

BEFORE THE NATIONAL GREEN TRIBUNAL, SOUTHERN ZONE AT CHENNAI

(UNDER SECTION 18(A) READ WITH S.14 OF THE NATIONAL GREEN TRIBUNAL, ACT)

Application No.157 of 2020 (SZ)

In the matter of :

People for Cattle in India (PFCI)

Represented by its Founder

Mr.G.Arun Prasanna having office at

8/22, Ragaviah Road,

T.Nagar, Chennai – 600 017.

.....Applicant

Vs

1. Additional Principal Chief Conservator of Forests

Coimbatore Circle,

Kurinji, Mettupalayam Road,

Coimbatore – 641 043.

Ph:0422-2453114

Email – cfcbe@tn.nic.in

2. Principal Chief Conservator of Forests/

Chief Wildlife Warden (Chennai)

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3. Additional Chief Secretary

Environment and Forest Department

Government of Tamil Nadu

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4. Secretary

Ministry of Environment, Forest and Climate Change

Government of India

Indira Paryavaran Bhawan

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5. Regional Deputy Director (SR)

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6. District Collector

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7. District Forest Officer

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.....Respondents

Report on mitigation measures to meet that situation of man animal conflict including death accord due to accidents by train with reference to Hon'ble National Green Tribunal, Chennai in O.A.No.157 of 2020 (SZ)

It is submitted that, Coimbatore forest division prone to Human elephant conflicts and its degree of occurrence has increased considerably in the recent past. The recent study conducted by the forest department shows that, elephant population is around 350-380 with a density of 0.5/Km². The estimated elephant population may vary with season ranging from 250- 300 in the off-season (September-December) and its increases up to 650-700 in the peak-season (January-August). Elephants are seasonal migrants, moving from Nilgiris and Sathyamangalam to Walayar reserved forests of Kerala through Coimbatore forest division. In particular, places like Walayar, Bolampatty, Anaikatti reserve forests, Gopinari reserve forests, Hulical, Jaccanari slopes and Nilgiris Eastern Slope reserve forests, Sholakkurai, Singapathy and Iruttupallam blocks are their favorite retreats during rainy season. As the result of disturbance in corridors, human occupied animal migratory paths, changes in land use pattern and agricultural practices, anthropological pressure and linear infrastructure developments causes severe impacts in Elephant behavior leads to human animal negative interactions.

It is submitted that the abstract of Human Animal Conflict between 2015 and 2020 in Coimbatore Forest Division is given below:

- Human Death caused due to Human Animal Conflict - **91**
- Human Injury cases reported - **57**
- Crop Damage cases received – **2008**
- Damage of livestock cases received - **18**
- Property damage cases received - **205**

Total Compensation paid last 5 years between 2015-2020 - **Rs.5,15,25,459.**

It is submitted that Reserve Forests of Coimbatore Forest Division shares boundary for a length of 350 Kms with farmlands and residential areas. About 90 villages are found to be vulnerable to elephant incursion results, increased Man-animal conflict gradually. In that 45 villages are severely affected by Human-Elephant conflict.

It is submitted that Man-Elephant conflicts have been managed by mitigation methods like construction of Elephant proof trenches, erection of solar fences and driving away elephants by making noises and using crackers by the

Forest Departments staff to minimize the conflict. Presently the Human Elephant Conflict Management strategy has been improved further by forming Boundary Night Patrolling Team (BNPT) Squad. To mitigate the Human Elephant conflict effectively, there are 3 BNPT teams are functioning namely Alpha, Beta and Gamma, in all seven ranges stationed at 12 different locations in Coimbatore forest Division and the details given below:

S.No	Name of the Team	Head of Team	Stations SubTeam	Range	No. of ADWs	
1	Alpha Team	FRO	Mullangadu	Bolampatty	4	
2			Bolampatty Range	Narasimpuram	Bolampatty	4
3			Thombalipalayam	Madukkarai	4	
4	Beta Team	FRO	Maruthamalai	Coimbatore	6	
5		Periyanaickenpalayam	Varapalayam	Coimbatore	6	
6			Gopinari	Periyanaickenpalayam	6	
7			Nackienpalayam	Periyanaickenpalayam	6	
8			Tholampalayam	Periyanaickenpalayam	6	
9	Gamma Team	FRO	Vellingadu	Karamadai	6	
10		Mettupalayam	Samayapuram	Mettupalayam	5	
11			Odanthurai Depo	Mettupalayam	6	
12			Ammanpudur	Sirumugai	5	
				Total	64	

