

Factly Weekly

Compilation

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**For UPSC CSE Prelims
Exam**

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Baalpan ki Kavita

News– The Union education ministry has launched the “Baalpan ki Kavita” initiative.

About Baalpan ki Kavita

- The Ministry of Education has introduced the Baalpan Ki Kavita initiative *to revive and preserve traditional Indian nursery rhymes and poems for young children.*
- This initiative focuses on compiling a diverse collection of rhymes and poems *across all Bhartiya Bhashas (Indian languages) and English.*
- **Objective**- To provide young learners with *engaging and culturally relevant learning materials*, strengthening their connection with their heritage while making foundational education more enjoyable.
- In *collaboration with MyGov*, the ministry has invited public contributions to this initiative.
- The Participants can submit *existing folklore-based rhymes, well-known traditional poems*, or newly composed joyful rhymes and poems.
- **Submissions are categorized into three age groups:**
 - Pre-primary (ages 3–6)
 - Grade 1 (ages 6–7)
 - Grade 2 (ages 7–8)
- *Entries are welcomed in all Indian languages and English*, emphasizing the cultural significance of regional rhymes and poems.

India Bio Economy Report 2025

News-The India BioEconomy Report 2025 has estimated India’s bioeconomy to be valued at over \$165 billion, contributing more than 4.2% of the country’s GDP. India BioEconomy Report 2025.

About India BioEconomy Report

It is an annual publication by the *Department of Biotechnology and BIRAC* that tracks the growth and performance of India’s bioeconomy

- The bioeconomy involves the *industrial utilization of biological resources* (plants, animals, and microorganisms) and the replication of natural biological processes to develop goods and services.
- It promotes sustainable alternatives to traditional, resource-intensive production systems

Applications of Bioeconomy

- *Biofuels, bioplastics, medicines, synthetic biology, and agriculture* are key areas where bioeconomy is making an impact.
 - Example: India’s COVID-19 vaccines (Covaxin, Covovax) developed using bioeconomy principles.
 - Example: Ethanol produced by microorganisms from crops like sugarcane and corn is a prime illustration of bioeconomy’s role in reducing dependency on hydrocarbon-based fuels.

Key Findings of the India BioEconomy Report

Market Growth:

- India’s bioeconomy has *almost doubled from \$86 billion in 2020 to \$165 billion in 2024.*
- The number of companies in the bioeconomy sector has increased by *90%, from 5,365 in 2021 to 10,075 in 2024*, with expectations to double again by 2030.

Sectoral Contributions:

- Industrial Sector: *\$78 billion*—driven by biofuels and bioplastics.
- Pharmaceuticals: *35% of total bioeconomy value*, largely led by vaccines.
- Research & IT: The fastest-growing segment, particularly in biotech software development and clinical trials.

Regional Contribution:

- *Maharashtra, Karnataka, Telangana, Gujarat, and Andhra Pradesh* contribute over *two-thirds of India's bioeconomy value*.
- The Eastern and Northeastern regions account for less than 6%.

Global Comparison:

- India's *bioeconomy-to-GDP share (4.2%)* is comparable to the US and China.
- However, countries like *Spain and Italy* have *bioeconomy contributing over 20% of their GDP*.

Policy Initiatives:

- The *BioE3 Policy (Biotechnology for Economy, Environment, and Employment)*, introduced in 2024, aims to position India as a global bio-manufacturing hub and a leading biotech R&D center.
 - The policy focuses on advancing bio-based chemicals, functional foods, precision biotherapeutics, marine & space biotechnology, and climate-resilient agriculture.
- National Bioeconomy Mission (Proposed): Suggested in the report to coordinate policy and funding under one umbrella

Vertically Launched Short-Range Surface-to-Air Missile

News- India recently conducted a successful flight test of the Vertically Launched Short-Range Surface-to-Air Missile (VL-SRSAM) from a defense test facility off the Odisha coast. **Vertically Launched Short-Range Surface-to-Air Missile.**



About Vertically Launched Short-Range Surface-to-Air Missile

- It is an indigenously developed weapon system by the Defence Research and Development Organisation (DRDO).
- This quick-reaction missile is *capable of neutralising various aerial threats at close ranges*, including sea-skimming targets.
- It was *originally designed for the Indian Navy* with a strike range of 40 km, it has now been enhanced to attack targets up to 80 km.
- Additionally, it is being *developed for the Indian Air Force to safeguard its air bases*.

