

Case Study 2: Haiti earthquake, 2010 ([Click here](#) to listen to a podcast about the case study)

Facts:

- The quake struck on 12 January 2010 at 4.53 pm.
- The quake measured 7 on the Richter scale.
- The epicentre was 15 km south-west of Port-au-Prince.
- The earthquake was quickly followed by two strong aftershocks of 5.9 and 5.5 magnitude.
- Haiti forms part of the island of Hispaniola. Hispaniola contains two countries: Haiti and the Dominican Republic.

Causes:

- The conservative plate boundary between the Caribbean and North American plates runs right through Haiti.
- These two plates constantly slide past one another, about 2 cm per year, with the Caribbean plate moving eastward with respect to the North American plate.
- The focus of the Haiti quake was 10 km below the Earth's surface. This is very shallow, so the energy that was released was very close to the surface and caused violent ground shaking.

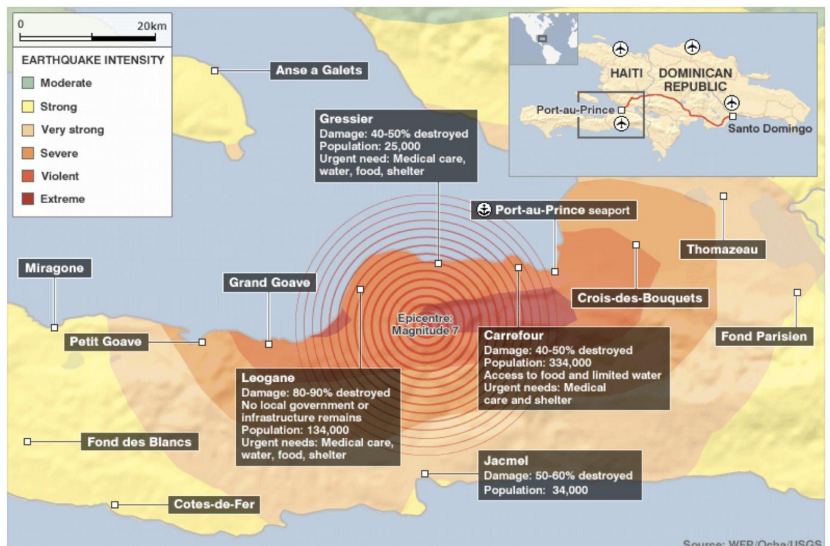
Effects:

Social

- Haiti's government says about 230,000 people died in the earthquake.
- About 300,000 people were injured.
- The survivors had nowhere to go as the hospitals were full.
- Patients were treated without proper doctors and medical equipment as the doctors had been killed or injured and the equipment had been destroyed.
- There was a lack of food meaning that even those who survived suffered extreme hunger.
- There was an acute shortage of drinking water. The water supply system, which before the disaster only provided 40% of the population of Port-au-Prince with clean water, had effectively collapsed.
- Mass graves were commissioned, holding up to 7,000 corpses each. The remaining bodies, which could not be buried, were used as a road block to protest against the lack of aid.
- As people tried to help their families and others, violence and looting broke out, which could not be controlled due to the lack of police.
- The high death rate was due to a number of factors:
 - 72.1% of the population lived on less than \$2 a day
 - The people lived in packed shanty towns in poorly constructed buildings
 - Builders did not follow safety codes and bribes were given so that builders could take short cuts
 - The quake hit close to a poorly constructed, large urban area.



Figure 1.14: Location of Haiti earthquake



Economic

- The infrastructure of the capital Port-au-Prince was completely ruined. The roads were impassable, the country's tiny airport was full of aid planes and the port was full of rubbish.
- The Presidential Palace and all other ministries collapsed, leaving parliament without a base from which to make decisions.
- Almost every house in the country fell down due to their unstable foundations.

Human response

- The UN said that £165 million was pledged (£10 million from the UK and a further £10 million from the UN).
- The USA sent:
 - 10,000 troops to help give aid and search for survivors
 - The USS Carl Vinson, the USS Bataan and several amphibious vehicles to transport aid from carriers to the land
 - Five helicopters.
- Indonesia sent search teams with sniffer dogs to search for survivors.
- A mountain rescue team from Devon was sent out.
- Aid agencies shipped in massive quantities of bottled water and distributed water purification tablets.
- Most of this aid took a long time to reach those who needed it, causing friction between the Haitians and aid workers.
- Many thousands of Haitians became amputees as a result of their injuries. These people will need mental health services as well as rehabilitation.
- The International Organisation for Migration (IOM) tried to improve the living conditions of an estimated 692,000 people in makeshift shelters in 591 camps in Port-au-Prince.
- More than 235,000 people took advantage of the Haitian government's offer of free transportation to cities in the north and south-west.
- Haiti is likely to need billions of pounds to build new homes and government buildings in Port-au-Prince and the surrounding area, which were densely populated before the earthquake.
- Higher building standards will be necessary.