



## A STUDY ON HUMAN –WILDLIFE CONFLICT IN COIMBATORE DISTRICT WITH REFERENCE TO ELEPHANTS (*Elephas maximus*)

### KEYWORDS

Elephant Depredation, Habitat management, Anti-Depredation, Geo-referenced system

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### Introduction:

The Asian Elephant (*Elephas maximus*) is one of the highly endangered species categorized under Schedule I and Part I of the Indian Wildlife (Protection) Act, 1972. In Tamil Nadu, the Elephant population and its movement in the forest divisions particularly of Dharmapuri, Hosur, Coimbatore, Erode, Sathyamangalam and Dindigul are confronting with persistent problems to the management and conservation by way of conflict with the human beings. Nowadays, the Human – Animal conflict has become a perennial problem. The elephants are coming out of the forests regularly, some times daily in these divisions and are causing enormous damage to life and property of the people living in and around forests. Each year about 35-40 casualties are being recorded besides crop damages. During the year of 2011-12 alone, so far, 13 human deaths have been caused by elephant depredation and about 300 crop damage compensation applications for around Rs. 15 lakhs have been received. In short, the crop damage and compensation against human deaths claims are increasing every year in all the above mentioned divisions.

### The reasons for human-wildlife conflict

The Coimbatore forest circle has a total area of 2340 sq km and it is under four divisions – Coimbatore, Nilgiris North, Nilgiris South and Gudalur. In the Coimbatore Forest Division, Human Elephant Conflicts occur in four U-shaped valleys that lie in the western part of Coimbatore, adjoining the Western Ghats. These valleys are the Boluvampatti range, which includes Thondamuthur; Marudamalai; Thadagam; and Palamalai. In all these valleys, an assortment of deemed universities, engineering colleges, holiday resorts and housing colonies have come up on the elephants' migratory routes. Two important places, which are in the elephants' migratory path and therefore facing a problem, are the Thadagam valley and the Naickenpalayam area. The Thadagam valley used to grow sorghum and maize, fodder for the cattle until 15 years ago. But it is home to 190 brick kilns now and stands right in the middle of the main migratory corridor of the elephants.

The brick kilns came up because the soil from the nearby hill slopes got washed down to the valley and piled up to a height of several metres. Affected by elephants' crop raids, big farmers took to making bricks. They dug up the soil for making bricks and used palmyra trunks for baking the bricks. The palmyra trunks are split (to be fed into the oven) and the pith inside them is thrown aside. This ferments and attracts elephants. The labourers in the kilns are from live in tenements near the kilns. Their colonies have no toilets and they are forced to go outdoors to relieve themselves at night. When they encounter elephants, they do not know how to deal with them. They throw stones at them, inviting trouble. Besides, they do not keep a safe distance from them.

There are 20 temples in the forests in the migratory path. They include the Marudamalai temple, the Anuvavi Subramania Swamy temple, the Palamalai temple and the temple in the Velliangiri hill. They attract several lakh pilgrims round the year. The Palamalai and Velliangiri temples are situated in the active migratory corridor. Since the Marudamalai tem-

ple blocks their path, the elephants go round the Bharathiyar University campus now.

More than 20 institutions have come up in the foothills of the Western Ghats in Coimbatore district directly in the migratory path of the elephants. These institutions include the Amirtha Vishwa Vidyapeeth University (364 hectares) at Ettimadai village in the Boluvampatti range, the Karunya University (283 ha) surrounded by the Western Ghats on three sides, the Isha Yoga Centre at Velliangiri Hills, the Tamil Nadu Agricultural University's Forest College and Research Institute (200 ha) on reserved forest at the foot of the Nilgiri Hills on Kotagiri Road, the Karl Kubel Institute for Development Education, the Salim Ali Centre for Ornithology and Natural History near Anakatty, the CRPF's Central Training College-II at Sanjeevi Hills, the Sachidananda Jothi Niketan Matriculation School near Mettupalayam, the Chinmaya International Residential School at Sirumugai, the Indus College of Engineering, the V.L.B. Janaki Ammal College of Engineering and Technology, and the ACC Madhukarai Cement Works. All of them have been built on patta land right on the elephants' migratory corridor.

The following incidents will not only render our heart grief stricken but also show the gravity of man –animal conflict in Coimbatore District.

1. Pregnant pachyderm along with two elephants was killed when they were hit by a train passing between Pothanur and Madhukkari Station, about 20 kms from the city, in the early hours of February 4th 2008. In the impact, the pregnant elephant delivered a calf which, too, died on the spot.
2. In 2009 the incidences of elephant attack on vehicles on the premier tourist path of Mettupalayam- Ooty National Highways were on the rise.
3. Since 2007, 11 elephants were killed by poachers. Villagers too were trampled to death by the elephants that occasionally visit the villages and farms.

