

ENVIRONMENT

PRE-CONTEXT

NDCs AND STATUS

THE HINDU, PG.NO: 6.

News: "A role for India in South-South climate cooperation."

India's NDCs 2016 (COP 21 Paris):

- **Carbon Emissions intensity to be reduced to 35 percent from 2005 levels by 2030.**
 - Target Achieved.
- **Electric power installed capacity from non-fossil fuel-based to reach 40 percent energy resources by 2030.**
 - Target Achieved.
- **Carbon Sink** creation equivalent to **3 billion tonnes of CO2** via Forest and tree cover.
- Boost climate resilience in agriculture, water & health.

India's Panchamrit (COP 26 Glasgow):

- Panchamrit is an update to India's existing NDCs 2016. **Five nectar elements (Panchamrit) of India's climate action:**
 - **Non-fossil energy capacity reach 500GW by 2030.**
 - **Carbon emissions to be reduced to one billion tonnes from now to 2030.**
 - **Net zero emissions by 2070.**
 - **Carbon Emissions intensity** of the economy to be **reduction to 45 per cent by 2030, over 2005 levels.** [UPDATED]
 - Reached to 36 percent as of year 2020.
 - **Electric power installed capacity from non-fossil fuel-based to reach by 50 percent energy resources by 2030.** [UPDATED]
 - By Oct 2024, India achieved 46%.
- **Mission 'LIFE'**– 'Lifestyle for Environment', a mass movement for as a key to combating climate change.

Carbon Markets

- Market based approach to control emissions by setting emission caps for polluters.
- **India's Carbon Credit Trading Scheme (CCTS)** backed by **Energy Conservation (Amendment) Act of 2022.**
 - Through this, India aims to align its climate commitments under the Paris Agreement with broader economic goals.
- **United Nations Carbon Offset Platform:**
 - **e-commerce platform** where a company, an organization or a regular citizen can purchase units (carbon credits) to compensate greenhouse gas emissions.
 - Provides economic incentives for reduction of emissions to polluters.

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GS III

SYLLABUS: DISASTER MANAGEMENT.

FOREST FIRES (INDIA)

THE HINDU, PG.NO: 7.

News: "Addressing the growing threat of forest fires."

Context: Wildfires swept throughout Los Angeles last month, destroying homes and causing casualties and displacements, the urgency of addressing and preventing forest fires took centre stage once again

India and Forest Fires:

- According to the, more than **36% of the country's forest cover is prone to fire** — **Forest Survey of India.**
- There has been a **10-fold increase in forest fire incidences in the last two decades** whereas the total forest cover has increased by merely 1.1% — **CEEIW research.**
- **Vulnerable Areas:** Uttarakhand and Himachal Pradesh, Madhya Pradesh, Maharashtra, Odisha, and Karnataka.

Causes:

- **90% of fires are due human activities:** such as deliberate **land clearing, slash-and-burn agriculture, and unattended campfires.**
- **Climate Change factors:** such as **rising temperatures and extended dry spells, intensify the risk of forest fires.**

Consequences:

- **Contribution to carbon emissions:** forest fires emit approximately **69 million tonnes of CO2 annually.**
- **Annual economic loss of approximately ₹ 2 lakh crore** due to Forest degradation (including forest fires).
- **Disruption of ecosystem stability:** the water cycle, cause soil fertility degradation, and worsen human-wildlife conflict as animals seek refuge in human settlements.

Tackling Forest Fires & Issues:

- **National Action Plan on Forest Fires and the Forest Fire Prevention and Management Scheme (FFPMS).**
 - The **centrally sponsored scheme** assists State govts.
 - But funding allotment to scheme is fluctuated over time.
- **No clear distinction between forest fires and other types of fires** under Existing Forest Fire Alert System.
- **Lack of induction of drones equipped with thermal imaging cameras** to monitor fire-prone areas, assess damage, and guide fire fighting efforts.
- **Equip more local communities to collect and share real-time fire data** through mobile apps and toll-free helplines.
- India can also draw from **Nepal's Community Forest User Groups and Indonesia's Fire-Free Village Program** to strengthen community forest fire management.

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BIODIVERSITY

PRE-CONTEXT

ELEPHANT

THE HINDU, PG.NO: 20.

News: "Asian elephants change scientists' minds on why they trumpet".

About Elephants:

- **Largest living land animal on Earth**, considered a **keystone species** (their activities shape the environment, benefiting other species).
- Elephant got **thick skin (protects from sunburn)**.
- **An Elephant never forgets.**
- Elephants are **constantly eating** (need to eat 150kg food per day).
- They have **long gestation period of 22 months** (longest of any animal in the world).
- They can hear and **communicate through the ground (seismic signals)** and **sound of approaching cloud**.
- They are **intelligent and social animals**, living in herds with their relatives.
- They can **live upto 60-70 years** in the wild.

Three species of Elephants:

- **African Savanna Elephant (EN)**, **African Forest (CR)** Elephant, **Asian Elephant (EN)**.
- **African Elephants have significantly larger ears** compared to Asian Elephants.
- In case of **African elephants both males and females have tusks**, while in Asian elephants, only males typically have large tusks.
- **Botswana has highest number of Elephants in the world (1,30,000)**.

India and Asian Elephant Conservation:

- **Project Elephant is now merged with Project Tiger**.
- **Listed under Schedule I of WLPA, 1972**, providing the **highest level of legal protection**.
- **Elephant census 2017:** approx 30,000 elephant population present in India.
- **Elephant corridors:** Narrow strips of land that connect two significant habitats of elephants.
 - The **Northeast region possesses the highest number** and the largest area of the Elephant Corridors.
- **Elephant Reserves:** dedicated protected habitats for Indian elephants.
 - As of 2024, **there are a total of 33 Elephant Reserves** present.
 - **Largest** in Singhbhum (Jharkhand).
 - **Highest** in Assam and TamilNadu (5 ERs in each).
- **Highest population of Elephants:** Mysore (Karnataka).

Elephant in News:

- **10 Elephants died** after **eating Kodo millet** in Bhadvagarh National Park (MP).
- **MoEFCC published the Captive Elephant** (Transfer or Transport) Rules in March 2024.
 - For instance, rules states that **when an owner is no longer able to maintain an elephant, the ownership of that elephant may be transferred**.
- **New life-sized mechanical elephant** to assist Kerala temple in ceremonies **due to efforts of PETA** (People for Ethical Treatment of Animals).

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Types of Elephants

African Elephants



African Bush Elephant



African Forest Elephant

Asian Elephants



Indian Elephant



Borneo Pygmy Elephant



Sri Lankan Elephant



Sumatran Elephant

Thank you!