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A natural threat; Elephant Vs Man and vice versa

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Abstract

Elephant-human conflict is common phenomena of recent years. Anthropogenic reasons are the main ingredients of this conflict, some climatic factors also catalyse these conflicts. Sustainable development is the main solution to the conflict.

Keywords: elephant-human conflict, forest

Introduction

The LARGEST of all Indian animals, is state animal of Kerala, Karnataka and Jharkand. In 1991-92 Govt. India organised national programme 'Project Elephant'. It aims to restore the degraded habitats of elephant. But the elephant-human conflict still continue. There is no less in this issue. This indicate habitats destruction still continue in different parts of the country. This creature need vast space for wandering and sustaining with adequate daily natural supplements. Unlawful and anthropogenic activities and their subsequent ecological depreciation generate source code for this conflict such as in Jharkand and Odisha, large scale mining of iron, magnesium and chromate ores is the largest threat to the elephants. This conflict has been increasing since after more casual humans interference in forest areas. Nowadays the conflicts are common and proceeds without effective measure as a natural threat to both sides.

Human casualties

In agricultural lands during the harvesting or yielding time elephant herds involve in direct attack with farmers. This causes casualties. During extreme summer water elephants face extreme water scarce in forest. This make wandering for water and the search ended in water bodies of forest bordered villages. This stationing near the human dwellings disturb local peoples. Then they start attack against elephant. At this counterinsurgency elephants counter act with people and loss several life. But in certain cases the attack and their casualties were accidental without any deliberation. In night, unconscious drunkards meet and indulge in encounter with elephant and succumb to death. From this exception, all other conflicts are mutually deliberate. Major EHC occurring states and list of human death during the conflict period is showed in fig. 1 and table.1 respectively.

Table 1: Human mortality due to Elephant attack ^[1, 2, 3, 4, 5, 6]

State	Mortality	Reported period
Assam	29	1989-2002
Jharkand	08	2011-2013
Karnataka	95	2010-2015
Kerala	01	2014-2015
Odisha	37	2001-2003
W. Bengal	314	2009-2010

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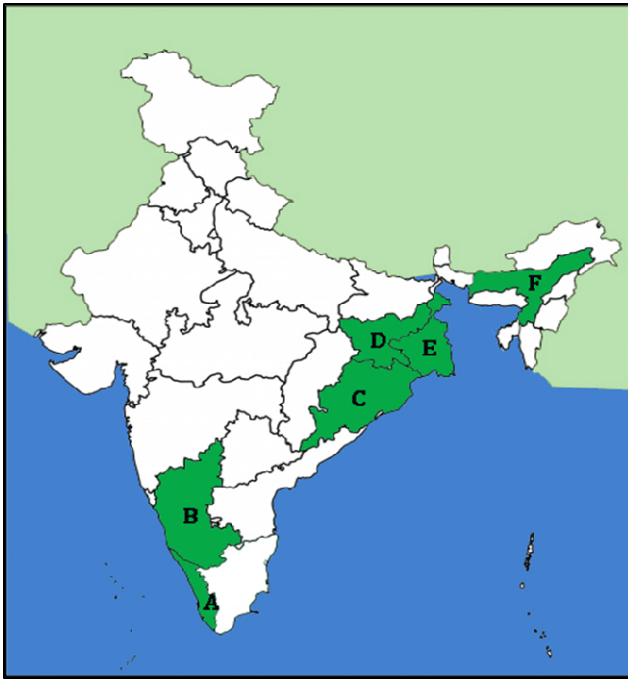


Fig 1: Major states of Elephant-man conflict present.

A= Kerala
 B= Karnataka
 C= Odisha
 D= Jharkhand
 E= W. Bengal
 F= Assam

Elephant mortality

Greater demand and money value of ivory insist people to do this crime and poach elephant using gun. This crime continues in forest flanked villages. Perhaps this crime is not documented due to lack of attention of officials. Another elephant lives lost is due to electrocution. When they try to trespass high voltage passing electric fencing. The execution measure causes heavy casualties in elephant herds. Poisoning via food bite is another preventive measure adopted by people to prevent crop raiding. Palatable fruits such as Pine apple and banana are commonly used for food bite. Direct attack with farmers in agricultural fields, falling into well and swamp and collision with train during rail cross are the other life-threatening events of elephant.

