

**ENVIRONMENT**

PRE-CONTEXT

**BIODIVERSITY**

THE HINDU, PG.NO: 5.

**News:** "M.P. CM releases five more cheetahs into the wild in Kuno."

**About Project Cheetah:**

- Aimed at reintroducing cheetahs, **specifically African cheetahs, into India.**
- **Kuno National Park (Madhya Pradesh)** has been selected as the site for the reintroduction of cheetahs.
- It has been estimated that **Cheetahs will reach carrying capacity** of Kuno National Park in about 15 years and that of the wider **Kuno landscape in 30-40 years.**
- **Cheetah is a flagship species:**
  - That can help restore India's **dry-open forest and savanna ecosystems.**
  - **Ecological balance** by controlling prey populations and rejuvenating habitats.
- **Boosts eco-tourism**, benefiting local communities living around these protected areas by creating jobs.
- **A captive breeding facility** for the African cheetahs is being built in the **Banni grasslands of Kachchh, Gujarat.**

**Cheetah Action Plan:**

- **Short term Goals:**
  - 50% survival rate in the first years.
  - Establishment of home ranges.
  - Reproduction in the wild.
  - Revenue generation through eco-tourism.
- **Long term Goals:**
  - Establishment of a stable population.
  - Creation of a viable Meta-population.
  - Improvement of habitat quality and prey diversity.
  - Economic benefits for local communities.

**About Cheetah:**

- **World's fastest land Animal (80-130 kmph)**, can **accelerate upto 0-100km/h in just about 3 seconds.**
- Can maintain top speed only for 20-30 seconds.
- **Diurnal** species.
- Female are mostly solitary, males may form coalitions.
- **Cheetahs cannot roar** instead they purrs, growls.
- **Distinctive black tear marks** from eyes to down sides of their mouths(help in reduction of glare from sun).
- **Asiatic cheetah**, Critically Endangered.
- **African Cheetah**, Vulnerable status under IUCN.

**Key Institutions Under Project Cheetah:**

- The **NTCA and the MoEFCC** are the institutions responsible for overall guiding the project.
- **Wildlife Institute of India** has been providing technical inputs.
- **Madhya Pradesh Forest Department** is responsible for implementation.

**Why did many Cheetahs die after introduction:**

- **Pre-existing Medical Conditions.**
- **Inadequate Environmental Acclimatisation** Eg. Heat-Related Deaths.
- **Unusual Accidents:** Death by drowning,
- **Nutritional and Health Issues:** A cheetah died due to suspected hypokalaemia (a condition involving low potassium levels)
- **Stress due to longer Captivity and Relocation:** captivity varied from few months to an year.

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- **Sufficient habitat (4,000 to 8,000 sq. km) of the required quality** to establish a viable population of free-ranging cheetahs in the wild.

**About National Parks**

- Established under WLP. 1972 & **IUCN category II.**
- **Declared by:** both State Govt., Central Govt.
- **National Board for Wildlife (NBWL)** approves NPs & WLS.
  - **NBWL is chaired by the Prime Minister.**
- **Boundaries** of NPs are clearly defined.
- NPs cannot be downgraded to WLS.