It is submitted that the each BNPT sub team consist of Anti depredation watchers (ADWs) as mentioned above and headed by a Forester / Forest Guard. The BNPT squad will watch over the Elephant movement Outside the Reserve Forest during nighttime, prevent the straying out of Elephant Outside Reserve Forest, drive the strayed-out Animal back into the Reserve Forest, protect the life of wild animals, protect the life / Property of public, prevent damage to the Crops and properties of farmers, communicate the day to day wild elephant stray incidences to team leaders, sensitise the farmers about the behavior of wild animals and safe farming methods, fire protection activities, support forest staffs and APWs in Forest Protection whenever needed and conduct awareness programs.

It is submitted that WhatsApp groups are functioning for each Boundary Night Patrolling team (Alpha, Beta, Gamma - WhatsApp groups). These groups share information of strayed animals like animal along with details about GPS location, from where they strayed out, name of the RF and place, and where it was driven in with a detailed description of the animal i.e., whether it is Single Male / Male group / Single Female / Group Female / Female. Further Community Information Network (CIN) namely Thadam (Path) for every Range with WhatsApp groups are functioning with 250 members each for easy communication among Farmers, line dept such as Revenue, Police, Forest dept officials, stake holders such as Temples and Educational Institutions. Transparency is maintained by the department by reporting to the

press and Media about each incident of Elephant straying which is communicated through the Forest Media group thereby alerting them and creating awareness. Further a toll free telephone number 180042545456 is functioning 24x7 to receive calls regarding man animal conflicts and will be attended by the concerned BNPT sub teams or by the concerned forest field staff.

With reference to elephant deaths occurred due to accidents by train, it is submitted that in Tamil Nadu side, the railway tracks (two tracks "A" and "B" lines) from Coimbatore (Pothenur) to Palakkad are passing through Boluvampatti Block I reserve forests, Madukkarai Range of Coimbatore Forest Division. The Two tracks separates at 504 kms and track A enters the Reserve Forest between 506-507 kms and the distance is about 1.8 km and exit the reserve forests at 508 kms. Track B enters the Reserve Forest at 505 A kms and exit at 506 A and 507 kms, for distance of 2.8 kms. The elephant habitat of about 200 Ha lies between track A & B. Hence, the elephant cross track A & B frequently and are subject to risk of train hits. The Elephants are also crossing the railway tracks inside & outside forest for their regular foraging and their attempts to raid agricultural crops raised by farmers.

It is submitted that 11 elephants died due to collision with trains from 2008 to till date in Coimbatore Forest Division. The statistics regarding the elephant deaths are as follows.

- ◆ During 2008 (4.2.2008), four elephants were killed by train accident between Pothenur - Palakkad railway line (outside the forest area) at 492/9, "B" line 1.06 km outside the RF.
- ◆ During 2009 (17.07.2009) one male elephant was killed by speeding train between Ettimadai-Walayar railway stations (outside the forest area) at 505/22, "A" line 0.47 km outside the RF.
- ◆ During 2016, (20.6.2016) one female elephant was killed due to train collision near Dharmalingeshwarar temple near Ettimadai Station (outside the forest area) at 497/100, "A" line 0.25 km outside the RF.
- ◆ During 2016 (29.7.2016), one female elephant was killed due to the train accident in track B, inside the RF at 506/6
- ◆ During 2021
 1. 15.3.2021 one male elephant was injured due to the train accident near Kerala - Tamilnadu border area that is 0.51 km outside the forest area in B line at 507/1. This elephant died on 18.3.2021.
 2. 26.11.2021 three elephants (One Female elephant, One makhna male elephant & one juvenile female elephant) were killed due to train collision near Solarkarai in A line at 506/300 about 220m outside the RF.

It is submitted that out of 6 incidences as mentioned above, 5 incidences of elephant death due to train hit occurred outside the forest area and only one incidence occurred inside the Reserved Forests.

The various measures already taken by Tamil Nadu Forest Department to Mitigate Elephant death due to train hit in Madukkarai Range, Coimbatore Forest Division are furnished below.