### Steps to prevent Human-Elephant Conflict:

To prevent elephants from moving out of the Reserve Forests into agricultural fields and human habitations and ultimately to prevent human deaths and damages to crops and to conserve the wild life population following mitigation measures have been proposed by the Forest Department of Tamilnadu.

#### 1. Elephant Depredation physical prevention measures

Coimbatore Forest Division is spread over 690 sq km in six ranges, of which 400 sq km is conflict-prone. The division has 58 villages and 315 route km of forest boundary.

##### a. Creation of Elephant proof trenches (EPT)

The Forest Department with the help of the farmers has identified important elephant exit locations as very sensitive and frequent movement area. EPT will be dug for 79 km along the conflict-prone forest boundary to prevent depredation of elephants.

**b. Maintenance of old elephant proof trenches (EPT)**

The existing trenches that extend for 19 km long are proposed to be improved.

**c. Maintenance of old solar fences**

Already installed solar fences along 50 km will be repaired.

**2. Habitat Management:****a. Desilting of water bodies and Construction of check dams**

According to the conservator of forests, 10 water bodies will be desilted and rain water will be preserved so that water will be available for the animals throughout the year. Once the capacities of the tanks are increased, they will be filled up by rain water. Also, the conventional water sources are to be preserved before they become extinct. Artificial check dams also are created along the way of water flow. The department is also building salt licks near water holes in the migratory corridor to supplement mineral requirements of elephants with the expectation that the jumbos will stay within the restricted migratory route and not stray into human habitations. Construction of check dams and percolation ponds will satisfy the thirst of animals in summer and also facilitate storage in water bodies.

**b. Fodder availability**

The state government has released Rs 3.45 crore for the purpose and work will soon begin in critical areas like Boluvampatti, Mettupalayam, and Sirumugai in Coimbatore district. Thondamuthur, Anaikatti, Kurudampalayam and Mangarai in Western Ghats will be included in the project in the next phase. The green-fodder banks may help end animals, mainly elephants, from straying into human habitats and agricultural fields.

The fodder bank concept includes planting of trees and grass varieties that are consumed by wild animals. The idea was formulated after chief minister, during a review meeting with forest department officials, suggested that steps be taken to ensure green fodder for animals in the forests, especially during summer, as an immediate measure to mitigate human-wildlife conflicts. A government order in this regard was released on December 14, 2011. The GO permits the forest department to create fodder plantations to improve wildlife habitats for a five-year period commencing January. The project would focus on cultivating grass and trees of indigenous species, which are favoured by elephants for immediate consumption needs and those which moderately grow but ensure a permanent fodder bank.

**3. Deployment of Anti-Depredation force**

It has also been proposed to engage professional tribal elephant trackers 3 trackers per herd for monitoring the movement of elephants. It is proposed to form anti depredation squad of 10 trained, skilled watchers to prevent the elephant depredation. It has also been proposed to establish anti-

depredation camp-cum-watch tower for monitoring. These camps will have place to stay, to cook food with bathing facilities, Lights, communication system and siren would also be provided. Anti-depredation logistics and infrastructures like vehicles and fuel, rations for anti-depredation forces and crackers will be provided.

**4. Farmer support services**

The forest Department has proposed to provide elephant safety equipments to farmers and compensation and relief in case of injury or death. Village anti-depredation committees will be formed and awareness programmes on anti depredation measures will be conducted.

Publicity about the same would be given for effective implementation of the programmes.

**5. Introduction of Tree culture**

Tree culture will be implemented as per the existing tree cultivation on private lands (TCPL) model irrespective of the status of the farmers. Bamboo plants, jackfruit trees and elephant grass will be grown.

**6. Geo referenced elephant monitoring system****a. Radio collar**

Further, it has been proposed to monitor the movement of elephants through fixing of collar device. Radio collar and support system has the facility for Tranquilization also.

**b. Early warning system**

The Coimbatore Institute of Technology (CIT) has developed an electronic early warning system using the GPRS technology using the principles of embedded seismic sensor network. It is proposed to install this technology at 10 important locations in Coimbatore Forest division at cost of Rs. 7.5 lakhs.

**7. Establishment of permanent kumki elephant camp**

Kumki elephants are bought from either Topslip or Mudumalai elephant camps to drive away wild elephants in to the forests. Since it is creating operational and monetary strain on the resources it is proposed to establish a permanent kumki elephant camp at Sadivayal of Bolampatty range with 2 elephants.

**Conclusion:**

Human-Wildlife Conflict seemed to be grim in Coimbatore with expanding population and desperate elephants. The endangered species are unscrupulously disturbed by human encroachment and the pachyderms retaliate in their own fury. The newly proposed action plans of the Forest Department of Tamilnadu ushers in hope and practical solutions. If awareness could be spread to people on the **Elephant Depredation** measures, we can have a sigh of relief. The sensitization and participation of the public is very much eminent to solve the conflict in the long run.

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