

15.2 TR PREP-3 and PREP-4: Building Awareness and Community Preparedness Strategies and examples

Ardito Kodijat
IOC/UNESCO - Indian Ocean Tsunami Information Centre
UNESCO Office Jakarta
a.kodijat@unesco.org

PREP-3: Outreach and public awareness and education resources are available and distributed



The community should have **Public Awareness and Education Resources:**

- That include tsunami evacuation maps, evacuation routes, safety tips, and information about when and how to respond to warnings (including natural warnings for regions with a local tsunami threat)
- Tailored to meet local information needs and be based on location-specific tsunami threats
- Distributed in three or more wide-reaching diverse methods physically or electronically.
- Distributed to community residents, businesses, and visitors.

Outreach methods

A wide range of outreach methods can be employed and new methods can be devised. Outreach material should always be tailored to meet local information needs and should be based on location-specific tsunami threats. Three or more methods should be used, including:

- **Brochures and flyers distributed at public venues and/or bulk mailed to local residents and businesses.**
- **Comics and boardgames**
- **Newspaper articles and inserts.**
- **Public utility/service industry bill safety notices .**
- **Local faith-based and civic organization bulletins/mailings.**
- **Local radio and television.**
- **Billboard, roadside, highway or educational signs.**
- **Historical markers and interpretative signs.**
- **Websites/Social media.**
- **Bulk email.**

Possible physical locations for distribution of material

Locations for the distribution of outreach material will depend on the nature of the material, some other examples include:

- **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**



Audience: Who?

- **Everyone!**
- **Technical / Professional Knowledge Building**
- **Targets**
 - Schools and Communities
 - Industries and businesses– factories, hotels & tourism, Planning
 - Government /Responders – what, how
 - Private sector: Infrastructure (utilities, transportation, lifelines); Small business (contingency plans); Engineers/building design guidance
 - Media

Public Awareness

- **Tsunami science and hazards**
- **Historical tsunami events and their impacts**
- **Tsunami Warning System**
 - Sources
 - Modes of dissemination
 - Types of messages
 - Timing
- **Tsunami Emergency Response System**
 - Safety actions
 - Services available
- **Tsunami Safety Rules**