Elephant forage inviting factors

Paddy, Sorghum, Maize and Ragi are the main crops and Coconut, Banana, Sugarcane, Mango are the plantations that attract elephants. Their harvesting period or yielding time affects elephant sense. It causes high economic loss to farmers.

Major reasons of elephant incursion

- **Country liquors:** In Assam, people prepare liquors for commercial use [1]. When they perceive this booze smell they roll down from forest.
- **Specific vegetative Yield.** In Kerala, seasons attract elephants by Jackfruit [4]. Then they descend and subsequently destroy human surroundings.
- **Crop raiding:** It depends on degradation of food habitat in their home range. Then they prefer alternative food source and necessitate them to raid Crops or other yields of human prevalence. In Assam elephants important pest

of paddy. They periodically visit and devastate yields.

- **Monoculture:** Cultivation of same crops throughout season makes imprint in behavioral memory. This habituates their recurring arrival.
- **Lack of fodder grass and bamboos:** This is another reason of this ravage. In forest fire and extreme drought large mass of vegetation of forest destroyed forest. This resulted in step down to nearby villages for food.
- **High elephant population and lowering forest areas:** This makes natural instinct to graze in human settlements.
- **Climate change:** Changing climate produces more sunburn in air, extreme drought in land and reduction in ration of rain. This reduces water quantities in water bodies and drought perishes greenish vegetation of forest. Then they started new lands for water and food. This expedition ended in forest ridged villages. This makes wandering in agricultural crops and yields.
- **Forest fire:** This is calamity of sunburn. It causes heavy toll in biomass. But certain cases some anti-socials make forest fire. This destructs large food mass and habitats of elephant.
- **Core forest area destruction:** The greedy destruction for wood, agricultural practices are the main anthropogenic reasons for this conflict. These human encroachments fragmentize its habitats and destruct its corridors in forest. Ecotourism labeled localisations also disturb the habitat fringes.
- **Development projects:** Construction of dam, roads, railways are another reasons of fragmentation this pressurizes them for survival. In Assam, a National Highway paved a behavioural change in elephants; they started search for food in cars [7].
- **Poaching:** Due to extreme poachery for tusk, forceful them to implant their lives to another place. This makes herd wandering. Some of them randomly diversified into local villages.

Solutions to elephant-man conflict

- Supplying limiting factors of elephant habitat is the primary solution to the war end. Make artificial water bodies in forest to facilitate water grooves during summer. Planting natural fodder species and bamboo in forest also parallelly nurture elephant habitat [1].
- If elephants enter into human prevalence inform wildlife officials and drive off elephants with proper action plan to drive off. Use of trained elephant (Koonkie) also good method to ascend elephants into forest.
- Set up watch tower to monitor elephant entries and applying different physical deterrents like crackers and acoustic deterrents such as drums and bells. Their effect renders them to forest.
- Fix electric fencing in forest boundaries this intensifies reverse move of elephants to forest. Expense and maintenance are the major hurdles of this method.
- Vegetative barrier using lemon tree, red chilly and citronella also triable in forest boundaries [1].
- Trenches are another potential method to prevent elephant entry. But in few cases elephants overcome this hurdle using their puffy leg, they break ridges of trenches and submerge the trench with this soil. This helps to easy walkout.
- High wavelength spotlight and fire accessories also recommended to scare elephants.

- Avoid shrubby and herby crops in forest boundaries. Make tree plantations. Eg: Rubber, Neem tree
- Afforestation is another natural long term measure in vegetation lacking areas. This will flourish elephant habitats, food mass and restore forest fire perished vegetation's.
- Punish those who violates laws under Forest conservation act 1980 and Wildlife (protection) act 1972. This prevent counter act of antisocials, poachers and hunters in forest areas.
- Give social awareness to people about forest and their resources, implement an action plan to protect forest and protect it from forest fire. Periodic roving of forest officials to assess ecological status also necessary. If these facts implement successfully it restore their native land and resources. It sow sustainable benefits and natural beauty to human kind.

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