

2. Manipur's Loktak Lake chokes from a Catastrophic Project Flagged off 50 Years Ago

Prelims Level: Environment – Biodiversity and its Threat

Mains Level: GS-III: Conservation, Environmental Pollution and Degradation, Environmental Impact Assessment.

Why in News?

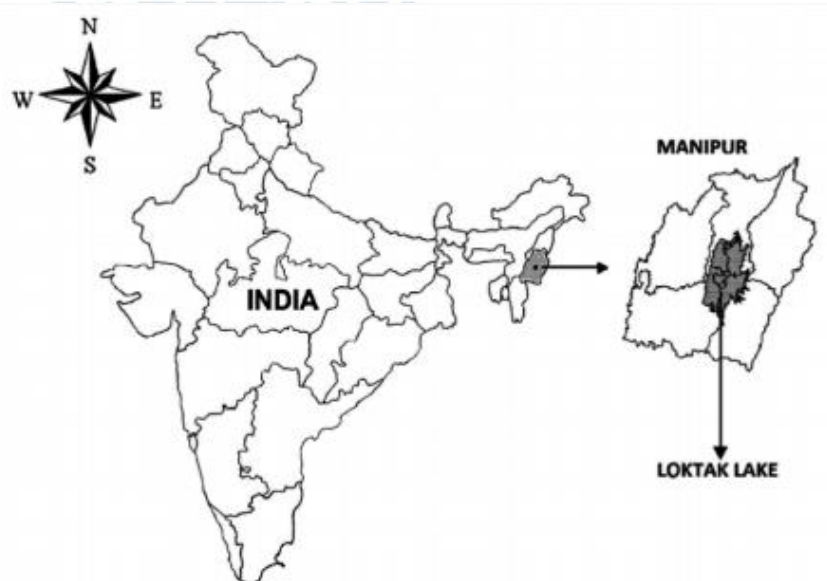
- “Ithai barrage” of the National Hydroelectric Power Corporation Limited (NHPC) is slowly causing the death of Loktak Lake by choking its lifeline.

About Loktak Lake:

- Largest freshwater lake in North -East India.
- It is one of the *Ramsar sites* in India.
- *Phumdi* - an organic mass floating in the lake – is an exclusive feature of Loktak Lake.
- *Keibul Lamjao*, the only floating national park in the world, floats over it.
- *Brow-antlered deer (Endangered)* are found only on Loktak's *phumdi*, in the Keibul Lamjao National Park.
- Edible plants, roots and fruits growing on the phumdi are a major part of the diet in Manipur.

Loktak - A living Lake:

- The phumdi's life cycle is regulated by the seasonal fluctuation in water level.
- In the dry season, they sink to the lake bed where their roots absorb nutrients from the soil. During monsoons they float back to the surface.
- Phumdi is a floating assortment of soil, vegetation and organic matter in various stages of decay.
- It sustains fish culture ponds.



The Beginning of Death of the Lake:

- In 1983, National Hydroelectric Power Corporation Limited (NHPC) constructed **Ithai barrage** which maintained water level in Loktak Lake, much higher than usual.
- The purpose was to provide cheap electricity and lift irrigation in the region. However no study was done on the impact on lake's ecosystem.

How the Lake is undergoing a Slower Death:

- With the water level now permanently high, phumdi can no longer reach the lake bed in the dry season. Unable to feed on nutrients, Loktak's islets of vegetation are thinning out.
- Ithai Barrage blocked the outlet of the lake to the sea. Fishermen cannot dispose of the dying biomass.
- For decades now, rotting vegetation has been piling up on the lake bed.
- Huge shoals of fish coming in from the Chindwin-Irrawaddy river system in Myanmar through the Manipur River previously, has stopped due to barrage construction.
- Run-off from surrounding agricultural fields and untreated sewage of the city are being added to the lake. .
- This has resulted in growth of semi-aquatic weeds that deplete oxygen in the water, choking Loktak.
- Adding to the Suffering , Fingerlings brought in from Andhra Pradesh and Odisha by fisheries department has gradually wiped out several species of native fish found in the lake.