Fire Safety Rules

Why in news?

The recent fires at a gaming zone in Rajkot, Gujarat, and a children's hospital in Delhi, have brought attention to fire safety regulations in India.

Status of fire accidents in India
• As per latest Accidental Deaths and Suicides in India (ADSI) report released by the National Crimes Records Bureau as many as 7,435 people were killed in over 7,500 fire accidents in 2022. • The data indicates that fire accidents continue to cause heavy casualties, with no lessons learnt from the 1997 Uphaar Cinema tragedy or the Kumbakonam fire that killed 90 schoolchildren in 2004. • As per Localcircles survey, despite the frequent occurrence of such fire accidents, 8 out of 10 Indians acknowledge that their homes and workplaces do not adhere to fire safety standards. • Merely 18% of respondents claim that the fire safety equipment in their homes is checked annually, while only 27% report the same for their workplaces. • 27% claimed that compliance to fire safety was never done at their home. • **Fire safety** –It is primarily a state responsibility in India, as fire services fall under municipal functions per the *12th Schedule of the Constitution.*

What are the fire safety regulations followed in India?

National Building Code

- **About**- It is published by the Bureau of Indian Standards (BIS) which is the central framework for fire safety in the country that provides comprehensive guidelines on the construction, maintenance, and fire safety of buildings.
- **Building classifications**- Categorizing buildings based on use and occupancy to apply specific fire safety measures.
- **Material specifications-** Recommending non-combustible materials for construction to mitigate fire risks.
- **Fire safety systems**- Mandating systems like automatic fire detection, alarm systems, sprinklers, emergency lighting, and exit signage.
- **Electrical safety-** Requiring flame retardant properties for wiring and

cables, proper earthing, and separate conduits for different voltage levels.
- **Escape routes-** Ensuring properly identified and adequately lit escape routes for safe evacuation.

Model Building Bye Laws, 2016 (MBBL)

- **About-** It is issued by the Ministry of Housing and Urban Affairs to ensure safe, sustainable and efficient urban development with a significant focus on fire safety.
- **Implementation-** It provides a uniform set of guidelines for all States and UTs to ensure consistency in building regulations across the country.
- **Safety and sustainability-** It enhances safety, sustainability and resilience of buildings especially against fire hazards.
- **Modernization**- Incorporate modern construction practices and technologies to improve building safety and efficiency.
- **Uniformity**- It integrates extensive fire safety measures aligned with NBC with the aim to minimizing fire risks and ensuring quick and safe evacuation in case of emergencies.

Guidelines of National Disaster Management Authority

- **About-** It supports States in framing their building byelaws and fire safety norms.
- **Fire risk assessment:** Conduct regular fire risk assessments to identify potential hazards and vulnerabilities within buildings and premises.
- **Hospital-** Install fire detection and suppression systems in critical areas such as operation theaters, intensive care units (ICUs), and laboratories. Ensure that all medical staff are trained in fire safety protocols.
- **Schools**- Ensure that schools have adequate fire safety equipment, conduct regular fire drills, and educate students about fire safety practices.
- **Public buildings-** Equip public buildings with comprehensive fire safety measures, including alarm systems, sprinklers, and clearly marked evacuation routes.

What are the challenges of fire safety in India?

- **Non-uniform legislation**- Different states and municipalities have varied levels of adoption and enforcement of the NBC and MBBL.
- **Outdated infrastructure-** Many buildings, especially in older urban areas, were constructed before modern fire safety standards were established and lack the necessary infrastructure to combat fires

effectively.

- **High rise buildings-** The increasing number of high-rise buildings poses significant fire safety challenges due to the complexity of evacuation and firefighting operations in tall structures.
- **Urban congestion**- High population density in urban areas increases the risk and potential impact of fires, complicating evacuation and firefighting efforts.
- **Fund deficit-** There is a lack of initiatives and funding for retrofitting older buildings with modern fire safety equipment and systems.
- **Lack of compliance**- Many establishments, particularly commercial ones, flout basic safety norms and fail to obtain necessary certifications, such as No-Objection Certificates (NOCs) from fire departments.
    - Example- Rajkot gaming zone fire and Delhi hospital fire incident noted that these structures was set up without proper NOCs and lacked adequate fire-fighting equipment.
- **Inadequate audits-** Fire safety audits are not conducted regularly or rigorously, leading to non-compliance going unchecked.
- **Staff shortages-** Fire services often suffer from a lack of personnel, exacerbating the problem of insufficient enforcement.

What should be done?

- **Strict enforcement-** Implement uniform fire safety legislation across states to ensure consistent application of the NBC.
- **Regular audits**- Conduct regular and rigorous fire safety audits to ensure compliance.
- **Awareness generation**- Increase community awareness and resilience through education and training on fire safety measures.
- **Resource allocation-** Address staff shortages and equip fire services with adequate resources and training.
- **Encouraging technological adoption-** There is a need to provide incentives for the adoption of advanced fire safety technologies and ensure their regular maintenance.
- **Fund support-** The government should offer financial assistance or subsidies to economically weaker sections to implement necessary fire safety measures

References

1. The Hindu- Fire safety rules in India

2. The Print- Survey on fire safety equipment
3. NDMA- Fire safety awareness

