

## EVERYDAY CURRENT AFFAIRS-JUNE 4, 2023

### NATIONAL

- Around 300 people were dead and more than 1,000 people injured - in the three-train accident at Bahanaga Bazar station in Odisha's Balasore district
- ✓ As per the initial investigation, the accident occurred as the Shalimar-Chennai Coromandel Express wrongly entered to a loop line even though it had received signal indication to move on to the main line towards Chennai

### 4 MINUTES WHEN IT ALL FELL APART

**Everything seemed to go wrong all at once.** First, the Chennai-bound Coromandel Express entered a wrong loop line and crashed into a stationary goods train. The force was such that the engine climbed on top of the goods train and all 22 coaches of Coromandel Express derailed, with three coaches falling on the track next to it, just when the Bengaluru-Howrah Superfast Express was moving on it towards Howrah. This is how it happened

**1 6.52 pm |** Shalimar-Chennai Coromandel Express passes Khan-tapara station, 10km from Bahanaga Bazar Station, moving at 128kmph

**2 6.54 pm |** Original signal for Coromandel Express was to be on main line towards Chennai. Control panel in railway control room confirms this and a railways' joint inspection report, too, says so

**3 6.55 pm |** Coromandel Express enters a loop line at high speed due to error in control centre or at cabin guard's end and crashes into a stationary goods train there

**4 6.56 pm |** The impact of the collision throws the Coromandel Express engine on top of the goods train — 22 coaches of Coromandel Express are derailed with three coaches falling onto the parallel line

**5 6.56 pm |** Coming from the other side on the adjacent track is Bengaluru-Howrah Superfast Express (12864). The tail-end of the Howrah-bound train hit the derailed coaches of Coromandel Express

#### The Rescue Op

**1,200 Personnel** 200 ambulances, 50 buses and 45 mobile health units were deployed to the accident site, as were Army jawans and engineering and medical personnel from bases in West Bengal

**Sniffer Dogs** Sniffer dogs were brought in and gas cutters used to create access through the mangled steel and wreckage of the three trains as rescuers looked for survivors and removed bodies

**Injured Airlifted** All govt and private hospitals in nearby districts were being used for treating the injured with two Mi-17 choppers also pressed into service to airlift passengers

Graphic: Ram & Arya Praharaj

- ✓ The Coromandel Express crashed so hard at speeds of 130kmph that its engine climbed the parked goods train and 22 compartments packed with passengers derailed.
- ✓ Three of the derailed coaches ran into parallel tracks and hit the tail-end of the Sir M Visveswaraya Terminal Bengaluru-Howrah Superfast Express crossing the station at the same time.
- ✓ The accident is the deadliest railway tragedy to occur in the last 30 years
- ✓ The Coromandel Express, belonging to South Eastern Zone Railway, has not been fitted with 'Kavach', anti-collision system.

### WORST TRAIN ACCIDENTS GLOBALLY

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| <b>December 2004</b><br>Over 1,700 people died in an accident caused by the 2004 Indian Ocean tsunami. The waves flooded and destroyed Samudradevi (Queen of the Sea) passenger train, moving from Colombo to Galle.                                | <b>January 1944</b><br>Over 600 people died when a train passing over a temporary wooden bridge on a lake formed after the bombing of embankments, plunged into icy cold water in Dyatkovsky District in Russia.                               |
| <b>Jan 1917</b><br>Between 800 and 1,000 people died when a train that was running several hours late because of German bombing in the First World War derailed near Ciurea station in Romania. It was carrying people fleeing the German advances. | <b>January 1915</b><br>During the Mexican Revolution, over 600 died when a special train derailed between Colima and Guadalajara while negotiating a steep descent. It was carrying families of revolutionaries to newly captured strongholds. |
| <b>December 1917</b><br>Train derailment while descending the Maurienne Valley in France killed 675.  | soldiers returning home after fighting at the Italian Front in World War I.  |

- ✓ It has to be recalled that railways has developed automatic train protection (ATP) system, called Kavach, as part of 'Atmanirbhar Bharat' initiative to prevent collision between trains on the same track

