

Regent Education and Research Foundation Group of Institutions
Daily Current Affairs Synopsis

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(Useful for UPSC/WBPSC/SSC Exams.)

- This is the **second litter of cheetah cubs** to be born in the country since the start of **Project Cheetah**.
- Till now, there were **15 cheetahs** at KNP and the tally now stands at **18**.
- **Under Project Cheetah**, 20 Cheetahs were translocated from **Namibia** (8) and **South Africa** (12) to KNP, Madhya Pradesh.
The cheetah was **declared extinct in India by 1952**, the only large carnivore species that went extinct in Independent India. **Objective:** To establish viable **cheetah metapopulation** in India that allows cheetah to perform **its functional role as top predator**.
Implementing Agency: National Tiger Conservation Authority (NTCA).
Funding: From Project Tiger as well as Compensatory Afforestation Fund Management & Planning Authority (CAMPA).
- **Progress so far:** Out of **6 criteria for assessing short-term success**, the project has already met four criteria namely: 50% survival of introduced cheetahs, Establishment of home ranges, Birth of cubs in Kuno, and Revenue to local communities.
- **Challenges:** fatalities, lack of space and prey at KNP, etc.
- **Cheetah, world's fastest mammal**, is a **keystone species** of dry forests, scrub forests, and Savannahs Protected under **Appendix 1 of CITES**.
IUCN status: African cheetah (Vulnerable), Asiatic cheetah (Critically endangered).

National Tiger Conservation Authority

New Delhi

Genesis: Established in **2006** as a **Statutory Body** constituted under the **Wildlife (Protection) Act, 1972**.

Organizational Structure: Chaired by the **Minister of Environment Forest and Climate Change** and the **Minister of State for Environment** acts as a Vice Chairman.

Functions: Providing ground protection initiatives to **science-based monitoring of tigers, cheetah and their habitat**
Fostering accountability of Center-State in management of Tiger Reserves.

- It is first nomination of its kind by the **Ministry of Environment, Forest, and Climate Change (MoEFCC)**.
It includes city of Indore, Bhopal and Udaipur.
 - **About WCA**
It is a **voluntary accreditation system** to recognize the importance of **wetlands in urban and peri-urban environments**.
 - ◆ Peri-urban areas are zones of transition from rural to urban land uses. It was **approved** in the **COP12 of Ramsar Convention (2015)**.
 - Objective:** Promote the conservation and wise use of wetlands, as well as sustainable socio-economic benefits for local populations.
 - Criteria:** Accreditation is **based on 6 criteria** which include **presence of Ramsar sites** in the city, or other wetland conservation sites etc.
 - ◆ Once granted it is **valid for 6 years**.
 - It will help in implementation of **Amrit Dharohar** Initiative across the country. ☺
Amrit Dharohar aims to promote unique conservation values of the Ramsar Sites in the country.
 - **Ramsar Convention** is an **intergovernmental treaty** under UNESCO that provides the framework for the conservation and wise use of wetlands and their resources.
 - ☺ **Adopted in Ramsar (Iran) in 1971**.
 - ☺ Currently, there are **75 Ramsar sites** in India.
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17 Products from different States/UTs bagged the Geographical Indications (GI) tag

- A GI is a sign used on products that have a **specific geographical origin and possess qualities or a reputation that are due to that origin.**
- **International Recognition:**
 - ⊕ Under the **Paris Convention for the Protection of Industrial Property**, GI are covered as an element of **Intellectual Property Rights (IPRs)**.
 - ⊕ Also covered under the WTO's **Trade Related Aspects of Intellectual Property Rights (TRIPS)** Agreement.
 - ⊕ **Madrid Agreement and Lisbon Agreement**
- **In India**, GI registration is administered by the **Geographical Indications of Goods (Registration and Protection) Act of 1999.**
 - ⊕ It is used to identify **agricultural, natural, or manufactured goods.**
 - ⊕ GIs are registered by the **Registrar of Geographical Indications (RGI)**, which is the **Controller-General of Patents, Designs, and Trade Marks.**
 - ⊕ **Duration:** 10 years and can be renewed.
 - ⊕ **Nodal Ministry:** Department for Promotion of Industry and Internal Trade, Ministry of Commerce and Industry.
 - ⊕ **Significance:** Confers legal protection against unauthorized use, boosts exports, Conveys an **assurance of quality and distinctiveness**, etc.

