

GOVERNMENT OF INDIA  
MINISTRY OF RAILWAYS  
**RAJYA SABHA**  
**UNSTARRED QUESTION NO. 3943**  
**ANSWERED ON 27.03.2026**

**DEVELOPMENT OF INFRASTRUCTURE UNDER RAILWAYS**

3943 SHRI K.R.N. RAJESHKUMAR:

Will the Minister of RAILWAYS be pleased to state:

- (a) the current status of the Kavach 4.0 (Automatic Train Protection system) implementation and the specific reasons as to why only approximately 1,306 route kilometers have been commissioned as of early 2026 against a target of 68,000+ kilometers;
- (b) the State-wise progress of the Amrit Bharat Station Scheme (ABSS) and whether the Ministry has received reports of significant passenger inconvenience and safety hazards due to simultaneous construction at active stations; and
- (c) whether there is any proposal to restore senior citizen concessions in the 2026-27 budget to provide relief to elderly travellers, given the normalization of railway revenues?

**ANSWER**

MINISTER OF RAILWAYS, INFORMATION & BROADCASTING AND  
ELECTRONICS & INFORMATION TECHNOLOGY

(SHRI ASHWINI VAISHNAW)

(a) to (c): Safety is accorded the highest priority on Indian Railways. As a consequence of various safety measures taken over the years, there has been a steep decline in the number of accidents.

Number of Consequential Train Accidents has reduced as shown in the table below:-

Year	Consequential Accidents
2014-15	135
2025-26 (upto 28.02.2026)	14 (90% lesser)

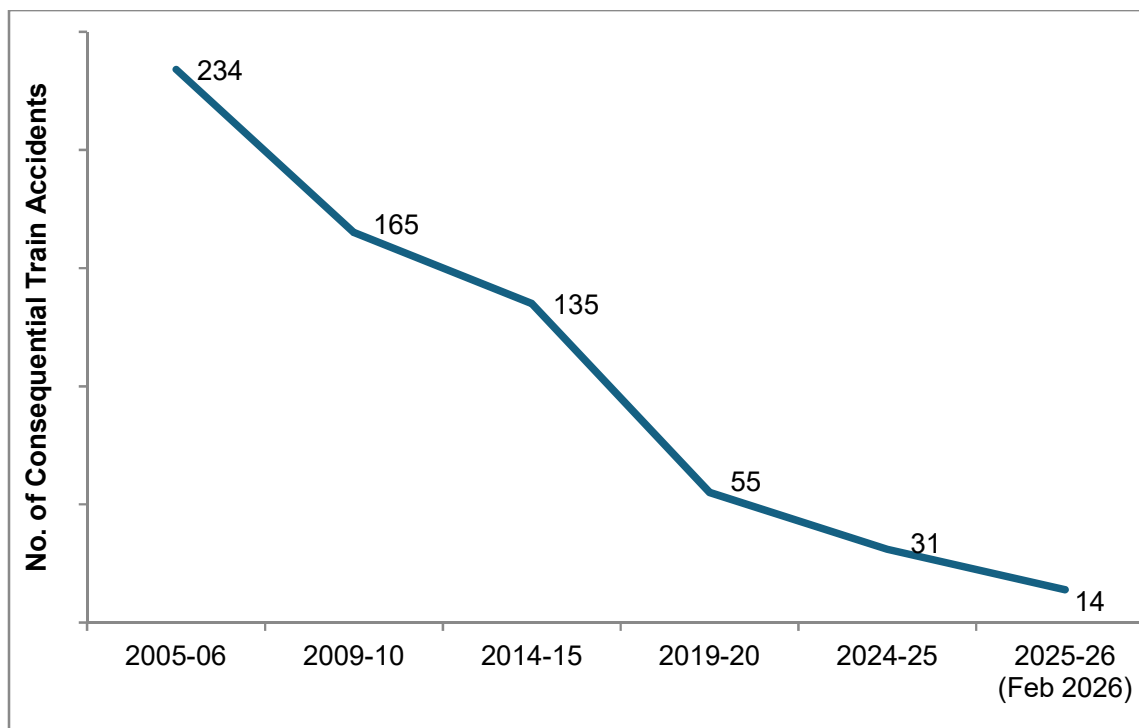
Another important index showing improvement in safety in train operations is Consequential Accident Index, the details of which are as under:-

**Consequential Accident Index:-**

Year	Accident Index
2014-15	0.11
2024-25	0.03 (73% lesser)

This index measures number of consequential accidents as a ratio of total running kilometers of all trains.

$$\text{Accident Index} = \frac{\text{No. of consequential accidents}}{\text{No. of trains X million kilometers run}}$$



