

**GOVERNMENT OF INDIA
MINISTRY OF RAILWAYS**

**LOK SABHA
UNSTARRED QUESTION NO. 1464
TO BE ANSWERED ON 04.12.2024**

RAILWAY ELECTRIFICATION

1464. SHRI SHANKAR LALWANI:

DR. K SUDHAKAR:

DR. RAJESH MISHRA:

SHRI DINESHBHAI MAKWANA:

SHRI VIJAY KUMAR DUBEY:

DR. SHIVAJI BANDAPPA KALGE:

SHRI MUKESHKUMAR CHANDRAKAANT DALAL:

DR. ALOK KUMAR SUMAN:

Will the Minister of RAILWAYS be pleased to state:

- (a) whether the Government has the specific statistics regarding India's railway electrification, including the percentage of tracks electrified and the total length of electrified routes and if so, the details thereof;**
- (b) whether the Government has any road map regarding railway electrification tracks specially in Marathwada region;**
- (c) whether the Government has data regarding steps taken to ensure having clean railway tracks and coaches and if so, the details thereof;**
- (d) whether the Government has data regarding the Kavach installation across the country, if so, complete details thereof;**
- (e) whether any new tracks, trains or large scale projects are being considered for the State of Karnataka, if so, the details thereof; and**
- (f) whether any steps are being taken to reduce the congestion in major trains through Karnataka and if so, the details thereof?**

ANSWER

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

(SHRI ASHWINI VAISHNAW)

(a) to (f) A Statement is laid on the Table of the House.

STATEMENT REFERRED TO IN REPLY TO PARTS (a) TO (f) OF UNSTARRED QUESTION NO. 1464 BY SHRI SHANKAR LALWANI, DR. K SUDHAKAR, DR. RAJESH MISHRA, SHRI DINESHBHAI MAKWANA, SHRI VIJAY KUMAR DUBEY, DR. SHIVAJI BANDAPPA KALGE, SHRI MUKESHKUMAR CHANDRAKAANT DALAL AND DR. ALOK KUMAR SUMAN TO BE ANSWERED IN LOK SABHA ON 04.12.2024 REGARDING RAILWAY ELECTRIFICATION

(a) and (b) Indian Railways (IR) has taken up electrification of Broad Gauge (BG) Railway lines in a Mission mode. Electrification done during 2014-24 and prior to 2014 is as under:

Period	Electrification done (RKM)
Prior to 2014	21,801 RKM
2014-24	44,199 RKM (including 30,512 RKM during 2019-24)

At present, 97% of the total BG network of the Indian Railways has been electrified. BG rail network in the state of Maharashtra including Marathwada region has been electrified.

(c) Cleanliness is a continuous process and Indian Railways make every endeavour to keep coaches and tracks in clean condition. In this regard, major steps taken are as under:

- Cleaning of coaches including toilets of trains is done at both ends including mechanized cleaning.**
- On Board Housekeeping Service (OBHS) has been provided in important long distance Mail/Express trains for cleaning of coach toilets, doorways, aisles and passenger compartments during the run of trains.**
- Clean Train Station (CTS) scheme has been prescribed for limited mechanized cleaning attention to identified trains including cleaning of toilets during their scheduled stoppages enroute at nominated stations.**
- Automatic Coach Washing Plants (ACWP) have been installed at major depots for more effective and efficient cleaning of coach exterior.**

- **Pest & Rodent control is done in All AC, Non AC reserved and un-reserved coaches including pantry cars.**
- **Special Cleanliness Campaigns under Swachh Bharat Abhiyan and cleanliness drives are organized regularly with the objective to achieve significant and sustainable improvements in cleanliness standards of trains.**
- **Frequent surprise inspections/checks are conducted by senior officials on overall cleanliness coaches.**
- **Provision of Bio toilets in all toilets of passenger coaches.**

(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 (Safety Integrity Level-4).**
2. **Kavach aids the Loco Pilot in running of train 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:**
 - a. **Installation of Station Kavach at each and every station, block section.**
 - 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.**

6. **Based on deployment of Kavach version 3.2 on 1465 RKM on South Central Railway, lot of experience was gained. Using that 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 yard, 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. **Progress of Key items comprising Kavach system on Indian Railways upto Oct' 2024 is as under: -**

SN.	Items	Progress
i	Laying of Optical Fibre Cable	5116 Km
ii	Installation of Telecom Towers	538 Nos.
iii	Provision of Kavach at Stations	521 Nos.
iv	Provision of Kavach in Loco	687 Locos
v	Installation of Track side equipment	3413 RKM

10. **Next phase of Kavach implementation is planned as under:-**
 - a. **Project for equipping 10,000 Locomotives has been finalized.**
 - b. **Bids for track side Works of Kavach for approximately 15000 RKM have been invited. It covers all GQ, GD, HDN and Identified sections of Indian Railways.**
11. **Currently, 3 OEMs are approved for supply of Kavach System. To increase capacity and scale of implementation, trials and approval of more OEMs are at different stages.**
12. **Specialized training programme on Kavach are being conducted at centralized training institutes of Indian Railways to impart training**

to all concerned officials. By now more than 9000 technicians, operators and engineers have been trained on Kavach technology. Courses have been designed in collaboration with IRISSET.

