DID YOU KNOW..?

- In 365 AD, a tsunami in Crete impacted the entire Eastern Mediterranean and destroyed the city of Alexandria, Egypt.

- The 1755 Lisbon earthquake and tsunami caused tens of thousands of deaths and also affected neighboring countries.

- The 1908 Messina earthquake and tsunami in Italy killed tens of thousands.

- In the last few years, several tsunamis have been recorded in the Mediterranean: the Bodrum-Kos event of 20 July 2017, Crete on 2 May 2020, and the Samos-Izmir event of 30 October 2020.

BE AWARE!

IN SOME CASES, NATURAL TSUNAMI WARNING SIGNS CAN BE OBSERVED:

1. Abnormal rise in sea level or a swift withdrawal of the sea from the coast.
2. Rapid change in water level of a river near the coast.
3. Strange noise or rumbling sound coming from the sea

If you live in a coastal area, be prepared and know nature's tsunami warning signals!

Since natural indicators do not always manifest, it is crucial to follow the official advice and instructions of the local authorities.
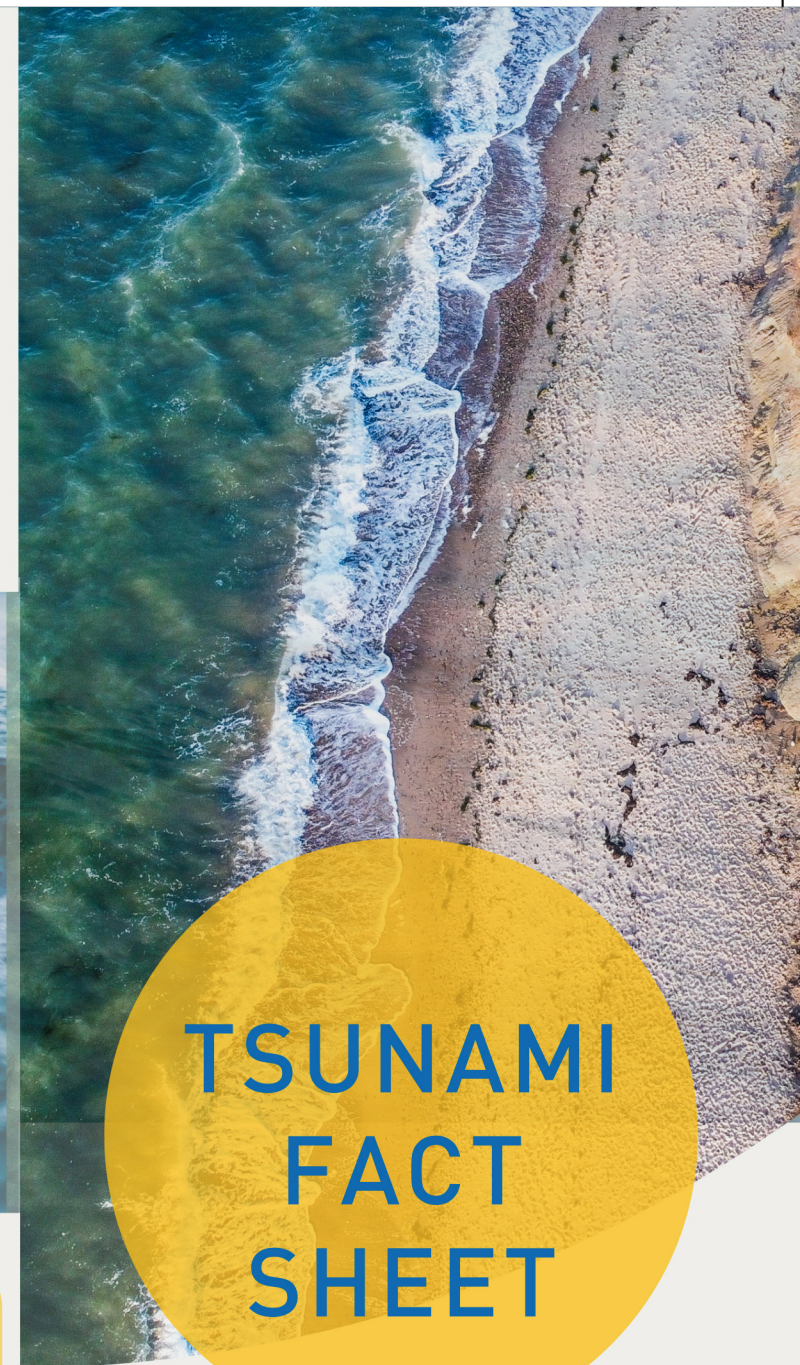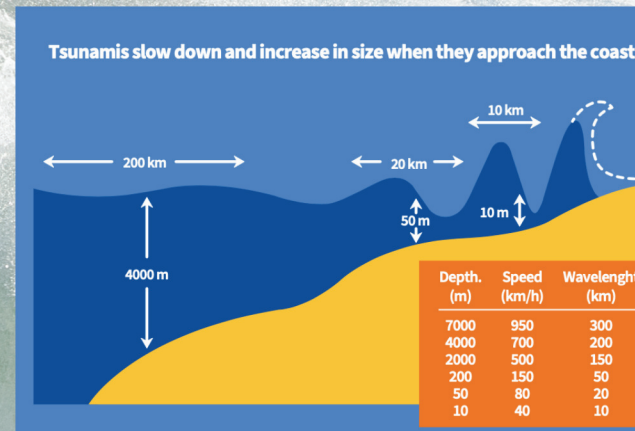
TSUNAMI FACT SHEET

