



# Water Pollution

## Causes, Effects, and Solutions

Understanding the impact of contaminated water on life and the environment





# The Crisis at a Glance

80%

Wastewater released untreated  
globally

1.8 Billion

People drinking fecal-contaminated  
water

1.5M Children

Die annually from polluted water

*"Thousands have lived without love, not one without water."* — W.H. Auden

# Five Types of Water Pollution

1

## Surface Water

Lakes, rivers, oceans contaminated. Example: Yamuna River toxic foam.

2

## Groundwater

Contaminants seep through soil. Example: Arsenic in West Bengal.

3

## Chemical

Toxic chemicals from industries. Example: Bhopal Gas Tragedy aftermath.

4

## Microbiological

Bacteria and viruses spread disease. Example: Cholera outbreaks.

5

## Thermal

Industrial heat raises water temperature, harming aquatic ecosystems.



# Primary Causes of Contamination

## Industrial Waste

Factories discharge mercury, lead, and nitrates. Kanpur's Ganga industrial belts are heavily polluted.



## Agricultural Runoff

Fertilizers and pesticides wash into rivers. Punjab's runoff harms aquatic life.



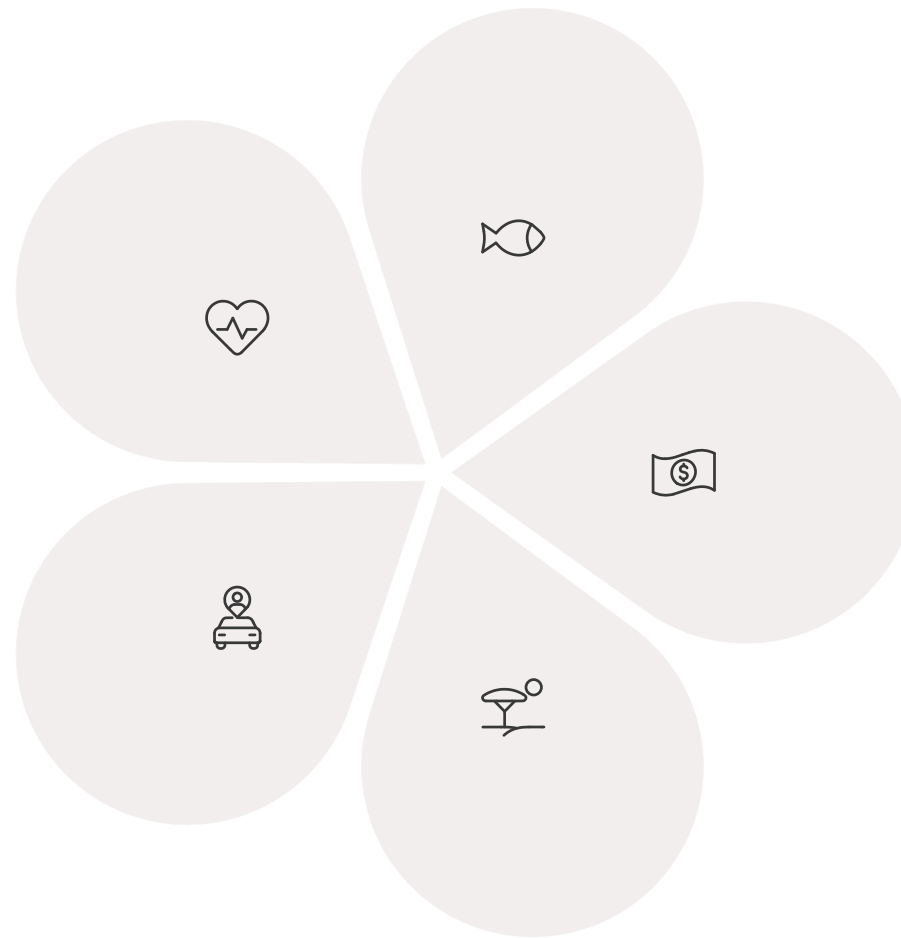
# Devastating Effects on Life

## Human Health

Cholera, typhoid, diarrhea, cancer. 1.5M children die annually.

## Social Impact

Water scarcity forces migration in rural areas.



## Aquatic Life

Fish die from oxygen depletion. Coral reefs destroyed by chemical imbalance.

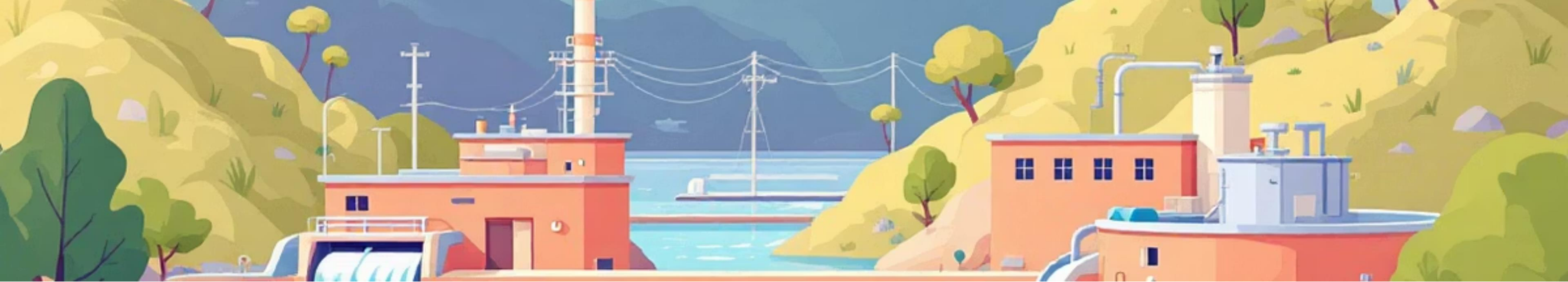
## Economic Loss

Fisheries, tourism, agriculture devastated. Kerala's Vembanad Lake fishing declined.

## Ecological Imbalance

Biodiversity disrupted. Food chains collapse.





# India's Response: Government Initiatives

01

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## Namami Gange Mission

Cleaning and rejuvenation of the Ganga River through comprehensive restoration.

03

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## Swachh Bharat Mission

Reducing open defecation and waste entering water bodies.

02

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## National Water Policy (2012)

Framework for sustainable water management and resource protection.

04

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## NMCG Focus

Building sewage treatment plants in cities and villages nationwide.



# Global Action & Solutions

## Global Initiatives

- UN SDG 6: Clean Water & Sanitation for all
- World Water Monitoring Day: Global awareness
- WaterAid NGO: Clean water access in India, Africa, Asia

## Prevention Steps

- Reduce plastic; promote recycling
- Treat industrial waste before discharge
- Promote organic farming
- Build sewage treatment infrastructure
- Raise community awareness





# Every Drop Counts

Water is not infinite. Conserving water means conserving life itself.

*"We never know the worth of water till the well is dry."* — Thomas Fuller

## Individual Action

Reduce consumption, recycle, support clean water initiatives.

## Community Responsibility

Educate others, advocate for policy change, monitor local water quality.

## Collective Impact

Together, we can restore water ecosystems and secure a sustainable future.