

Magnitude measures the size of the earthquake, similar to radius

- Richter scale measured the largest displacement recorded but is considered outdated and wasn't very accurate internationally. Other scales take in more data and is more complete
- Moment Magnitude (Mw) scale - related to total energy released

Chile - the border bw the South American plate and the Nazca plate is off its shoreline

Dr. Sergio Barrientos from the National Seismological Center in Santiago

- Earthquakes take place where most of the population is located
- Building code is updated every time there's a large earthquake bc they have new data and discover new aspects how to minimize damage, resulting in fewer casualties compared to countries that don't have earthquakes as frequently

1960 Valdivia Earthquake (aka Great Chilean Earthquake) (from Britannica)

- Most deaths came from an 80 foot tsunami
- Large waves reached Hawaii (61 killed), Japan (138 killed), and the Philippines (32 dead/missing)
- Cordon Caulle volcano erupted two days later

Haiti - situated close to where the Caribbean plate meets the North American plate

NPR

- Haitians focus on building their homes to withstand hurricanes rather than earthquakes and use materials like concrete and cinder block, which can become hazardous during earthquakes

World Economic Forum

- Lack of resources and stability make it hard for them to build systems to hold up to both

2010 Haiti Earthquake (from Britannica)

- Haiti's first earthquake of that magnitude in over 100 years
- Infrastructure wasn't great, was recovering from 2 hurricanes
- 3 million affected, 1 million left homeless. Looting became prevalent due to prisoners escaping a damaged penitentiary

Japan

- 20% of > mag 6 earthquakes on earth happen on Japan

BBC

- Buildings designed to not sustain any damage during smaller earthquakes
- For larger earthquakes, buildings absorb seismic energy
  - Shock absorbers at foundations (1-2 ft thick rubber)
  - Motion dampers bw floors

- Steel mesh to spread impact bw several buildings rather than just one
- Kobe Earthquake of 1995 (aka Great Hanshin Earthquake) (from Britannica)
- Kobe is Japan's 2nd largest urban area
  - Many supposedly earthquake-resistant buildings were destroyed. Transportation was paralyzed and the government was slow to respond