

Item No. 01

(Court No. 01)

**BEFORE THE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI**

(By Video Conferencing)

Original Application No. 142/2021

(With reply dated 07.07.2021 & report dated 08.07.2021)

(In re: News item published in The Hindu, dated 29.05.2021 titled
“Night, early morning trains cause most elephant deaths”)

Date of hearing: 08.07.2021

**CORAM: HON’BLE MR. JUSTICE ADARSH KUMAR GOEL, CHAIRPERSON
HON’BLE MR. JUSTICE SUDHIR AGARWAL, JUDICIAL MEMBER
HON’BLE MR. JUSTICE M. SATHYANARAYANAN, JUDICIAL MEMBER
HON’BLE MR. JUSTICE BRIJESH SETHI, JUDICIAL MEMBER
HON’BLE DR. NAGIN NANDA, EXPERT MEMBER**

Respondent: Mr. Ram Shankar, Advocate for the State of Tamil Nadu
Mr. K. Muthamil Raja, Advocate for Southern Railways

ORDER

1. This matter has been taken up based on the media report titled “Night, early morning trains cause most elephant deaths” in Hindu dated 29.05.2021¹. The substance of the news item is that death of elephants is taking place on a railway track from Kottekad and Madukkarai. In all, seven elephants have been killed as per the media report between 10:00 pm to 06:00 am on being hit by the trains on ‘B’ line and one elephant was killed on ‘A’ line of the map given in the media report. ‘A’ line runs through reserve forest for 17 km between Chullimada-Madukkarai stations and ‘B’ line passes through reserve forest for 23 km between Madukkarai- Kanjikode stations.

¹ The Hindu dated 29.05.2021: <https://www.thehindu.com/news/cities/Coimbatore/night-early-morning-trains-cause-most-elephant-deaths/article34671423.ece>

2. An advance notice dated 02.07.2021 was sent by the Registry to MoEF&CC, The Principal Chief Conservator of Forest (Wildlife) & Chief Wildlife Warden, Government of Kerala, The Principal Chief Conservator of Forest & Chief Wildlife Warden, Chennai and General Manager, Southern Railway by e-mail. A status report has been filed on behalf of the State of Tamil Nadu.

3. Reply has also been filed by the Southern Railways as follows:-

“2. The 4th respondent / Railways humbly submit that the Palakkad - Podanur electrified broad gauge double line railway track of Southern Railway passes through the reserved forest in the western Ghat between Kanjikode and Madukarai railway stations. The track between Km 486 to 534 is being separated by twin single lines- 'A' & 'B' line. The Podanur-Palakkad down line is 'A' line laid during the year 1861 and Palakkad - Podanur UP line is 'B' line which was newly constructed in 1974 comes in the Ghat section both in Kerala & Tamil Nadu States. The length of 'A' line is 48.26 km and 'B' line is 52.56 km with 8 stations. It is pertinent to note that Palakkad Division has taken various steps to mitigate train accidents involving elephants in last few decades.

3. The 4th respondent / Southern Railway Palakkad Division has taken all measures for elephant track crossings as envisaged in Provisional Para No.34 finalized by DAI (Railways) for C&AG's Report (Railways) for the year ended 31.03.2019 regarding "Provision of Elephant passages in Indian Railways". Some of the main Recommendations of C&AG Report and action taken on the same are detailed below:

- *Identification and notification of elephant passages should be reviewed periodically in consultation with the Forest Department.*

The Palakkad Division and Forest Department of Palghat and Coimbatore District reviews the elephant crossing passages during their regular review meeting. The review is done on a regular basis apart from specific reviews based on movement of elephant inside forest ranges and sighting/crossing of elephant near railway track as reported. The following sections are identified as elephant passages and Permanent Speed Restriction (PSR) of 45 kmph imposed from dusk to dawn (18.00 hrs to 06.00hrs).