(e) and (f) Railway infrastructure projects falling fully/partly in the State of Karnataka are covered under South Western Railway (SWR), Central Railway (CR), Southern Railway (SR) and South Central Railway (SCR) Zone of Indian Railways. Zonal Railway wise details of Railway projects including cost, expenditure and outlay are made available in public domain on Indian Railway's website.

As on 01.04.2024, 31 Projects (21 new lines and 10 Doubling) of total length of 3,840 Km, costing Rs. 47,016 crore, falling fully/partly in the State of Karnataka, are at various stages of planning and implementation, out of which 1,302 Km length has been commissioned and an expenditure of Rs. 17,382 crore has been incurred upto March, 2024.

The status of work is summarized as :-

Category	No. of projects	Total Length (in Km)	Length Commissioned (in Km)	Expenditure upto March 2024 (in Rs. Cr.)
New Line	21	2,556	395	7,592
Doubling/ Multitracking	10	1,284	907	9,791
Total	31	3,840	1,302	17,382

Budget allocation for Infrastructure projects and safety works, falling fully/partly in Karnataka is as under:

Period	Outlay
2009-14	Rs. 835 crore/year
2024-25	Rs. 7,559 crore (more than 9 times)

The details of commissioning/laying of new track falling fully/partly in the State of Karnataka during 2009-14 and 2014-24 is given below:

Period	Total Track Commissioned
2009-14	565 Km
2014-24	1,633 Km (about 3 times)

Further, survey of total 56 projects (19 new line and 37 doubling) of total length 6159 Km falling fully/partly in the State of Karnataka have been sanctioned during last three year (2021-22, 2022-23, 2023-24 and current financial year 2024-25).

Sanctioning of Railway projects is a continuous and dynamic process of Indian Railway. Railway infrastructure projects are taken up on the basis of remunerativeness, traffic projections, last mile connectivity, missing links and alternate routes, augmentation of congested/saturated lines socio-economic considerations etc. depending upon liabilities of ongoing projects, overall availability of funds and competing demands.

After firming up of Detailed Project Report (DPR), sanctioning of project requires consultation with various stake-holders including State Governments and necessary approvals viz. appraisal of NITI Aayog, Ministry of Finance etc. As sanctioning of projects is a continuous and dynamic process, exact timelines cannot be fixed.

Indian Railways (IR), operates various types of regular time-tabled trains e.g. suburban, short distance passenger trains, long distance/Mail Express/ Superfast trains with different compositions catering to different segments of passengers. Besides, in its constant endeavour to provide additional accommodation to travelling passengers, IR also operates Special train services during festivals, holidays, etc. and by augmenting the load of trains including that with Sleeper Class Coaches, both on permanent and temporary basis, to cater to additional demand. These are on-going processes on Indian Railways. Accordingly, during the year 2024, 13523 trips special trains

were operated to meet the extra rush of passengers during Holi and summer vacation. To cater to the rush during Durga Pooja/Dipawali/Chhath, 7983 trips of Special trains have also been notified during the period 1st October, 2024 to 30th November, 2024, to serve approximately 1.8 crore passengers.

IR also augments the load of trains, both on a permanent and temporary basis, to generate additional accommodation for different segments of passengers. During the 2023-24, 872 coaches have been utilized for augmentation of train services on a permanent basis while during the year 2024-25(till October, 2024), 664 coaches have been utilized for permanent augmentation. However, as the Railway network straddles across State boundaries, trains are operated as per network requirements, across such boundaries.

To cater to the needs of stations located in the State of Karnataka, 8 pairs of new train services including 5 pairs of Vande Bharat train and one pair of Amrit Bharat Express viz. 13433/13434 SMVT Bengaluru-Malda Town Amrit Bharat Express have been introduced during 2023-2024. During the current financial year, 06 pairs of trains including 03 pairs of Vande Bharat services have also been introduced. Besides, introduction of trains is an on-going process on Indian Railways subject to traffic justification, operational feasibility and availability of resources etc..