- I. A major Ramp structure has been created in track B on either side at 506/4 km in the year 2016. Subsequently two more minor ramps have also been created across the B track, one at 506A/1 and another at 506 A/4. These structures have been made to facilitate the elephants and other wild animals to cross the railway track, with ease in order to avoid train hits.
- II. Five track watchers / Four Anti-depredation watchers are engaged round the clock to monitor the animal movement in Railway lines "A & B" from 2016. As soon as they sight an elephant in the railway track, the location of the animal will be communicated to the railway authorities who in turn will alert the Loco pilots immediately to minimize the train speed and blow horn continuously while crossing such locations.
- III. A watch tower was constructed near the deep curve at 506/6 km in "B" line during 2016-17 to facilitate, the monitoring the movement of elephants along the railway track.
- IV. A percolation pond was formed in 2016 and Forest pond in 2017 in such a locations inside the Reserved Forests for providing water to wild animals so as to minimize the movement of animals across "B" line in search of water.
- V. An UV based early warning alarm and message alert system were established for 500 M length either side of the track between 506/4 and 506/9 on pilot basis during 2017. However, this system was not successful and not functioning.
- VI. A whatsapp group (Railway & Forests) comprising the personnel of Kerala and Tamil Nadu State Forest Department and Railway department has been created to share the elephant and wild animals movement along the railway tracks. If any elephants or other wild animals found near the "A" and "B" lines, the staff will immediately post the details in the whatsapp group. The loco pilots will be alerted by the Railway officials. The field staff also will move to the spot immediately and drive the animal away from the tracks.

It is submitted that Joint coordination meetings between Forest and Railway departments have been conducted on 27.07.2009 and 10.01.2011 at Chennai, 16.03.2012 & 18.06.2013 at Palaghat, 11.07.2016 at Coimbatore and

12.07.2016 at Palaghat, 20.07.2016 at Coimbatore. As the result of above coordination meetings the following mitigating measures taken by Railway Department.

- a) Speed restriction of 45 km / Hour is imposed in the vulnerable section of "A" line and "B" line from 6.00 pm to 6.00 am. Speed restriction of 65 km / Hour is imposed during day time for passenger train and 25km to 35km for goods train
- b) Signage board erected at suitable locations to sensitise train drivers and also to blow horn continuously.
- c) Vista clearances on either side of the tracks have been carried out periodically by Railways department to improve the visibility to loco pilots.

It is submitted that as per order of the Hon'ble National Green Tribunal, Principal Bench, New Delhi (O.A. Case No.141/2021) a expert committee from Project Elephant, MoEF&CC, Project Elephant Division, Ministry of Environment, Forest Department and Climate change visited on 4th and 5th September 2021 to review the steps taken by the railways and forest department and suggested further mitigation measures.

It is submitted that pursuant to death of 3 elephants due to collision with Mangalore -Chennai Express on 26.11.2021 in "A" line near Bolampatti Block I RF, Solakarai Beat, Madukkarai Range, Coimbatore Forest Division, the Principal Chief Conservator of Forests and Chief Wildlife Warden had inspected the said area on 29.11.2021 and convened a joint meeting was on 30.11.2021 with Senior Railway officials of Palaghat Railway division. During this meeting various mitigation measures such as improving the visibility of railway track, ensuring speed restriction of trains, erecting more number of reflective signage boards, providing earthen ramps wherever desirable, under process at 505/A/600 and 506/B/900 in "B" line, Hotline communication, Sensitization programme for loco pilots and forest field staff, installation of solar lights at animals crossing line, conducting periodical inter departmental meeting at different levels, periodical joint inspection etc., were discussed. Accordingly, the following mitigation measures have been taken by the Forest department.

1. Engaging additional Track Watchers for monitoring the track

Earlier, there were 5 track watchers engaged for monitoring of animal movement near the track. In addition to that, 4 Anti Depredation watchers (ADWs) were also deployed on track to support the track watchers. Since the animal movement has to be monitored 24x7 and in both A (1.78 Km) and B (2.8 Km) line continuously, the manpower engaged was not sufficient. Hence as instructed by Chief Wildlife Warden on 29.11.2021 during the field inspection and as suggested by the expert committee of MoEFCC after their field visit during September-2021. New track watchers of 10 Nos have been engaged for monitoring the elephant movements in the track. At

present, there are 15 Track Watchers and 4 ADWs in the track for monitoring the animal movement along the track in Madukkarai Range.

2. Equipping the track watchers

The Track watchers are provided with Long-range torch lights, field dress, shoes, Jackets for supporting them in performing the duty effectively.

3. Improvement of the existing watch tower

The existing watch tower near B track is renovated, painted and the charging facility is made prompt in the watch tower. Extra solar panels and batteries are installed for providing 12 hours of automatic lighting in the watch tower. It is also used for recharging the torch lights and other equipments.