Consequential Train Accidents on Indian Railways and casualties (including railway passengers and railway personnel) therein are as follows:-

Period	No. of Consequential Train Accidents	No. of Deaths	No. of injuries
2004-05 to 2013-14	1,711	904	3,155
2014-15 to 2023-24	678	748	2,087
2024-25	31	18	92

The various safety measures taken to enhance safety in train operations are as under:-

1. On Indian Railways, the expenditure on Safety related activities has increased over the years as under:-

Year	Expenditure/Budget on Safety related activities (Rs. In Cr.)
2013-14	39,200
2022-23	87,336
2023-24	1,01,662

2024-25	1,14,022
2025-26	1,17,693
2026-27	1,20,389

2. Electrical/Electronic Interlocking Systems with centralized operation of points and signals have been provided at 6665 stations upto 28.02.2026 to reduce accidents due to human failure.
3. Interlocking of Level Crossing (LC) Gates has been provided at 10,153 Level Crossing Gates up to 28.02.2026 for enhancing safety at LC Gates.
4. Complete Track Circuiting of stations to enhance safety by verification of track occupancy by electrical means has been provided at 6,665 stations up to 28.02.2026.
5. Detailed instructions on issues related with safety of Signalling, e.g. mandatory correspondence check, alteration work protocol, preparation of completion drawing, etc. have been issued.
6. System of disconnection and reconnection for S&T equipment as per protocol has been re-emphasized.
7. All locomotives are equipped with Vigilance Control Devices (VCD) to improve alertness of Loco Pilots.
8. Retro-reflective sigma boards are provided on the mast which is located two OHE masts prior to the signals in electrified territories to alert the crew about the signal ahead when visibility is low due to foggy weather.
9. A GPS based Fog Safety Device (FSD) is provided to loco pilots in fog affected areas which enables loco pilots to know the distance of the approaching landmarks like signals, level crossing gates, etc.
10. Modern track structure consisting of 60kg, 90 Ultimate Tensile Strength (UTS) rails, Prestressed Concrete Sleeper (PSC) Normal/Wide base sleepers with elastic fastening, fan shaped layout turnout on PSC sleepers, Steel Channel/H-beam Sleepers on girder bridges is used while carrying out primary track renewals.
11. Mechanisation of track laying activity through use of track machines like PQRS, TRT, T-28 etc. to reduce human errors.
12. Maximizing supply of 130m/260m long rail panels for increasing progress of rail renewal and avoiding welding of joints, thereby improving safety.
13. Ultrasonic Flaw Detection (USFD) testing of rails to detect flaws and timely removal of defective rails.
14. Laying of longer rails, minimizing the use of Alumino Thermic Welding and adoption of better welding technology for rails i.e., Flash Butt Welding.
15. Monitoring of track geometry by OMS (Oscillation Monitoring System) and TRC (Track Recording Cars).

16. Patrolling of railway tracks to look out for weld/rail fractures.
17. The use of Thick Web Switches and Weldable CMS Crossing in turnout renewal works.
18. Inspections at regular intervals are carried out to monitor and educate staff for observance of safe practices.
19. Web based online monitoring system of track assets viz. Track database and decision support system has been adopted to decide rationalized maintenance requirement and optimize inputs.
20. Detailed instructions on issues related with safety of Track, e.g. integrated block, corridor block, worksite safety, monsoon precautions, etc. have been issued.
21. Preventive maintenance of railway assets (Coaches & Wagons) is undertaken to ensure safe train operations.
22. Replacement of conventional ICF design coaches with LHB design coaches is being done.
23. All unmanned level crossings (UMLCs) on Broad Gauge (BG) route have been eliminated by January 2019.
24. Safety of Railway Bridges is ensured through regular inspection of Bridges. The requirement of repair/rehabilitation of Bridges is taken up based upon the conditions assessed during these inspections.
25. Indian Railways has displayed Statutory “Fire Notices” for widespread passenger information in all coaches. Fire posters are provided in every coach so as to educate and alert passengers regarding various Do’s and Don’ts to prevent fire. These include messages regarding not carrying any inflammable material, explosives, prohibition of smoking inside the coaches, penalties etc.
26. Production Units are providing Fire detection and suppression system in newly manufactured Power Cars and Pantry Cars, Fire and Smoke detection system in newly manufactured coaches. Progressive fitment of the same in existing coaches is also underway by Zonal Railways in a phased manner.
27. Regular counselling and training of staff is undertaken.
28. Concept of Rolling Block introduced in Indian Railways (Open Lines) General Rules vide Gazette notification dated 30.11.2023, wherein work of integrated maintenance/ repair/replacement of assets is planned up to 52 weeks in advance on rolling basis and executed as per plan.