States/UTs	GI tagged Products
Odisha	Lanjia Saura paintings, Dongaria Kondh shawl, Khajuri Guda, Dhenkanal Magji, Similipal Kai Chutney, Nayagarh Kanteimundi Brinjal, Koraput Kalajeera Rice
Arunachal Pradesh	Handmade Carpets, Wancho Wooden Craft, Adi Kekir (Ginger)
West Bengal	Tangail Saree, Garad Saree, Korial Saree, Kalonunia Rice, Sundarban Honey
Jammu and Kashmir	Ramban Anardana
Gujarat	Kachchhi Kharek

Studies reported presence of Microplastics concentrations in landfills leachate

- **Leachate** is formed when rain water filters through wastes placed in a landfill.
- Studies highlighted that landfills contribute in **creating an environment conducive for disintegration of plastic** items into microplastics.
 - ⊕ It is mainly due to different **biochemical reactions** which lead to temperature fluctuations, high salinity, low pH and generation of gases such as methane, etc.
- **Microplastics** are typically the **plastics of size** ranging from 1 micrometre to 5 millimetre.
 - ⊕ They can be categorised as-
 - ◆ **Primary microplastics:** virgin or manufactured
 - ◆ **Secondary microplastics:** formed by the degradation of plastics due to photodegradation etc.
 - » **Ex:** laundering of synthetic clothes; abrasion of tyres through driving; microbeads in facial scrubs etc.
- **Consequences of microplastics:**
 - ⊕ **Leaching of toxic substances** such as phthalates, Bisphenol A etc. in soil and groundwater.
 - ⊕ **Bioaccumulation** of toxic pollutants in food web.
 - ⊕ **Health impacts on humans and animals:** endocrine disruption, DNA damage, decreased reproductive health, cancer etc.
- **Initiatives Taken:**
 - ⊕ **Global:** UNEP's Clean Seas Campaign, Global Partnership on Plastic Pollution and Marine Litter, negotiations on Global Plastics Treaty etc.
 - ⊕ **India:** Ban on single use plastics, Extended Producer Responsibility (EPR) under Plastic Waste Management (Amendment) Rules, 2022, etc.

Related News: Single Screw Extruder

- It is indigenously developed equipment for mechanical recycling of **waste thermoplastic polymers and inorganic particulate.**
- With the help of it, polymer composites can be molded to the required shape for making paver blocks, tiles, and bricks.
- It has been developed by IIT Bombay with the help of the **Department of Science and Technology (DST).**

Lakshadweep's first Solar Project launched with Battery Energy Storage System (BESS) Technology

- **BESS technology** is critical for promotion of renewable energy through efficient energy storage systems.
- **Energy Storage Systems** are of different types such as: ⊕
 - ⊕ Mechanical (Ex. Pumped Hydro Energy Storage)
 - ⊕ Electrochemical (BESS)
 - ⊕ Thermal (Ex. Phase Change materials)
 - ⊕ Electrical (Ex. Super Capacitors)
 - ⊕ Fuel Cells
- **BESS uses different electrochemical reactions** to store electricity.
 - ⊕ **Examples of BESS** are Lithium-Ion (Li-Ion) battery, Sodium-Sulfur (Na-S) battery etc.
- There are two main categories of battery energy storage system:
 - ⊕ **Traditional solid rechargeable batteries** where the chemical energy is stored in solid metal electrodes, and,
 - ⊕ **Flow batteries** where chemical energy is stored in varying types of flowing liquid electrolytes kept in tanks separate from the actual electrochemical cells.
- **Importance of BESS:**
 - ⊕ Helps in achieving **net zero emission targets** by 2070 under **Panchamrit**.
 - ⊕ **Improve grid stability** during variable renewable generation.
 - ⊕ Development of BESS is quite slow in India in comparison to countries like China due to
 - **Low domestic Production**, due to lack of raw material availability such as lithium, cobalt, nickel etc.
 - ⊕ Lack of **high-quality R&D** infrastructure
 - ⊕ Lack of appropriate **technology transfer**, high cost of installation etc.

