

HUMAN ELEPHANT CONFLICT MITIGATION IN WESTERN GHATS, INDIA

PROJECT PROPOSAL BY RID 3203

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Action Group



TITLE: Human Elephant Conflict Mitigation using Technology in Western Ghats, India

BUDGET:

BACKGROUND OF WORK DONE BY NATURE CONSERVATION FOUNDATION DONE IN MITIGATING CONFLICT

Human-elephant conflict has been one of the global conservation issues across Asia. In India, daily interactions between people and elephants endangering lives on both sides besides extensive property damage. Since 2002, Nature Conservation Foundation (NCF) have been carrying out research and conservation work in a critical landscapes of South India, namely, the Valparai plateau in the Anamalais of Tamil Nadu

The Valparai plateau is a 220 km² landscape matrix of tea-coffee-rainforests, supporting the livelihood of 70,000 people and 120 elephants that move across plantations into surrounding Protected Areas.

Long-term research has identified that human deaths/injuries due to elephants have been primarily due to the lack of prior intimation about elephants and their movements through plantations. In collaboration with local communities and state forest departments, NCF has implemented simple, adaptive, and participative mobile phone technology-based interventions which include alerting people over mobile phones using bulk SMS text and voice calls and installation of mobile operated alert beacons and GSM- based information boards in strategic locations indicating elephant locations and their movements daily. These measures have been well regarded by the state government departments, plantation companies, village communities, and residents in both regions. As a result of early warning systems with stakeholder participation, there has been a gradual decline in human death incidents/injuries in both plantation landscapes.

Early warnings helped the state forest department officials to make appropriate decisions and deploy their teams in sensitive areas of conflict. Besides, prior intimation about elephant locations to companies to adopt better protection strategies resulted in a more than 50% decline in property damage incidents by elephants for the past three years in the Valparai region.

However, the occurrence of recent incidents of human deaths necessitates

- (i) strengthening and expansion of early warning systems to facilitate increased safety to people and minimise human fatal/injury incidents due to elephants,
- (ii) Development of an effective Elephant Information Network (EIN),
- (iii) capacity building and focussed field orientation sessions for the forest department staff would help proactive management of human-elephant conflict.

NCFs work along with Rotary Clubs in RID 3203 aims to create a win-win situation through technology-driven interventions and empower local communities to enhance safer zones for people and elephants and promote co-inhabitation in Valparai that would

become coexistence models for human- elephant interface areas in Asia. The project aims to achieve the following objectives.

NCF and RID 3203: Human Elephant Conflict Mitigation in Western Ghats

- **Objective 1:** Monitoring elephant movements and conflict occurrence in plantations of Valparai

Method: Tracking of elephants within plantations will be carried out daily in project sites by field teams using a 4-wheel drive vehicle and on foot. These teams will record GPS locations of elephant presence areas and conflict incidents. The elephant location information from the field teams will be fed to early warning systems to send out alerts to people.

- **Objective 2.** Development of Elephant Information Network to involve stakeholders in human-elephant conflict management

Method: An effective Elephant Information Network (EIN) will be developed by involving stakeholders in both regions. We plan to create an informant network involving identified individuals from local communities who are responsible for intimating elephant locations on a real-time basis.

- **Objective 3.** Strengthening and expansion of early warning systems (EWS) using technological interventions to minimise human fatalities due to elephants.

Method:

a. SMS text and voice alert systems

Registration Drives in tea plantations and villages in project site. We aim to increase the database of subscribers who would receive elephant alerts on their mobile phones from 4500 to 5500 families in Valparai. Daily, text and voice call alerts (in the form of MP3 files) will be sent in the vernacular language (Tamil) using a web-based service provider to mobile phones of people residing within the close quarters of elephants.

b. GSM-based alert beacons and digital information boards

In Valparai, we continue to monitor the operations of 32 alert beacons installed in key locations. In addition, six more alert light beacons will be installed in critical areas of elephant movements. These boards and alert beacons would signal the presence of elephants to people who are unable to access or receive text or call alerts over their mobile phones.

- **Objective 4.** Analysing the impact of early warning systems on the occurrence of incidents of conflict

Method: Understanding the effectiveness of early warning systems is crucial for the functional efficacy of the systems in the form of reduced incidents of human deaths and crop damage incidents by elephants. Impacts of early warning systems will be analysed from daily delivery reports, number and nature of phone calls received over contact number provided along with the SMS text and voice alerts, and compare the number of incidents with the pre-project baselines. We will analyse the effects of optical fences by

comparing the number of crop damage incidents before and after the installation of optical fences.

