

*A community tsunami exercise is conducted at least every two years*

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The community should conduct tsunami exercise :

- At least every 2 years.
- Focus only on tsunami hazard or part of multi-hazard exercise that includes tsunami.
- Exercise type could be tabletop, functional, or full-scale, including the communications test.
- Can be part of a regional, national, or local exercise with a response by emergency services. Conduct post exercise evaluations to identify gaps and for improvements in preparedness, warning, and response.



### *Why Conduct Tsunami Preparedness Exercises?*

- **Purpose** : To test the tsunami warning system and evacuation plan for effectiveness.
- **Benefits** : Assess community readiness, identify gaps, and improve the plan.
- **Scope** : Can focus on tsunami only or be multi - hazard (e.g., fire, hurricane, volcano).
- **Types of Exercises:** Tabletop, functional, or full - scale, should include a communication tests.
- An effort should be made for the schools within the mapped evacuation zone to participate by conducting an evacuation drill

**P-5**

*A community tsunami exercise is conducted at least every two years*

## Type of Exercise

**1** Orientation Workshop



**2** Table Top Exercise



**3**

Drill



**4**

Functional Exercise

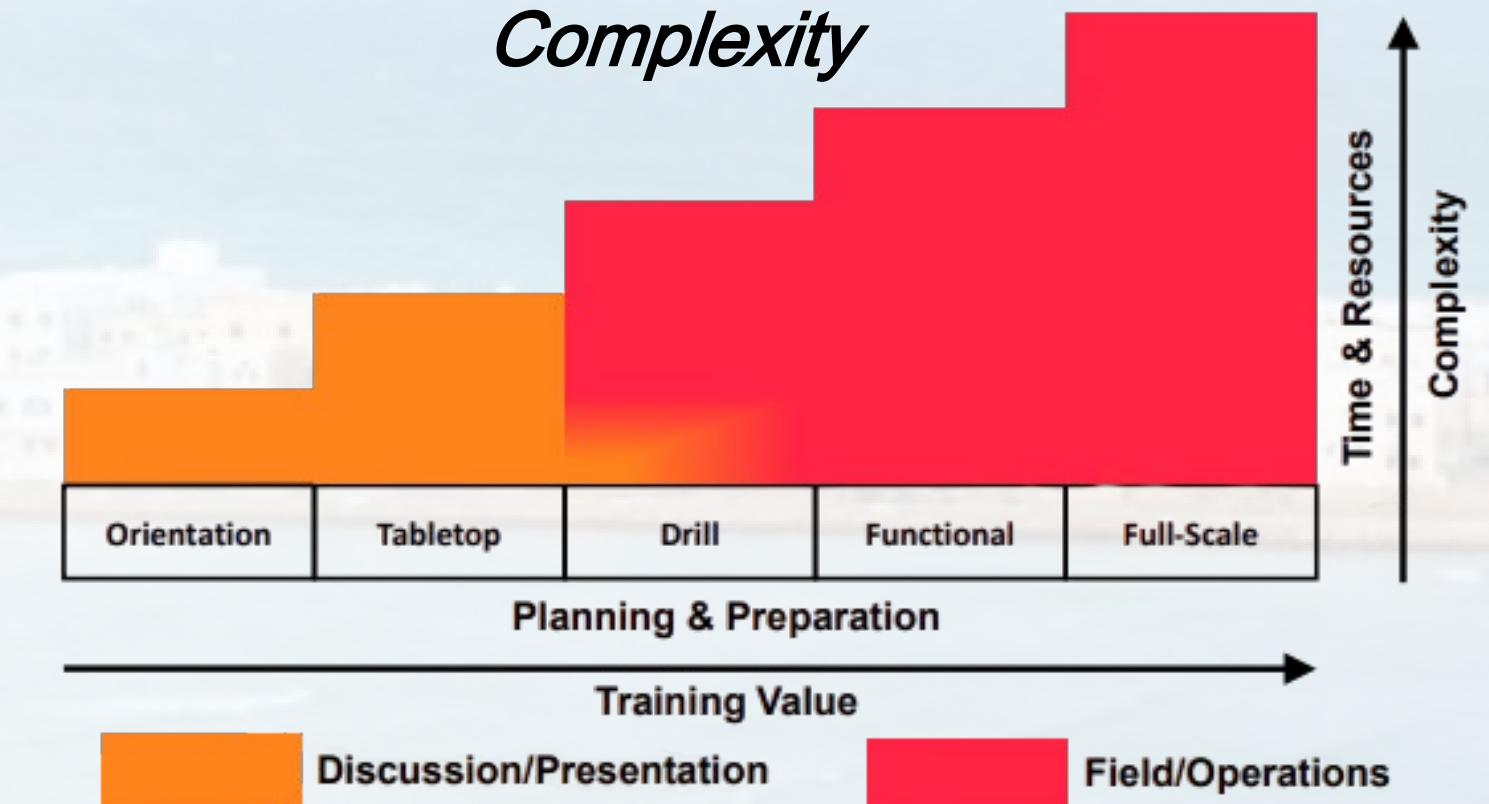


**5**

Full - Scale Exercise



*Exercise Planning, Preparation and Complexity*



Acquire required information

*Planning an exercise*

Plan Exercise

Implement Recommendations

Conduct Exercise

Evaluate Exercise



## *South China Sea Region Tsunami Ready Training*

*22 - 23 Desember 2025*

# THANK YOU

*“A community that is tsunami ready is not only protecting lives today but also building confidence and sustainability for tomorrow”*

Abdul Rosid

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*Indonesia*

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