



## 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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