• **Objective 5.** Capacity building for forest department staff in the positive management of human-elephant conflict

Method: State forest departments play a critical role in safeguarding the lives of people and elephants in conflict-prone areas. In the project sites, Rapid Response Teams have been established by the respective forest departments in Valparai, in Tamil Nadu. These teams need to be equipped with a better understanding of elephants in terms of their movements and execution of on-the-ground proactive steps. We intend to empower these teams with our research information in the following ways.

- Training and focal orient sessions: On-the-field and off-the-field training and orient activities to convey elephant behaviour and proactive steps for frontline staff of the state forest departments in the project sites. NCF and Rotary District 3203 plan to conduct four-stage sessions to cover a minimum of 300 members of the Rapid Response Teams which are involved in day and night time management of human-elephant conflict
- Workshops: We will propose at least four workshops using audio–visual mediums will be used to convey precautionary steps of dos and don'ts for the managerial staff of the state forest departments to adopt better management practices in dealing with conflicts.

Expected outcomes

- A decline in human fatalities/injury incidents and property damage by elephants over pre-project baselines
- Greater participation of people in pro-active conflict management enhances increased safety in peoples' lives and reduces pressures on elephants.
- Adoption of better practices through developing conflict management guidelines
- The project would remain a coexistence model that would encourage others to adopt similar techniques in other interface areas of elephants and people

RID 3203: Community Assessment through newspaper articles, talking with the villagers (through mobiles due to Covid restrictions) have shown that the program where it currently operates is doing well but conflicts occur in the adjoining landscapes. The project had to stop surveillance in new areas due to Covid and its associated funding crunch.

Budget: Three year period (2021-24)

Justification

The proposal is a part of the larger programme aiming at Asian elephant conservation in critical human-elephant conflict zones in south India. We seek support for people who are involved in multiple tasks of the project activities in the Valparai project site. These include support for the one project coordinator, a technical field coordinator, and six field assistants who are involved in field tracking of elephants, recording conflict incidents, sending out text and call alerts over phones to people residing in tea plantations, a compilation of field data, and conduct capacity building programmes for the state forest department frontline staff.

Tracking of elephants involves extensive travel in tea plantations covering multiple locations using the four-wheel vehicle. Hence, we have requested fuel and maintenance support for the field vehicles in the site. Alerting people over the mobile phone would require the purchase of SMS and call credits at the rates indicated by the service provider (GUPSHUP Enterprises). Life and medical insurance for field assistants are critical as they are involved in the field tracking of elephants. Utilities such as the internet, telephone, and accommodation expenses for field staff have been requested at minimum in the project site.

Heading	Role	Budget for 1 year	Budget for 3 years
Salary - Project Coordinators	Project Coordinators-2 Role: To run project activities including monitoring and compiling elephant movements and conflict incidents, sending out elephant alerts, and conduct outreach programmes	\$10,000	\$30,000
Salary- Field Assistants	Field Assistants -Five field assistants to locate elephants on a daily basis and record information on elephant location information in project sites	\$ 7,000	\$21,000
Early Warning System	Purchase of 10,00,000 SMS and 3,00,000 voice credits from the service provider (Based on the service provider current rates of charges) for project site of Valparai	\$4,150	\$12,540
Maintenance	Maintenance of early warning systems (Validity and SMS packages for SIM cards, SMPS for alert beacons and information boards, and optical fences)	\$1,350	\$4,050
Outreach Programs	Street plays, Puppet shows, Movies by professional troupes	\$2,000	\$5,000
Transport	Fuel and Maintenance of 4 wheel drive vehicles	\$2,500	\$ 7,500
Utilities	Internet and phone usage in site	\$400	\$1,200
	Accommodation of field staff	\$500	\$1500

Heading	Role	Budget for 1 year	Budget for 3 years
	Medical Insurance and Life Insurance for 5 Field Assistants	\$200	
Monitoring and Evaluation	Elephant movement outside Valparai-monitoring and evaluation	\$ 2,000	\$6,000
5% extra for administration		\$1505	\$4439.50
TOTAL (1\$=75INR)		\$31,605	\$93,229.5

About Field Partner - Nature Conservation Foundation India -www.ncf-india.org

Print and Videos of this project:

<https://www.ncf-india.org/western-ghats/in-the-elephant-hills>

<https://youtu.be/MWcdMjv41ho>

<https://www.aljazeera.com/program/witness/2020/8/9/india-elephants-in-my-backyard>