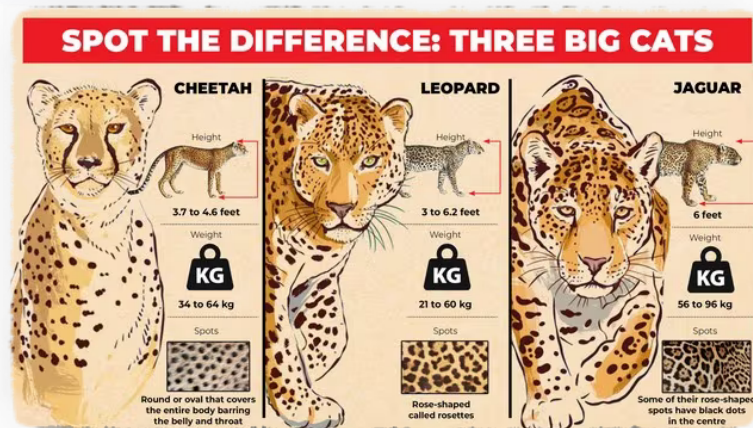
**Zones inside National Park:**

- Offer **highest level of Protection** than Wildlife Sanctuary.
- Consists of core & buffer Zones.
- **Core zone strictly protected for wildlife:**
  - No human interference.
  - No harvesting of timber.
  - No collecting minor forest products, Grazing, hunting etc.
  - No private ownership rights are allowed.
- In **buffer zones sustainable practices** are allowed.
- NPs Protects both flora and fauna.
- **Chief Wildlife Warden** shall be authority who shall control, manage and maintain all protected areas.
- **NPs are not species centric.**

**Facts on National Parks:**

- **Hailey National Park (Jim Corbett National Park)**, est in 1936 is India's first National Park.
- **Highest number of NPs:** MP(9), A&N(9).
- **Highest number of WLS:** A&N (96), MH (45).
- **Hemis NP in J&K** is the largest National Park of India.
- **South Button Island NP** in A&N is the smallest.

6 FEB 2025



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ENVIRONMENT

PRE-CONTEXT

SACRED GROVES

THE HINDU, PG.NO: 8.

**News:** "What is the SC directive on sacred groves?"

About Sacred Groves:

- Sacred groves are **patches of trees traditionally protected by local communities for their religious and cultural significance** also contribute to local biodiversity conservation.
- India has over 13,000 documented Sacred Groves.
- **These sites are repositories of various herbal medicines and gathering points for local healers**, as much as they are biodiversity hotspots.
  - **Extraction of any resources in any form is prohibited, except for custodians to access medicinal plants.**
- These are found in **Tamil Nadu, Kerala, Karnataka, and Maharashtra, Rajasthan etc.**
- Currently, **boundaries of sacred groves are not clearly demarcated.**
- Centre has usually maintained that the management of wildlife while its **habitat is primarily the responsibility of the States.**
  - **Wild Life (Protection) Act, 1972:**
    - **Empowered States to declare any private or community land, as a community reserve**, for protecting fauna, flora and traditional or cultural conservation values and practices.

Recent Developments

Supreme Court of India directed Forest Dept of Rajasthan to declare Sacred groves as 'forests' and notify them as 'community reserves' under the Wildlife Protection Act (WLPA) 1972.

Community Reserve:

- Community reserves are **notified over community or private land** where locals have volunteered to conserve habitats to protect "fauna, flora, and traditional or cultural conservation values and practises".
- It falls under jurisdiction of **Chief Wildlife Warden.**
- **Land-use pattern within a community reserve cannot be changed** without the approval of the **Community reserve management committee and the State government.**

Community Forest Resource under FRA provisions:

- According to the FRA, a community forest resource is the **"customary common forest land within the traditional or customary boundaries of the village...**including reserved forests, protected forests and protected areas such as sanctuaries and national parks to which the community had traditional access".
  - Here, **gram sabhas are the statutory authority** to protect, regenerate, conserve or manage community forest resources, along with the wildlife, flora, and biodiversity within
- **All sacred groves 'in forest areas'** are currently subsets of community forest resources, **fall under the jurisdiction of gram sabhas**, and **not the Forest or the Wildlife department.**

**Sacred Groves of Rajasthan:** orans', 'malvan', 'deo ghat', and 'baugh'.



ENVIRONMENT

PRE-CONTEXT

PETA

THE HINDU, PG.NO: 5.