'A' LINE

SN	Between Stations	UP/DN Direction	From km	To km	Speed Restriction (in KMPH) (18.00hrs to 06.00hrs.)
1	Madukkarai - Ettimadai	DN	497/6	499/4	45
2	Ettimadai - Kanjikode	DN	505/0	515/0	45
3	Kanjikode- Palakkad	DN	525/10	527/20	45
4	Palakkad - Kanjikode	UP	527/20	525/10	45
5	Kanjikode- Ettimadai	UP	515/0	505/0	45
6	Ettimadai- Madukkarai	UP	499/4	497/6	45
7	Ettimadai- Walayar - Kottekad	UP&DN			Whistle continuously since wild elephants likely to cross the track

'B' LINE

SN	Between Stations	UP/DN Direction	From km	To km	Speed Restriction(in KMPH) (18.00hrs to 06.00hrs.)
1	Madukkarai- Ettimadai	DN	497/3	499/3	45
2	Ettimadai- Palakkad	DN	505/0	520/31	45
3	Kanjikode- Palakkad	DN	525/0	527/25	45
4	Palakkad - Kanjikode	UP	527/20	525/10	45
5	Palakkad- Ettimadai	UP	520/31	505/0	45
6	Ettimadai- Madukkarai	UP	499/3	497/3	45
7	Ettimadai- Walayar - Kottekad	UP&DN			Whistle continuously - since wild elephants likely to cross the track

Speed restriction of 45kmph is imposed for 13.9 km in 'A' line from 18.00 hrs to 06.00 hrs and in 'B' line, a total of 19.41km is having a permanent speed restriction of 45kmph from 18.00 hrs to 06.00 hrs on account of frequent crossing of wild elephants and a PSR of 65kmph for passenger trains and 25kmph for Goods train for a length of 18.84 kms in A line. Similarly, a PSR of 65kmph for passenger trains and 25kmph (DN Direction)/ 35 Kmph (UP Direction) for Goods train for a length of 27.5 kms exists in B line. (Copy of WTT is enclosed).

- Sensitizing programme of awareness workshop should be conducted for Station Masters/Train drivers/Guards to sensitize them about elephant conservation.

Joint meeting with Forest Rangers of Forest Department and Supervisors and Officers of Palghat Division from Railways to sensitize the Loco Pilots/Guards/Keyman/Trackmen about elephant conservation and working on track. A workshop was conducted on 07/02/2019 at Palakkad by Forest Department on the topic of Human elephant interaction, which was attended at the level of DRM/PGT and concerned Divisional officers. The various measures undertaken by PGT Division to mitigate elephant run over was discussed during the course of the workshop.

- The signage boards to pre-warn the drivers should be standardized w.r.t. colour, shape, height, placement, position etc;

In PGT Division, the erected signage board is as per the MoEF recommendations circulated by Railway Board in September 2017 and the design given by Wild Life Trust of India at desired locations to pre-warn the Train Drivers.

In addition to above, the general advisories circulated vide Railway Board's Letter No.2011/TT-IV/9/8 dated 30/03/2010 like regular clearance of vegetation alongside the track, fixing of signage boards, sensitizing programme for train drivers /guards etc. are being followed. As suggested by the Parliamentary standing committee, a co-ordination committee between Railways (at the level of DEN) and Forest Official (at the level of DFO) is being made and periodical review meeting is also conducted.

CASES OF ELEPHANT HIT BY TRAIN:

The first case of elephant death on railway track was reported in 1978 at km 507/600-700 in 'A' line. The Loco Pilots are sensitized to report any elephant sighting as well as any elephant hit case through Control which is immediately informed to Forest Officials. The year wise details of Elephant hit cases between KJKD MDKI section is tabulated below:

SN	Year(s)	No of Elephant Hit Reported
1	2010	1
2	2010 to 2015	NIL
3	2016	4
4	2017	NIL
5	2018	1
6	2019	2
7	2020	3
8	2021	1

The detailed tabulation of cases is attached vide Annexure A (Excel Sheet).

