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Elephant!! A National Heritage Animal: Why its Survival Matter?

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Government of India declares elephant as the National Heritage Animal of the country as suggested by National Board for Wildlife in the year 2010. India that has 17 % of the world's human population, though occupying 2.61% of the world's land-mass, also account for 60 % of the world's Asian elephants, 75% of the world's tigers, 100% of Asiatic lions and 85% of the world's one horned rhinos. There are three recognized elephant species on the earth, the African savanna elephant (*Loxodonta africana*), the African forest elephant (*Loxodonta dot*) and the Asian elephant (*Elephas maximus*). The population trend of the Asian elephant has been falling, possibly for hundredth, especially in most of the countries of South-east Asia. An elephant is a megaherbivore and social

in nature, live in groups of about 20-25 animals lead by female and have a home range size of approximately 100–1,000 km². They are regular migratory megaherbivore in seek of food, water and reproduction. It requires an average of 150 kg of forage and 150-200 liter of water daily.

Expansion of human settlements and agricultural fields across Asia and Africa has resulted in widespread loss of elephant habitat, degraded forage, reduced landscape connectivity, and a significant decline in elephant populations relative to their historical size and overall range. However, limited resources are need of both animals and humans, increasing human population lead to increasing human-elephant conflicts, reduction and crumbling of elephant habitat.

The reason why we're continuously straggling with natural disasters, disconnecting once uninterrupted forests, obstructing natural migratory routes by building concrete jungle of key species and disturbing an ecological balance. If we hope to have free flowing rivers, forests sequestering carbon and less severe impacts of climate change, emphasize the urgent need for appropriate long-term policies to manage and conserve the ecosystem.

Population status and distribution

The Asian elephant is found in 13 range countries across Asia, within India, wild elephants are distributed in 23 states with southern and north-eastern India. Present-day distribution of elephants in India, extended from South of Himalayas to cover the entire subcontinent with the exception of the most arid tracts. Currently states like Andhra, Bihar, Gujarat, Maharashtra, Punjab and Rajasthan which are not elephant range states. India being home to major number of wild Asian elephants (*Elephas maximus*), likely at about 31368 or just about 60% of the total population while it had fallen to 27312 (Project Elephant Directorate

in 2012).

Captive population

History of keeping elephants in captivity is over 5000 years old. In Asia alone, over 15000 elephants are kept in captivity with India reported to be having a captive population of 3000 to 4000 elephants. Profit-making is the major motive and other reasons as well. Elephant usage was popularized in the recent colonial past, where elephants were the instruments to harvest the finest tropical evergreen and mixed forests in India. Captive elephants maintained as status symbols or used in temples, festivals, private functions, processions, elephant safaris, recreation in zoos, and circuses, wildlife tourism, immobilization of wild carnivores, and patrolling for protection of Sanctuaries and National Parks. States such as Andaman, Assam, Kerala and Tamil Nadu have, in addition to keeping elephants in forest camps.

Utility of captive elephant in forest

The trained elephants playing key role in the wildlife health management tasks and they are mostly maintaining by state forest departments under ministry of Environment and Forest, Govt. of India. The

trained elephants are performing various activities viz. transportation of goods to distant places, during immobilization of carnivores, searching of animals, carcasses and patrolling of the protected forest areas etc.

Conservation status

Asian elephants are protected under Schedule I and Part I of Indian Wildlife Protection Act (1972). The Asian elephant (*Elephas maximus*) is an endangered species and has been listed in Appendix 1 of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) since 1973 and mapped 101 elephant corridors across the country.

Cultural significance

Historically, elephants have been integral parts of Indian culture. The significance of the elephant in Indian culture and mythology, as well as its economic and military role in the country's history has been well known. From the prehistoric time, elephant has been known for their aesthetic and spiritual values as a symbol of Lord Ganesha. It was known that in the early 17th century, nowadays Gaj Yatra is the biggest event around 12 states of India.

Role of elephant in ecosystem

Elephants are a majestic keystone species and their wandering behavior like the daily and seasonal migrations plays a vital role to maintain the environment. Basically they are landscape architects; control the soil erosion by ingestion of dense trees in the forest, preventing overgrowth of certain plant species and allowing space for the regeneration of others, which in turn large pasture cover to other grazer herbivorous. Elephants are both browser and grazer eat plants, grasses, fruits and seeds, releasing the seeds when they defecate and disperse the seeds in other places as they travel, promote biodiversity.

An elephant plays a crucial role in the ecology of the vast plains and is superlative indicator of forest health. They graze profoundly on inhabitant grasses and muddle the soil with their movement, allowing many plant and animal species to develop. They distribute the plant and fodder seeds by dung everywhere into jungle, while dung pile act as bio fertilizer and provide essential nutrient to the wild flora and fauna and maintain the soil fertility as well as water holding capacity. They consume more than hundreds of plants species that

supports a vegetation type ranging from evergreen to moist deciduous. Thus, the species is found in a forested area having enormous biodiversity. This is the reason why elephant is often referred as an indicator species of a healthy forest ecosystem. Many species follow the elephant for food and water especially in drought conditions. According to elephant expert more than 150 types of plant, amphibians are depend upon the elephant if we lose the elephant these plants and amphibians are also extinct slowly. For healthy forest, elephant are key species and these forests are major source of water and oxygen for us.

