

Fire safety code for buildings

May 5, 2020

Source: *The Hindu*

Manifest pedagogy: Fire incidents are on rise these days due to improper precautionary measures taken by authorities as well as negligence. This topic deals with the measures to be taken to mitigate such ill happenings. It deals with disaster management and is important from mains perspective.

Placing it in syllabus: Disaster management

Static dimensions: History of fire services in India

Current dimensions:

- Issues of fire safety
- Measures needed to deal with it
- National Building code

Content: Fire poses a major threat to various occupancies in India. Because of its peculiar nature, fire in residential buildings, high rise buildings, become more complex and the salvaging operations become more difficult.

These result in the loss of lives and injuries to many and have also inflicted heavy property loss. The rapid modernisation of Indian industries have made the scenario more complex.

History of fire services in India:

- Regular fire services in India were **first established in Bombay in 1803, followed by Calcutta in 1822**, Delhi in 1867 and Madras in 1908.
- Fire services in India came under the **Twelfth Schedule**

of the Constitution of India, under the provisions of **Article 243W** of the Constitution (under the **domain of Municipalities**).

- Ministry of Home Affairs, in 2009, approved the **Centrally Sponsored Scheme on Strengthening of Fire and Emergency Services** at an estimated cost of Rs.200 crore during the Eleventh Plan Period.
- The **Scheme for 'Modernization of Fire and Emergency Services in the Country' (2014-2016)** was launched, which has been subsumed in the State Plan Funds from 1st April, 2015 and hence no budget provision has been made thereafter.
- Presently, fire prevention and firefighting services are **organised by the concerned States and Union Territories**.
- The Ministry of Home Affairs has been assisting the State Governments to increase the fire fighting capabilities by **arranging soft loans from General Insurance Corporation through the Ministry of Finance (Insurance Division)**.

Issues of fire safety:

- **Poorly enforced regulations** lead to thousands of deaths in fires across India every year.
- Many residential areas in metropolitan cities like Delhi, Kolkata, Chennai and Bangalore are no longer distinguishable from planned industrial areas.
- **Majority of the buildings lack NoC from the fire department** and continue to sustain huge populations at the risk of their lives.
- The municipal corporations and local bodies are responsible for providing fire services in many states.
- But due to **lack of resources, fire services are ill equipped** in providing adequate fire safety cover to the population.
- Based on a 2011 study, **65 percent deficiency was**

reported in fire stations.

- According to the Ministry of Home Affairs, in **144 towns with a population over 1 lakh, there is a huge deficiency of fire fighting infrastructure.**
- **Laxity in following fire safety measures** caused many major fires in various occupancies and some of them even resulted in catastrophes.
- There are many offices, high rise buildings and religious places having firefighting equipment installed but **hardly any person has the knowledge of using them** and thus the **lack of maintenance makes the equipment dysfunctional.**

Measures needed to deal with fire incidents:

- A **complete fire incident management** is required.
- In India codes and standards related to fire safety are seldom followed.
- Development agencies monitoring the construction of houses need to diligently **follow the regulatory authorities' prescribed norms** of fire safety measures and implement them.
- **Training of employees and building awareness among citizens** about fire prevention and protection measures is also of paramount importance.
- **Organising a firefighting workshop** once in six months in localities/schools with the involvement of local elected representatives is necessary.
- **Mid-day meal cooking in schools should be regularly monitored** by fire service departments at least once in six months.
- To **fasten the justice delivery in cases related to fire incidents**, they should also be heard in the **fast track courts** so that the compensation could be awarded to the affected person at the right time.
- **Hazard Identification & Risk Assessment (HIRA)** can be focused to identify potential hazards.

- **Fire Safety Audit (FSA)** is found to be an effective tool to assess fire safety standards of an organisation or an occupancy.
- Hence FSA, at least once in a year by independent agencies should be made mandatory all over India.
- E.g. rules framed under the **Maharashtra Fire Prevention and Life Safety Measures Act, 2006** has made it mandatory for building owners and residents to conduct half-yearly fire safety audits and submit the report to the fire department.

National Building Code (NBC):

- The National Building Code is published by the **Bureau of Indian Standards (BIS)**.
- It is the **basic model code in India on matters relating to building construction and fire safety**.
- The **first edition** of NBC was **published in 1970**.
- The second edition of NBC was published in 2005 and the **recent edition of the NBC was published in 2016** which is the third one.
- As fire prevention and fire protection is a **state subject**, rules for fire prevention and fire protection are laid in the **form of State Regulations or Municipal By-Laws**.
- The NBC classify the **buildings into the following 9 groups:**

1. Residential
2. Educational
3. Institutional
4. Assembly
5. Business
6. Mercantile
7. Industrial
8. Storage
9. Hazardous

The code broadly covers the following areas:

Fire prevention: This covers aspects of fire prevention pertaining to the design and construction of buildings. It also describes the various types of buildings materials and their fire rating.

Life Safety: This covers life safety provisions in the event of fire and similar emergencies, also addressing construction and occupancy features that are necessary to minimise danger to life from fire, smoke, fumes or panic.

Fire Protection: Covers significant accessories and their related components and guidelines for selecting the correct type of equipment and installations meant for fire protection depending upon the classifications and type of building.

The guidelines for **fire drills and evacuations for high-rise buildings** are also specified. It **mandates the appointment of a qualified fire officer and trained staff** for significant land uses.

((**Note: Oil Industry Safety Directorate (OISD)** under the Ministry of Petroleum and Natural Gas formulates and coordinates the implementation of a series of self-regulatory measures aimed at enhancing the safety in the oil & gas industry in India.))

Procedure followed:

- The fire safety norms as per NBC states that **buildings above 15 metre in height would require a NoC** from the fire safety department.
- The procedure involves **two stages** mainly:
- The **first stage** is prior to construction of a building wherein building plans are approved and fire safety recommendations are issued.
- The **second stage** is after the construction of the building before commencing occupancy, when all the

recommended fire and life safety measures have been provided.

- **Fire Safety Certificate (FSC)** needs to be issued after verification.

The fire safety recommendations once issued are valid till there is no addition/ alteration or revision in approved plan. The **FSC's are to be renewed after a period of 5 years for residential buildings and 3 years for non-residential buildings** including hotels.

Mould your thought: Analyse the issues of fire safety in India. What is the importance of National Building code (NBC) in this regard?