



## ASHTAMUDI LAKE: ENVIRONMENT

**NEWS:** A lake ecosystem gasping for breath

### WHAT'S IN THE NEWS?

Ashtamudi Lake in Kerala, a Ramsar site, faces severe pollution from untreated sewage, plastic waste, and sedimentation, leading to biodiversity loss, algal blooms, and declining fishery livelihoods. Invasive species and unsustainable activities further degrade its ecological balance and economic significance.

### Deterioration of Ashtamudi Lake Ecosystem

#### Water Pollution

#### Untreated Sewage and Waste Disposal

- Households discharge untreated sewage and septic waste directly into the lake.
- Poultry refuse and abattoir by-products are also dumped, exacerbating contamination.

#### Plastic and Microplastic Pollution

- Plastic waste, including microplastics like nylon and polypropylene, has heavily polluted the lake.
- High levels of heavy metals such as barium and iron accompany microplastic pollution, threatening aquatic life and public health.

#### Algal Blooms and Fish Mortality

#### Excessive Nutrient Inflow

- Pollutants contribute to frequent algal blooms, depleting dissolved oxygen levels.

#### Impact on Aquatic Life

- Algal blooms lead to mass fish mortality by suffocating aquatic organisms.
- Streptococci and E. coli, indicators of sewage contamination, further deteriorate water quality.

#### Habitat Degradation

#### Sedimentation and Water Flow Disruption

- Sediment buildup in canals and channels impedes natural water flow, harming the estuarine ecosystem.



## Invasive Species

- Water hyacinth, a rapidly spreading invasive plant, disrupts fishing activities and damages equipment.

## Impact of Anthropogenic Activities

### Illegal Encroachments

- Encroachments along the lake's banks worsen waste accumulation and obstruct natural water flow.

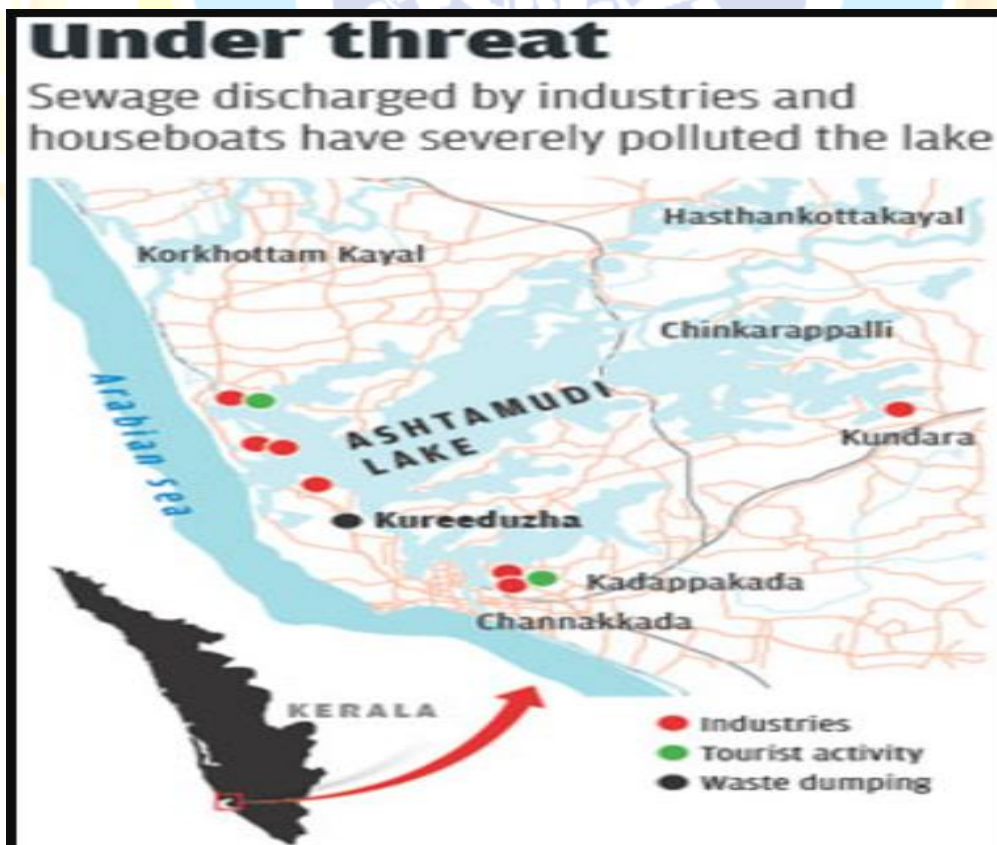
### Unsustainable Practices

- Tourism activities and unregulated aquaculture significantly contribute to pollution and ecosystem imbalance.

## Threats to Biodiversity and Livelihoods

### Loss of Biodiversity

- Habitat degradation has caused the extinction of several fish species, impacting the lake's ecological balance.





## Livelihood Decline

- Fishers face reduced yields due to pollution, sedimentation, and invasive species growth.
- Contamination of fish tissues with heavy metals poses risks to public health and aquatic biodiversity.

## Ashtamudi Lake

**Location:** Kollam district, Kerala, India.

**Significance:** Second-largest estuarine ecosystem in Kerala. Recognized as a Ramsar Wetland of International Importance since 2002.

**Name Origin:** "Ashtamudi" means "eight braids" in Malayalam, referring to the lake's eight arms or channels.

**Biodiversity:** Supports mangroves, fish species, and birds, crucial for ecological balance and local livelihoods.

**Economic Role:** Sustains fishing, coir-making, and tourism. Houseboats and backwater cruises are major tourist attractions.

**Source:** <https://www.thehindu.com/news/national/kerala/a-lake-ecosystem-gasping-for-breath/article68893355.ece#:~:text=A%20recent%20episode%20of%20fish,protected%20site%20of%20international%20importance.>