- **Features:**

- It has a *solid propellant and weighs approximately 170 kg.*
- It is capable of *reaching Mach 4.5*, it can achieve a *maximum altitude of 16 km.*
- It employs a *fibre-optic gyroscope-based inertial guidance system* for mid-course flight, while its terminal phase is guided by active radar homing.
- Designed as an integrated missile and weapon control system (WCS), it *can hold multiple missiles within a twin quad-pack canister configuration.*

GAIA Mission

News- The *European Space Agency (ESA)* has officially decommissioned its Global Astrometric Interferometer for Astrophysics (GAIA) mission after more than a decade of operation. **GAIA Mission.**

About GAIA Mission

- It aimed to create the largest and most precise *3D map of the Milky Way* by surveying about 1% of its 100 billion stars.
- It was launched in 2013.

Location and Instruments

- **Position:** Gaia orbits the Sun at *Lagrange Point 2*, about 1.5 million kilometers (930,000 miles) from Earth.
- **Equipment:** It carried two telescopes and a 1-billion-pixel camera, the largest ever sent to space.
- **Key Instruments:**
 - Astrometer – Measured star positions and motions.
 - Photometer – Measured the brightness of celestial objects.
 - Spectrometer – Analyzed star composition and movement.

Major Discoveries and Contributions

- **Milky Way Mapping:** Created a detailed 3D map, revealing the galaxy's shape, structure, and movement.
- **Black Holes:** Identified new types by detecting their gravitational effects.
- **Asteroids:** Tracked over 150,000 asteroids, helping predict future impacts on Earth.
- **Stellar Evolution:** Provided insights into how stars, including the Sun, form and evolve.

Exercise Prachand Prahaar

News- The Indian Armed Forces recently conducted a multi-domain exercise, Prachand Prahar, in Arunachal Pradesh. **Exercise Prachand Prahaar.**



About Exercise Prachand Pahaar

- It is a *tri-service integrated multi-domain warfare exercise*, conducted in the high-altitude areas of Arunachal Pradesh under the *Eastern Army Command*.
- **Continuation of Previous Exercise:** It follows *Exercise Poorvi Prahar (Nov 2024)*, conducted along the India-China border, which focused on the integrated use of aviation assets.
- **Objective:** Enhancing *operational readiness* and *joint integration of the Army, Navy, and Air Force*, while validating surveillance, command, control, and precision firepower in modern warfare.
- **Key Features:**
 - Deployment of *advanced platforms*, including *long-range reconnaissance aircraft, UAVs, armed helicopters*, and *space-based assets*.
 - Simulated targets neutralized through coordinated strikes involving *fighter aircraft, rocket systems, artillery, and kamikaze drones (loitering munitions)*.
 - Conducted in an *electronically contested environment, replicating real battlefield conditions*.

Nag Anti-Tank Missile System (NAMIS)

News- The Ministry of Defence has signed a contract with Armoured Vehicle Nigam Limited to procure the tracked version of the Nag Missile System (NAMIS), an anti-tank weapon platform. **Nag Anti-Tank Missile System (NAMIS).**



About Nag Anti-Tank Missile System (NAMIS)

- It is an advanced anti-tank weapon system designed as a *mobile platform to launch Nag anti-tank guided missiles (ATGMs)*.
- **Developed By:** Defence Research and Development Laboratory (DRDL), DRDO
- The tracked system is mounted on a *BMP-2 chassis*.

Key Features:

- **Armed with Nag ATGM:**
 - *Third-generation fire-and-forget missile with lock-on after launch capability.*
 - Designed to destroy heavily armored enemy tanks, including those with composite and reactive armor.
 - All-weather and night-strike capable using Imaging Infrared (IIR) Seeker.
- **Range:** 500 meters to 4 km
- **Thermal Imaging:** Equipped with an advanced sighting system for effective targeting in low-visibility conditions.

Debrigarh Wildlife Sanctuary

News– In a first-of-its-kind initiative. Debrigarh Wildlife Sanctuary hosted the ‘Indian Bison Fest’ to spread the word about its conservation needs and ecological significance. **Debrigarh Wildlife Sanctuary.**



About Debrigarh Wildlife Sanctuary

- **Location**-It is located in the *Bargarh district of Odisha, near the Hirakud Dam* on the Mahanadi River.
- **Historical Significance**- This sanctuary holds historical significance due to its association with the renowned *freedom fighter Veer Surendra Sai*. During his uprising against British rule, he used Barapathara, a site within the sanctuary, as his base of operations.
- **Vegetation**- The sanctuary primarily features *dry deciduous mixed forests*.
- **Flora**- The major tree species found here include *Sal, Asana, Bija, Aanla, and Dhaura*.
- **Fauna**: Tigers, sloth bears, leopards, hyenas, spotted deer, antelopes, sambar, gaur, nilgai, bison, and langur monkeys.

