Popocatepetl volcano

Prelims: *Current events of national and international importance |Geograph*

Why in News?

Scientists released the first 3D images of the Popocatepetl volcano's interior, developed using AI and five years of seismic data to map magma accumulation zones.

- Popocatepetl, often referred to as "El Popo," is an active ***stratovolcano*** in central Mexico.
- It is one of the ***world's most active volcano.***
- It is the ***second-highest peak*** in the country, rising to 5,426 meters (17,802 ft).
- It is one of the most dangerous volcanoes in the Ring of Fire.
- **Name -** Derived from the Nahuatl words for "Smoking Mountain".
- **Geological setting**
  - Part of the Trans-Mexican Volcanic Belt.
  - Lies above a subduction zone where the *Cocos Plate subducts beneath the North American Plate.*
- **History -** Popocatépetl emerged in the crater of other volcanoes in its current form more than 20,000 years ago.
- It has been active since 1994, spewing plumes of smoke, gas and ash more or less daily.
- The activity periodically forms a dome over the main vent, which eventually collapses, causing an eruption.
- In the early 20th century, humans used dynamite to extract sulfur from the crater, provoked an eruption.
- **Traditional customs -** A bottle of tequila placed near a rocky hollow, known as El Popo's belly button, reflects the traditional customs associated with the volcano, including an annual pilgrimage.
- **Movement underground -** Inside an active volcano the rocks, magma, gas and aquifers are moving and it generates seismic signals.
- **Monitoring -** Its frequent activity is closely monitored due to its proximity

to a population of nearly 30 million people.

Reference

[The Hindu | Popocatepetl volcano]