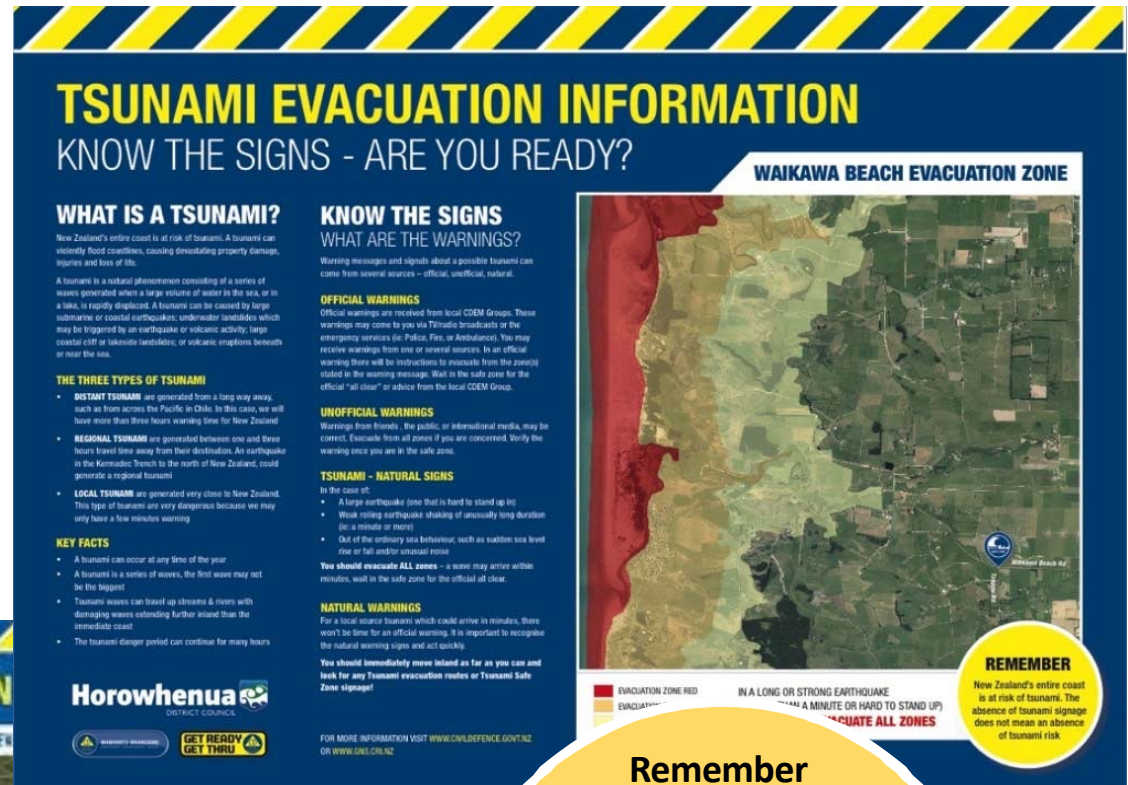
Public Awareness

What is a tsunami

- Type of tsunamis
- Key Facts about tsunami

Knowing the signs

- What are the warning / Official Warning
- Natural Signs / Natural warnings



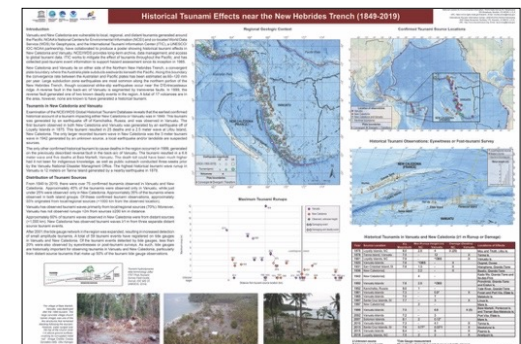
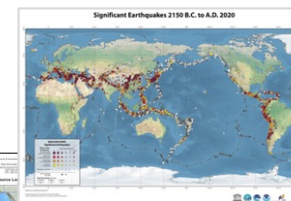
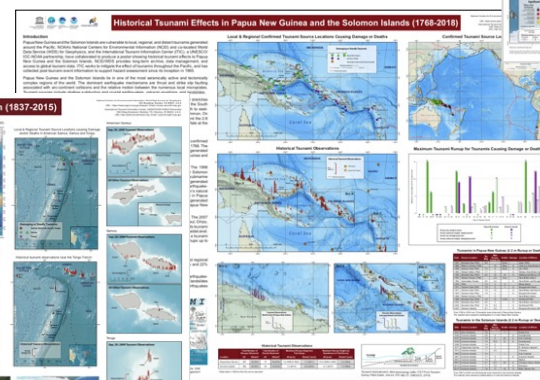
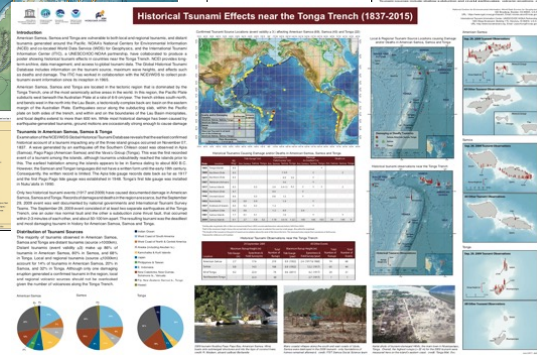
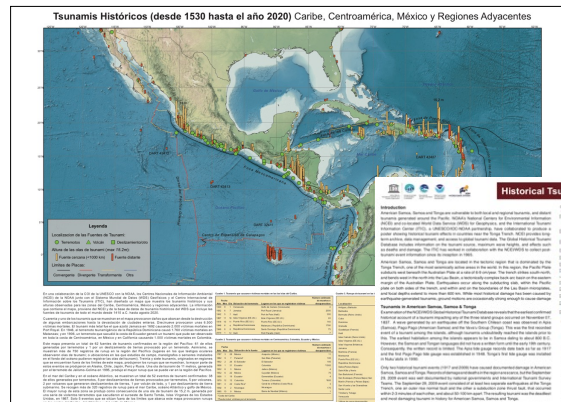
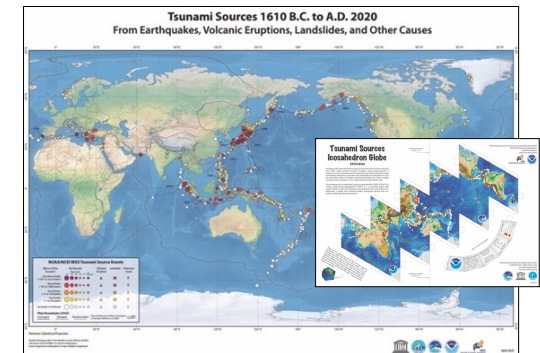
Remember
New Zealand's entire coast is at risk of Tsunami. The absence of tsunami signage does not mean an absence of tsunami risk

Public Awareness



ITIC Awareness: Historical Hazard Maps

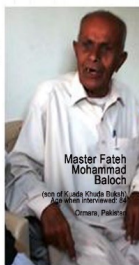
- ❑ **Global Tsunami, Earthquake, Volcanic Eruption Maps** (update through 2022)
- ❑ **Regional Historical Tsunami Effects Maps –**
 - Caribbean, Central America, Mexico (update 2020)
 - American Samoa /Samoa/Tonga (2017, rev 2022)
 - Papua New Guinea/Solomons (2019)
 - Vanuatu / New Caledonia, New Hebrides (draft 2020)
 - South America (2022 planned)



IOTIC Awareness: Historical Tsunamis

2015

1945 Makran Tsunami
Survivor and Eyewitness Stories



1945 Makran
Tsunami
38 videos

2016

1950 Ambon Tsunami
Survivor and Eyewitness Stories



1950
Ambon
Tsunami
28 videos

2018

1992 Flores Tsunami
Survivor and Eyewitness Stories



1992
Flores
Tsunami
45 videos

2019

1994 Banyuwangi Tsunami
Survivor and Eyewitness Stories



1994
Banyuwangi
Tsunami
46 videos

2020

Central Sulawesi Tsunamis
Survivor and Eyewitness Stories



Central
Sulawesi
Tsunamis
(1927, 1938,
1968, 1996,
2019)