Indian Bison (Gaur)

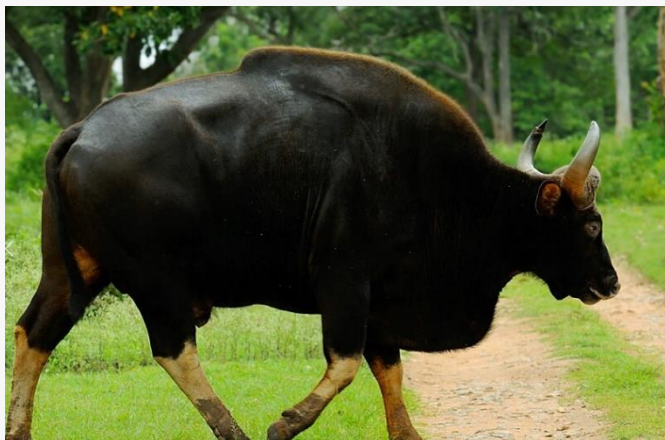


Figure 1 Source Tiger reserves in India

- It is the *largest extant bovine species*.
- It is among the largest wild cattle species, reaching a shoulder height of up to 220 cm.
- **Habitat & Distribution:**
 - Gaurs inhabit *forested hills, grasslands, and tropical deciduous forests* across *South and Southeast Asia*.
 - Globally, their population is estimated to be between *13,000 and 30,000*, with around 85% found in India.
 - Apart from India, they are also found in *Burma and Thailand*.
 - In India, one of their strongest habitats

is the Western Ghats, particularly in the *Wayanad–Nagarhole–Mudumalai–Bandipur complex*

- The gaur is the *State Animal of Goa and Bihar*.
- **Conservation Status:**
 - **IUCN Red List:** Vulnerable
 - **CITES:** Listed in Appendix I
 - **Wildlife Protection Act, 1972:** Schedule I

Sarhul Festival

News- Adivasis in Jharkhand and the broader Chhotanagpur region will celebrate the arrival of the new year and spring season with the Sarhul festival soon.

