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.

Indian Railways (IR)

• It is the world's *4th 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 s*tress 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