There is no dispute of reporting of elephant hit/ death between Forest and Southern Railway of Palakkad Division.

4. The 4th respondent / Southern Railway submits that the following are the effective measures taken by the Southern Railway Palakkad Division;-

VARIOUS MEASURES TAKEN BY PALAKKAD RAILWAY DIVISION TO MITIGATE ELEPHANT HIT BY TRAINS

1. Speed Restriction on the Vulnerable Section:

Speed restriction of 45kmph is imposed for 13.9 km of vulnerable section in 'A' line from 18.00 hrs to 06.00 hrs and in 'B' line, a total of 19.41 km of vulnerable section is having a permanent speed restriction of 45kmph from 18.00 hrs to 06.00 hrs on account of frequent crossing of wild elephants (Copy of WTT is enclosed.). Even during the daytime, a permanent speed restriction of 65kmph is imposed in these vulnerable sections for passenger trains and 25/35kmph for Goods trains. Standing Committee on Railways 2013 had recommended speed restriction of 50 kmph at vulnerable locations as agreed both by Forest and Railway Department.

2. Signage boards to pre-warn the Train Drivers:

The signage design given by the Wild Life Trust of India has been erected at desired locations to pre-warn the Train Drivers and also to whistle continuously to warn the Elephants. Special attention is given for maintaining the visibility of these signage boards.

3. Wires with low voltage at boundary to deter elephants:

In Kerala Forest area, solar fencing at ground level with safe electric voltage of 12V has been provided for a length of 7.1 km in 'B' line near railway track area and 3.2 km in 'A' line to deter elephants. The fencing has been proven very effective to prevent entry of elephant herds inside railway track area.

4. Elephant Ramps:

Ramps are being provided at suitable locations for passage of elephants without getting entrapped near railway track area. The locations for provision of ramps are jointly decided by Railway and Forest Department. At present, elephant ramps are provided at Km 506A/100, 506/400, 506A/300 in Ettimadai-Walayar section at high bank location as per the guidelines from Tamil Nadu Forest Dept for easy passage of elephants. Watch Towers has also been provided inside Forest Area at dedicated locations to map the movement of elephant out of Forest area. Railway is providing more ramps at suitable locations in Railway Embankment area along with Cess widening work in consultation with Forest Department of Kerala and Tamil Nadu.

5. Lights toward away elephants from Railway Cutting:

Between Kanjikode and Walayar, Railway line is passing through two cuttings — first one at Km 510/900-511/200 and

other one at Km 512/200-400. There are chances of elephant getting trapped inside these cuttings, so solar lights have been provided to ward away elephants at both ends of the cutting. The solar lights also help in improving the visibility for Train Drivers during night time.

6. Installation of audio alarm with honey bee sound

This has been installed at Level Crossing number No. 154 between Kanjikode and Walayar on 'A' line to scare away the elephants. This system has been adopted based on the successful trial conducted in NFR earlier. It is informed that after installation of the audio alarm system, no case of elephant crossing near the level crossing is reported.

7. Widening of Cutting & Cess making:

Earth work for widening of cutting has been done between Km 513/500 - 519/400, Km 500/00 — 505/00 on 'B' Line. This will help the elephant to move away from track on sighting of coming train, as sufficient space has been made available there. To further safeguard elephants near Railway track area, Cess widening including provision of ramps at three more locations between Kanjikode and Madukarai is in progress at a cost of Rs 6.4 crore. Moreover, manmade ponds were made at the toe of cutting so that elephant need not cross the track in search of

water during summer.

8. Engagement of elephant trackers by MoEF and communication with Station Masters:

Elephant Trackers have been deployed by forest Department of Tamil Nadu and Kerala and a system of communication have been set up with Railway Control. The Loco Pilots are pre-warned by control in case any information of elephant sighting is reported. This is major action which is helping to control the accidents.

