

Asian Tsunami – 10th anniversary

On December 26, 2004, a 9.2-magnitude earthquake off the coast of northern Sumatra, Indonesia, unleashed a tsunami across the Indian Ocean that killed more than 230,000 people in fourteen countries and left some 1.7 million homeless

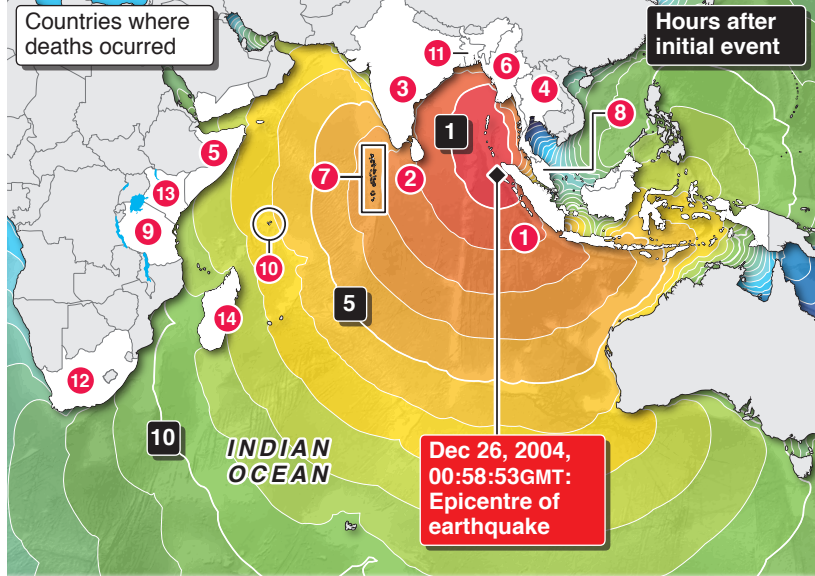
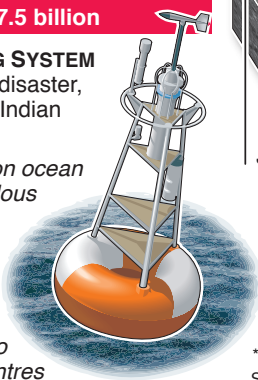
CASUALTIES	Deaths*	Displaced
1. Indonesia	167,736	500,000+
2. Sri Lanka	35,322	516,150
3. India	18,045	647,599
4. Thailand	8,212	7,000
5. Somalia	289	5,000
6. Myanmar	500	3,200
7. Maldives	108	15,000+
8. Malaysia	75	n/a
9. Tanzania	13	200
10. Seychelles	3	n/a
11. Bangladesh	2	n/a
12. South Africa	2	n/a
13. Kenya	1	n/a
14. Madagascar	> 200	1,000
Total	~230,000	~1,690,000

Estimated cost: \$7.5 billion

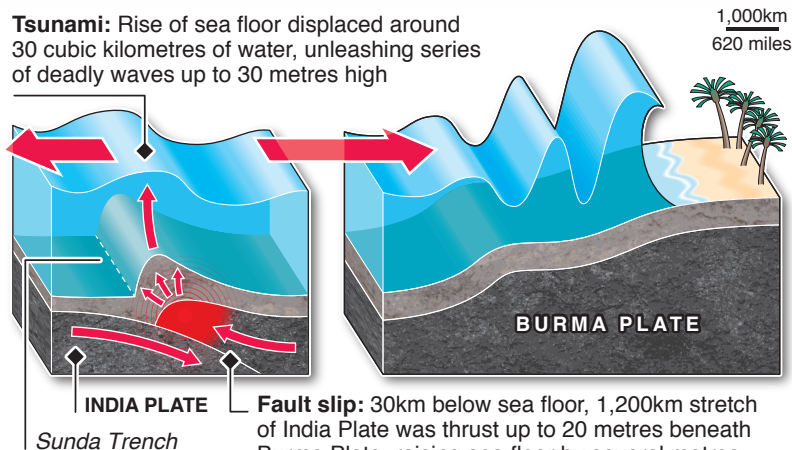
TSUNAMI WARNING SYSTEM

Prompted by 2004 disaster, was put in place in Indian Ocean in 2006

Pressure sensors on ocean floor detect anomalous behaviour in water column and send information to surface buoys, which then relay data, via satellite, to onshore control centres



Tsunami: Rise of sea floor displaced around 30 cubic kilometres of water, unleashing series of deadly waves up to 30 metres high



Magnitude:
9.2M megathrust
earthquake was
third largest
on record

Fault slip: 30km below sea floor, 1,200km stretch of India Plate was thrust up to 20 metres beneath Burma Plate, raising sea floor by several metres

■ **Earthquake lasted up to 10 minutes – longest duration of faulting ever observed**

■ **Believed to have shortened Earth's days by 6.8 microseconds and shifted its axis by about 7cm**

■ **Released energy equivalent to 23,000 Hiroshima bombs**

*Deaths include missing

Sources: USGS, NASA, A Flying start, Then a Slow Slip by Roger Bilham

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