4. Data collection of elephant movement

A regular record is currently maintained to monitor the elephant movement in Soolakarai beat especially in the areas along the track. The individual animals and herds are identified and monitored continuously. Every sighting of the animal along the track is recorded in a dedicated register. The regular movement of the animal is recorded for mapping its behaviour and migratory pattern. This will enable in efficient monitoring in future.

5. Train schedule Timetable provided to track watchers

The train schedules and the timetable of the passenger and express trains run between Walayar to Pothanur are received from the Railway department and provided to the track watchers for monitoring the train movement and informing the Railway authorities in advance if any animal movement is found near the track on the particular time.

6. 24x7 Communication Facility at Forest Range Office, Madukkarai

As requested by the Railway authorities during joint meeting convened by Chief Wildlife Warden on 30.11.2021, to create a dedicated 24x7 landline facility for communication regarding the track and animal movements. In response, a dedicated communication facility is created at the Forest Range Office, Madukkarai with 24x7 staff arrangement and it is functioning as control room for Forest department in Tamilnadu side.

7. Special Team for monitoring

Monitoring the track during night time under the supervision of special team of Foresters and Forest Guards is set up for effective perambulation and immediate communication between Railways and the Forest department in case of emergency.

8. Awareness programme

A multi-stakeholders awareness program on Human Elephant Conflicts was conducted on 30.12.2021, in association with NGOs, viz., Nature Conservation Society and Zoo outreach at Coimbatore wherein the railway officials have also participated

9. Proposals submitted for mitigation

A comprehensive proposal of Rs.550.00 lakhs for installation of six new surveillance towers, construction of four new watch towers, improvement of existing watch tower, purchase of thermal sensor drones, thermal imager, providing two new four wheelers for immediately attending emergency situations along the track, transit sheds, new water troughs to restrict animal movement away from track and walkie talkie setup for communication has been prepared in the lines of minutes of joint meeting held on 30.11.2021 and recommendations of expert team of MoEFCC visited during September, 2021 for mitigation of elephants death due to train hits between Walayar and Madukkarai and submitted for approval and funds.

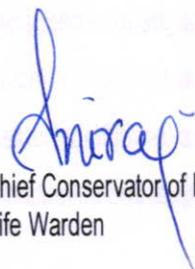
10. Joint inspection of Railway and Forest Department

As per the decision taken in the joint meeting held on 30.11.2021, two joint inspections were conducted on 24.12.2021 and 27.1.2022 by Forest and Railway department in A line and B line using inspection trolleys and spots were identified for new ramps, under passes, solar lights, signage boards. The important measures such as, Ensuring speed restrictions in the vulnerable sector, Vista clearance including pruning of trees, removal of bushes, smoothening and widening of existing ramps, erecting solar lamps for improved visibility of the loco-drivers, regular removal of poly bags, food and garbage materials along the track by Railways were discussed and being followed up.

Further, the Principal Chief Conservator of Forest & Chief Wildlife Warden has inspected the railway tracks passing through Madukkarai Forest range again on 06.02.2022 in the presence Conservator of Forest & Field Director, Mudhumalai Tiger Reserve, the then District Forest Officer, present District Forest Officer, Coimbatore, Forest Range Officer, Madukkarai Range and field staff, both in 'A' & 'B' tracks by walk for 7 Kms and examined the discharge of duties by field staff and track watchers, the locations selected for construction of proposed 4 Watch towers, interacted with the farmers near the tracks and non-functional stone quarry inside the forests and instructions given for removal is poly bags & garbage in the tracks by railways, data collection on elephant movement across the tracks, monitoring the speed of the trains and various suggestions for effective monitoring etc., to prevent collusion of elephants by train.

It is submitted that the key measure to avoid train collision elephant deaths is speed restrictions on train in the vulnerable section of both "A" line and "B" line. In addition to strict adherence of speed restrictions, measures such as clearance of vegetation on the sides of railway tracks, signage boards to loco drivers, ramps and underpasses, widening of deep cutting areas along the track, keeping the track free from plastic, food and garbage and solar lights have to be implemented efficiently by the Railways department apart from measures taken by Forest Department, to ensure the prevention of elephant deaths due to accidents by train.

Solemnly affirmed at Chennai on this
10th day of February, 2022 and signed
his name in my presence


Principal Chief Conservator of Forests and
Chief Wildlife Warden

Before me


PERSONAL ASSISTANT (GENERAL)
O/o PRINCIPAL CHIEF CONSERVATOR OF FORESTS
(HEAD OF FOREST FORCE) CHENNAI-600 015.