



## The Big Picture - Drinking Water: Quality & Challenges

According to the Ministry of Consumer Affairs, Food and Public Distribution, Mumbai residents need not buy reverse osmosis (RO) water purifiers as samples of tap water collected from the Mumbai are compliant with the Indian standards for drinking water.

However, other metro cities of Delhi, Kolkata and Chennai failed in almost 10 out of 11 quality parameters tested by the Bureau of Indian Standards (BIS). Similar is the condition in the majority of other state capitals.

### Nature of Water Crisis

- According to [NITI Aayog's Composite Water Management Index 2018](#), 21 major cities (Delhi, Bengaluru, Chennai, Hyderabad and others) are racing to reach zero groundwater levels by 2020, affecting access for 100 million people.
- India ranks 120 among 122 countries on the Water Quality Index released by WaterAid.
- The national capital region of India is facing a double whammy, not only it harbours poor standards of air ([air emergency](#)) but poor water quality also.

### Drishti Input:

- According to the data released by the World Resources Institute, India is ranked 13<sup>th</sup> among the 17 most water-stressed countries of the world.
- According to the Ministry of Urban Development, 80% of India's surface water is polluted.
- This signifies India is going through Water emergency.

### Causes of Poor Drinking Water Quality

- In the name of water purification, most of the times water is **chlorinated**.
  - Chlorination only kills bacteria & other microorganisms but dissolved salts, alkalinity, toxic metals in water can't be eliminated by chlorination.
- The pipes which carry the water, **are old and leaking**. This leakages in pipes lead to contamination of water.
  - Moreover, the water supply line & sewerage line running side by side.
- In metropolitan cities, **the demand for water is higher than the supply**. Therefore, this deficit in the water supply is compensated by the mixing of surface water & groundwater.
  - However, groundwater is severely contaminated by carcinogenic pollutants like Arsenic.
- Water is a **state subject**. This lead to the problem of coordination between Union, State and Local government.
- **Rapid urbanization** has led the unequal distribution of water, contamination/ depletion of local water bodies due to pollution.

- Sometimes the places from where water samples are collected, may not reflect the true state of water quality.

## Effects of Poor Drinking Water

- **Harmful health impacts:** Nearly 70% of the diseases in India are waterborne. Therefore, poor water quality is a great health hazard.
- **Economic cost:** Poor drinking water will lead to a reduction in tourist inflow.
- **Domino effect:** Result of poor drinking water is the prime reason for the sale of plastic bottled drinking water. However, this bottled water gives rise to plastic pollution.
- **Wasting resources:** RO is expensive and for 1 litre of RO or bottled water, many litres of water wasted.
  - Also, the RO water is deprived of essential minerals and salts.
- **Social effect:** With the given condition of the water crisis, it is less likely to fulfil the target of providing everyone with safe drinking water (Sustainable Development Goal number 6).

## Way Forward

- **Data based support system:** Water quality should be tested frequently and the findings should be made public.
  - This will increase involvement, sensitization & awareness of citizens, service providers and the government.
- **Mandatory compliance:** Compliance to Bureau of Indian Standards for water quality should be made mandatory for local bodies.
  - This can make municipalities and other local bodies accountable.
- **Pricing for water:** Water can be priced for well-off sections of society so that proper maintenance cost should be recovered.
- **Better management:** Long-distance pipelines of water should be discouraged and water treatment should be made more localized.
  - Also, efforts should be made to find out the sites of continuation in the supply line.
- **Technological solution:** Up-gradation of the water treatment plant to remove toxic inorganic pollutants and dissolved solids.
- **Rainwater harvesting:** The reason why Mumbai's water is relatively safer because it is sourced from rainwater (the purest source of water).
  - Therefore, rainwater harvesting should be encouraged to the maximum extent possible.
- **Next step for Jal Jeevan mission:** The government's effort to provide **piped water to all rural households by 2024** under the Jal Jeevan mission, is a step in the right direction. However, providing quality piped water will be a big challenge.