9. Sensitizing Programmes for Train Drivers/Guards/Station Masters:

Regular sessions are held with Forest Department to sensitize the Loco Pilots for taking action to protect the Elephants at Palakkad. Regular meetings with DFO/Palghat (Forest) and DEN/East/Palghat (Railways) is also conducted for discussion on various issues related to Forest and Railways. Last meeting was conducted at DFO Office Palghat and attended by DEN/East/Palghat and ADEE/G/Palghat to study the working of Hanging Solar Fencing on 25th June 2021.

10. Under passes across the Railway Track to allow elephants to escape:

Railway Board vide letter No. 2008/CE-II/Safety/1(Fencing) dated 07/12/2010 has circulated the minutes of the inter-ministerial meeting between Railways and the Ministry of Environment and Forest held on 05/03/2010. One of the decisions taken in the above meeting was that the Ministry of Environment and Forest will bear the cost of work and

the work will be executed by the railway on deposit terms. In this connection and as recommended by the WTI in their report a rough estimate of three work(Tamil Nadu area) mentioned below was prepared and sent to Principal Chief Conservator of Forests & Chief Wildlife warden, Panagal Maaligai, Saidapet, Chennai — 600015 (on 28/11/2012) for their acceptance and remittance of required amount to process further.

1 Rail fencing and widening cuttings and side drains between Madukarai and Walayar stations 'A'&'B' lines)	=	Rs.25, 08,30,268/-
2 Under bridge on B line at km 506/900-506/A-000 between Ettimadai and Walayar Stations	=	Rs.2, 15, 43,337/-
3 Under bridge on B line at km 505A/400-500 between Ettimadai and Walayar Stations	=	Rs.2, 16, 51,199/-
Total	=	Rs.29, 40, 24,804/-

Similarly, in Kerala area also, a detailed estimate for provision of fencing for a length of 20kms (at km510/0 to 513/0 'A' line for 3km & at km 510/500 to 518/0 on 'B' line including Km516A for 17 kms (both side of the track) was prepared for an amount of Rs.12,11,46,215/- and sent to the Chief Conservator of Forest, Kerala for their acceptance and as a permanent mitigation measure. Despite reminding many times for the same, the centage charges are yet to be remitted by Forest department. Further processing will be done by Railways only after the remittance of the centage charge.

11. Regular clearing of vegetation:

As discussed during regular meetings with Forest Department, work of clearing of vegetation up to 5 m of track side and 10m of track side at specified locations is being carried out regularly by Railway. The work is being executed by Railway in timely manner in consultation with Forest Department. This clearing of vegetation helps in identifying any elephant hiding inside forest area from a longer distance as well as in improving the visibility for loco drivers to take timely action.

12. Interaction of Forest officials and Railways realtime:

A WhatsApp group has been created with Forest officials including Rangers and Forest watchers and Railway officials including Control offices as part of the group. The real-time movement of elephants entering into Railway track side are immediately reported by Forest officials in the group and immediate lookout caution for LPs and ALPs are issued immediately by Railways at the reported locations. Moreover, Speed restrictions are also imposed immediately at the reported locations whenever the elephants are sighted near to

the track. These steps mitigate the hitting of the pachyderms many a times.

5. The 4th respondent / Southern Railway submits that the following are the various other steps planned to protect the wild life;-

VARIOUS MEASURES PLANNED BY PALGHAT DIVISION TO FURTHER MITIGATE ELEPHANT HIT BY TRAINS

1. Provision of Hanging Solar Fencing parallel to Railway Track:

The hanging solar fencing has been provided in Wayanad and Dhoni range of Kerala by Forest Department and the same has been found to be successful in preventing elephants crossing. Therefore, in consultation with the Forest Department of Palghat, Kerala, it is planned to provide hanging solar fencing for a length of 1.5km between Kanjikode - Walayar section on 'B' line, so as to prevent elephant from crossing into the railway area and at same time, small animals will be able to cross the fence.