2021

1996 Biak Tsunami
Survivor and Eyewitness Stories



1996 Biak
Tsunami
60 Videos

2022

2000 Banggai Tsunami
Survivor and Eyewitness Stories



2000
Banggai
Tsunami
72 Videos

2023

1995 Dili Tsunami
Survivor and Eyewitness Stories



1995 Dili
Tsunami
East Timor
37 Videos

2023

2004 Indian Ocean Tsunami
Survivor and Eyewitness Stories



2004 Indian
Ocean
Tsunami in
Seychelles
8 Videos

2024



Global
Tsunami
Survivors
(Indonesia,
Japan, India,
Sri Lanka,
Chille, Greece
Turkey)
15 videos

2024



1979
Lembata
Tsunami
21 Videos

2024
2019



2004 Indian
Ocean
Tsunami in
Maldives
10 Videos

2025



1998
Taliabu
Island
Tsunami
11 Videos

IOTIC Awareness: Historical Tsunamis

Video Documented 383 Stories of Eyewitness and Survivors of Past 14 Tsunamis (252 in YouTube IOTIC 131 in Process)



UNESCO-IOC IOTIC - BMKG

@unesco-iotic-bmkg6894 · 512 subscribers · 240 videos

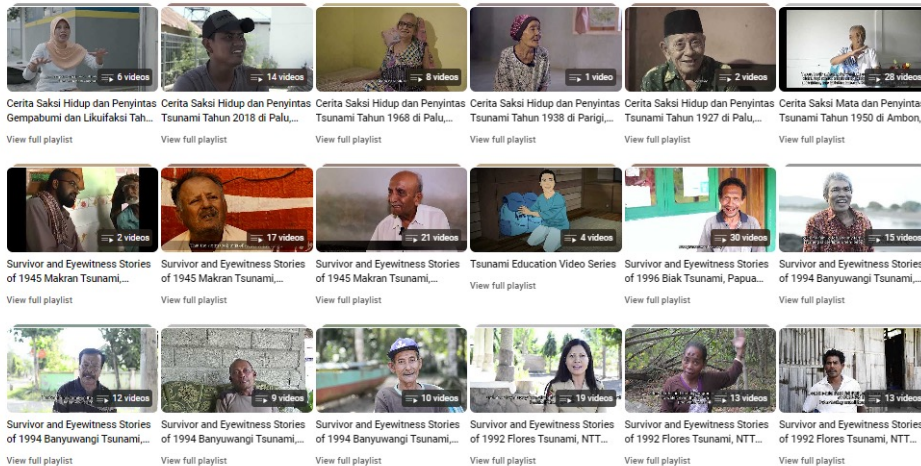
Indian Ocean Tsunami Information Centre ...more



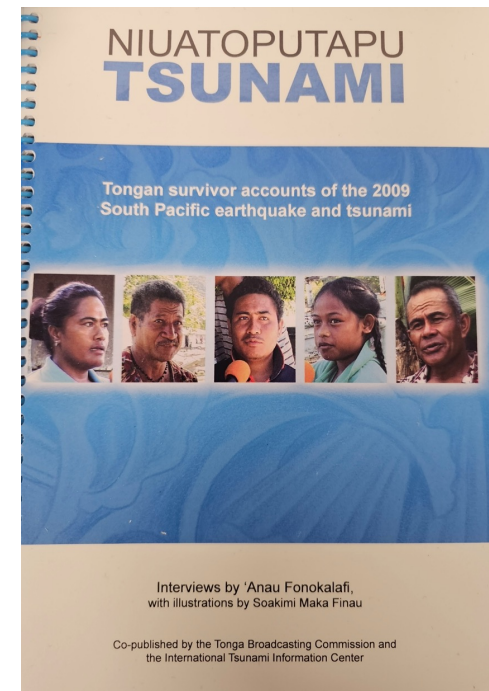
Home Videos Playlists Q

Created playlists

Sort by




UNESCO/IOC-NOAA SHOA
International Tsunami Information Center



http://itic.ioc-unesco.org/index.php?option=com_content&view=category&layout=blog&id=1075&Itemid=1075





Plan 9

A simple guide to the essential items you should pack BEFORE a disaster or emergency occurs.

1 Water

Bottled water. One gallon per person, per day, for at least 7 days, for drinking and sanitation.

- Keep the water in a cool, dark place and change to a fresh supply every six months.

6 Flashlight

Keep a bright flashlight in case there's no electric power.

- Consider getting a lantern-style light for hands-free use.
- Don't use candles! They're a fire hazard and are easy to lose track of when the lights come back on.

2 Food

Nonperishable food. A supply of at least 7 days of food per person.

- Ready-to-eat canned meat, fruit and vegetables.
- Powdered milk and soup.
- Crackers, granola, trail mix.
- Manual can opener.

7 Hygiene Items

Just the basics: like soap, toilet paper and a toothbrush.

- Mouth towels can be useful for quick sanitation.

3 Radio

A battery-powered radio for listening to news and weather.

- Consider buying a crank-operated or solar-powered radio.
- Don't forget extra batteries! Buy them in advance in case they're in short supply.

8 First Aid

Basics such as antiseptic, gloves, band-aids and non-prescription medicines.

- You can buy a pre-made kit at most pharmacies or grocery stores.

4 Medications

Collect at least a week's worth of any prescription medicines you're taking.

- Be sure to note the expiration date so you don't keep them past their date.

9 Cash

Enough money (in small bills) to purchase extra food, water or other items, for at least 7 days.

5 Clothes

Collect one change of clothes and footwear per person.