The details of the Safety related works related to better maintenance practices, Technological improvements, better infrastructure and rolling stock etc. undertaken by Railways are tabulated below:-

S.N.	Item	2004-05 to 2013-14	2014-15 to 2024-25	2014-25 Vs. 2004-14
	<b>Technological Improvements</b>			
1.	Use of high-quality rails	57,450 Km	1.43 Lakh Km	More than 2

	(60 Kg) (Km)			times
2.	Longer Rail Panels (260m) (Km)	9,917 Km	77,522 Km	Nearly 8 times
3.	Electronic Interlocking (Stations)	837 Stations	3,691 Stations	More than 4 times
4.	Fog Pass Safety Devices (Nos.)	As on 31.03.14: 90 Nos.	As on 31.03.25: 25,939 Nos.	288 times
5.	Thick Web Switches (Nos.)	Nil	28,301 Nos.	
<b>Better Maintenance Practices</b>				
1.	Primary Rail Renewal (Track Km)	32,260 Km	49,941 Km	1.5 times
2.	USFD (Ultra Sonic Flaw detection) Testing of Welds (Nos.)	79.43 Lakh	2 Crore	More than 2 times
3.	Weld failures (Nos.)	In 2013-14: 3699 Nos.	In 2024-25: 370 Nos.	90 % reduction
4.	Rail fractures (Nos.)	In 2013-14: 2548 Nos.	In 2024-25: 289 Nos.	More than 88% reduction
<b>Better Infrastructure and Rolling Stock</b>				
1.	New Track KM added (Track Km)	14,985 Km	34,428 Km	More than 2 times
2.	Flyovers (RoBs)/Underpasses (RUBs) (Nos.)	4,148 Nos.	13,808 Nos.	More than 3 times
3.	Unmanned Level crossings (Nos.) on BG	As on 31.03.14: 8,948	As on 31.03.24: Nil (All eliminated by 31.01.19)	Removed
4.	Manufacture of LHB Coaches (Nos.)	2,337 Nos.	42,677	More than 18 times

1. Kavach is an indigenously developed Automatic Train Protection (ATP) system. Kavach is a highly technology intensive system, which requires safety certification of highest order (SIL-4).
2. Kavach aids the Loco Pilot in running of trains within specified speed limits by automatic application of brakes in case Loco Pilot fails to do so and also helps the trains to run safely during inclement weather.

3. The first field trials on the passenger trains were started in February 2016. Based on the experience gained and Independent Safety Assessment of the system by Independent Safety Assessor (ISA), three firms were approved in 2018-19, for supply of Kavach Ver 3.2.
4. Kavach was adopted as National ATP system in July, 2020.
5. Implementation of Kavach System involves following Key Activities:
  - i. Installation of Station Kavach at each and every station, block section.
  - ii. Installation of RFID Tags throughout the track length.
  - iii. Installation of telecom Towers throughout the section.
  - iv. Laying of Optical Fibre Cable along the track.
  - v. Provision of Loco Kavach on each and every Locomotive running on Indian Railways.
6. Based on deployment of Kavach version 3.2 on 1465 Rkm on South Central Railway and experience gained, further improvements were made. Finally, Kavach specification version 4.0 was approved by RDSO on 16.07.2024.
7. Kavach version 4.0 covers all the major features required for the diverse railway network. This is a significant milestone in safety for Indian Railways. Within a short period, IR has developed, tested and started deploying Automatic Train Protection System.
8. Major improvement in Version 4.0 includes increased Location Accuracy, Improved Information of Signal Aspects in bigger yards, Station to Station Kavach interface on OFC and Direct Interface to existing Electronic Interlocking System. With these improvements, Kavach Ver.4.0. is planned for large scale deployment over Indian Railways.
9. After extensive and elaborate trials, Kavach Version 4.0 has been successfully commissioned on 1638 Route Kilometres, covering the high density Delhi- Mumbai and Delhi-Howrah routes as below:

SN	Section	Progress (Route Km)
<b>(1)</b>	<b>Delhi-Mumbai route:</b>	
i	Junction cabin – Palwal – Mathura –Nagda section	667
ii	Vadodara – Ahmedabad section	96
iii	Vadodara – Virar section	336
<b>(2)</b>	<b>Delhi – Howrah route:</b>	
i	Gaya Sarmatanr section	93

ii	Chota Ambana - Bardhaman – Howrah section	260
iii	Subedarganj-Kanpur	186

10. Track side Kavach implementation work has been taken up on 24,427 RKM covering all GQ,GD,HDN and identified sections of Indian Railways.

