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TOPIC: WATER POLLUTION

Rivers in peril: How pollution endangers India's water lifelines

Water Pollution in India:

- A CPCB report informed that during the Maha Kumbh, water in Prayagraj did not meet bathing water quality standards due to high fecal coliform levels.

Rivers in India:

- Rivers are integral to India's culture and ecosystem, but pollution continues to harm them.
- India was one of the first countries to recognize rivers as "living entities," but pollution levels are rising.

Water Quality Assessments:

- A 2022 CPCB report found 311 polluted river stretches across 279 rivers in India.
- Maharashtra has the highest number of polluted stretches (55), and Coum River in Tamil Nadu is the most polluted.

Pollution Indicators:

- **Biological Oxygen Demand (BOD)**: A BOD higher than 3 mg/L means the water is unsafe for bathing.
- **Fecal Coliform (FC)**: Levels above 2,500 MPN/100 ml are highly toxic and unsafe for human use.

River Ganga's Pollution:

- During the Maha Kumbh Mela, the CPCB reported that the Ganga had dangerously high fecal coliform levels in Prayagraj.

Main Causes of River Pollution:

- **Untreated Sewage**: Over 60% of sewage in India is released untreated into rivers.
- **Industrial Effluents**: Untreated industrial wastewater, especially from chemicals, textiles, and tanneries, pollutes rivers.
- **Municipal Solid Waste**: Millions of tons of waste are dumped into rivers, blocking water flow and damaging ecosystems.
- **Agricultural Runoff**: Pesticides and fertilizers from agriculture pollute water bodies, leading to eutrophication.

- **Sand Mining and Encroachments**: These disrupt river flow and contribute to pollution.

Legal Framework:

- **Water (Prevention and Control of Pollution) Act, 1974**: Established CPCB and SPCBs for pollution control.
- **Environment Protection Act, 1986**: Covers environmental protection and industrial discharge standards.
- **National Water Policy, 2012**: Focuses on safeguarding water bodies and tackling pollution.

River Rejuvenation Programs:

- **Ganga Action Plan (GAP)**: Launched in 1985 to improve Ganga's water quality, but had limited impact.
- **Yamuna Action Plan**: Started in 1993 but failed to reduce pollution significantly.
- **Namami Gange Programme (NGP)**: Launched in 2014, focused on cleaning Ganga but still faces issues with encroachments and industrial waste.

Challenges in Fund Utilization:

- As of December 2024, less than half of the targeted ₹19,271 crores for NGP had been spent.

Way Forward:

- **Community Participation**: Encourage community involvement in waste management to reduce pollution.
- **Technological Advancements**: Use technologies like AI for real-time pollution monitoring, as done in Germany.
- **Strict Penalties**: Enforce penalties for industries discharging untreated waste into rivers, as practiced in Sweden and the Netherlands.
- **Sand Mining & Encroachment Control**: Set up local committees to monitor sand mining and prevent riverbank encroachments, as done in Kerala.
- **Effective Fund Utilization**: Ensure transparent use of funds allocated for river rejuvenation programs.

Conclusion:

- Rivers are essential for human life, but pollution continues to rise.
- Combating pollution requires stricter laws, better awareness, and advanced technology to ensure cleaner rivers and a healthier nation.

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