

Describe different causes of 'Tsunami'. Is there any difference between a Tsunami and a tidal wave? Name the worst Tsunami ever recorded.

Definition:

A tsunami is a series of large ocean waves caused by underwater disturbances such as earthquakes, volcanic eruptions, or landslides. These waves can cause significant damage when they reach coastal areas.

Causes of Tsunami:

Tsunamis are primarily generated by:

i- Underwater Earthquakes: The most common



cause, occurring when tectonic plates shift abruptly, displacing a large volume of water. This is usually due to subduction zones when one plate is <sup>forced</sup> under another.

### ii- Volcanic Eruptions:

Explosive volcanic activity can displace water, generating tsunamis. This includes the collapse of a volcano into the sea or an underwater volcanic eruption.

iii- Landslides: Large-scale underwater landslides or coastal landslides that enter the sea can generate tsunamis by displacing water.

Difference between a ~~Fresh~~ Tsunami and a Tidal wave:

Tsunami	Tidal wave
<ul style="list-style-type: none"><li>caused by earthquakes, volcanic eruptions, or landslides.</li></ul>	<ul style="list-style-type: none"><li>caused by the gravitational pull of moon and sun.</li></ul>
<ul style="list-style-type: none"><li>Long waves travel fast across oceans.</li></ul>	<ul style="list-style-type: none"><li>Regular and predictable part of tidal cycles.</li></ul>



## Tsunami

- Waves grow tall near shore, causing floods.
- often mistakenly called "tidal waves."

## Tidal wave

Do not cause sudden, violent water movement. Correct term does not mean sudden water displacement.

## Worst Tsunami Ever Recorded:

The 2004 Indian Ocean Tsunami is considered the worst tsunami in recorded history.