

Earthquakes in Haiti

Why in news?

A powerful earthquake (magnitude 7.2) killed hundreds and injured thousands more in Haiti (which faces frequent earthquakes).

Where is Haiti?

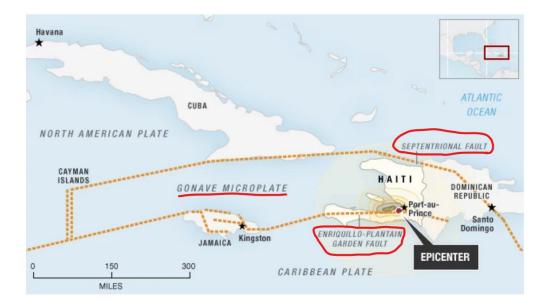
- An island country located in the <u>Caribbean Sea</u>, on the <u>island of Hispaniola</u> in the <u>Greater</u> <u>Antilles archipelago</u>.
- Bordered in land by the Dominican Republic in east.
- Maritime borders with the Bahamas, Colombia, Cuba, and Jamaica.

What causes frequent quakes in Haiti?

- Haits'sunique geology makes it seismically active and prone to devastating earthquakes.
- Located near the intersection of two tectonic plates-the North American plate and the Caribbean plate.
- Multiple fault lines between those plates cut through or near the island of Hispaniola.
- Not all of those fault lines behave the same way; here, plates transition from smashing together to sliding past one another.

Plates move - Friction builds up - Resultant strain - Fault moves suddenly - Earthquake occurs

- The recent earthquake likely occurred along the Enriquillo-Plantain Garden fault zone:
- i. cuts across Haiti's southwestern Tiburon Peninsula
- ii. the source of many earlier big earthquakes in Haiti



- Other reasons
- High <u>population</u> density of 11 million people.
- Typical concrete and cinder block <u>buildings designed to withstand hurricanes</u> but are vulnerable to collapse when the ground shakes.
- Given the factors, it is much a natural hazard that overlaps with a vulnerable design and system, and not really a natural disaster.

What are the challenges?

- Financial challenges in constructing more earthquake-resistant buildings:
 - i. Haiti is the poorest nation in the Western Hemisphere.
 - ii. It is still recovering from the 2010 earthquake and Hurricane Matthew in 2016.
- Lack of political will, centralized effort and funding to build earthquake-resistant structures, despite the availability of technical knowledge, trained architects and city planners.
- Political instability following recent assassination of Haiti's President JovenelMoïse.
- NGOs focus on their own compartmentalized projects; no coordination.
- More quakes may be ahead as 2010 earthquake was said to mark the beginning of a new cycle of large earthquakes on the Enriquillo fault system after 240 years of seismic dormancy.

Source: The Indian Express, NPR

