ELEPHANT CONSERVATION IN INDIA – ENVIRONMENT

On 12th August, the Ministry of Environment, Forest and Climate Change (MoEF&CC) celebrated World Elephant Day in Coimbatore, focusing on human-elephant conflict.

World Elephant Day

Establishment

World Elephant Day was jointly founded on 12th August 2012 by Patricia Sims (Canada) and the Elephant Reintroduction Foundation (Thailand). Patricia Sims continues to lead the campaign globally.

Global Partnerships

The initiative has collaborated with over 100 global organisations that work on wildlife conservation and sustainable ecosystems.

Awareness & Participation

Millions of people worldwide support the initiative annually, making it one of the most widely recognised days for raising awareness on elephant protection.

Objective

To highlight the urgent plight of elephants, including threats from poaching, habitat loss, and human-elephant conflict, and to mobilise global cooperation for their survival.

Key Facts About Elephants

Species Diversity

There are three extant elephant species – the African Savannah elephant, the African Forest elephant, and the Asian elephant.

Physical Differences

African elephants have larger ears shaped like the African continent, whereas Asian elephants' ears are smaller and shaped like the Indian subcontinent. African elephants have two trunk "fingers", while Asians have only one.

Largest Land Animal

The African Savanna (Bush) elephant is the world's largest land animal, weighing up to 6–7 tonnes.

Longevity & Reproduction

Elephants live up to 65 years. Females reach puberty at 11 years, carry the longest pregnancy among mammals (22 months), and remain fertile till their late 40s. Under ideal ecological conditions, populations can grow by 7% annually.

Social System

Herds are matriarchal, led by the oldest and most experienced female, ensuring group safety and knowledge transfer across generations.
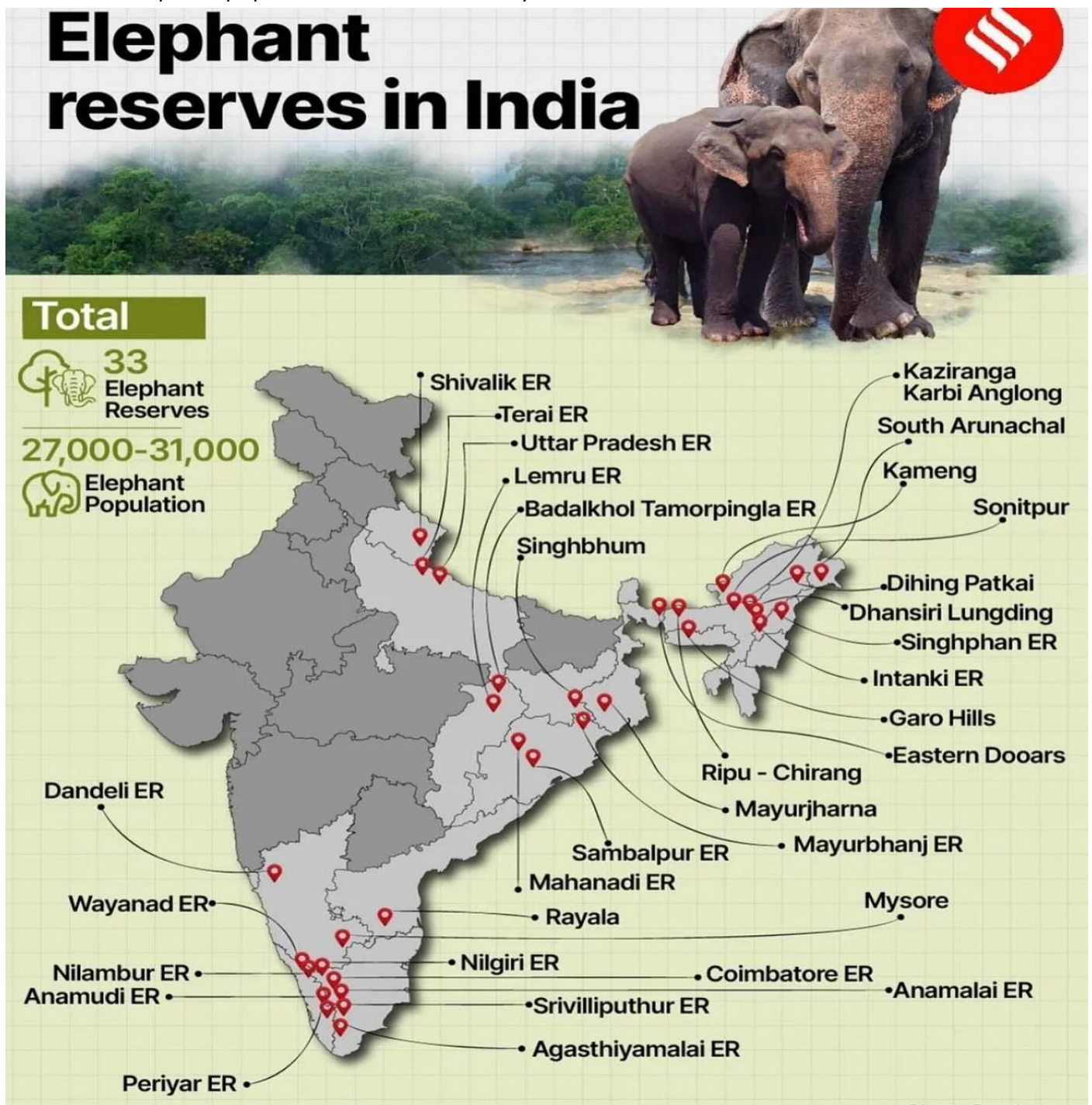
Tusks

