

BEFORE THE NATIONAL GREEN TRIBUNAL, SOUTHERN ZONE AT CHENNAI

O.A.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)
No.1, Jeenis Road, PanagalMaaligai
Saidapet, Chennai – 600 015
Ph: 044-24348059
Email: tnforest@tn.nic.in
3. Additional Chief Secretary
Environment and Forest Department
Government of Tamilnadu
Secretariat, Chennai – 600 009
Ph: 044-25671511
Email: forsec@tn.gov.in
4. Secretary
Ministry of Environment, Forests and climate change
Government of India
Indira Paryavaran Bhawan
Jorbagh Road, New Delhi – 110 003
Ph: 044 24695262
Email: secy-moef@nic.in

5. Regional Deputy Director (SR)
Wildlife Crime Control Bureau
C2A, Rajaji Bhavan, Besant Nagar
Chennai – 600 090
Ph: 044-24916747
Email: rddsr@wccb.gov.in
6. District Collector
Coimbatore
Collectorate Building
Coimbatore – 641 018
Ph: 044 2301114
Email: collrcbe@nic.in
7. District Forest Officer
Coimbatore Division
Avinasilingam Home Science College Post
Mettupalayam Road
Coimbatore – 641 043
Ph: 0422 2456911
Email: dfocbe@tn.nic.in
8. Secretary
Ministry of Railways
Government of India
Room No.209, Rail Bhawan
Raisina Rd CP,
New Delhi – 110001
Email: secyrb@rb.railnet.gov.in
9. General Manager
Southern Railway
Government of India
Southern Railway Head Quarters Office
Park Town
Chennai – 600 003
Email: gm@sr.railnet.gov.in
10. Divisional Railway Manager
Office of DRM Complex
Southern Railway
Salem – 636 005
Email: drm@pgt.railnet.gov.in

11. Divisional Railway Manager
Office of DRM Complex
Southern Railway
Palakkad Division
Olavakkode, Palakkad – 678 002
Email: drmpgtsr@gmail.com

...Respondents

AFFIDAVIT

I, Jatin Kumar, S/o Shri Chander Sain, Hindu aged about 30 years working as Divisional Engineer/East in the office of Divisional Railway Manager, Works Branch, Southern Railway, Palakkad Division, Palakkad – 678 002 do hereby solemnly affirm and sincerely states as follows:-

1. I am the Respondent herein and I am authorised to file this report on behalf of Respondents 8 to 11 since i am well acquainted with the facts of the case.
2. I humbly submit that as per the direction of this Hon'ble Tribunal the following action plan is taken by Railway to prevent elephant deaths due to hitting of trains in ghat section of Southern Railway, Palakkad division.

Intrusion Deduction system:

This system has been planned on trial basis in Alipurduar division of Northeast Frontier Railway. The work is now under tender finalization stage for a cost of Rs 2.56 crore. The work consists of supply, installation and commissioning of Remote DAS unit along with communication interface to monitor elephant movement/train tracking/ Asset Monitoring on Railway Track for the distance of 30 km consisting of optical unit to cover both side of equipment. The scope of work also consists of supply installation and commissioning of Central DAS server along with Geo Location application server and interface unit at nearest Level Crossing gate. Palakkad division of Southern Railway is in close coordination with North Frontier railway and planning to introduce in this location based on the trial conducted after commissioning in North Frontier railway. The functioning of this system is based on the Distributed Acoustic Sensitising system. The working principle of the work is as below:

- OFC Distributed Acoustics Sensing based on Rayleigh scattering phenomenon
- Real time monitoring via one single core of a fiber optic cable.
- Laser pulses from Remote OFC DAS unit will be sent continuously and reflected pulses will be received from various points along the fiber cable and analyzed
- Vibration / external sound waves hitting the OFC cable cause changes in the reflected pulses
- Reference signature is captured for on ideal condition when there is no external vibration
- In case of elephant intrusion , signature is captured for classification and analysis
- Real-time trace are compared with reference signature, analysis is done and then alarm is generated

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KUMAR

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- One unit can monitor 40 km to 60km of track depending upon the health of OFC
- Remote OFC DAS unit shall be connected to central server over Ethernet Link (IP / 4G)
- OFC Route Survey shall be done with GPS for localization of event.

The system shall detect and locate moving elephants up to 5m from the fibre optical cable. The objective of the system shall be to identify elephant movement close to track in advance and convey the information to the nearest manned control which can be either the nearest level crossing gate or the Station. With the receiving of movement of elephant with its geo location, the same can be conveyed to the loco pilot of the next train before its departure from the signal of the nearest Level crossing gate or Station home signal to observe special restricted speed cautions or to stop and proceed the train at the identified elephant crossing locations after careful observations. The same can also be used to plan train movement in advance in either B or A line as per the feasibility. The system will also be modeled to examine and analyze the train speed running in the particular location. The information received shall be further shared to the Forest control room also in advance to take appropriate action. Southern Railways Palghat Division has already laid optical fibres on the sides of the track for the purpose of signal communication. The work shall be implemented as soon as the work in NFR railway is commissioned after its successful trial.

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Audio alarm system:

An audio alarm system has been developed by signal department of Southern Railway which was commissioned on 28.12.21 at KM 513/800-900 "B" line at unnamed locations and directly controlled by nearest station to give honey bee/tiger roaring sounds to ward away elephant entering the vulnerable area. This system is solar powered and function automatically after sunset till sunrise. Effective functioning of this alarm system is being monitored and shall be installed in other locations depending on its efficiency with any modification if required.

LIDAR Technology.

Railway is in consultation with Pramura software Pvt. Ltd., to develop modern Technological solutions to give prior warning to Loco drivers regarding elephant movement near to the Railway track. The preliminary discussion was held through online video conferencing on 13.01.2022 to discuss the problem at hand and the requirements of Railway to get feasible solutions which can be based on either LIDAR technology equipped with thermal or infra-red sensors to sense and further communicate to the nearest Station Masters.

3. It is therefore prayed that this Hon'ble Tribunal may be pleased to record this report and pass suitable orders thus render Justice.

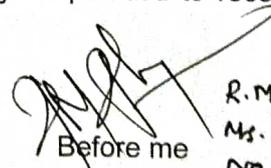
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Solemnly affirm at Chennai on this

____ day of February 2022 and

Signed His name in my presence.


Before me

R.M. Pradeepan
Ms. 2913/2012
No. 143, Law chambers,
Highcourt, Chennai.

Advocate/Chennai

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Coimbatore – 641 043 and 10 others

...Respondents

AFFIDAVIT

K.MUTHAMIL RAJA
Counsel for Respondents 8 to 11