



General Studies-1; Topic: Urbanization, their problems and their remedies.

Perils of unplanned urbanisation

Introduction

- In the past few weeks, many major cities have been flooded.
- The consequence is majority of urban residents face water-logging and traffic congestion.

Present Status

- Due to flooding the damage and disruption have increased.
- With unplanned urbanisation and a rise in population, there has been a rise in construction and a loss of water bodies.
- With cities getting more concretised, rainwater percolation has reduced, leading to a rise in stormwater run-off.

Major Flooding Events

- Most Indian cities are situated beside a river, with extensive floodplains and wetlands.
- India has lost 40 per cent of its wetlands in the past 30 years.
- Baroda lost 30 per cent of its wetlands between 2005 and 2018.
- Delhi had 1,000 waterbodies in 1997, but now has just 700.
- With such a loss of natural "blue infrastructure", flooding risks have increased.
- Delhi has seen four major flooding events between 2005 and 2023.

Concerns / Challenges

- Most of India's 5,000 plus cities and towns don't have a well-functioning sewerage network.
- Delhi's stormwater drains are very old.
- Coordination challenges among civic agencies.

Flood Risk Management

- Studies must be conducted in all cities to understand the flooding risk associated with urban water bodies.
- Include the **participation of the local citizenry** in upkeep and a push to remove encroachments.
- Geographic information systems (GIS) may be used to tag local water bodies, to understand their seasonality.

Drainage and stormwater Management

- Revamp and expand drainage and stormwater networks across our cities.
- Most cities need to develop drainage master plans.
- Existing pipelines need to be surveyed and water-logging locations identified.

Local Examples

- The Mangalore City Corporation (MCC) established wastewater treatment plants with end-user linkages.
- Community-driven approach led to reviving the Kaikondrahalli Lake in Bengaluru in a phased manner.

Way Forward

- Investments are required in more **early warning systems** to enable real-time updates on changing weather patterns locally.
- **Invest in city-wide databases** that enable the provision of immediate relief in the event of a flooding-related disaster.
- **Coordination between agencies/institutions** must improve.
- Awareness about wetland/water body conservation must be improved.
- Require a well-defined urban water policy.
- **Regulatory bodies like the Central Wetland Regulatory Authority can be granted statutory powers.**

Conclusion

- As we advance, cities must lead on climate change, rather than simply reacting to untoward events.
- Instead of pursuing smart cities, we should invest in rainwater harvesting and better drainage.