ALL.3D

IO NON RISCHIO maremoto

What you need to know and what to do BEFORE a tsunami

What do you need to know?

If you live, work or travel in a coastal area, learn to recognize phenomena that could signal the arrival of a tsunami:

- A strong earthquake you have felt or heard about
- A deep and increasing noise coming from the sea, like that of a train or a low flying aircraft
- A sudden and unusual retreat of the sea, a rapid rise in sea level or a big wave extended over the whole horizon.

In case of tsunami waves arriving from afar, authorities may have enough time to issue an alert through TV, radio and web: trust only institutional sources and wait for them to declare the all clear.

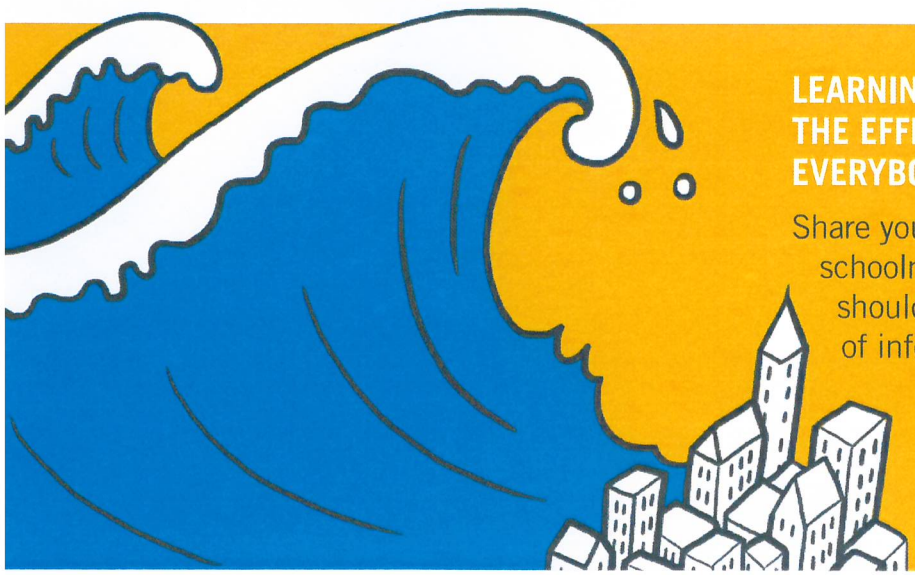
Remember that houses and buildings close to the coast aren't always safe:

- The degree of safety of a building depends on various factors, for example the typology and quality of materials used, the altitude, the distance from the shore, the number of floors, the degree to which it is exposed to the impact of the wave
- Generally, the highest floors of a concrete reinforced building, if properly built, offer adequate protection

What to do before?

You need to know the environment where you live, work or spend a significant amount of time in order to better react in case of emergency:

- Ask local authorities of civil protection for a Plan, areas at risk, evacuation times and escape routes, and follow signs to designated waiting areas to be reached in case of emergency
- Obtain safety information about your own house and the surrounding area
- Make sure that your school or workplace has an evacuation plan and that periodical simulation exercises are carried out
- Be prepared for the emergency with your family and plan how to reach escape routes and waiting areas
- Keep a first aid kit and supplies of water and food at home
- Learn the correct behaviour to adopt during and after a tsunami



LEARNING TO PREVENT AND REDUCE THE EFFECTS OF A TSUNAMI IS EVERYBODY'S TASK.

Share your knowledge with your family, your schoolmates and your colleagues: each of us should contribute to the dissemination of information on tsunami risk.

