Detoxification of Lukha River: Meghalaya

Why in News

Recently, the Meghalaya Government has claimed that a **detoxing pilot project** has brought the **Lukha river back** from the dead.

Key Points

- **About:**
  - The Lukha River was considered toxic beyond redemption a decade ago owing to **contamination due to acid mine drainage and run-off from the coal mines.**
  - **Phytoremediation method** was used to detoxify the river, where **Algae** was used to remove major toxic contents from the water.
  - The pilot project was **undertaken under the District Mineral Fund** after reports of low pH levels affecting the aquatic life in the river.
    - Most living organisms, especially aquatic life, function at the **optimal pH range of 6.5 to 8.5.**
    - pH is a **measure of how acidic/basic water is.** The range goes from 0 to 14, with 7 being neutral. pHs of less than 7 indicate acidity, whereas a pH of greater than 7 indicates a base. The **pH of water is a very important measurement concerning water quality.**

- **Lukha River:**
    - The Lukha is located in the southern part of **<u>east Jaintia Hills</u>** of Meghalaya where most of Meghalaya's **<u>rat-hole coal mines</u> are located.**
        - It has become a victim of the unsustainable large-scale mining of coal and limestone, allegedly responsible for the pollution that turns the river its surreal winter hue.
    - It **receives water from the Lunar river** (Wah Lunar) and small streams draining from the **Narpuh Reserve Forest** and the undulating hills of the area while flowing down.
    - The river is mainly fed by monsoon rain and flows in the south-west direction and later takes a southern path after **joining the Lunar river near the Gaddum village.**
    - The river passes via the Sonapur village and then **into southern Assam's Barak Valley and ends up in the floodplains of Bangladesh.**

<u>Source: TH</u>