

Tsunami Struck the Indian Ocean - [December 26, 2004] This Day in History

On 26 December 2004, a megathrust earthquake with its epicentre off the west coast of Sumatra, Indonesia struck the Indian Ocean and triggered a series of devastating tsunamis that affected 14 countries including India, killing a total of about 2,80,000 people.

Aspirants would find this article very helpful while preparing for the IAS Exam.

Indian Ocean Tsunami

- A **tsunami** or a **seismic sea wave** is a series of waves that are caused in a large water body like an ocean by the displacement of massive volumes of water. The displacement can occur due to earthquakes, volcanic eruptions, landslides, meteorite impacts, underwater explosions, etc.
- Tsunamis are sometimes called tidal waves because they resemble rapidly rising tides, but scientists avoid this usage since tides are caused by the gravitational pull of the sun and the moon whereas tsunamis are caused by water displacement.
- The 2004 tsunami was caused by a massive earthquake that was the third-largest earthquake ever recorded on a seismograph. It measured between 9.1 and 9.3-moment magnitude. The duration of faulting was between 8.3 and 10 minutes and this was the longest ever.
- The epicentre was in the Indian Ocean between Simeulue and mainland Indonesia.
- The scientific community named this earthquake the **Sumatra-Andaman Earthquake**. It's very high intensity makes it a megathrust earthquake.
- About 1600 km of fault surface slipped 15 m along the zone where the Indian Plate slides under the Burma Plate.
- It triggered several aftershocks for up to 3 to 4 months after the event. An enormous amount of energy was released as a result of the seismic activity and the earth is said to have wobbled minutely on its axis. The alteration in the mass and the energy released also caused a change in the earth's rotation.
- Due to the earthquake, the seabed rose vertically by many metres displacing a huge volume of water thus, causing the tsunami.
- Indonesia was the first country to be hit by the tsunami because of its proximity. It also saw the maximum casualty, close to 1,70,000 being killed.
- The eastern coast of India was hit about 2 hours later sometime after 9:00 AM local time. Kerala was hit after another 2 hours. It also hit countries far away like Somalia, Tanzania and even South Africa. Bangladesh was spared the horror despite its nearness to the epicentre because the tsunami waves were in the east-west direction.

- The tsunami was also detected in Antarctica, Mexico and Vancouver in Canada.

Effects on India

- In India, the states of Tamil Nadu, Kerala and Andhra Pradesh were badly affected. The Andaman and Nicobar Islands were also severely affected. Fortunately, many of the aboriginal tribal people were safe thanks to their oral traditions and wisdom which made them flee to safer higher grounds before the tsunami struck.
- Before the tsunami struck taking people by surprise, they observed a “sea disappearing” effect, i.e, the sea retreated by as much as 2.5 km in some places. Many people who had come to witness this were submerged when the tsunami struck suddenly. The waves were as high as 100 feet in many places.
- In Thailand, many European vacationers were also affected.
- Countries that were affected by the disaster in approximate decreasing order of casualties: Indonesia, Sri Lanka, India, Thailand, Somalia, Myanmar, Maldives, Malaysia, Tanzania, Seychelles, Bangladesh, South Africa, Yemen, Kenya and Madagascar. Many European countries like Sweden and Germany also had a large number of victims.
- This 2004 tsunami was the deadliest recorded tsunami in history.
- The catastrophe triggered a massive wave of humanitarian aid from all over the world with governments, organisations and individuals contributing significantly.
- The tsunami also destroyed the economies of many communities, especially that relied on the sea for a living.
- In India, the coastal town of Nagapattinam in Tamil Nadu reported the most number of deaths with over 6000 people killed. Many villages were completely destroyed.
- The total damage caused due to the tsunami in 2004 is about USD 19.6 billion.