**11. Progress of key items of Kavach on High density routes including Delhi– Mumbai & Delhi– Howrah corridors as on 23.03.26 are as under:**

SN	Item	Progress
i	Laying of Optical Fibre Cable	8875 Km
ii	Installation of Telecom Towers	1182 nos
iii	Station Data Centre	767 station
iv	Installation of Track side equipment	7078 Rkm
v	Provision of Kavach in Loco	4254 nos

12. In addition, work for installation of Kavach in 8979 Locomotives and 1200 EMU/MEMU has been taken up.

13. Specialized training programmes on Kavach are being conducted at centralized training institutes of Indian Railways to impart training to all concerned officials. By now more than 61,758 technicians, operators and engineers have been trained on Kavach technology. This includes about 52,317 Loco Pilots & Assistant Loco Pilots. Courses have been designed in collaboration with IRISSET.

14. The cost for provision of Track Side including Station equipment of Kavach is approximately Rs. 50 Lakhs/Km and cost for provision of Kavach equipment on locomotives is approximately Rs. 80 Lakh/Loco.

15. The funds utilized on Kavach works so far up to Feb'26 is Rs. 2,763.90 Crores. The allocation of funds during the year 2025-26 is Rs. 1673.19 Crores. Requisite funds are made available as per the progress of works.

#### **Amrit Bharat Station Scheme:**

Ministry of Railways has launched Amrit Bharat Station Scheme for redevelopment of stations with a long-term approach.

The scheme involves preparation of master plans and their implementation in phases to improve the stations. The master planning includes:

- Improvement of access to station and circulating areas
- Integration of station with both sides of city
- Improvement of station building
- Improvement of waiting halls, toilets, sitting arrangement, water booths
- Provision of wider foot over bridge/air concourse commensurate with passenger traffic
- Provision of lift/escalators/ramp
- Improvement /Provision of platform surface and cover over platforms
- Provision of kiosks for local products through schemes like ‘One Station One Product’
- Parking areas, Multimodal integration
- Amenities for Divyangjans
- Better passenger information systems
- Provision of executive lounges, nominated spaces for business meetings, landscaping, etc. keeping in view the necessity at each station.

The scheme also envisages sustainable and environment friendly solutions, provision of ballastless tracks etc. as per necessity, phasing and feasibility and creation of city centre at the station in the long term.

So far, 1,338 stations have been identified for development under the Amrit Bharat Station Scheme.

**Completed stations:**

Development works at railway stations under Amrit Bharat Station Scheme have been taken up at a good pace. Till now, works have been completed at 180 stations. Names of stations completed so far are as following:

Alnavar, Amb Andaura, Ambikapur, Amgaon, Anandpur Sahib, Anara, Angamali For Kaladi, Ayodhya Dham, Badami, Bagalkot, Baijnath Paprola, Balrampur, Bantawala, Barabhum, Baramati, Bareilly City, Baripada, Barmer, Barpali, Begumpet, Beohari, Bhanupratappur, Bhilai, Bhind, Bijnor, Bimalgarh, Bommididi, Bundi, Chanda Fort, Chalakudi, Changanassery, Chennai Park, Chhindwara, Chidambaram, Chinchpokli, Chinna Salem, Chirayinkeezh, Cuttack, Dakor, Derol, Deshnoke, Devlali, Dharwad, Dhule, Dongargarh,