Elephants' tusks are enlarged incisors used for feeding, digging, defense, and marking territories. They are also the primary target of ivory poaching, threatening species survival.

Communication

Elephants communicate through low-frequency sounds (infrasound), body language, scent, touch, and even seismic vibrations transmitted through the ground.

Population Decline

In the past century, 90% of African elephants have been lost due to poaching and habitat loss, while Asian elephant populations have declined by over 50%.

Elephant reserves in India

Total

33 Elephant Reserves

27,000-31,000 Elephant Population

- Shivalik ER
- Terai ER
- Uttar Pradesh ER
- Lemru ER
- Badalkhol Tamorpingla ER
- Singhbhum
- Kaziranga Karbi Anglong
- South Arunachal
- Kameng
- Sonitpur
- Dihing Patkai
- Dhansiri Lungding
- Singhphan ER
- Intanki ER
- Garo Hills
- Eastern Dooars
- Ripu - Chirang
- Mayurjharna
- Mayurbhanj ER
- Dandeli ER
- Sambalpur ER
- Mahanadi ER
- Mysore
- Wayanad ER
- Rayala
- Nilambur ER
- Anamudi ER
- Nilgiri ER
- Coimbatore ER
- Anamalai ER
- Srivilliputhur ER
- Agasthiyamalai ER
- Periyar ER

Elephants in India and Their Significance

Population Share

India is home to over 60% of the world's wild Asian elephants, mainly of the subspecies Elephas maximus indicus (Indian elephant).

National Heritage Animal

Declared as India's National Heritage Animal, elephants hold cultural, ecological, and religious importance.

Ecological Role

Elephants are considered

1. Keystone species, they shape ecosystems by creating clearings, dispersing seeds, and maintaining biodiversity.
2. Umbrella species, their conservation indirectly protects numerous co-existing species.
3. Flagship species, they symbolise conservation efforts, drawing public attention to wildlife protection campaigns.

Distribution

Elephants are found mainly in southern, northeastern, and central India, with an estimated 28,000–30,000 elephants living in fragmented habitats.

Legal and Institutional Protection in India

IUCN Red List

Asian Elephant is listed as Endangered.

Wildlife (Protection) Act, 1972

Included under Schedule I, providing the highest protection.