The **IO NON RISCHIO** maremoto campaign is promoted and carried out by

PROTEZIONE CIVILE
Presidenza del Consiglio dei Ministri
Dipartimento della Protezione Civile

INGV

ANPAS

reluis

in collaboration with

ISPRA
Istituto Superiore per la Protezione e la Ricerca Ambientale

OGS

Civil protection volunteers take part to the **IO NON RISCHIO** maremoto *campaign with the local sections of Ana, Arc, Anpas, Anvvfc, Avis, Italian Caritas, Cisom, Cisvo, Cngei, Cri, Era, Fni, Fr Ch, legambiente, Misericordie, Pmcv-Arci, Pmcv Italia, Rnn, Ucis, Unitalsi, Vab. Moreover, the regional associations and local groups of Calabria, Campania, Emilia Romagna, Friuli Venezia Giulia, Lazio, Marche, Puglia, Sicily and Veneto will participate.*

IO NON RISCHIO is a national informative campaign on natural and man-made risks that affect our country, carried out in collaboration with the involved Regions and Municipalities. It is addressed to the citizens with the aim of promoting their active role during prevention. The volunteers of civil protection - organized, trained and prepared citizens – are the protagonists of this initiative. Women and men that, on a daily basis, contribute in first person to risk reduction. Besides the days in the squares, the campaign provides for initiatives dedicated to the world of work and schools.

CONTACTCENTER
DIPARTIMENTO DELLA PROTEZIONE CIVILE
800 840 840

www.iononrischio.it

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WHAT IS A TSUNAMI?

A seaquake, tsunami in Japanese, is a series of waves produced by the rapid displacement of a large mass of water. In open water, the waves propagate very quickly over large distances, with an almost imperceptible height (at times less than one meter) but the wavelength (the distance between one wave and the next) can be tens of kilometres. As the wave approaches the coast, its speed decreases while its height rapidly increases, even by tens of meters. The first wave may not be the largest, and several minutes may pass between the arrival of one wave and the next one.

WHAT CAUSES A TSUNAMI?

It is generally caused by strong earthquakes with epicentre at sea or near the coast. Tsunamis can also be generated by submarine or coastal landslides, by volcanic activity in the sea or near the coast and, much more rarely, from meteorites that fall into the sea.

IS ITALY EXPOSED TO TSUNAMI RISK?

All the Mediterranean coasts are exposed to tsunami risk, due to the high seismicity and to the presence of numerous active volcanoes, both emerged and submerged. Over the past thousand years, dozens of tsunamis have been documented along the Italian coasts – only some of which destructive. Eastern Sicily, Calabria, Puglia and the Aeolian archipelago are the most affected coastal areas. However, minor tsunamis have also been registered along Liguria coasts, and in the Tyrrhenian and Adriatic seas. We must also consider that the Italian coasts can be reached by tsunamis generated in areas of the Mediterranean far away from our country.

WHAT HAPPENS ALONG THE COASTS WHEN A TSUNAMI OCCURS?

A tsunami appears as a rapid rise in sea level or a wall of water that hits the coast, causing a flood. Sometimes we observe an initial and sudden retreat of the sea, which leaves dry ports and beaches. Tsunami waves have much more strength than sea storms and can penetrate hundreds of meters inland (and, if the coast is very low, even kilometres), dragging everything in their path: vehicles, boats, trees, tanks and other materials, which increase their destructive potential.

WHEN WILL THE NEXT TSUNAMI OCCUR?

Nobody knows. It can occur at any time. We know many things about tsunamis, but it is not yet possible to predict when and where they will occur.

IS THERE AN ITALIAN ALERT SYSTEM?

An international alert system – Italy is one of the participating countries – is currently being tested. Such system is similar to the ones already active in the Caribbean Sea and in the Pacific and Indian Oceans, but compared to them, it has some limits: in a basin such as the Mediterranean sea, arrival times are in fact very short, not allowing enough time for alerting the population. Only in case of tsunamis caused by seismic events occurring away from the Italian coasts (e.g. in the Greek seas), the National Institute of Geophysics and Volcanology, the Institute for Environmental Protection and Research and the Civil Protection Department will have the time to alert the population through tv, radio and web. It is therefore fundamental to know rules of behaviour well, keeping in mind that the tsunami risk necessarily implies the possibility of false alarms.

WHAT CAN WE DO TO REDUCE TSUNAMI RISK?

The use of monitoring networks, the study of past events and of wave propagation models are just a few of the actions that allow to reduce the tsunami risk. Such knowledge contributes to improving territorial planning and to carry out interventions to make areas exposed to the risk safer, and also to elaborate emergency plans. Being aware and being prepared are the best ways to prevent and reduce the consequences of a tsunami.