

GOVERNMENT OF INDIA  
MINISTRY OF RAILWAYS

**RAJYA SABHA**  
**UNSTARRED QUESTION NO. 289**  
**ANSWERED ON 21.07.2023**

**BUDGETARY ALLOCATION FOR KAVACH SYSTEM IN TRAINS**

289. SMT VANDANA CHAVAN:

Will the Minister of RAILWAYS be pleased to state:

- (a) the number of trains equipped with the Kavach apparatus till date;
- (b) the budgetary allocation for the Kavach apparatus and how much fund has been spent since its roll out;
- (c) the time frame to completely operationalise Kavach on all routes; and
- (d) the number of train accidents in the last year and number of the trains involved that were equipped with Kavach?

**ANSWER**

MINISTER OF RAILWAYS, COMMUNICATIONS AND  
ELECTRONICS & INFORMATION TECHNOLOGY

(SHRI ASHWINI VAISHNAW)

(a) to (d)

1. Kavach is 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 help the train safely run during inclement weather.
3. The first field trials on the passenger trains were started in February 2016. Based on the experience so gained and Independent Safety Assessment of the system by a 3rd party (Independent Safety Assessor: ISA) three firms were approved in 2018-19, for supply of Kavach.

4. Subsequently Kavach was adopted as a National ATP system in July 2020.
5. Kavach has so far been deployed on 1465 Route km and 121 locomotives (including Electric Multiple Unit rakes) on South Central Railway.
6. Kavach tenders have been awarded for Delhi – Mumbai & Delhi – Howrah corridors (approximately 3000 Route km) and work is in progress on these routes.
7. Indian Railways is preparing Detailed Project Report (DPR) and detailed estimate for another 6000 Rkm.
8. The amount spent so far on Kavach implementation is Rs.351.91 Crores. 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 loco is approximately Rs. 70 lakh/ loco.
9. Presently there are three Indian Original Equipment Manufacturers (OEMs) who are approved for Kavach. Efforts are being made to develop more vendors to enhance the capacity and scale up the implementation of Kavach.
10. The budgetary allocation for Kavach during the year 2023-24 is Rs. 710.12 Cr. Since it's roll out, Rs. 351.91 Cr. has been spent till date. 48 no. of train accidents were reported during last year. No accident has taken place involving Kavach fitted trains.

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