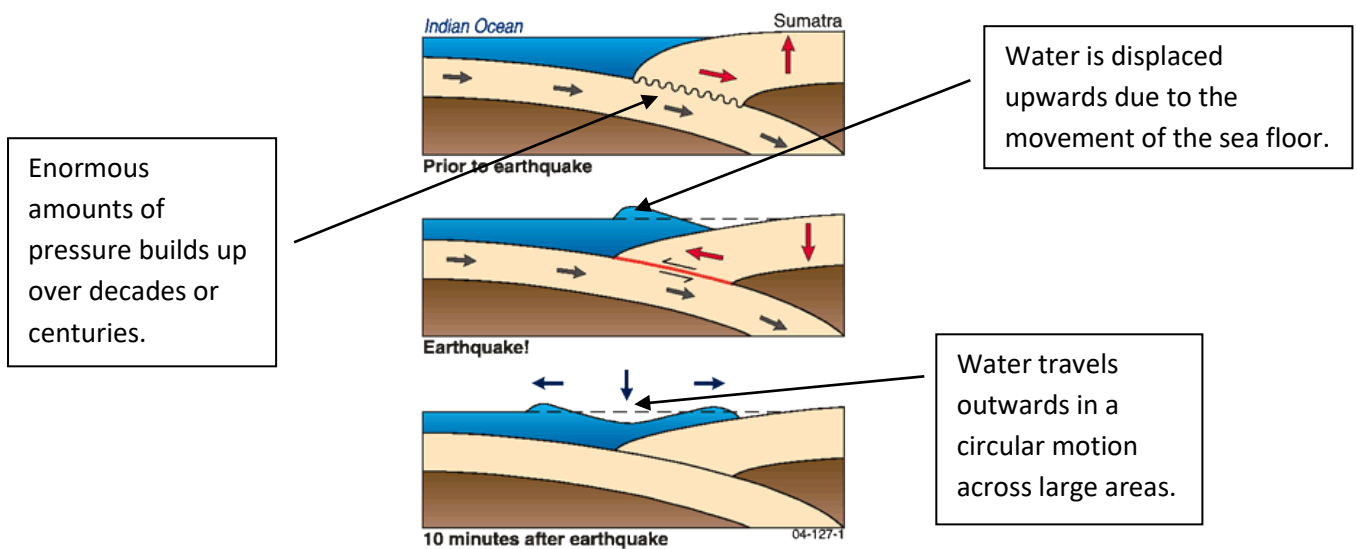


## Indian Ocean Tsunami – Resource 2

In the case of the December 2004 earthquake off Indonesia, the tsunami was generated 10 minutes after the event when the displaced sea surface spread outward from the epicentre as a tsunami. In this illustration, the red arrows indicate the direction in which the upper plate is deformed due to drag and release of the lower plate.



This event was one of the most devastating caused by a natural hazard in recent years. The earthquake that triggered the tsunami occurred west of the Indonesian island of Sumatra and measured 9.0 on the Richter Scale, making it the largest earthquake worldwide in 40 years. The death toll in March 2005 was over 273 000 people, with many still missing.

### Impacts of the Tsunami

Despite being 240km off the coast the seismic waves from the earthquake still caused damage to poorly built homes and better built structures over 3 storeys high in Banda Aceh (a city on the coast of Sumatra).

#### Primary Impacts

- The wave killed people in 14 different countries around the Indian Ocean totalling over 250,000
- The highest death toll was on the Indonesian island of Sumatra where over 130,000 were killed and over 30,000 remain missing

- In Sumatra over 500,000 people were made homeless, over 80,000 houses were destroyed as well as serious damage to any ports, boats, roads, bridges, hospitals, forests and crops within 1km of the shore
- 8 people were killed in South Africa which is over 8000km from the epicentre and over 8000 tourists from Australia, Europe and America were also killed
- In Sri Lanka, a train was derailed by the force of the wave killing over 1000

### Secondary Impacts

- Diseases such as cholera and dysentery spread due to the lack of clean water and sanitation in the refugee camps killing an estimated 150,000
- Incomes were lost due to the destruction of fishing boats and damage to the ocean bed
- Loss of foreign income from tourism was significant in Thailand
- Emotional and psychological impacts on the survivors and aid workers
- Land disputes broke out as documents were lost in the devastation and in some cases land was destroyed by erosion from the wave