- Consider packing blankets, rain gear and outerwear in case of inclement weather.
- If you wear glasses, consider packing a spare pair.

For more information about emergency preparedness, contact some of the following agencies:


Local Emergency Management Agency	www.hawaii.gov/emergency
State Emergency Management Agency	www.hawaii.gov/emergency
Department of Health	www.hawaii.gov/health
Department of Emergency Management	www.hawaii.gov/emergency
Department of Public Safety	www.hawaii.gov/dps

HNL.Info




STAY INFORMED

Urgent Traffic Bulletins, Emergency Information,
Severe Weather Alerts, City Information
and much more.




1



WHAT IS TSUNAMI?

It is a series of waves in the sea produced by a strong earthquake, landslide or volcanic eruption.


2



WHEN DOES IT HAPPEN?

It can occur at any time and arrive in a few minutes to the coast. Tsunamis travel at the speed of a supersonic jet or plane.

3




EFFECT OF A TSUNAMI

It floods the coast and devastates everything. A tsunami wave can grow up to 10 meters high or even more.


SIGNS OF A TSUNAMI

FEEL




Strong earthquakes, shake severely or for long time

SEE




*A descent of the sea level
*A wall of water approaching the coast

HEAR




An approaching tsunami creates a loud roar.

RUN!




Get away from the coastal zones and look for the highest areas

TSUNAMI EVACUATION DRILL




Source: COPECO HONDURAS, IOTIC, ITIC, LIPI

Mensajes Oficiales de Tsunami para Honduras




Alerta Roja

- Impacto de Tsunami Confirmado
- Mantenerse en los puntos de reunión
- Siga las instrucciones de los encargados de emergencias




Alerta Amarilla

- ¡Peligro de Inundación!
- Si está en la zona de evacuación, salga, *Diríjase* hacia los puntos de reunión
- Siga las instrucciones de los encargados de emergencias



Alerta Verde

- Posibles corrientes peligrosas
- Salir del agua, playa, puertos marinos
- Estar en Observancia
- Siga las instrucciones de los encargados de emergencia



Boletín Informativo

- No hay peligro
- Estar atento a información oficial

Para Más Información
Comisión Permanente de Contingencias (COPECO)
<http://copeco.gob.hn/>
y CODEL Cedeño
En caso de Emergencia llamar 911

En Honduras Sí Ocurren Tsunamis

Los Tsunamis en Honduras no son tan frecuentes pero sí han ocurrido y pueden volver a ocurrir en cualquier momento. Las costas Sur y Norte son vulnerables.

En Centro América han ocurrido unos 49 tsunamis desde los tiempos coloniales. Se generaron a consecuencia de terremotos en fallas cerca a las costas del Pacífico, como del Caribe y también distantes .

Uno de los tsunamis que afectó las costas hondureñas ocurrió el 4 de agosto de 1856. El mismo se generó en el Golfo de Honduras cerca de Belice y bañó toda la costa norte: Tela, La Ceiba, Trujillo y llegó hasta Gracias a Dios.

También se han registrado tsunamis en la parte sur, en el Golfo de Fonseca.

¿Qué es un Tsunami?

- Un tsunami es una serie de olas causada por una fuerte perturbación de un cuerpo de agua.
- Estas olas pueden llegar en unos minutos, pero continuar por horas. Las olas arrasan con todo lo que encuentran a su paso ya sea cuando inundan la costa o cuando retroceden.
- Los tsunamis pueden ser producidos por grandes terremotos localizados en la costa o en el fondo marino, un deslizamiento o una erupción volcánica.
- En Honduras se encuentran fuentes potenciales de tsunamis que se pueden generar localmente y también existen fuentes regionales y distantes , al otro lado del océano.

Alarma Personal Para Terremotos y Tsunamis LOCALES



Los Terremotos ocurren de forma súbita, y en el caso que sean cercanos y generen tsunamis, las olas pueden llegar antes que le llegue una alerta oficial. Siga estas recomendaciones:

Protéjase durante el terremoto:
Agáchese, Cúbrase y Sujétese

Salga rápidamente de la zona de evacuación por tsunami en cualquiera de las siguientes situaciones:

- Después de **SENTIR** un terremoto fuerte que te tumbe o dure más de veinte segundos
- Si **VE** un repentino aumento o disminución del nivel del mar
- Si **OYE** un ruido extraño o fuerte que viene del mar

¡¡PROTÉJASE, VIVA PARA CONTARLO!!!

Text on the back of an vacation Map Cedeño, Honduras

FOR YOUR SAFETY !



EARTHQUAKE READY

- Be alert, a strong or long earthquake may trigger a tsunami in short time.
- Move away from beaches and river banks, and seek information on what has happened.



TSUNAMI WARNING READY

- Seek warning information from BMKG on national TV, local radio, or public announcement in your area.
- If there is a sound of siren or other warning dissemination devices, evacuate immediately.

BMKG Warning information provides tsunami **THREAT LEVEL** for each region

MAJOR WARNING

Highest threat level, **The communities must evacuate !**

WARNING

Medium threat level, but still dangerous ,

The communities must evacuate !

