Lonar Lake

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

Why in News?

Recently, the water level of Lonar Lake in Maharashtra has risen drastically, and the Bombay High Court has taken suo motu cognisance of the issue.

- **Location –** Lonar Lake is located in ***Maharashtra's Buldhana district.***
- **Type –** It is formed inside a *meteorite impact crater,* estimated to be formed from ~12,000 years to 5.7 lakh years ago.
- It is considered the ***largest basaltic impact crater in the world*** by the Geological Survey of India.
- **Characteristics –** Saline and highly alkaline lake with pH ~10.
- Supports specialized extremophile microorganisms, making it uninhabitable for most plant and animal species.
- Stable alkalinity is essential to maintain its fragile ecosystem.
- It features a distinct ecosystem that sometimes turns pink due to microorganisms.
- **Ramsar site** - It is a ***Ramsar site and National Geo-heritage Monument.***
- **Drainage –** The lake is fed by multiple streams and underground aquifers, but has no outlet.
- **Protected Temples –** The lake complex houses ancient temples, including the *Kamalja Devi Temple and 15 ASI-protected temples* are located along the lower rim of the crater.
- **Recent Concern –** Water level has increased by ~4 metres since 2022.
- Strong 2025 monsoon caused the Kamalja Devi Temple to be submerged by nearly 2 metres.
- Out of 15 ASI-protected temples, 9 are partially or fully submerged.
- **Reasons –** According to a geologist, human-induced groundwater recharge is one of the reasons.
- Construction of deep borewells (600–700 ft), dugwells, and percolation dams over the last 10–15 years.
- These structures recharge lower aquifers, which now feed groundwater into the lake.

- **Extreme Rainfall Events –** Intense rainfall in 2025 with enhanced percolation and subsurface flow into the lake.
- **Closed Basin Nature –** The lake has no outlet, and water loss occurs only through evaporation.
- **Institutional Response –** ASI plans to build a gabion wall as a temporary protective measure for the Kamalja temple.

Reference

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