### WHAT IS KAVACH?

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| <b>&gt; Kavach (armour) is a train collision avoidance system</b><br><b>&gt; Announced in March 2022, the system was developed by Research Design and Standards Organisation (RDSO)</b><br><b>&gt; The system consists of electronic and high radio frequency instruments installed in trains, tracks, and signaling systems</b> | <b>&gt; These instruments are programmed to communicate with each other</b><br><b>&gt; These digital systems can spot if a train jumps signal or if another train is on the same track</b><br><b>&gt; It then takes control of the brakes</b> | <b>and applies it automatically bringing the train to a halt</b><br><b>&gt; RFID tags are placed on tracks every 1km and at station yard, and signals for train identification and train location and direction</b><br><b>&gt; Government had planned to install Kavach on a 2000km rail network during 2022-23</b> |
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- ✓ Kavach consists of electronic and radio frequency identification instruments such as radio antennas, RFID reader, loco train collision avoidance system (TCAS) and loco speedometers installed in locomotives, signalling systems and tracks.
- ✓ Kavach was announced in March 2022 and was developed by Research Designs and Standards Organisation, a unit of railways



- ✓ It was adopted as the national ATP system for Indian Railways.
- ✓ The patent for the device is held by Research Designs and Standard Organisation
- ✓ Kavach was developed to prevent train accidents by automatically applying the brakes when the digital system spots another train on the same track within a specific distance and in situations of over speeding or likely collision.
- ✓ The device sends signals that can be useful at higher speed and even in foggy weather.
- ✓ The anti-collision system works both to prevent head-on and rear collision of two trains running on the same track
- ✓ The system has been provided on 1,465km of South Central Railway and it has also been sanctioned as part of 'Mission Raftar' to upgrade the speed on New Delhi–Mumbai and New Delhi–Howrah sections (about 3,000km).
- ✓ The railway plans to bring around 34,000 km of network under Kavach.

PICS: PTI & IANS



### MATTER OF MINUTES: 3 TRAINS, LINE CONFUSION, COLLISION, DERAILMENT & ANOTHER COLLISION

**6.52pm** | Shalimar-Chennai **Coromandel Express** (12841) passes through Khantapara station, 10km from the mishap site of Bahanaga Bazar Station, at speed of **130 km per hour**

**6.54** | Original signal for Coromandel Express was to **pass through the main line towards Chennai**. No halt. Control panel in the railway control room also confirms it

**6.55** | Coromandel Express **erroneously enters loop line at high speed, dashes into stationary goods train** there. The impact causes the Coromandel engine to climb atop the freight train, causing 22 compartments to derail (pics). Three coaches veer off onto a

parallel line  
(Loop lines are constructed to accommodate more trains to ease operations. They are generally 750m long to accommodate full-length goods train with multiple engines)

**6.56** | On the parallel line, **Bengaluru-Howrah superfast express**, as it is popularly known, is coming from the opposite direction at **116kmph**. It has almost passed the stretch when the derailed Coromandel coaches **collide with its tail, 2 bogies derail**. Most of the deaths from 5 bogies of Coromandel and 2 of superfast express. Preliminary probe suggests **human error**



**BALASORE** Howrah

Odisha

Kuttack

ROUTE

Coromandel Express

Bengaluru-Howrah Superfast

Yesvantpur Chennai



**IT'S INDIA'S 3RD WORST TRAIN ACCIDENT**

**June 1981** | Seven bogies of passenger train from Mansi to Saharsa plunge into raging **Bagmati** river in Bihar due to torrential rains. **Toll pegged at 800** or higher

**August 1995** | **More than 300 people** killed as Delhi-bound **Purushottam Exp** collides with **Kalindi Exp** standing on the tracks near **Firozabad**

**August 1999** | Head-on collision between **Avadh Assam Express** and **Brahmaputra Mail** at **Gaisal** station in Uttar Dinajpur, West Bengal, results in deaths of **287 people**

