



## ***Before a Tsunami***

- Be aware of tsunami facts. This knowledge could save your life!
- Share this knowledge with family and friends. It could save their lives!
- Be conscious if you live, work, play, or transit a coastal low lying area or tsunami evacuation zone.
- Follow the advice of the Department of Meteorology and Geo-hazards and law enforcement authorities. Do not return until authorities say it is safe.
- Stay away from bodies of water. If you are at the beach or near the ocean, and you feel the earth shake, move immediately inland to higher ground. Do not wait for a tsunami warning to be issued. Stay away from rivers and streams that lead to the ocean due to strong tsunami wave action and currents.



## **Tsunami Safety:**

- Take shelter. **If you live in a tsunami evacuation zone** and hear that there is a tsunami warning, your family should evacuate your house. Walk in an orderly, calm manner to the evacuation site or to any safe place outside your evacuation zone.
- **If you are in school** and you hear there is a tsunami warning, you should follow the advice of teachers and other school officials. If you are unable to quickly move inland, or to high grounds, you can rush to the highest floor of a multi-story, reinforced concrete building.



**A big tsunami wave can travel up to 15 m in 1 second!**



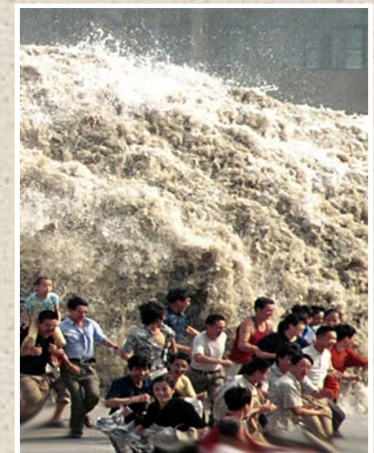
## **Tsunami is NOT an entertainment!!**



**Never stand near the shore to watch an approaching tsunami !**



**You cannot outrun a tsunami once it reaches the shore!**





# TSUNAMI FACTS

Tsunami is a Japanese word:

**TSU** – meaning ‘harbor’

**NAMI** – meaning ‘wave’

They are sometimes called ‘tidal waves’ but this can be confusing because tsunamis are not related to tides, however their effects can be affected by the tide levels.

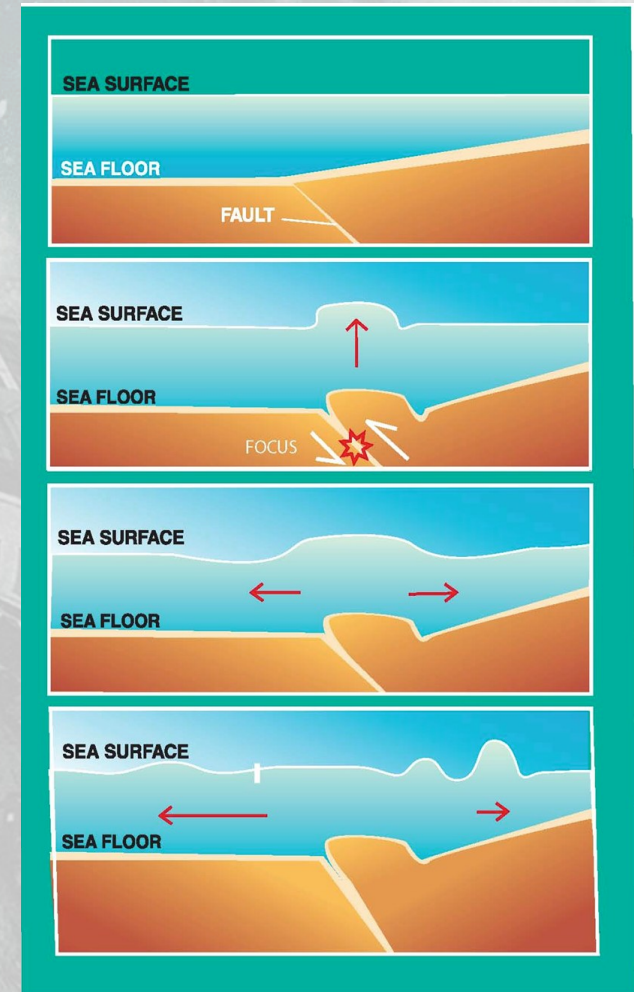
## Tsunamis . . .

- Travel at jet airliner speeds in the deep ocean where the waves are only centimeters high and cannot be felt aboard ships. When tsunamis hit shallow water, they slow and their height grows tremendously.
- Can crest to 10-m high heights, strike with devastating force, and quickly flood all low-lying coastal areas.
- Threaten life and property.

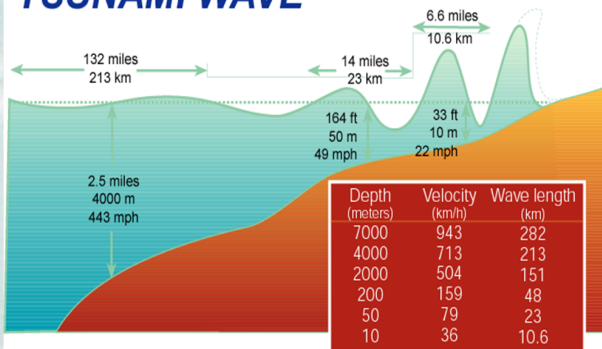
## Tsunamis . . .

- Are a series of long-wavelength, long-period ocean waves. They are not surfing waves.
- Come ashore for hours. The first wave may not be the largest.
- Are caused primarily by earthquakes occurring below or near the seafloor.
- Are less frequently caused by underwater volcanic eruptions, landslides, slumps, and meteorites.
- An earthquake is one of nature’s tsunami warning signs. If you’re at the beach and the ground shakes so hard you can’t stand up, a tsunami may have been generated.
- A Tsunami may be preceded by a rapid fall in sea level as the ocean retreats exposing fish and rocks on the sea bottom. A roar like an oncoming train may be heard as a tsunami rushes toward the shore.

## How Tsunamis are caused



## TSUNAMI WAVE



**As it enters shallow water, tsunami wave speed slows and its height increases, creating destructive, life-threatening waves.**

Depth (miles)	Velocity (mph)	Wavelength (miles)
4.4	586	175
2.5	443	132
1.2	313	94
635 ft	99	30
164 ft	49	14
33 ft	22	6.6



The Banda Aceh tsunami of 26 December 2004 travelled inland hundreds of meters and killed more than 100,000 people in Indonesia.



This project is funded by NZAID and implemented by the Department of Meteorology and Geo-Hazards. For more information please see this link : [www.geohazards.gov.vu](http://www.geohazards.gov.vu) or write to [geohazards@meteo.gov.vu](mailto:geohazards@meteo.gov.vu)

