

GOVERNMENT OF INDIA  
MINISTRY OF RAILWAYS

**RAJYA SABHA**  
**UNSTARRED QUESTION NO. 1371**  
**ANSWERED ON 02.08.2024**

**AI-ENABLED SYSTEM TO DETECT OBSTRUCTIONS ON RAILWAY TRACKS**

1371 SHRI B. PARTHASARADHI REDDY:

Will the Minister of RAILWAYS be pleased to state:

- (a) whether Government has taken into cognizance of wild animal deaths on railway tracks leading to long halts of service and passenger trains;
- (b) the steps taken by Government to prevent the deaths of wild animals/ humans crossing railway tracks;
- (c) whether Government has proposed to install AI enabled sensors to alert loco pilots of obstructions on track at least before 2 KMs;
- (d) if so, details of the initiative along with the timeline set and budget allocated for the same; and
- (e) if not, the reasons therefor?

**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. 1371 BY SHRI B. PARTHASARADHI REDDY ANSWERED IN RAJYA SABHA ON 02.08.2024 REGARDING AI-ENABLED SYSTEM TO DETECT OBSTRUCTIONS ON RAILWAY TRACKS.**

(a) to (e) Indian Railways has taken up various measures in close coordination with Forest department, so that no harm is caused to wild animals during train operation. These measures include imposition of suitable speed restrictions in identified locations of animal corridors, regular meetings with concerned forest officials to update and sensitize the train crew and station master for alertness and awareness, clearance of vegetation and edible items surrounding the track within railway land etc. Elephant trackers are also installed/ engaged by Forest department which give timely alert to station master for further communication to loco pilots.

Other measures like construction of underpasses and ramps for the movement of elephants at identified locations, provision of fencing along the track etc. have been taken up. Installation of innovative Honey bee buzzer device at crossing locations in elephant corridor areas to prevent the movement of wild animals/ Elephants near Railway tracks have been done. This device acts as a repellent to move away elephants from track and 96 such Honey bee buzzers are operational in various locations of Northeast Frontier Railway. Thermal vision camera has also been developed for detecting presence of wild animals on straight track during night/poor visibility which alerts loco pilots for presence of wild animals. LED lights with solar system are also provided in forest area near track to prevent entry of elephants.

Indian Railways has taken up the work for installation of Optical Fiber Cable based Distributed Acoustic Sensors (DAS) also known as AI enabled Intrusion Detection System (IDS) for detecting presence of Elephants/ wild animals on track or nearby track at identified corridor locations. This system helps to get advance intimation regarding movement of Elephants/ wild animals for taking timely action and transmitting alerts to loco pilots, station master and control room. The development and effectiveness of Intrusion Detection System (IDS) is a continuous and ongoing process and RDSO is working to further improve system functionality and reliability. So far, the above system has been installed in about 54 Route Km length of Northeast Frontier Railway. Further, a work of installation of this system in various zonal railways has been sanctioned at a cost of Rs. 208 Crore.

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