**News:** "New life-sized mechanical elephant to assist Kerala temple in ceremonies."

About PETA:

- **People for Ethical Treatment of Animals(PETA):** a **NGO.**
- **Founded:** 1980 in the USA.
- **Prohibits animal abuse like experimenting, kill to eat, wear, entertainment etc.**
- Promotes understanding of **right for all animals to be treated with respect.**

Key Campaigns of PETA in India:

- **Ban on Animal Testing for Cosmetics (2014):** Lobbied the **Bureau of Indian Standards (BIS)** to remove animal testing requirements.
- **Ban on Wild Animals in Circuses (2017):** **Central Zoo Authority** prohibited their use after PETA India's advocacy.
- **Anti-Jallikattu Movement:** Filed petitions leading to a 2014 **Supreme Court** ban; later reinstated with restrictions after public protests.
- **Save Temple Elephants:** Campaigned against mistreatment of elephants in Kerala temples.

Legal Protection for wildlife in India:

- **Prevention of Cruelty to Animals Act, 1960:** Advocated for stricter penalties and enforcement.
- **Wildlife Protection Act, 1972:** Supported amendments to enhance animal welfare provisions.



GS II

SYLLABUS: BILATERAL AGREEMENTS INVOLVING INDIA.

INDIA–MIDDLE EAST–EUROPE ECONOMIC CORRIDOR (IMEC)

THE HINDU, PG.NO: 10.

News: "West Asia crisis must not be allowed to undermine IMEC."

About IMEC:

- With IMEC, India aims to position itself as a global supply chain alternative.
- The proposed corridor is expected to reduce the transit time between its eastern and western (beyond Haifa) nodes by 40%, and costs by 30%, compared to transportation via the Suez Canal.
- IMEC involves Rail connectivity, Shipping lines, Energy pipelines, High-speed data cables.
- Participating countries (India, U.S., United Arab Emirates, Saudi Arabia, Italy, France, Germany, and European Commission).
- Two corridors under IMEC:
  - Eastern: Connects India to Arabian Gulf.
  - Northern: Connects Arabian Gulf to Europe.

Ongoing Status:

- Northern End: Conflict between Israel and Palestine engulfed crisis the whole of West Asia.
- Eastern End:
  - India signing Comprehensive Economic Partnership Agreement (CEPA) with UAE, led to faster pace of development.
  - India and the UAE launched the Virtual Trade Corridor (an integral part of the IMEC):
    - Reduction of administrative processes and time.
    - Reduction of logistics and transportation costs.
    - Ease of doing trade.

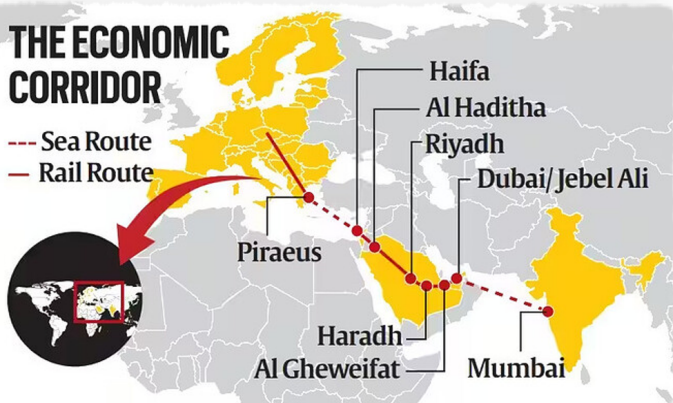
Opportunities for India:

- Current crisis on Northern part is to be seen as an opportunity for:
  - Prepare its ports.
  - Develop specific economic zones along the connectivity nodes.
  - Improve its domestic logistics for seamless integration with the IMEC.
  - Enhancing its manufacturing competitiveness.

6 FEB 2025

THE ECONOMIC CORRIDOR

--- Sea Route  
— Rail Route



ENVIRONMENT

PRE-CONTEXT

WESTERN GHATS

THE HINDU, PG.NO: 9.

