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ANALYSIS**

**TOPIC**

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**Strengthening Industrial  
Safety**

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## STRENGTHENING INDUSTRIAL SAFETY

### Context

- The recurrence of industrial disasters in India underscores the need for urgent reforms in the inspection system, especially in hazardous industries where accidents have caused loss of life, injuries, and property damage.

### Factory Accidents in India

- Industrial accidents pose significant risks to workers, communities, and the environment, impacting lives and productivity. The World Health Organization (WHO) and International Labour Organization (ILO) report that work-related diseases like chronic obstructive pulmonary disease, stroke, and ischemic heart disease are major causes of death.
- The National Disaster Management Authority (NDMA) has recorded 130 significant chemical accidents over the past decade, resulting in 259 deaths and 563 major injuries. Notable disasters include the Bhopal Gas Tragedy (1984), the Visakhapatnam Gas Leak (2020), and more recently, the Dombivli chemical factory explosion in May 2024.

### Reasons Highlighted For Accidents

- **Inadequate Safety Measures:** Some industries do not adhere to safety standards due to loopholes in regulations or insufficient monitoring by regulatory authorities.
  - ◆ Fatal industrial accidents have been alarmingly frequent, with incidents reported in 2016, 2018, 2020, and 2023.
  - ◆ Shockingly, the boiler in the chemical factory involved in the recent explosion was not even registered under the **Indian Boiler Regulations, 1950**.
  - ◆ **Human error** like negligence and fatigue often lead to accidents.
- **Low Inspection Rates:** The inspection rates for hazardous factories are alarmingly low. For instance:
  - ◆ In Maharashtra, only 23.89% of hazardous factories were inspected in 2021.
  - ◆ Tamil Nadu had a general inspection rate of 17.04% and a hazardous factories inspection rate of 25.39%.
  - ◆ Gujarat's inspection rates were 19.33% (general) and 19.81% (hazardous).
  - ◆ Nationally, the figures were 14.65% (general) and 26.02% (hazardous).
- **Poor Prosecution Rates:** The prosecution rates (decided cases as a percentage of total prosecutions) are also disheartening and far from satisfactory.
  - ◆ Gujarat: 6.95%
  - ◆ Maharashtra: 13.84%
  - ◆ Tamil Nadu: 14.45%
- **Shortage of Personnel:** One reason for poor inspection rates is the shortage of personnel. In Maharashtra, only 39.34% of sanctioned officers were appointed. Gujarat and Tamil Nadu fared slightly better, but the overall situation remains inadequate.
- **Other key reasons** are lack of training and awareness, equipment failure, chemical and process safety, lack of emergency preparedness, and informal workforce etc.

### Prevention

- **Strengthening Labor Inspection:** To enhance safety and prevent accidents, India must address the following:
  - ◆ **Personnel Allocation:** Increase the number of inspectors and ensure adequate coverage.
  - ◆ **Efficient Inspections:** Reduce the workload per inspector to maintain the deterrent effect. Increase the number of inspectors and allocate adequate resources to ensure comprehensive inspections of all factories.
  - ◆ **Prosecution:** Improve prosecution rates to hold violators accountable.
  - ◆ **Streamline Regulatory Processes:** Simplify and expedite the registration and compliance procedures for factories.

- ◆ **Accountability and Enforcement:** Hold violators accountable through stricter enforcement and timely prosecutions.
- ◆ **Worker Safety First:** Prioritise worker safety over profit margins and business interests.

### Related Government's Initiatives

- **National Policy on Safety, Health and Environment at Workplace (NPSHEW):** It aims to promote a preventive safety culture in industries and workplaces, and to integrate safety, health, and environmental concerns into the decision-making processes of industries and improve the overall safety performance.
- **Industrial Safety and Disaster Management Plans:** The government mandates industries to develop and implement safety and disaster management plans to mitigate the risks of industrial accidents.
  - ◆ These plans include measures for risk assessment, emergency response, evacuation procedures, and training programs for employees.
- **National Disaster Management Authority (NDMA):** The NDMA plays a crucial role in disaster preparedness, response, and mitigation across various sectors, including industrial safety.
  - ◆ It formulates policies, plans, and guidelines for disaster management and works with relevant stakeholders to ensure effective coordination during emergencies.
- **Bureau of Indian Standards (BIS):** BIS develops and maintains standards for industrial safety equipment, materials, and processes to ensure compliance with safety regulations.
- **Labour Inspection and Enforcement:** The government conducts regular inspections of industrial establishments to assess compliance with safety regulations and identify potential risks.
  - ◆ Strict enforcement measures are taken against violators to ensure accountability and deterrence.

### Related Global Efforts

- **Global Strategy on Occupational Safety and Health (2024-2030):** The **International Labour Organization (ILO)** has introduced a new plan to prioritise workers' well-being.
  - ◆ It aims to enhance safety and health in workplaces worldwide, aligning with the ILO's commitment to social justice and decent work.

### International Tools and Support

- **Organisation for Economic Co-operation and Development (OECD):** Provides policy guidance for the prevention, preparedness, and response to chemical accidents.
- **EU Policy:** Focuses on major-accident hazards.
- **UN Environment:** Supports prevention and preparedness at local and national levels.
- **WHO:** Manages public health during chemical incidents.
- **United Nations Office for Disaster Risk Reduction (UNISDR):** Advocates for a new framework for disaster risk reduction.
- **Organisation for the Prohibition of Chemical Weapons (OPCW):** Implements chemical safety and security programs.

### Conclusion

- Labour market governance through the inspection system needs urgent reform. Only then can we prevent factory accidents and protect workers' lives.
- Given the fast-paced changes in technology and the use of hazardous and chemical substances, increased inspection is crucial.



### Mains Practice Question

[Q] The recurrence of industrial disasters in India underscores the need for comprehensive reforms in safety regulations, inspection mechanisms, and enforcement protocols. Critically analyze