



read

Natural Hazards

HIC Case Study

Japan Earthquake 2011

quiz



The Big Picture



Key Terms



Immediate responses - The reaction of people as the disaster happens and in the immediate aftermath.



Long-term responses - Later reactions that occur in the weeks, months and years after the event.



Primary effects - The initial impact of a natural event on people and property, caused directly by it.



Secondary effects - The after-effects that occur as indirect impacts of a natural event, sometimes on a longer timescale.



Overview

- Friday, March 11, 2011
- 2.46 pm
- Japan's northeast Pacific coast
- High income country
- Magnitude 9.0
- Destructive margin – Eurasian and Pacific



Primary Effects

- 15,894 people died
- 26,152 people were injured.
- 130,927 people were displaced.
- 332,395 buildings were damaged or destroyed. 300 hospitals were damaged, and 11 destroyed.
- 2,126 roads, 56 bridges and 26 railways were destroyed or damaged.
- 4.4 million households were without power.



Secondary Effects

- Total damage estimated at US \$235 billion.
- Waves up to 40 m in high devastated entire coastal areas and resulted in the loss of thousands of lives.
- Seven reactors at the Fukushima nuclear power station experienced a meltdown. Radiation was over eight times the normal.



Immediate Responses

- The Japan Meteorological Agency issued tsunami warnings
- Rescue workers and around 100,000 members of the Japan Self-Defence Force supported search and rescue operations.
- A 20 km evacuation zone was established around the Fukushima nuclear plant.
- Japan received international help from the US military, rescue teams from NZ, India, South Korea, China and Australia.



Long-term Responses

- The central government established the Reconstruction Policy Council to develop a national recovery and reconstruction.
- The government approved a budget of 23 trillion yen (approx £190 billion) to be spent over ten years.
- A coastal protection policy was established to construct seawalls and breakwaters.
- By Nov 2011, 96% of the electricity supply was restored and 98% of water supplies.