



Mains Practice Question

Q. "Indian cities are increasingly vulnerable to disasters, yet urban disaster management remains inadequate." Suggest measures to strengthen urban disaster resilience within the existing legal framework. **(250 words)**

20 Nov, 2024 GS Paper 3 Disaster Management

Approach

- Introduce the answer by highlighting the vulnerability of Indian cities to disasters
- Highlight the Challenges in Urban Disaster Management
- Give Measures to Strengthen Disaster Preparedness and Response
- Conclude suitably.

Introduction

Indian cities, with their **growing populations, rapid urbanization, and expanding infrastructure**, are increasingly vulnerable to various disasters—**natural (floods, earthquakes, cyclones)** and man-made (**fire, building collapse, industrial accidents**).

- Despite several advances in disaster management, urban disaster resilience remains inadequate, primarily due to fragmented governance, insufficient infrastructure, and lack of effective planning.

Body

Challenges in Urban Disaster Management:

- **Rapid Urbanization: Unregulated expansion** leads to encroachments on floodplains and seismic zones. **(2023 Bengaluru floods)**
- **Weak Implementation of Laws:** Poor enforcement of **building codes and zoning** regulations
- **Insufficient Urban Planning:** Lack of integration of **disaster risk reduction (DRR)** into city development plans. **(2022 Morbi Bridge collapse in Gujarat)**
- **Inadequate Early Warning Systems:** Limited reach of disaster alerts, especially for marginalized groups. **(Kedarnath Flash Floods 2013)**
- **Public Awareness Gaps:** Low community participation in preparedness measures.

Measures to Strengthen Disaster Preparedness and Response:

- **Enhanced Coordination among Agencies:** Urban disaster management requires seamless coordination between various agencies **(NDRF, State Disaster Management Authorities, local municipal bodies, and emergency services)**.
- **Urban Risk and Vulnerability Mapping:** Utilize the **National Disaster Management Guidelines** to develop **city-specific vulnerability maps based on risks**.
 - These maps should include hazard-prone areas (floodplains, seismic zones, etc.), vulnerable populations (slums, informal settlements), and critical infrastructure (hospitals, power grids).
- **Disaster Management Plans at the Urban Level:** Cities should mandatorily prepare specific,

localized disaster management plans as mandated under the **Disaster Management Act**, ensuring they address urban-specific challenges such as **overcrowding, transportation bottlenecks, and inadequate healthcare facilities**.

- **Incorporating Resilience into Urban Development:** Amendments in urban planning laws, such as the Model Building Bye-Laws, 2016, can make it mandatory for cities to integrate disaster-resilient infrastructure, **earthquake-resistant buildings, flood-control systems, and safe public spaces**.
 - Introduce **resilience audits** for new buildings and infrastructure to assess and improve disaster resilience before approval.
- **Climate-Resilient Infrastructure:** The **National Action Plan on Climate Change (NAPCC)** should be implemented at the city level to address **climate-induced disasters like flooding, heat waves, and droughts**.
 - Urban local bodies can be mandated to incorporate climate-resilient infrastructure (e.g., **sustainable drainage systems, green roofs, and renewable energy solutions**).
- **Disaster-Resilient Housing:** Cities with high-density slum populations should prioritize retrofitting existing structures and promoting safer housing through the **Pradhan Mantri Awas Yojana (PMAY)**, focusing on disaster-resilient designs and materials.

Conclusion

Urban disaster resilience in India can be significantly strengthened through better coordination, integrated disaster risk management, enhanced infrastructure, and increased public participation. Leveraging the existing legal framework, including the **Disaster Management Act, 2005**, National Building Codes, and **urban planning guidelines**, can foster a more disaster-resilient urban environment.

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