CITES (Appendix I)

Strictly prohibits international trade in elephants and their body parts.

Project Elephant (1992)

A centrally sponsored scheme under MoEFCC to conserve elephants, habitats, and migration corridors. Supports 22 states/UTs through anti-poaching, conflict mitigation, and habitat protection.

Project Tiger & Elephant (from FY 2023–24)

Project Elephant has been merged with Project Tiger for integrated conservation and better resource utilisation.

Project RE-HAB (KVIC initiative)

Uses bee-fences (bee boxes placed along elephant paths) to reduce crop-raiding and human-elephant conflict, providing farmers with additional honey income.

Population Growth

India's wild elephant population rose from 27,669 in 2007 to 29,964 in 2017, indicating positive conservation outcomes.

Elephant Reserves

India has notified 33 Elephant Reserves across 14 states, overlapping with tiger reserves, sanctuaries, and reserved forests.

Corridor Conservation

150 elephant corridors across 15 states have been mapped and ground-validated to allow safe migration routes.

Technological Use

Adoption of geospatial tools, LULC analysis, and satellite monitoring for habitat protection and anti-poaching strategies.

MIKE Programme (CITES)

India participates in the Monitoring of Illegal Killing of Elephants, which provides global data to track poaching trends.

Challenges in Elephant Conservation in India

Elephant-Train Collisions

From 2009–2024, 186 elephants died due to train hits, mainly in Assam, West Bengal, Odisha, Kerala, and Uttarakhand. Causes include railway lines cutting corridors, high train speeds, and lack of monitoring systems.

Habitat Loss and Fragmentation

Expanding agriculture, urbanisation, and infrastructure projects shrink forests and cut migration routes, leading to genetic isolation.

Human–Elephant Conflict

About 400–500 humans and 60 elephants die annually due to conflict, mostly during crop raids and retaliatory killings.

Climate Change

Alters water and food availability, forcing elephants into human-dominated landscapes. Floods and droughts worsen this trend.

Poaching

Despite global ivory trade bans, elephants are hunted for ivory, meat, skin, and tail hair, particularly in the Northeast.

Electrocution & Explosives

Low-hanging power lines and crude bombs (intended for wild boars) kill many elephants every year.

Accidental Deaths

Elephants frequently fall into open wells, pits, and trenches, especially in fragmented landscapes.

Weak Resources

Many reserves like Odisha's Similipal suffer from poor infrastructure, shortage of trained staff, and lack of anti-poaching patrols.

Measures Needed for Elephant Conservation

Collision Mitigation

MoEFCC recommends underpasses, overpasses, ramps, and Intrusion Detection Systems (IDS) along railway tracks to prevent elephant-train accidents.

Conflict Deterrents

1. Chili-oil fences act as low-cost barriers to keep elephants away from crops.
2. Beehive fences deter elephants and provide additional income for local farmers.
3. Banana and Napier grass plantations at forest edges work as trap crops, diverting elephants from food crops.

Habitat Strengthening

Implement Elephant Task Force (2010) recommendations like reconnecting fragmented habitats via land acquisition, Gram Sabha-based consent, and voluntary relocation of human settlements.

Technological Tools

Expand use of GPS collars to track elephant movements in real time, predict conflict hotspots, and alert nearby communities.

Capacity Building

Equip forest staff with modern vehicles, drones, veterinary support units, and non-lethal deterrent tools to handle conflicts.

Community Participation

Programmes like Gaj Yatra (nationwide awareness campaign) and Gaj Shilpi (involving local artists and communities) encourage public ownership of conservation. Eco-tourism opportunities linked with elephant reserves can provide alternative income to local communities, reducing dependence on forests.

Sources: https://www.thehindu.com/sci-tech/energy-and-environment/key-focus-on-human-elephant-conflict-mitigation-moefccs-world-elephant-day-celebration-in-coimbatore-on-august-12/article69920385.ece