India's Initiative:

Ministry of Power (MoP) has taken following initiative:

- **Scheme for Viability Gap Funding (VGF)** for development of BESS.
 - ◆ Envisages 4,000 MWh of BESS projects by 2030-31, with a financial support of up to 40% of the capital cost as VGF.
- ⊕ **National Framework for Promoting Energy Storage Systems** unveiled in 2023.

Ministry of Health and Family Welfare released the results of a survey on Antimicrobial resistance (AMR)

- The hospital-based survey was conducted by the **National Centre for Disease Control (NCDC)** under **National Programme of Antimicrobial Containment**.
- **Key Findings of the survey**
 - ⊕ **Wide variations among hospitals:** Prescription of antimicrobials varied between 37% to 100% of patients, among surveyed hospitals.
 - Preventive usage:** 55% of the antibiotics prescribed were not for the treatment but for the prevention of an infection.
 - Empirical prescriptions:** 94% of antibiotics prescribed were empirical i.e. given by the doctors based on what they thought had caused the infection.
- AMR occurs when **microbes (bacteria, fungi, parasites, and viruses)** evolve so that **antimicrobial drugs against them are no longer effective**.
 - Due to resistance, **infection** spread becomes difficult to stop, making **treatment harder**. Microorganisms that develop antimicrobial **resistance are referred to as "superbugs"**.
- ⊕ **World Health Organisation (WHO)** has identified **AMRs among the top ten public health threats**.
- WHO classifies antibiotics into three groups, to **emphasize the importance of their appropriate use**.
 - Access group:** Offer the best therapeutic value with less potential for resistance.
 - ⊕ **Watch group:** Higher resistance potential and need to monitor usage to avoid overuse. **Reserve group:** Last-resort antibiotics to treat severe infections caused by multidrug-resistant pathogens.



(RUPPs)

- The Election Commission of India (ECI) brought **new rules for the allocation of symbols** to RUPPs.
 - The new rules mandate RUPPs to furnish the following along with application for symbols
 - ◆ **Audited accounts** of the last three financial years,
 - ◆ **Expenditure statements** of last two elections
- RUPPs are those which have **not secured enough percentage of votes** in the Assembly or general election to **become a State party**.
 - ⊕ It also includes **newly registered parties or parties that have never contested elections** after being registered.



Direct-to-Cell

- **SpaceX**, an American company, launched the first batch of Starlink satellites with **"Direct-to-Cell" capabilities**.
- **Direct-to-Cell** satellites have an advanced **eNodeB modem** onboard that **acts like a cellphone tower in space**.
 - ⊕ Current communication system is based on the land based tower for transferring signals.
- It allows Starlink to **deliver direct satellite broadband** connectivity on smartphones anywhere on Earth.
- It will also connect **Internet of Things (IoT)** devices with common LTE (Long-Term Evolution) standards.



Ratle Hydroelectric Project (RHP)

- A Power Purchase agreement has been signed between RHP Power Corporation and Rajasthan Urja Vikas and IT Services Limited.
- It is a **Run of River (ROR) project** with a capacity of 850 megawatt (MW).
 - ⊕ **ROR project** harvest the energy from flowing water to generate electricity in the absence of a large dam and reservoir. ➤ It is located on the river **Chenab** in Jammu and Kashmir.
 - ⊕ **Chenab** is formed after the **merger of the two streams namely Chandra and Bhaga**.
- **Other major projects** on Chenab and its tributaries include Dul Hasti, Pakal Dul, etc.