Areas to be explored

Despite of above all information there are many areas where systemic studies and research are needed. It includes study on the diseases, anatomy and physiology such as values of haemato-biochemical parameters at different age and sex, proximate analysis of the feedstuffs and diet formulation for captivity, dose standardization of anesthetics, gut microflora, temperature, pulse, heart rate etc. Besides, systemic studies on the animal behavior, movement and migration in different

seasons are also essential.

Recent mortality events

- ⇒ More than 356 elephants in different age and sex group died in Botswana since May 2020 out of 281 deaths are verified by mysterious pathogen.
- ⇒ In Kerala a pregnant female elephant falling prey to crude bait firecracker stuff in fruits meant for wild boar
- ⇒ Mortality of elephants also reported in Chhattisgarh by varies causes

Threats

Habitat destruction and poaching for tusk are the major factors threatening to the survival of the elephant. Other problems are disease, insurgency, straying, human-elephant interaction and various developmental activities. Most elephant range countries are developing countries with limited financial resources to commit to conservation, so funds remain major constraints in elephant conservation. One of the major limitations is lack of information regarding the population dynamics and habitat requirements of elephant in most protected areas.

Habitat destruction

Habitat loss has been largely

responsible for the large scale decline of elephant range and it remains a major threat to elephant conservation in Asia. The habitat degradation and fragmentation affect elephant population in two ways. They are:

- * The physical disturbance caused by people such as wood cutting and forest fire
- * Loss of food availability due to extensive cattle grazing.

Habitat destruction by humans has threatened the survival of the elephant throughout its range. Because the animal is basically a forest (including grassland) dweller, its survival depends upon the continued existence of large stretches of forest cover. Because of unplanned clearance, the habitat has been fragmented, resulting in isolated or pocketed populations that do not have any future. Various developmental activities have also resulted in loss of habitat of the elephant. Various mining, dam constructions, railway, highway project has destroyed part of a rich elephant habitat.

Insurgency

This is a rather new but serious problem affecting the survival of the elephant and other wildlife in different parts of India. The Naxalite/

Maoists movement has severely affected much of the elephant habitat in India. While the extremists themselves do not usually harm wildlife, but others take advantage of the situation for tree-felling and poaching.

Poaching

Poaching of elephant is mostly for tusk. The most severe threat facing elephants is poaching and the now illegal global ivory trade. Asian elephants are being targeted by poachers for their tusk, skin and bones which are used for commercial and medicinal purposes.

Climate Change

Elephants are already feeling the impacts of global warming. Droughts lead to food shortages and reduced habitat. Droughts also disrupt the mating season, which leads to fewer offspring.

Common Diseases of Elephants

Gaja Shastra' written in Sanskrit is considered to be the first written document on diseases of elephants. The infectious disease manifestations reported in Asian elephants are as follows: Endotheliotropic herpes virus infection (EEHV), Foot and Mouth Disease, Rabies and Tuberculosis, Anthrax, Haemorrhagic Septicaemia, Tetanus, Babasiosis,

Trypanosomiasis, Schistosomiasis and Non-infectious Osteoarthritis, Foot disorder etc. these various diseases and disorders that caused widespread morbidity and mortality in elephant. In past, elephant population declined drastically due to disease epidemics and sporadic mortalities. Therefore, regular health monitoring and epidemiological surveillance are needed on diseases affecting survival of elephant in free range and captivity.

Human-elephant interaction

Straying into human habitations and crop damage especially to sugarcane, banana plantation is serious threat especially near smaller and fragmented habitats. Conflict between elephant and humans is very a serious conservation problem. It is mainly confined to some crop depredation, especially in the forest villages and encroachments.

Poisoning

Accidental poisoning from pesticides used on agriculture field is also a danger to the elephant. This is an important issue for elephant conservation because a major part of its habitat in south and north-eastern India. A large number of pesticides, including dangerous non-

biodegradable items such as Endosulfan and Dieldrin, are commonly used.

Road and train accidents

Road and train accidents also occasionally result in death of elephant

Lack of awareness

Despite of the highest level of protection accorded to Asian elephant; most of the peoples are not aware of its protected status and their ecological importance.

Conservation

Elephant reserve are forms for the conservation of elephant in their natural habitat, government of India induce Ministry Of Environment, Forest and Climate Change lunched Project Elephant- 1992 and its very successful project for elephant conservation. Project elephant was lunched with certain objective to ensure the welfare, protection of habitat and corridors, prevention and mitigation elephant conflicts. At present there are around 32 elephant reserves in 16 different state of India. Today Ministry of Environment, Forest and Climate Change, Project Elephant, NGOs mapped 101 elephant corridors across the country for elephant conservation.

As elephant habitats shrink leading to frequent conflict over space and resources which leads to conflict and sometimes loss of life. Hence need to develop a conceptual model that include reducing and mitigating human elephant conflict and recognizes the competition for water, land and plant resources and seeks to identify conflict hotspots and alternative resource access options for effective habitat management now and in the future.



