

## Railway Accidents

### Why in news?

A statutory inquiry is initiated by the Commissioner of Railway Safety (CRS) following the train accident involving Kanchanjunga Express.

### What is a railway disaster?

- The concept of a Disaster was not adequately and comprehensively defined on Indian Railways, till the year 2005.
- **Disaster in the Railway context** - It traditionally refers to a serious train accident, caused by human/equipment failure, which may affect normal movement of train services with loss of human life or property or both.
- **Types of railway disasters** - It now includes natural and other man made disasters.
- **Natural Disaster** - It Includes Earthquakes, Floods, Cyclones, Land Slides, Snow Avalanches, Tsunami etc.
- **Train Accident related Disaster** - It includes
  - Collisions (with a huge number of casualties)
  - Train marooned (flash floods)
  - Derailments on a bridge over a river and coaches falling down
  - Train washed away in cyclone,
  - Derailment of a train carrying explosives or highly inflammable material
  - Tunnel collapse on a train, fire or explosion in trains, and other miscellaneous cases etc.
- **Manmade Disasters** - It covers Acts of Terrorism and Sabotage, i.e. causing deliberate loss of life and/or damage to property.
- It includes Setting a Train on fire, Railway installations etc., bomb blast at Railway Station/Train, Chemical (Terrorism) Disaster, Biological, Radiological and Nuclear Disaster.

- It is the world's 4<sup>th</sup> largest railway network after US, China and Russia respectively.
- It is the largest system under a government in terms of passenger traffic.
- **First Indian passenger train** - It ran between Mumbai's Bori Bandar to Thane covering a distance of 34 kms.
- **Mascot** - It is called as '*Bholu*', dressed like *elephant*.
- **Longest train route** - *Dibrugarh-Kanyakumari Vivek Express* which runs between Assam and Kanyakumari that takes about 79 hours.
- **Network** - It has crossed 1,00,000 running track kms, and it is about to become fully electrified.
- **UNESCO recognition** - It has world's four UNESCO heritage sites.
  - Darjeeling Himalayan Railway
  - Chhatrapati Shivaji Terminus in Mumbai
  - Nilgiri Mountain Railway
  - Kalka Shimla Railway

### What is the status of railway accidents in India?

- **Collisions** - They are the worst kind of accidents and invariably result in casualties.
  - In the year 2021-22 - Only two
  - In the year 2022-23 - A total of 6 collisions
  - In the year 2023-24 - As of now, 4 collisions
- Most of these collisions involved casualties and injuries to passengers.
- **National Crime Record Bureau (NCRB)** - Its 2022 report states that more than 100,000 train-related deaths were reported between 2017 and 2021.
- **UIC report 2023** - It found that in 2022, in the rail systems of 35 countries, 1,888 significant rail accidents were recorded.
- While overall rail system of 35 countries works out to 0.39 accidents per million train km, Indian Railway's record is 0.03 per million train km in 2022.
- Thus, despite major accidents involving collisions, the IR claims to have one of the best safety records in terms of accidents per million train km, even better than many European systems.

***International Union of Railways (UIC)** is the worldwide professional association representing the railway sector and promoting rail transport. It is helping Members find continuing success and opportunities.*

- **Compensation for unwanted incident** - Section 124A of the Railways Act of 1989 defines an 'unwanted incident'.
- If an untoward incident occurs while the railways are in operation, the railway administration must compensate the victim or the victim's dependent.
- This compensation is regardless of whether or not the railway administration was negligent or made a mistake.

### What are the reasons for railway accidents in India?

- **Train Operator Error** - Human error is a contributing factor in a large number of railway accidents.

- This could be due to poor training, inexperience, reckless behavior, or a combination of these.
- **Track Problems** - Track owners are responsible for keeping their tracks maintained and in good repair.
- Over time, tracks become worn and broken, which can cause train derailments and other problems.
  - NCRB - 69% of railway accidents from 2018 to 2021 were caused due to derailments.
- **Lack of Warning Signals** - This is particularly common in rural areas, where those in charge of these crossings often do not have the budget to make them safer.
- **Warning Signal Defects** - Many crossings have warning signals installed, but they have not been maintained properly or there may be a faulty part that malfunctions.
- **Outdated and ageing train coaches** - Most train coaches were developed at the *Integral Coach Factory (ICF)*, and they are known for piling up on collision.
- The updated *Linke Hoffman Busch (LHB) coaches* made of stainless steel are more effective at shock absorption and preventing derailment.
- **Overcrowding** - There is a mad rush for trains on high-density routes, particularly during weekends, major festivals and summer holidays.
- Coaches are filled to four times their capacity.
- **Staff shortages** - According to information presented in the Rajya Sabha in 2023, 3.12 lakh non-gazetted railway posts were vacant in the country.
- Any vacancies in these categories mean *stress and overwork for the existing staff*.

### Committees for Railway Safety

- There have been 28 reports on the railways since 1993.
- Rakesh Mohan Committee (National Transport Development Policy Committee (NTPDC)), 2010
- Sam Pitroda Advisory Committee (2012)
- Kakodkar Committee (2012)
- Dinesh Trivedi Committee (2012)
- Bibek Debroy Committee (2015)

To know about Railway Safety measures, click [here](#)

### What lies ahead?

- Allow provision of low-cost equipment in locomotives to aid the driving crew.
- Strengthen preventive maintenance of signalling assets.
- Impart intensive training to staff.
- Treat every *Signal Passed at Danger (SPAD)* case as a major accident and deal with it accordingly.
- Emulate the successful examples of *Automatic Train Protection Systems* like the Mumbai suburban.
- *Safety Fund resources* should be utilised towards safety.

### References

1. [The Indian Express| Steps to improve Railway Safety](#)

2. [Lok Sabha| Railway Disasters](#)