Prerana Program

- **Ministry of Education** launched the “Prerana: An Experiential Learning program” to empower participants with leadership qualities
 - ⊕ It is a **week-long residential program** for selected students of class IX-XII.
 - ⊕ **20 Students** are selected for each batch (10 boys and 10 girls)
 - ⊕ It is to **run from a Vernacular School**, established in 1888, in **Vadnagar (Gujarat)**
 - ⊕ The curriculum was prepared by **IIT Gandhi Nagar** based on **nine value-based themes**.
- It aims to embody the spirit of “Vasudhaiva Kutumbakam” and foster **unity in diversity**.



Rejupave technology

- The **Border Road Organisation** has utilized Rejupave technology for constructing **high-altitude bituminous roads under low and sub-zero temperature conditions** Indo-China border in Arunachal Pradesh.
- ➤ Rejupave is a **liquid bio-based asphalt modifier cum rejuvenating agent**.
- It is jointly developed by **CSIR-Central Road Research Institute and Verma industries**.
- It is developed as a **Bio-based eco-friendly product** with 100% bio- oil.
- It eliminates the problem of **increasing road levels** due to overlay.
- It also enables the conservation of natural resources by **recycling the aggregates and bitumen for road construction**.



White Goods

- **Department for Promotion of Industry and Internal Trade (DPIIT)** is planning to undertake a third-party assessment of the PLI scheme in the white goods segment.
- **White goods** refer to heavy consumer durables or large home appliances, which were traditionally available only in white.
 - ⊕ E.g. washing machines, air conditioners, etc.
- **Some other types of goods**
 - ⊕ **Veblen good:** Their demand increases as the price increases due to their exclusivity. E.g. luxury cars
 - ⊕ **Giffen goods:** Their demand increases when prices increase due to lack of substitute for them. E.g. Wheat
 - ⊕ **Sin goods:** Considered harmful to society. E.g. Alcohol



Central Drugs Standard Control Organisation (CDSCO)

- CDSCO has **banned all charges except supply and processing costs on blood units**.
- Hospitals and blood banks can now only **charge supply and processing fees for blood from patients**.
- CDSCO is the **Central Drug Authority** for discharging functions under the **Drugs and Cosmetics Act, of 1940**. It is responsible for
 - ⊕ Approval of Drugs and Conduct of Clinical Trials. Laying down the standards for Drugs.
 - ⊕ **Control over the quality** of imported Drugs.
 - ⊕ **Coordination** of the activities of State Drug Control Organizations.



Kadamba Dynasty

- An inscription of **Kadamba period** has been discovered in **Goa**. It is a bilingual inscription written in **Kannada and Sanskrit**.
- **About Kadamba Dynasty:**
 - ⊕ Founded by **Mayurasharma** in **345 CE**.
 - ◆ Later Kadambas ruled as feudatories of other empires (Chalukya and Rashtrakuta empires) from different places.
 - ⊕ **Region:** Present day Karnataka and Konkan.
 - ⊕ **Capital:** Banavasi
 - ⊕ **Administration** - Divided into smaller units such as Visaya, Rastra and Nadu.
 - ⊕ **Architecture:** Kadamba Shikhara (part of temple) is most prominent feature.



Iran (Capital: Tehran)

- ⊕
- India condemned the twin explosions that took place in **Kerman city** of Iran.
- **Political features:**
 - Iran is a country in the **Middle East or West Asia**.
 - Bordering nations:** Afghanistan, Pakistan, Turkmenistan, Azerbaijan, Armenia, Turkey, Iraq.
 - Bordering water bodies:** Caspian Sea, Gulf of Oman and Persian Gulf.
- **Geographical features:**
 - ⊕ **Major mountain ranges:** Zagros, Elburz, Caucasus.
 - ⊕ **Highest Point:** Mount Damavand (Dormant stratovolcano)
 - ⊕ **Major deserts:** Dasht-e-Kavir and Dasht-e-Lut
 - ⊕ **Major lakes:** Lake Urmia, Gahar Lake.

