Causes of Myanmar's Earthquake

Prelims – *Physical, Social, Economic Geography of India and the World.*

Current events of national and international importance.

Mains (GS I & III) – *GS I (Important Geophysical phenomena such as earthquakes, Tsunami, Volcanic activity, cyclone etc.) | GS III (Disaster and disaster management).*

Why in the news?

India's National Centre for Seismology says soil liquefaction caused severe damage in the recent earthquake that stuck in Myanmar.

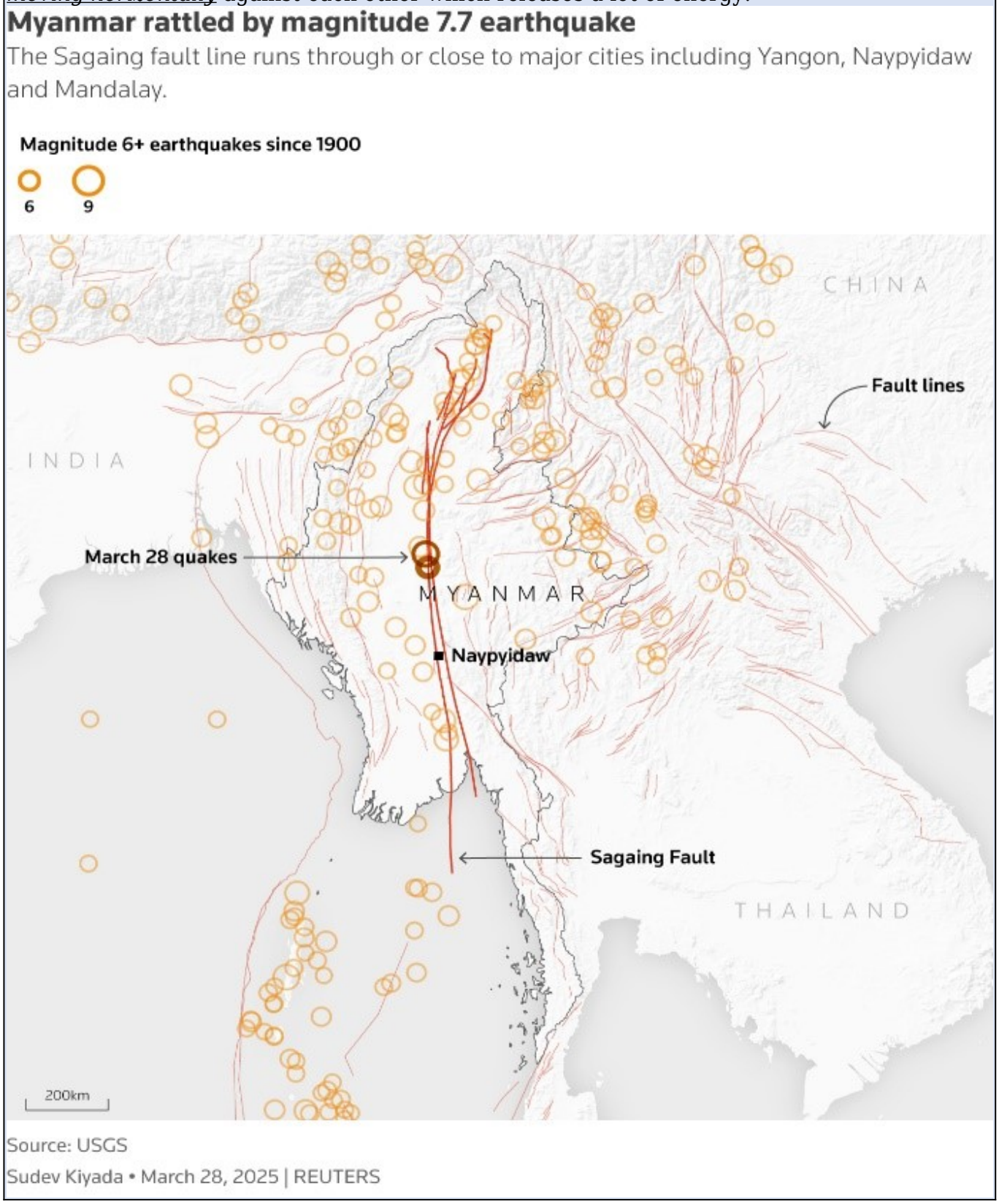
- **Earthquake** – It is the shaking of the earth's surface caused by a sudden release of energy within the earth's crust.
- **Epicentre** – Mandalay in Myanmar