WHAT IS A TSUNAMI?

Tsunamis are traveling ocean waves of long length (up to 200 km) and period (from 5 to 90 minutes) generated by a major disturbance in a body of water, caused by earthquakes, submarine landslides, volcanic eruptions, or meteorite impacts, and atmospheric disturbances (meteotsunamis).
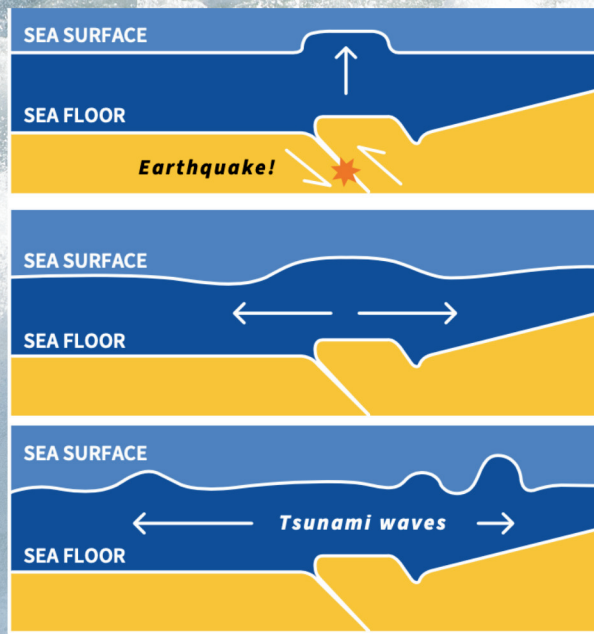
Generation of a tsunami from an earthquake.

Tsunami waves can occur some minutes apart from each other, but can also be separated by upto several hours. The first wave is not always the largest!

Tsunamis slow down and increase in size when they approach the coast.

Depth. (m)	Speed (km/h)	Wavelenght (km)
7000	950	300
4000	700	200
2000	500	150
200	150	50
50	80	20
10	40	10

Wave height, wave length and speed vary depending on depth. In the open ocean, a tsunami is often only a tens of centimeters high, but its wave height grows rapidly in shallow water.

TSUNAMI DETECTION, FORECASTING AND WARNING

Effective tsunami warning involves rapid detection and assessment of potential triggers like earthquakes, confirmation of tsunami occurrence, accurate wave forecasting, identification of vulnerable regions, and rapidly sharing of threat information.

Tsunamis can be detected using:

- GNSS and Smart Cables
- Sea Level Gauges
- Deep Ocean Assessment of Tsunamis (DART) Buoys

Tsunamis can be forecasted with:

- Numerical modeling
- Probabilistic Tsunami Hazard Assessment (PTHA)

The alert of a tsunami is given by:

- Tsunami Service Providers (TSPs)
- National Tsunami Warning Centers (NTWCs)
- Tsunami Warning Focal Points (TWFPs)

A tsunami is one the most powerful and destructive natural forces. It is capable of creating unusually strong currents, flooding land quickly, and devastate coastal communities. The most vulnerable are low-lying locations like beaches, bays, lagoons, harbors, river mouths, and regions near rivers and streams that flow into the ocean.

For more information visit our websites:
https://neamtic.ioc-unesco.org   http://www.ioc-tsunami.org