News: "Western Ghats: a living archive of culture, memory, and resilience"

About Western Ghats:

- Mountain range parallel to India's western coast, spanning 6 States: Gujarat, Maharashtra, Goa, Karnataka, Kerala, Tamil Nadu.
  - Length: ~1,600 km from Tapi River (Gujarat) to Kanyakumari (Tamil Nadu).
- UNESCO Status: Declared a World Heritage Site in 2012 and one of the world's 36 biodiversity hotspots.
  - Criteria qualified:
    - Outstanding examples of ecological processes.
    - Rich biodiversity and endemic species.
- Age: Older than the Himalayas, formed during the breakup of Gondwana (~150 million years ago).
- Biodiversity:
  - Flora: Tropical rainforests, Shola grasslands, Myristica swamps (unique freshwater ecosystems).
  - Endemic species: Nilgiri tahr (EN), Lion-tailed macaque (EN), Malabar civet (EN), Nilgiri blue robin.
  - Receives heavy rainfall (2000–8000 mm annually), supporting tropical evergreen forests.
- Rivers:
  - Major Peninsular Rivers: Godavari, Krishna, Kaveri (Cauvery), Tungabhadra.
  - West-flowing Rivers: Periyar, Bharathapuzha, Mandovi, Zuari.

Mountain Ranges:

- Sahyadri Range (Northern Western Ghats), Anaimalai Hills, Nilgiri Hills, Cardamom Hills.

Protected Areas:

- National Parks: Silent Valley etc (Kerala), Anamalai etc (Tamil Nadu), Kudremukh, Nagarhole, Bandipur (Karnataka).
- Biosphere Reserves: Nilgiri (oldest in India), Agasthyamalai.
- Kasturirangan Committee (2013): Proposed 37% of Ghats as Ecologically Sensitive Area.

6 FEB 2025





## TECHNOLOGY

PRE-CONTEXT

### UPI

THE HINDU, PG.NO: 7.

**News:** "The rise and rise of UPI digital payments."

#### About Unified Payments Interface (UPI):

- UPI is a **mobile-based payment system** that allows users to transfer funds between bank accounts in **real time**. **Users can transfer money to a recipient's UPI ID**, which can be a mobile number, QR code, or Virtual Payment Address.
- UPI is **regulated by RBI**.
- **Developed by National Payment Corporation of India (NPCI)** in 2016.
  - A not-for-profit organization founded by the **Reserve Bank of India (RBI) and the Indian Banks' Association (IBA)**.
- UPI is built on Immediate Payment Services (**IMPS**) and Aadhar-Enabled Payment System (**AEPS**) architecture.
- The **standard limit is ₹1 lakh per transaction per day**. However, banks can set their own limits; which can be made in **20 transactions**.
- UPI can be used on **BHIM, a first-party app**. It can also be accessed **via third-party platforms** such as **Google Pay, PhonePe, BharatPe, etc.**
- Unlike a credit or debit card payment, there is **no charge involved in UPI payment**.
- **UPI Lite by NPCI:**
  - Which **does not require a PIN or internet** to make transactions.
  - It limit of Rs 500 per transaction and Rs 4,000 limit per day.
- **UPI used outside of India:** Nepal, Bhutan, Srilanka, Maldives, Mauritius, Singapore, UAE and France.

#### Digital Public Infrastructure (DPI):

- DPI refers to digital platforms that **enable the efficient delivery of public services to citizens** in a secure, inclusive, and interoperable manner.
  - **Digital identity systems:** India's Aadhaar system.
  - **Digital payment systems:** Unified Payment Interface (UPI), BHIM etc.
- **India Stack:**
  - **e-KYC:** owned by **UIDAI**.
  - **e-Sign:** maintained by **Ministry of Communications and Information Technology**.
  - **Digilocker:** Owned by **Ministry of Electronics and Information Technology**.
  - **UPI:** owned by **NPCI**.

6 FEB 2025

**Thank you!**