2. Elephant Signage Boards:

As agreed, to in the recent meeting held between DFO/PGT and DRM/PGT, twenty more elephant signage boards are to be provided near tracks on locations as jointly inspected and advised by Forest Department. The fixing of boards is planned to be completed by July 2021.

3. Barricading /Solar fencing /Lighting along the Railway track:

To safeguard the wild elephants from collision with trains, an estimate for providing rail fencing, widening cuttings and side drains between MDKI-WRA stations ('A' & 'B' lines) and at km510/0 to 513/0 'A' line for 3km & at km 510/500 to 518/0 on 'B' line including 516A for 17 kms (both side of the track) was prepared and sent to Forest Department for acceptance and remittance of centage charge. The same is yet to materialize.

6. The 4th respondent / Southern Railway submits that the above plan for provision of Hanging solar Fencing, Rail Fencing between Walayar and Madukkarai stations in both 'A' and 'B' Lines and viaducts/elephant underpasses in the identified locations of Elephant crossings could be effectively implemented with the active cooperation of the Forest department and local and state Government. At this juncture this Hon'ble Tribunal may be pleased to fix time frame to execute the project to protect the wild life especially Elephants.”

4. According to the status report filed on behalf of the State of Tamil Nadu, reasons for death is visibility on the track being poor to the loco

pilots and topography being unsuitable for the elephants to escape. The remedial action taken is deputing Track watchers/ Anti-depredation watchers, construction of ramps and alerting of the pilots by the watchers. Watch tower has been constructed for the purpose. A percolation pond has been formed for providing water for the animals to minimize the movement. A Whatsapp group has been created of the concerned staff of the Railways and the Forest Department. Forest Department also wrote to the Divisional Railway Manager on 22.03.2021 for precautions to be taken in operation of trains at night and the Divisional Railway Manager has given a reply on 05.05.2021. Further, as per stand of the Railway, in para 10 quoted earlier, an inter-ministerial meeting was held between the Railways and MoEF&CC on 05.03.2012 and steps were to be taken for construction of under bridges, fencing and widening cuttings and side drains but the MoEF&CC failed to make the payment and said step could not be taken.

5. We have heard learned Counsel for the State of Tamil Nadu and considered the matter. We find that apart from the steps said to have been taken in terms of the status report of the State of TN, further measures need to be adopted as emerging from the stand of the Railways as well as in the light of directions on the subject by the Hon'ble Supreme Court.

6. The Hon'ble Supreme Court, vide orders dated 04.08.2017 in *Writ Petition (C) No. 275 of 2015, Vidya Athreya & Anr v. Union of India & Ors.* and dated 22.10.2018 in *W.P (C) No. 489 of 2018, Prerna Singh Bindra & Ors v. Union of India & Ors.*, issued directions to the MoEF&CC to constitute a Central Monitoring Committee to coordinate with elephant bearing States on issues relating to safety of elephants in elephant

protection zone. The Central Monitoring Committee held a meeting with the concerned States on 29.05.2018 and it was decided that suggestions given in the Gajah Report be implemented by the State Governments. MoEF&CC directed the States concerned to notify elephant corridors.

5. Accordingly, the Central Monitoring Committee constituted by MoEF&CC dealing with the project 'Elephant' needs to look into the issue raised in the media report in coordination with the Railway Authorities, the Wildlife Institute of India and the States of Tamil Nadu and Kerala. A joint meeting needs to be held on the subject by the Central Monitoring Committee of the MoEF&CC with the States of Tamil Nadu and Kerala and the Southern Railways within one month from today to work out the necessary modalities, including the authority which is to incur the necessary expenditure.

The application is disposed of.

A copy of this order be forwarded to MoEF&CC, States of Tamil Nadu and Kerala, the General Manager, Southern Railways and the Wildlife Institute of India by e-mail.

Adarsh Kumar Goel, CP

Sudhir Agarwal, JM

M. Sathyanarayanan, JM

Brijesh Sethi, JM

Dr. Nagin Nanda, EM

July 8, 2021
Original Application No. 142/2021
SN