ADVISORY

Low threat level, **The communities must move away from beaches and riverbanks !**



EVACUATION READY

- Upon feeling the earthquake or receiving tsunami warning, evacuate immediately to designated safe locations.
- Follow the evacuation route and signage, if available.
- If you don't know the location of the safe zone, run as far as possible from the coast

WARNING INFORMATION DISPLAY ON NATIONAL TV

Information on the time of origin of the earthquake



Information on the magnitude of the earthquake

Information on the epicenter of the earthquake

Information on regions with tsunami warning :

- **Red** colour = **MAJOR WARNING** level
- **Orange** colour = **WARNING** level
- **Yellow** colour = **ADVISORY** level

Information on the regions with tsunami warning

Prepare yourself from now !

- **Learn about tsunami and its signs !**
- **Find information from your local government about tsunami evacuation procedures in your area !**
- **Plan with your family on how to respond to a tsunami !**

Education : What, Who

- ☐ **Formal**
- ☐ **Structured**
- ☐ **Standards**
- ☐ **Science-based**



Curriculum

Content, Language,
age-appropriate
Teaching Materials

☐ **Targets:**

- Schools: Elementary, Primary, Secondary, High
- Out-of-school, Home-school children
- Adults – may be non-formal education program
- Individuals
- Professional
- Vulnerable & special needs

Education : Formal

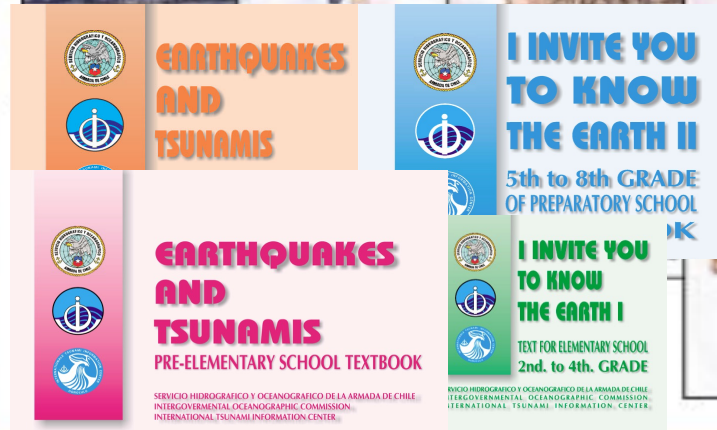


Books Teaching Materials

Curriculum and/or
Resources

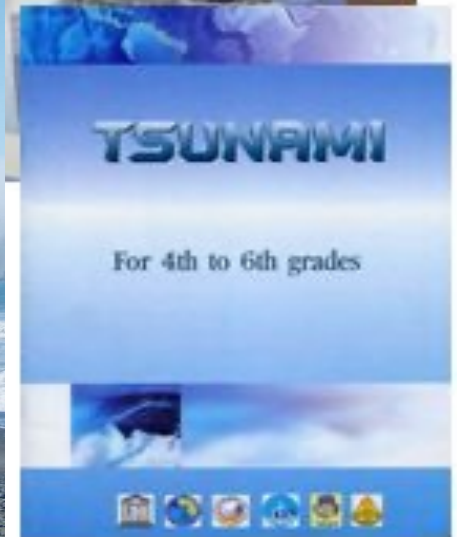


Education



Earthquake and Tsunami INFORMATION AND RESOURCES FOR SCHOOLS

Surviving Great Waves of Destruction



Tsunami Ready Tools for Tsunami Preparedness

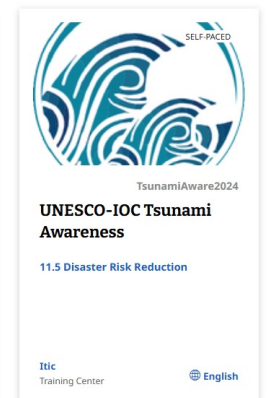
Boardgames

- Tsunami Ready
- Runami



Online Courses

Online Courses on Tsunami Awareness and Tsunami Ready



OTG@ Ocean Teacher Global Academy

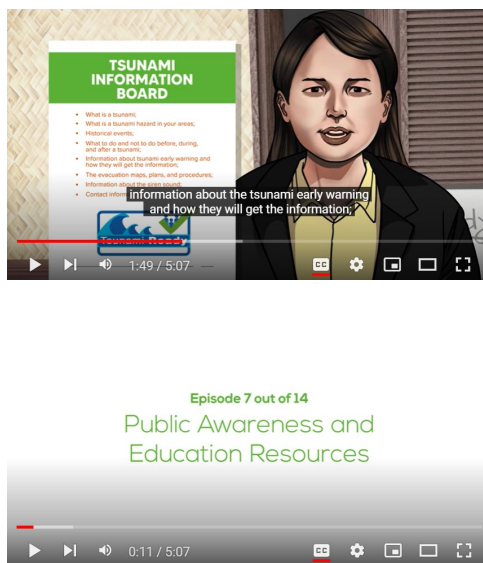
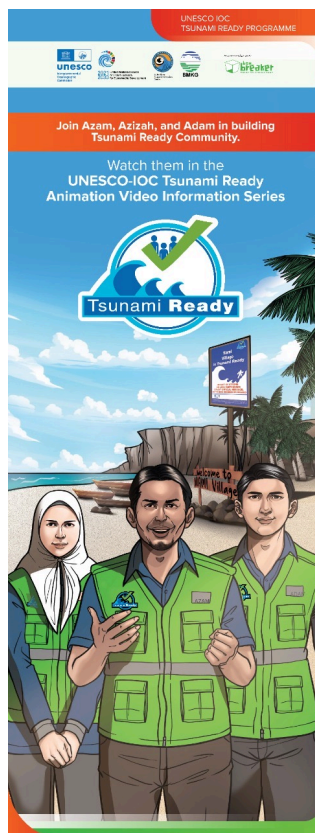


unesco

Tsunami Ready Short Animation Video Series

Story line:

Following the journey of Azam, Azizah, and Adam in building their Village “Nami” to be a Tsunami Ready Community based on UNESCO-IOC Tsunami Ready Indicators



- Video 1: Tsunami Ready (an introduction) **+ 7:10 minutes**
- Video 2: Tsunami Hazard for Tsunami Ready Community **+ 8:02 minutes**
- Video 3: Knowing people at risk of tsunami **+ 4:48 minutes**
- Video 4: Resource and capacity for Tsunami Ready Community **+ 6:57 minutes**
- Video 5: Public Tsunami Information in Community **+ 5:32 minutes**
- Video 6: Tsunami Evacuation Map for the community **+ 5:15 minutes**
- Video 7: Public Awareness and Education Resources **+ 5:07 minutes**
- Video 8: Outreach Activities in Tsunami Ready Community **+ 4:39 minutes**
- Video 9: Community Tsunami Exercise **+ 6:49 minutes**
- Video 10: Community Tsunami Emergency Operation Plan **+ 5:28 minutes**
- Video 11: Building Capacity in community for Emergency Response **+ 7:50 minutes**
- Video 12: Linking the Community to the Tsunami Warning Chain **+ 4:40 minutes**
- Video 13: Providing warning to the community **+ 5:27 minutes**
- Video 14: Getting Tsunami Ready Recognition **+ 6:50 minutes**

Traditional knowledge



2004 Tsunami in Simeulue Island

Straits of Malacca



Displaced coral of 1907
A Smong Monument



Tsunami Dec. 2004

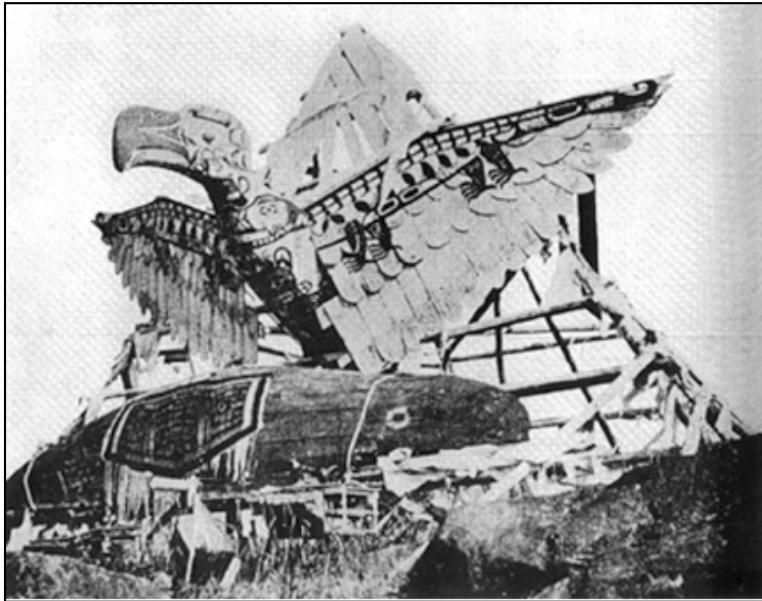
7 out of 78.000 → 95% live in coastal

Issues

Smong = earthquake + receding water + tsunami

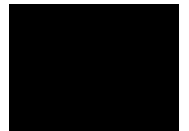
Traditional knowledge – US Pacific NW

“Among the signs of danger, the elders warn, is long-lasting shaking moving from west to east, and sand that becomes so loose people walking on the beach sink into it – Elders tell the young they must run to high ground”



Run to High Ground
(Children's video)

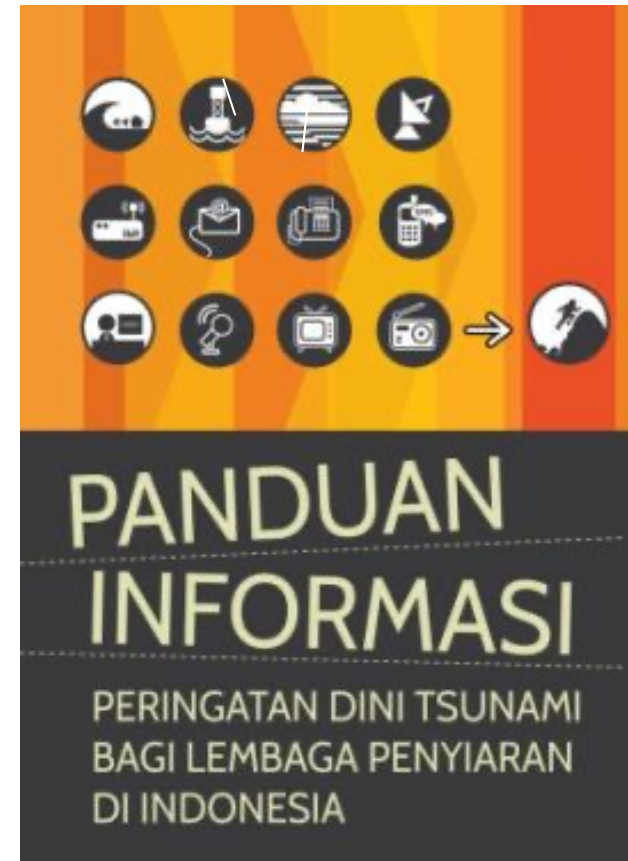
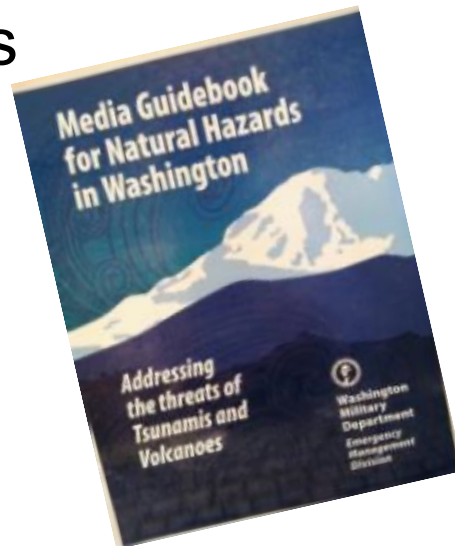
“Thunderbird and Whale” is a story is told by various Native American tribes. The event is thought to be associated with the 1700 Cascadia Subduction Zone earthquake and tsunami.