- ✓ A team from Tamil Nadu comprising ministers Udhayanidhi Stalin and S S Sivasankar and senior bureaucrats is coordinating rescue and relief operations in Odisha.
- ✓ Chief minister M K Stalin instructed the team to stay in Odisha for a few more days and ensure that all the passengers who were bound for Tamil Nadu reach Chennai safely.
- ✓ According to government sources, all the passengers from Tamil Nadu were safe and none of the injured was from Tamil Nadu
- ✓ Earlier in the day, CM Stalin announced that the state government would observe one day mourning and all government programmes, events and the public meeting to celebrate the birth anniversary of late chief minister M Karunanidhi scheduled on June 3 were cancelled.

- ✓ CM Stalin announced ex-gratia of Rs.5 lakh each to the kin of the deceased and Rs.1 lakh each to the injured.

## CONFERENCES & SUMMITS

- **External Affairs Minister S Jaishankar** – represented the country and addressed at a meeting of the foreign ministers of BRICS (Brazil, Russia, India, China and South Africa) nations in Cape Town on June 1 and 2.
- ✓ South Africa, which currently chairs the bloc, is hosting the BRICS foreign ministers' meeting



- ✓ The BRICS ministers were joined by counterparts from countries including Saudi Arabia, the United Arab Emirates, Egypt and Kazakhstan.
- ✓ The meeting had 'expansion' as one of its agenda, with more than 20 countries including Egypt and the Middle Eastern oil-producing nations of Iran, Iraq, Kuwait, Qatar, Saudi Arabia and the UAE aspiring to join.
- ✓ The gathering is a precursor to the 15<sup>th</sup> summit of BRICS heads of state currently scheduled for Johannesburg from August 22-24
  - ✓ Prime Minister Narendra Modi, Russian President Vladimir Putin, Chinese President Xi Jinping and other heads of state will attend the summit.
- ✓ The External Affairs Minister is on an official visit to African countries, South Africa and Namibia from June 1-6.
- ✓ The BRICS bloc brings together five of the largest developing countries of the world, representing 41% of the global population, 24% of the global GDP and 16% of the global trade.

## SPORTS

- **On June 3, India's Sainyam** - claimed the gold medal in the women's 10m air pistol competition in the ISSF Junior World Cup at Suhl, Germany.
- ✓ Sainyam shot 238 in the eight-women final to finish on top of the podium.
- ✓ Korea's Kim Minseo claimed the silver medal with a total score of 236, while the bronze went to Liu Heng Yu of Taipei, who shot 216.9





- ✓ Sainyam clinched bronze in women's 10m air pistol event at the Khelo India Youth Games in February.
- **Manchester City - achieved a historic double after scoring twice to beat Manchester United 2-1 in the FA Cup final on June 3.**



- ✓ Pep Guardiola's team has completed a domestic double at Wembley, after winning the English Premier League title earlier.
- ✓ The team can become just the second side, after United in 1998/99, to win the Premier League, FA Cup and Champions League in the same season should they beat Inter Milan to become European champions for the first time on June 10.
- ✓ During the course of the match, Gundogan scored the fastest goal in FA Cup final history after just 12 seconds.
- **Faith Kipyegon - broke the world record for the women's 1500 metres at the Florence Diamond League on June 2 with a time of 3: 49.11 seconds.**
- ✓ The 29-year-old Kenyan bettered the previous best of 3:50.07 set by Ethiopia's Genzebe Dibaba in Monaco in 2015.

- ✓ British Laura Muir finished second in 3:57.09, and third-placed Australian Jessica Hull clocked 3:57.29 to set an Australian and Oceania record.



- ✓ Kipyegon was considered the greatest ever woman in the discipline with two world and two Olympic titles to her name
- ✓ Kipyegon owned the second fastest time after clocking 3:50.37 in August in Monaco
- ✓ Meanwhile, World champion Fred Kerley eased to victory in the men's 100 metres, in the absence of injured Olympic champion Marcell Jacobs.