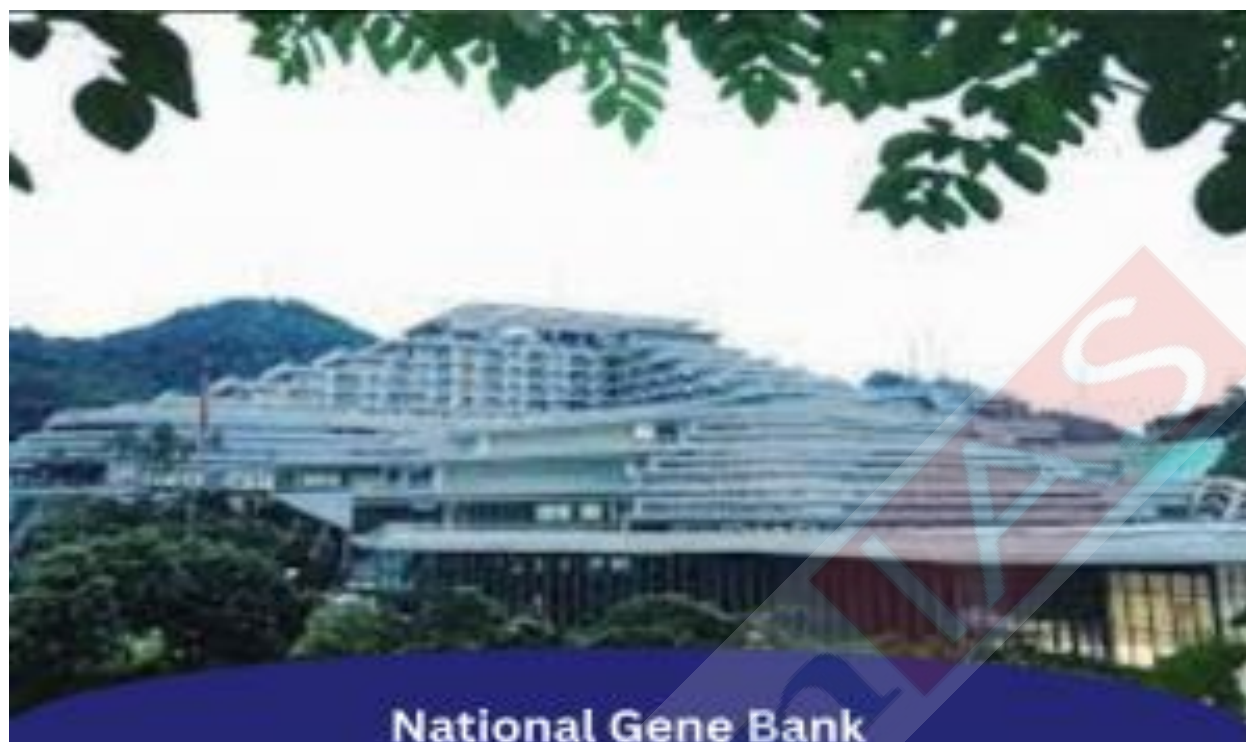


About Sarhul Festival

- Sarhul, literally “worship of the Sal tree”, is among the most revered Adivasi festivals. It *signifies nature worship* and marks the arrival of spring.
- Sarhul also symbolizes the marriage between the Earth and the Sun.
- **Region & Tribes:** It is celebrated in *Jharkhand and the Chhotanagpur region* by the *Oraon, Munda, Santal, Khadia, and Ho tribes*.
- **Time of celebration:** It is observed on the *third day of the moon in Chaitra (Hindu calendar)*, marking the arrival of spring (Phaagun) and *continuing till Jeth (June)*.
- **Religious & Cultural Significance:** The festival *honors Sarna Maa*, the deity residing in Sal trees, at Sarna Sthals (sacred groves).

National Gene Bank

News- The Government of India has announced the creation of a *Second National Gene Bank to conserve 10 lakh crop germplasm*. This initiative aligns with the “Investing in Innovations” theme of the *Union Budget 2025-26*.



Gene Bank

- A Gene Bank is a specialized storage facility designed to preserve seeds, pollen, and plant tissues to safeguard plant species from extinction and ensure their availability for future needs.
- These preserved samples play a vital role in crop breeding, scientific research, and biodiversity conservation.

India's First National Gene Bank

- It was established in 1996 by the *Indian Council of Agricultural Research – National Bureau of Plant Genetic Resources (ICAR-NBPGR)* in New Delhi.
- **Current status:**
 - It is the *second-largest Gene Bank globally*, following the *Svalbard Global Seed Vault in Norway*.
 - It houses 4,71,561 accessions spanning 2,157 species.
 - It *supplies plant genetic resources to both public and private entities* engaged in crop improvement and genetic conservation.

National Bureau of Plant Genetic Resources (NBPGR)

- It is the apex institution under ICAR responsible for plant genetic resource management.
- **Objective:** Conservation, evaluation, and utilization of plant genetic resources to support sustainable agriculture and food security.
- **Headquarters:** New Delhi

Operation Brahma- Myanmar

News- After a devastating earthquake ravaged Myanmar recently, India initiated its relief and rescue efforts in the country under the banner 'Operation Brahma.

About Operation Brahma

- India launched this *humanitarian mission* after a powerful 7.7-magnitude earthquake struck Myanmar on March 28, 2025.
- The mission includes rescue teams, medical aid, and essential supplies.
- An 80-member NDRF team with specialized rescue equipment has been sent.
- Two Indian naval ships, *INS Satpura* and *INS Savitri*, have delivered 40 tonnes of aid to Yangon.

Why Myanmar Experiences Frequent Earthquakes?

The Myanmar earthquake was caused by “*strike-slip faulting*” (*Sagaing Fault*), between the Indian and Eurasian plates.

Sagaing Fault:

- A major active fault extending north to south through central Myanmar.
- It functions as a boundary between the northward-moving Indian Plate and the Eurasian Plate.

Key Facts about Myanmar



Figure 2 Source- Worldatlas

- **Location**– It is situated in Southeast Asia, between latitudes 10°N to 28.5°N.

- **Capital:** Nay Pyi Taw

Borders:

It shares borders with *India, China, Bangladesh, Thailand, and Laos*.

It is bounded by the *Andaman Sea* and *Bay of Bengal* to the south.

● **Mountain Ranges:**

- Northern Mountains (*Mount Hkakabo, 5,881 m – highest peak*).
- Western Ranges (*Patkai, Naga, Chin, Rakhine Hills*).
- Shan Plateau (*Eastern highlands with rugged terrain, deep valleys*).

- **Major Rivers:** *Irrawaddy River* (primary navigable river), *Chindwin, Sittang, and Salween Rivers*