

**GOVERNMENT OF INDIA  
MINISTRY OF RAILWAYS**

**LOK SABHA  
UNSTARRED QUESTION NO. 300  
TO BE ANSWERED ON 24.07.2024**

**STATUS OF KAVACH SYSTEM**

**300. SHRI KHALILUR RAHAMAN:**

**Will the Minister of RAILWAYS be pleased to state:**

- (a) whether the Government will update regarding the train accidents in the last five years;**
- (b) if so, the details of the status of the implementation of Kavach Safety system;**
- (c) the number of trains have been fitted with the technology so far along with the number and name;**
- (d) the reasons of these collision inspite of using the technology; and**
- (e) whether the fund sanctioned for development of Kavach has been diverted to buy furniture and crockery for railways, if so, the details thereof?**

**ANSWER**

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

**(SHRI ASHWINI VAISHNAW)**

**(a) to (e): A Statement is laid on the Table of the House.**

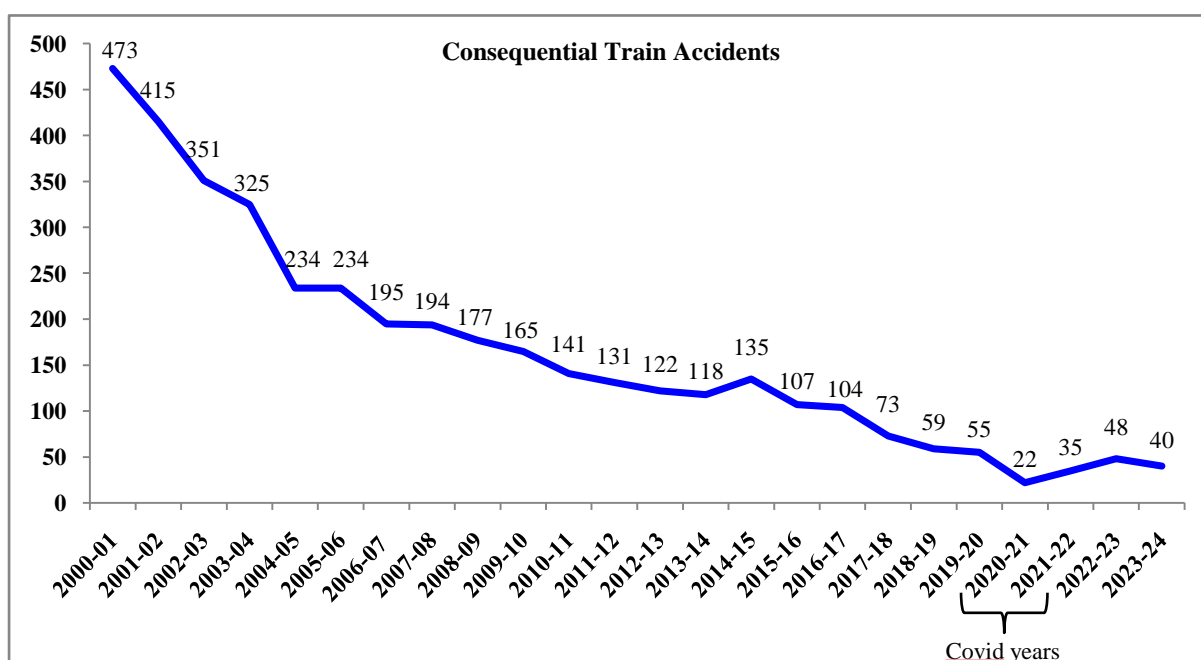
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**STATEMENT REFERRED TO IN REPLY TO PARTS (a) TO (e) OF UNSTARRED QUESTION NO 300 BY SHRI KHALILUR RAHAMAN TO BE ANSWERED IN LOK SABHA ON 24.07.2024 REGARDING STATUS OF KAVACH SYSTEM**

**(a): As a consequence of various safety measures taken over the years, there has been a steep decline in the number of accidents. Consequential Train Accidents have reduced from 473 in 2000-01 to 40 in 2023-24 as shown in the graph below.**

**It may noted that the consequential train accidents during the period 2004-14 was 1711 (average 171 per annum), which has declined to 678 during the period 2014-24 (average 68 per annum).**

**Another important index showing improved safety in train operations is Accidents Per Million Train Kilometer (APMTKM) which has reduced from 0.65 in 2000-01 to 0.03 in 2023-24, indicating an improvement of more than 95% during the said period.**



**(b) to (d):**

- 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.**
- 2. Kavach aids the loco pilot in train running within specified speed limits by automatic application of brakes in case Loco Pilot fails to do so and also helps the train safely run during inclement weather.**
- 3. Implementation of Kavach involves execution of many activities, such as:**
  - a. Installation of Station Kavach at each and every station.**
  - b. Installation of RFID tags throughout the track length.**
  - c. Installation of Telecom Towers throughout the section.**
  - d. Laying of optical Fibre cable along the track.**
  - e. Provision of Loco Kavach on each and every Locomotive running on Indian Railways.**
- 4. Kavach has so far been deployed on 1465 Route km and 144 locomotives (including Electric Multiple Unit rakes) on South Central Railway.**
- 5. Presently, the progress of main items related to Kavach on Delhi- Mumbai & Delhi- Howrah corridors (approximately 3000 Route km) is as under:**
  - (i) Laying of Optical Fibre Cable: 4275 Km**
  - (ii) Installation of Telecom Towers: 364 Nos.**
  - (iii) Provision of Kavach equipment at Stations: 285 Nos.**
  - (iv) Provision of Kavach equipment in Loco: 319 Locos**
  - (v) Installation of Kavach Track side equipments : 1384 Route Km.**

- 6. Further, Detailed Project Report (DPR) and Detailed Estimate on another 6000 RKms are approved on Indian Railways.**
  - 7. On 16.07.2024, Kavach 4.0 specification has been approved by RDSO. This version 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.**
- (e) Funds sanctioned for Kavach are being used for Kavach only.**

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