

GOVERNMENT OF INDIA
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

RAJYA SABHA
UNSTARRED QUESTION No. 2299
TO BE ANSWERED ON 12.03.2026

Elephant deaths due to collisions

2299 SMT. RENUKA CHOWDHURY:

Will the Minister of ENVIRONMENT, FOREST AND CLIMATE CHANGE be pleased to state:

- (a) the number of elephant deaths caused by collisions with trains and road vehicles across the country since 2021, State-wise and year-wise along with the number and location of identified collision hotspots;
- (b) the mitigation measures implemented at such hotspots, including fencing, underpasses/overpasses, speed restrictions, animal detection systems and night patrolling, State-wise;
- (c) the length of railway tracks and roads that have been fenced or secured to prevent elephant movement onto tracks or carriageways, State-wise;
- (d) the total length of railway lines covered by Artificial Intelligence (AI)-based warning systems; and
- (e) whether any independent evaluation has been conducted to assess the effectiveness of AI-based system?

ANSWER

MINISTER OF STATE IN THE MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE
(SHRI KIRTI VARDHAN SINGH)

(a)to(e)The management of wildlife is primarily the responsibility of the concerned State Government/Union Territory Administration. The State Government/Union Territory Administration is the first responder in wild animal deaths and maintains the data related to such incidents and the species involved. The number of elephant deaths due to train collisions in the past four years are placed at **Annexure**. The data on elephant casualties due to road vehicles are not collated in the Ministry.

Ministry has published a comprehensive report titled “Suggested Measures to Mitigate Elephant & Other Wildlife Train Collisions on Vulnerable Railway Stretches in India”. The details of railway stretches prioritised on the basis of intensity of wildlife use and threat of wildlife mortality is as given below;

Sl.No	Particulars	Details
1.	Total railway stretches surveyed (kms)	127 stretches (3,452.4 km)
2.	Sensitive railway stretches identified in elephant range	110 stretches
3.	Sensitive railway stretches identified in tiger range states	17 stretches
4.	Railway stretches prioritized for mitigation in 14 states	77 (1,965.2 km)

On the basis of the study above the following mitigation structures have been suggested;

S. No.	Type of Structure	Number Proposed
1.	Ramps and level crossings	503
2.	Bridge extensions and modifications	72
3.	Fencing / barricading / trenching structures	39
4.	Exit ramps	4
5.	New underpasses	65
6.	Overpasses	22
	Total	705

As per the information received from Ministry of Railways, an Artificial Intelligence (AI)-enabled Intrusion Detection System (IDS) for detecting presence of elephants on Railway tracks using Distributed Acoustic Sensing (DAS) has been developed. The system components include Optical Fibre, hardware and pre-installed signatures of elephant locomotion. The system alerts loco pilots, station masters and Control Room about the movement of elephants on track's proximity, for taking preventive action timely.

Artificial Intelligence (AI) enabled Intrusion Detection System (IDS) using Distributed Acoustic Sensing (DAS) for detecting presence of elephants on Railway tracks is implemented in 141 Route Kilometres (RKms) section and further tenders have been awarded for 981 RKms section of Indian Railways. The system is designed to generate alerts for loco pilots, station masters and Control Room about the movement of elephants in proximity of railway tracks, for taking timely preventive action.

Elephant casualties due to train collisions

State	2021-22	2022-23	2023-24	2024-25
Assam	8	7	2	3
West Bengal	0	1	4	0
Tamil Nadu	3	0	0	0
Jharkhand	0	1	1	2
Kerala	0	2	0	2
Odisha	3	3	5	3
Tripura	0	0	1	1
Uttarakhand	6	1	4	0
Uttar Pradesh	0	0	0	1
Karnataka	1	0	0	0
Total	21	15	17	12