Focus or Hypocenter *is the point within the Earth where an earthquake rupture starts.* ***Epicenter*** *is the point at the surface of the Earth above the focus.*

- **Cause of earthquake** – Mainly due to ***Sagaing Fault***,

Sagaing Fault

• It is a major fault line located 1,200 km east of the *Indo-Burma subduction zone*.
• **Geography** – To the east of the Sagaing Fault is the Sunda Plate.
• The Fault is the partitioning between the Myanmar plate and the Sunda plate.
• **Concept** – It is a *'strike-slip' fault,* which means that the Indian and Sunda landmasses are *moving horizontally* against each other which releases a lot of energy.



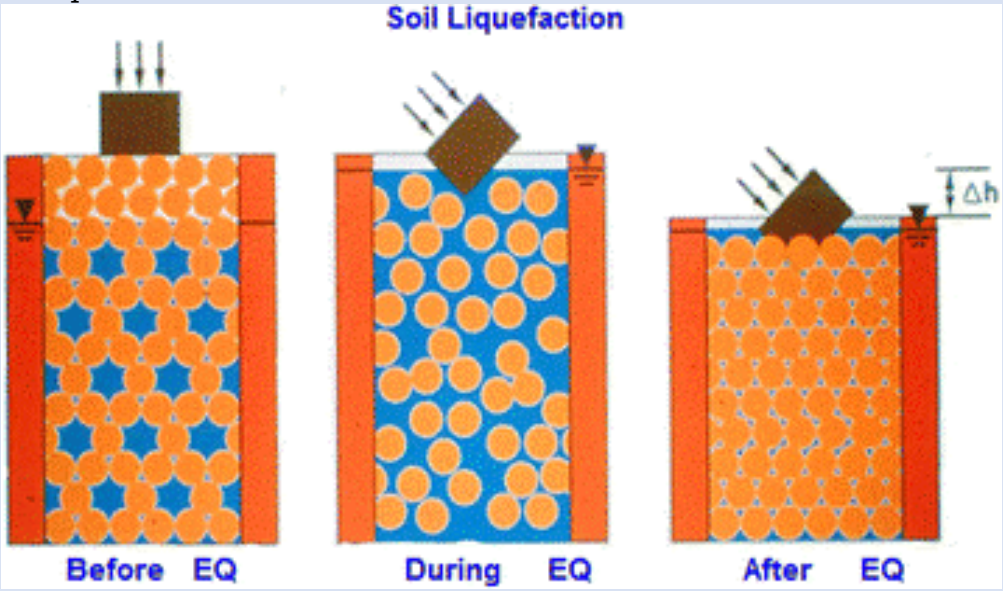
- **Major causes for damage**
  - **Resonance Effect** – The natural frequency of a structure matches with the frequency of seismic waves, causing amplified vibrations.

- ***Soil liquefaction***.

Thailand's capital Bangkok, which is more than 1,000 km away from the epicentre suffered significant damage as the rupture's direction was towards it.

Soil liquefaction

• **It is a phenomenon that occurs when saturated, loose *soil loses its strength and behaves like a liquid* due to intense** seismic shaking.
• **Conditions** – It usually occurs in places with loose, wet soil like sandy areas near rivers or the coast.
• **Concept** – When the earthquake shakes the ground, the water between the soil particles pushes them apart, making the soil lose its strength.
• **Consequences** – As a result, buildings, roads and other structures may sink, tilt or collapse.



EQ- Earthquake

National Centre for Seismology is the *nodal agency involved in monitoring seismic activity* across the country with the help of National network consisting of 166 stations. It works under Ministry of Earth Sciences and are aimed at better earthquake monitoring, early warning systems, and research into seismic activity.

Reference

The Hindu| Myanmar-Thailand Earthquake

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