Educate Stakeholders: Media

- Ensures clear understanding of tsunami hazard, tsunami risk, warning messages, NTCW/TWFP & DMO SOP, and their own SOP

Media guidebooks should be accompanied by regular training and materials



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>

World Tsunami Awareness Day, Nov 5

**WORLD
TSUNAMI
AWARENESS
DAY**
5 NOVEMBER



#Plan2survive

**“Tsunamis
have enormous
destructive power.**

**Knowing your
risks and having
a tsunami plan in
place is the best way
to reduce human and
economic losses if a
tsunami hits.”**



Mami Mizutori
the UN Secretary-General's
Special Representative
for Disaster Risk Reduction

#TsunamiDay



World Tsunami Awareness Day, Nov 5



“Inamura-no-hi” (burning of rice sheaves): during the 5 November 1854 (Japan calendar) Ansei-Nankai earthquake and tsunami in Japan, **local leader Hamaguchi Goryo** noticed the low tide and set fire to his entire harvest to warn villagers, who fled to high ground. He also funded the “build back better” effort, building an embankment and planting trees to act as a buffer

December 2015: UN General Assembly Resolution A/70/203 designates 5 November as World Tsunami Awareness Day



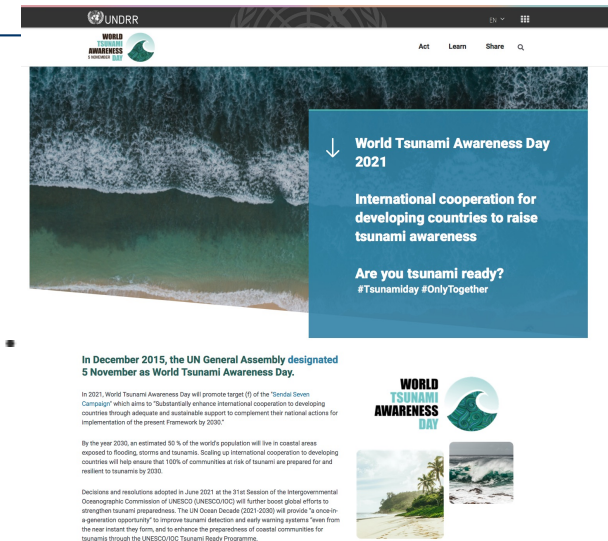
World Tsunami Awareness Day, Nov 5

Tools and Products

- Dedicated Web page
(<https://tsunamiday.undrr.org>)
- Videos – UNDRR, UNESCO IOC

[General](#), [Tsunami Ready](#), [ITIC WTAD](#)

- Social media – Are you tsunami ready? #Tsunamiday #OnlyTogether
- Infographics, Press releases, news stories, Op-Eds
- Coverage of celebrations and drills, to share outcomes



“Be Tsunami Ready: Invest in Tsunami Preparedness”.

International Tsunami Information Center

Important considerations in developing awareness material and campaigns

Local or traditional knowledge:

This can be a **powerful tool to support scientific knowledge** in community preparedness. It may be most **effective means in a more traditional or remote** community. Additional information on warning systems and evacuation and return arrangements is required.

Community needs:

Awareness material and activities should be **tailored to the specific community**. Factors such as geography, demographics, language, cultural, religious and social orientations should influence the awareness approach. They will present both strengths and opportunities.

Coordination and collaboration:

Working together among the **different agencies involved** is essential.

Important considerations in developing awareness material and campaigns

A multi-faceted approach:

Target a variety of **formal and informal education**, and awareness-building and preparedness activities.

Content:

Should anticipate and **answer the obvious questions** of the target audience **simple and clear**.