Fatehabad, Fatehpur, Fatehpur Shekhawati, Feroke, Gadag, Gangapur City, Godda, Godhra Jn., Gogameri, Gokak Road, Gola Gokarnath, Gomti Nagar, Govardhan, Govind Garh, Govindpuri, Govindpur Road, Hafizpeta, Haibargaon, Haldia, Hapa, Harpalpur, Hathras City, Hodal, Idgah Agra Jn., Izzatnagar, Jaisalmer, Jam Jodhpur, Jam Wanthali, Joychandi Pahar, Junnor Deo, Kakinada Town, Kalyani Ghoshpara, Kamakhyaguri, Kanalus Jn., Karaikkudi Jn., Karamsad, Karimnagar, Katni South, Kedgaon, Khairthal, Khambhaliya, Khalilabad, Koppal, Kosamba Jn., Kulitturai, Kuttipuram, Lasalgaon, Limbdi, Lohardaga, Lonand Jn., Mahe, Mahuva, Mailani, Mandal Garh, MandawarMahwa Road, Madhupur, Mambalam, Manaparai, Mandi Dabwali, Mangalagiri, Mannargudi, Matunga, M.C.S. Chhatrapur, Mithapur, Morappur, Morbi, Muktsar, Munirabad, Muri Jn., Murtizapur Jn., Nainpur Jn., Nandura, Narmadapuram (Hoshangabad), Netaji Subhash Chandra Bose Itwari Junction, Nidadavolu Jn., Nilambur Road, Okha, Orchha, Palitana, Panagarh, Panki Dham, Parel, Parlakhemundi, Pirpainti, Piska, Pokhrayan, Pollachi Jn., Polur, Porbandar, Rajgarh, Rajmahal, Rajula Jn., Ramagundam, Ramghat Halt, Rayanpadu, Saharanpur Jn., Sahibzada Ajit Singh Mohali, Sahebgunj, Samakhiyali, Samalpatti, Sanchi, Sankarpur, Savda, Seoni, Shahad, Shajapur, Sholavandan, Shoranur Jn., Shridham, Siddharth Nagar, Sihor Jn., Siuri, Sri Bala Brahmewara Jogulamba, Srirangam, Srivilliputtur, St.Thomas Mount, Sullurpeta, Suraimanpur, Swaminarayan Chappia, Talcher, Tamluk, Thawe, Thiruvarur Jn., Tiruvannamalai, Tripunithura, Tuni, Ujhani, Urkura, Utran, Vadakara, Vadala Road, Vidisha, Vriddhachalam Jn., Wadakancheri, Warangal.

The activities for development at other stations have also been taken up at good pace and progress of some of the above stations is as given below:

- **Tirupati station:** The structural framework of new second entry station building on South side, 2 nos. air concourses and sewage treatment plant have been completed. The finishing works of new second entry station building on South side and air concourses, structural work of station building on North side, platform shelter, lift, escalator etc. have been taken up.
- **Nellore station:** The structural framework, brickwork and plastering of station building on both East and West sides have been completed. The finishing works of station building on both East and West side and air concourse, extension work of subway, parking, water tanks and sewage treatment plant have been taken up.
- **Bangalore Cantonment station:** The works of diversion road on South side, training centre, hostel on North side, electric substation building have been completed. The works of

South side station building, North side station building, circulating area and Foot Over Bridge have been taken up.

- **Kota Junction station:** The structural works of front departure hall, front arrival hall and rear side station building have been completed. The finishing works of front departure hall, rear side station building, air concourse, through roof, circulating area have been taken up.
- **Bhubaneswar station:** The structural work of new station building at East and West side and air concourse have been completed. The structural work of elevated driveway at East and West side station, extension of Foot Over Bridge and platform shelter have been taken up. The finishing works of new station building at East and West side, works of MEP (Mechanical, Electrical and Plumbing), HVAC (Heating, Ventilation and Air Conditioning) and escalators have been taken up.

Further, development / redevelopment / upgradation / modernisation of stations on Indian Railways is a continuous and ongoing process and works in this regard are undertaken as per requirement, subject to inter-se priority and availability of funds. Development / redevelopment / upgradation / modernisation of a station is carried out based on category of station/condition/traffic handled etc.

Development / Upgradation of railway stations is complex in nature involving safety of passengers & trains and requires various statutory clearances such as fire clearance, heritage, tree cutting, airport clearance etc. The progress also gets affected due to brownfield related challenges such as shifting of utilities (involving water/sewage lines, optical fibre cables, gas pipe lines, power/signal cables, etc.), infringements, operation of trains without hindering passenger movement, speed restrictions due to works carried out in close proximity of tracks and high voltage power lines, etc. and these factors affect the completion time.

Further, development / upgradation / modernization of stations including Amrit Bharat Station Scheme is generally funded under Plan Head-53 'Customer Amenities'. The details of allocation and expenditure under Plan Head-53 are maintained Zonal Railway-wise and not work-wise or station-wise or state-wise. The fund allocation of ₹ 12,120 crore has been made for the financial year 2025-26 under Plan Head-53 and expenditure (up to February, 2026) of ₹ 11,892 crore has been incurred so far.

**Subsidy:**

Indian Railways strives to provide affordable services to all strata of the society and gave subsidy of Rs. 60,239 crore on passenger tickets in 2024-25. This amounts to concession of 43% on an average, to every person, travelling on Railways. In other words, if the cost of providing service is Rs. 100, then the price of ticket is Rs. 57 only. This subsidy is continuing for all passengers. Further, concessions beyond this subsidy amount are continuing for many categories like 4 categories of Persons with disabilities (Divyangjans), 11 categories of patients and 8 categories of students.

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