## Cause and effect essay: tsunamis

**Business** 



The movie "The Impossible" starring Ewan McGregor and Naomi Watts documents an event that was rare, tragic, devastating – but far from impossible. The movie is a dramatization of a real event that shocked the entire world. In 2004, fourteen countries were effected by a powerful natural event that launched a 98 foot tidal wave and killed 230, 000 people.

Countries such as Sri Lanka, Thailand, and Indonesia were devastated. But what was this powerful natural event? A tsunami. And not just any tsunami, but the worst single tsunami in recorded history.

Tsunamis, or "seismic sea waves", as they are sometimes called, can be devastating. But what causes these extreme weather phenomena? And how do they affect the world? Tsunamis can be caused by landslides or volcanic eruptions that occur on the ocean floor. Rarely, they can be triggered by large meteorite impacts. But most tsunamis are caused by an earthquake. Luckily, not all earthquakes cause tsunamis. They must be large earthquakes that occur under or near the ocean, and create movement under the sea floor.

Earthquakes themselves are caused by the meeting of the earth's tectonic plates along 'faults' or 'fault lines'. When these earthquakes occur at a submarine level, the vibrations cause the ocean water to ripple and move. And the bigger the earthquake.. the larger the results.

A tsunami is, in essence, an enormous wave. Or, to be more specific, a series of giant waves. They most often occur in the Pacific Ocean due to the amount of ocean trenches, mountain chains, and volcanoes that line the ocean floor. There are a total of 452 volcanoes in this titled, "Ring of Fire"

that can erupt at any time. The problem with tsunamis is the fact that their effects are somewhat unpredictable. They can strike hundreds of kilometers away from where the initial earthquake took place.

Generally, places such as Alaska, Japan, the Philippines, and the west coast of the United States are at the greatest risk. Tsunamis reach coastal areas the quickest, landing enormous waves on the shore in a manner that can tear buildings apart and sweep people and vehicles away. They flood areas quickly and have an energy that is often equivocated to the energy from multiple blasts of TNT. Tsunamis cause many people to lose their homes and places of business, and cost governments millions of dollars in repairs and assistance. Contaminated water needs to be dealt with and people need food and medical care.

Earthquakes in themselves are devastating. But for coastal areas, a far greater danger can strike later: the dreaded tsunami. With the speed of a tornado and the blast of a volcano eruption, a tsunami can displace people, elements of nature, and monuments of human construction. More effort needs to be put into detection systems so that people can better prepare for the impact that a tsunami can have.