# Recent findings on Earth's Geological process

***Prelims*** *– Current events of National and International Importance*

***Mains (GS I) –*** *Geography of the India & World | Important Geophysical phenomena*

**Why in News?**

*Scientists have recently discovered that a rare geological process is tearing the Indian Plate apart deep beneath the surface.*

- Researchers revealed the India plate is delaminating, its *dense lower layer peeling off and sinking into the Earth's mantle.*
- The process called delamination was detected beneath the Tibetan Plateau using seismic waves and helium gas analysis from natural springs.
- This shift could reshape earthquake patterns ***across the Himalayas and beyond***.
- The findings reveal that parts of these plates especially their deeper sections can soften, break off, and sink back into the Earth over geological time.
- These findings have raised urgent scientific questions about the stability of one of Earth's most active tectonic zones.
- **Impact -** The Himalayan region is already one of the most earthquake-prone areas in the world.
- With the Indian Plate tearing from below, new stress lines could be forming in the crust above.
- The tearing and sinking of the plate could create new stress points in the Earth's crust, triggering more frequent and potentially more powerful quakes.
- Particular attention is being paid to the ***Cona-Sangri Rift***, a deep fracture in the Tibetan Plateau.
- Scientists believe it may be directly connected to this hidden tear. If confirmed, regions around this rift could face heightened earthquake threats in the coming decades.
- The implications go beyond India. The study suggests that delamination may not be unique to the Indian Plate.
- Researchers are now scanning other continental plates for signs of similar activity.
- Researchers continue to monitor seismic activity and helium levels across the region, using these tools to paint a clearer picture of the miles beneath the Earth's surface.

**Reference**

Economic Times | Hidden rift in Indian Plate



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