3. CPCB Report on River Polluted Sites - Environment

The Central Pollution Control Board's 2023 report shows a marginal decrease in polluted river stretches in India, identified using Biological Oxygen Demand (BOD) as the key metric. While Maharashtra retains the highest number of polluted stretches, the count of the most severely polluted 'Priority 1' sites has fallen nationally.

About the CPCB River Health Assessment Report

The Central Pollution Control Board (CPCB) periodically assesses the health of rivers across India to monitor pollution levels and guide remediation efforts.

Monitoring Cycle - The CPCB tracks river water quality in two-year cycles.

Key Parameter - The assessment primarily uses Biological Oxygen Demand (BOD) as the key indicator of organic pollution.

Latest Assessment (2023) - The new report is based on water quality data collected from 2,116 locations during the period of 2022–2023.

Previous Assessment (2022) - The earlier report was based on data from 2019–2021, with the year 2020 excluded from the analysis due to monitoring disruptions caused by the COVID-19 pandemic.

Key Terms Explained

Understanding these terms is crucial to interpreting the report's findings.

Biological Oxygen Demand (BOD) - This is the amount of dissolved oxygen that aerobic bacteria require to decompose the organic waste present in a body of water. It is measured in milligrams per liter (mg/L). A high BOD indicates a high level of organic pollution.

Dissolved Oxygen (DO) - This refers to the amount of free, non-compound oxygen gas present in water that is available for use by fish and other aquatic organisms.

The Pollution Relationship - Higher concentrations of organic waste in water accelerate decomposition by bacteria, which consumes oxygen. This increased oxygen use leads to a decrease in the Dissolved Oxygen (DO) content, harming aquatic life.

Polluted River Location - The CPCB defines any location as "polluted" if the BOD level is greater than 3 mg/L, a threshold at which the water is considered unfit for bathing.

Polluted River Stretch (PRS) - When two or more consecutive monitoring locations on a single river exceed the BOD criteria (>3 mg/L), they are collectively counted as one 'Polluted River Stretch'.

Key Highlights from the 2023 Report

The latest report indicates a marginal improvement in the overall health of India's rivers compared to the previous assessment.

Polluted River Locations - The total number of polluted locations reduced from 815 (in 2022) to 807 (in 2023).

Polluted River Stretches (PRS) - The number of polluted stretches decreased from 311 (in 2022) to 296 (in 2023).

Priority 1 Stretches (Most Polluted) - There was a notable improvement in the most polluted category, with the number of Priority 1 stretches reducing from 45 (in 2022) to 37 (in 2023).

2023 Status - The maximum number of Priority 1 stretches (5 each) were found in Tamil Nadu, Uttar Pradesh, and Uttarakhand.

2022 Status - The maximum number of Priority 1 stretches (6 each) were in Gujarat and Uttar Pradesh.

State-wise Comparison of Polluted River Stretches (PRS)

The report provides a state-wise ranking, with Maharashtra consistently having the highest number of polluted rivers stretches.

Rank	State / UT	Polluted Stretches (2023)	Polluted Stretches (2022)
1	**Maharashtra**	54	55
2	**Kerala**	31	18
3	**Madhya Pradesh**	18	19

Rank	State / UT	Polluted Stretches (2023)	Polluted Stretches (2022)
3	**Manipur**	18	- (Not in top 5)
4	**Karnataka**	14	17
-	**Bihar**	- (Not in top 4)	18
-	**Uttar Pradesh**	- (Not in top 4)	17

CPCB Priority Categories (Based on BOD)

The CPCB categorizes polluted river stretches into five priorities to focus remediation efforts on the most critical areas.

Priority Level	BOD Value (mg/L)	Implication / Pollution Level
Priority 1	> 30	Most Polluted, requires urgent action
Priority 2	20–30	High pollution, significant intervention needed
Priority 3	10–20	Moderate pollution
Priority 4	6–10	Low pollution
Priority 5	3–6	Least polluted, low intervention needed

About the Central Pollution Control Board (CPCB)

The CPCB is the principal statutory organization responsible for pollution control in India.

Formation - It was constituted in September 1974 under the Water (Prevention and Control of Pollution) Act, 1974.

Powers - It is also entrusted with powers and functions under the Air (Prevention and Control of Pollution) Act, 1981.

Principal Functions - To promote the cleanliness of streams and wells by preventing, controlling, and abating water pollution. To improve the quality of air and to prevent, control, or abate air pollution.

Additional Role - It provides technical services to the Ministry of Environment, Forests and Climate Change (MoEFCC) regarding the provisions of the Environment (Protection) Act, 1986.

Nodal Ministry - It functions under the Ministry of Environment, Forests and Climate Change.

Monitoring Network - CPCB operates a vast monitoring network of 4,736 sites across rivers, lakes, creeks, drains, and canals nationwide.

Source - https - //www.thehindu.com/sci-tech/energy-and-environment/number-of-polluted-river-sites-shows-slight-reduction-cpcb/article70081607.ece