Use different platforms:

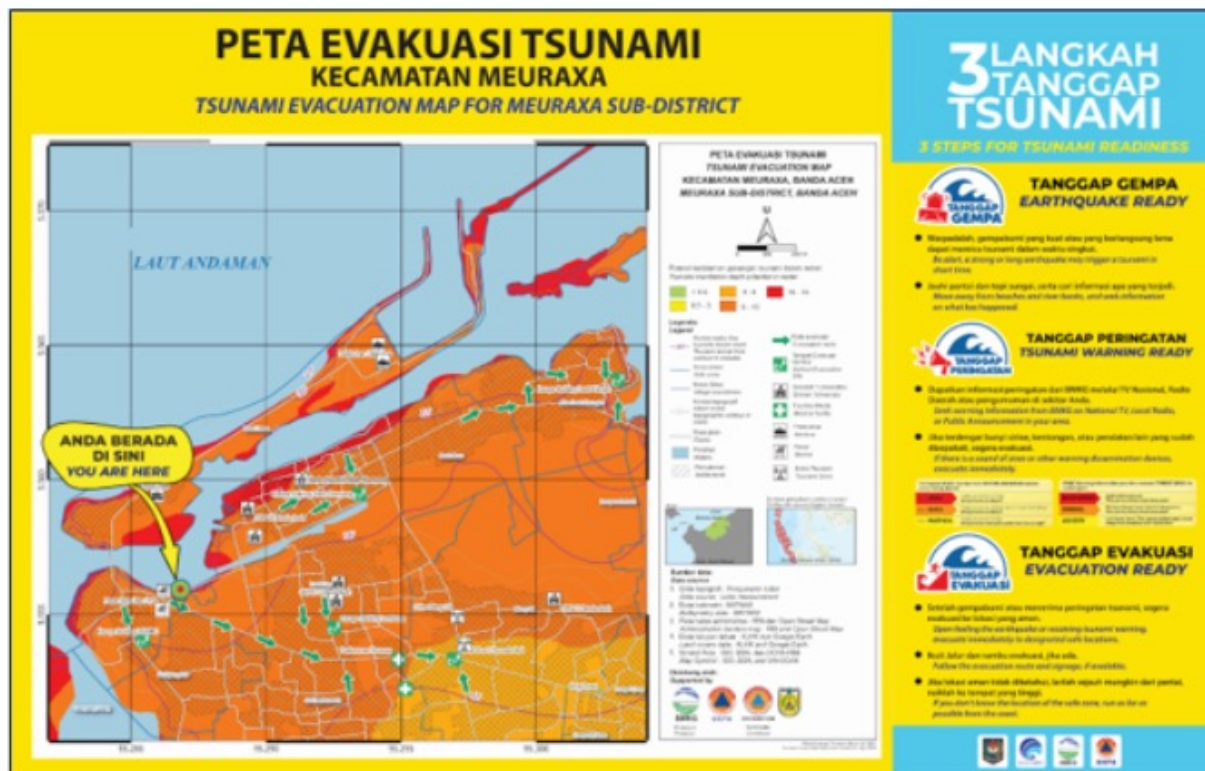
Printed materials, videos, and Social Media

Using Online Tools Such as Canva to Create Materials

- Free account
- Many themes and elements
- Highly customizable
- Accessibility



Examples ITP 2024 Chile



MEDIDAS DE PREVENCIÓN ANTE UN TSUNAMI

ANTES

- Identifica y señala las zonas de seguridad.
- Reconoce las rutas de evacuación para llegar con facilidad y en el menor tiempo a las zonas de seguridad.
- Ten a la mano siempre una mochila con artículos básicos de emergencia.

DURANTE

- Si observas que después del temblor el mar se recoge y deja en seco grandes extensiones del fondo marino, dirígete rápidamente a zonas de seguridad.
- Si no hay lugares altos cerca, un bosque frondoso y alto o los pisos altos de edificios pueden ser alternativas.
- Alejate rápidamente de la línea de costa.

DESPUÉS

- Comprueba cómo se encuentra físicamente tu familia, verifica si falta alguien.
- Evita áreas inundadas hasta que las autoridades indiquen que es seguro regresar.
- Sigue las instrucciones que emitan las autoridades competentes.

PREP-4: Outreach or educational activities are held at least 3 times a year



Orientation Programme

Sensitisation meeting



Mock Drills

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.

PREP-4. Outreach or educational activities are held at least three times a year.

- Leveraging of national, state and regional campaigns, including use of social media.
- Multi-hazard events or presentations.
- Booths at community events and fairs.
- Community tsunami safety workshops, town hall or similar public meetings.
- Presentations or workshops for faith-based or cultural organizations, community or civic groups.
- Local public safety campaigns, such as
 - “Tsunami Preparedness” week/month.
- Media workshops.
- Local business workshops to help them develop response and business continuity plans.
- Information for business owners foremployee training, outreach or education that targets high-occupancy businesses in tsunami hazard zones (e.g. hotels, restaurants, fisheries, industrial sites).
- Door-to-door safety campaigns targeted to residents and businesses living or working in the community’s tsunami hazard zone.



UNESCO-IOC / NOAA ITIC Training Program in Hawaii (ITP-TEWS Hawaii)
TSUNAMI EARLY WARNING SYSTEMS
AND THE PACIFIC TSUNAMI WARNING CENTER (PTWC) ENHANCED PRODUCTS
TSUNAMI EVACUATION PLANNING AND UNESCO IOC TSUNAMI READY PROGRAMME
15-26 September 2025, Honolulu, Hawaii

Thank You

Ardito Kodijat
IOC/UNESCO - Indian Ocean Tsunami Information Centre
UNESCO Office Jakarta
a.kodijat@unesco.org



Pacific
Community
Communauté
du Pacifique