GOVERNMENT OF INDIA
MINISTRY OF RAILWAYS

LOK SABHA
UNSTARRED QUESTION NO. 2120
TO BE ANSWERED ON 02.08.2023

KAVACH PROTECTION SYSTEM

2120. SHRI LAVU SRI KRISHNA DEVARAYALU:
SHRI UDAY PRATAP SINGH:
SHRI A. RAJA:
SHRIMATI KANIMOZHI KARUNANIDHI:

Will the Minister of RAILWAYS be pleased to state:

(a) whether the Government has any data on the extent of railway meterage covered by Kavach Protection System;
(b) if so, the details thereof State/zone-wise and if not, the reasons therefor;
(c) whether the Train Collision Avoidance System (TCAS) i.e., Kavach technology is effective in stopping accidents like head-on collision and rear-end collision in the same track;
(d) if so, the reasons for not covering all sections with Kavach safety;
(e) whether all rakes like passenger coaches, AC and non-AC coaches have been fitted with anti-collision devices, in each Zonal Railway, if so, the details thereof;
(f) if not, the number of rail engines equipped with Kavach technology so far during the past three years and the present year; and
(g) the details of expenditure incurred so far and targets earmarked for installation of Kavach Protection System by the Government, State-wise?

ANSWER

MINISTER OF RAILWAYS, COMMUNICATIONS AND ELECTRONICS & INFORMATION TECHNOLOGY

(SHRI ASHWINI VAISHNAW)

(a) to (g) Regarding installation and safety features of Kavach, the details are:

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 (Rkm) and 121 locomotives (including Electric Multiple Unit rakes) on South Central Railway in Telangana (684 Rkm), Andhra Pradesh (66 Rkm), Karnataka (117 Rkm) & Maharashtra (598 Rkm) States.
6. Kavach tenders have been awarded for Delhi – Mumbai & Delhi – Howrah corridors (approximately 3000 Route km) and work is in progress on these routes in West Bengal (229Rkm), Jharkhand (193Rkm), Bihar (227Rkm), Uttar Pradesh (943Rkm), Delhi (30Rkm), Haryana (81Rkm), Rajasthan (425Rkm), Madhya Pradesh (216Rkm), Gujarat (526Rkm), Maharashtra (84Rkm) States.
7. Indian Railways is preparing Detailed Project Report (DPR) and detailed estimate for another 6000 RKm.

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8. Presently there are three Indian 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.

9. The Cost for provision of Track side including Station equipment of Kavach is approximately ₹ 50 Lakhs/Km and cost for provision of Kavach equipment on loco is approximately ₹ 70 lakh/ loco. The amount spent so far on Kavach implementation is ₹ 351.91 Crores. The budgetary allocation for Kavach during the year 2023-24 in ₹ 710.12 Crores. The projects are sanctioned zone-wise and not State wise as Indian Railway's projects may span across State boundaries. Therefore, State wise expenditure is not maintained.

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