

## Prelim Bits 27-11-2023 | UPSC Daily Current Affairs

### Kambala

More recently, the Kambala Samithi hosts weekly events from the end of November till the 1<sup>st</sup> half of April across Dakshina Kannada and Udupi districts in Karnataka.

- A folk sport practised in **coastal Karnataka districts**, especially in regions where **Tulu speakers** form a majority.
- **Harvest festival** - It will be organised in the slushy **paddy fields**, in the **days after the harvest** from November to March.
- Pairs of buffaloes are groomed by **Bunt community** in the coastal regions around the year.
- **4 categories**
  - **Negilu (plough)** - Lighter ploughs are used to tie buffaloes which is for entry-level buffalo pairs.
  - **Hagga (rope)** - Buffaloes are raced by jockeys with just a rope tied to both buffaloes.
  - **Adda Halage** - Participants stand over a horizontal plank which is dragged by buffaloes.
  - **Kane Halage** - Participants stand over a wooden plank which has 2 holes through which water gushes out.
- **Ban** - Supreme Court ruled to ban Jallikattu, Kambala and bullock cart racing in 2014.
- Later, the Environment Ministry and State governments made provisions to exempt these events in recognition of the **customs and cultural heritage of various communities**, which was upheld by the Supreme Court bench in 2023.

**Article 29 (1)** of Indian constitution is a fundamental right guaranteed under Part III to protect the educational and cultural rights of citizens.

### Reference

[The Indian Express| Kambala Race](#)

### Basic Animal Husbandry Statistics 2023

The Basic Animal Husbandry Statistics 2023 was released during National Milk Day in 2023.

- It is a survey of milk, egg, meat and wool production in India based on **Animal Integrated Sample Survey (ISS)** conducted between March 2022-February 2023.

- The survey is conducted in 3 seasons - summer (March-June), monsoon (July-October) and winter (November-February).

### Basic Animal Husbandry Statistics 2023



#### **Milk Production**

- Total is ***230.58 million tonnes***.
- The production increased by 3.83% over the 2021-22.
- ***Uttar Pradesh*** is the highest milk producer followed by Rajasthan
- In terms of Annual Growth Rate (AGR), the highest was ***Karnataka***.



#### **Egg Production**

- Total is ***138.38 billion numbers***.
- The production increased annually by 6.77% over 2021-22.
- ***Andhra Pradesh*** is the highest egg producer followed by Tamil Nadu
- In terms of AGR, the highest was ***West Bengal*** followed by Sikkim.



#### **Meat Production**

- Total is estimated as ***9.77 million tonnes***.
- The production increased annually by 5.13% over 2021-22.
- ***Uttar Pradesh*** is the highest meat producer followed by West Bengal
- In terms of AGR, the highest was ***Sikkim*** followed by Meghalaya.



#### **Wool Production**

- Total is estimated as ***33.61 million kg***.
- The production increased by 2.12% over 2021-22.
- ***Rajasthan*** is the highest wool producer followed by Jammu & Kashmir
- In terms of AGR, the highest was ***Arunachal Pradesh***.

- **Key finding** - Production of milk, egg and meat has significantly gone up in 2022-23 over the past five years, although wool output in the same period has witnessed a negative growth.

*India celebrates National Milk Day on November 26<sup>th</sup>, to commemorate the efforts of Dr Verghese Kurien, the father of White Revolution.*

### **Reference**

[PIB| Basic Animal Husbandry Statistics 2023](#)

### **Amaterasu**

*Recently, astronomers have detected a rare and extremely high-energy particle falling to Earth.*

- It is one of the ***most powerful cosmic rays*** slamming into Earth and has been named "Amaterasu" after the ***Japanese sun goddess***.

- These ultra-high energy particle passes atmosphere smoothly without any deflection by magnetic fields.
- **Spotted by** - ***Telescope Array observatory in Utah***, a collaboration of the United States, Japan, Korea, Russia, and Belgium to observe cosmic rays.
- **Energy** - It ***exceeds 240 exa-electron volts (EeV)***, millions of times more powerful than the particles produced by the [Large Hadron Collider](#), which is the most powerful accelerator ever built.
- It is **2<sup>nd</sup> only to the 'Oh-My-God' particle**, another high-energy cosmic ray at 320 EeV that was detected in 1991.
- **Source** - Only the most powerful cosmic events, on scales far exceeding the explosion of a star, are thought to be capable of producing such energetic particles.
- But Amaterasu appears to have emerged from the ***Local Void***, an empty area of space bordering the Milky Way galaxy.

### Cosmic Rays

- A radiation that is constantly rains down on Earth from space.
- **Properties** - They are *electrically charged* and so *deflected by various magnetic fields* throughout the galaxy.
- **Detection** - The rays *don't point directly back to their sources*.
- **Composition** - They are *mainly protons (89%)* but also includes nuclei of helium (10%) and heavier nuclei (1%).
- **Impact** - When they crash into our atmosphere, they are broken up and fall to Earth in even smaller fragments.
- **Significance** - Helps in understanding the chemical evolution of the universe.

#### • Reasons for non-detection

- It could be from a source that we have not yet identified.
- It might have been magnetically deflected much higher than current models predict.
- Scientists might need to rewrite their incomplete understanding of high-energy particle physics.

### References

1. [The Indian Express| High Energy Particle from Space](#)
2. [CERN| Cosmic Rays](#)

### Mangroves as Carbon Sink

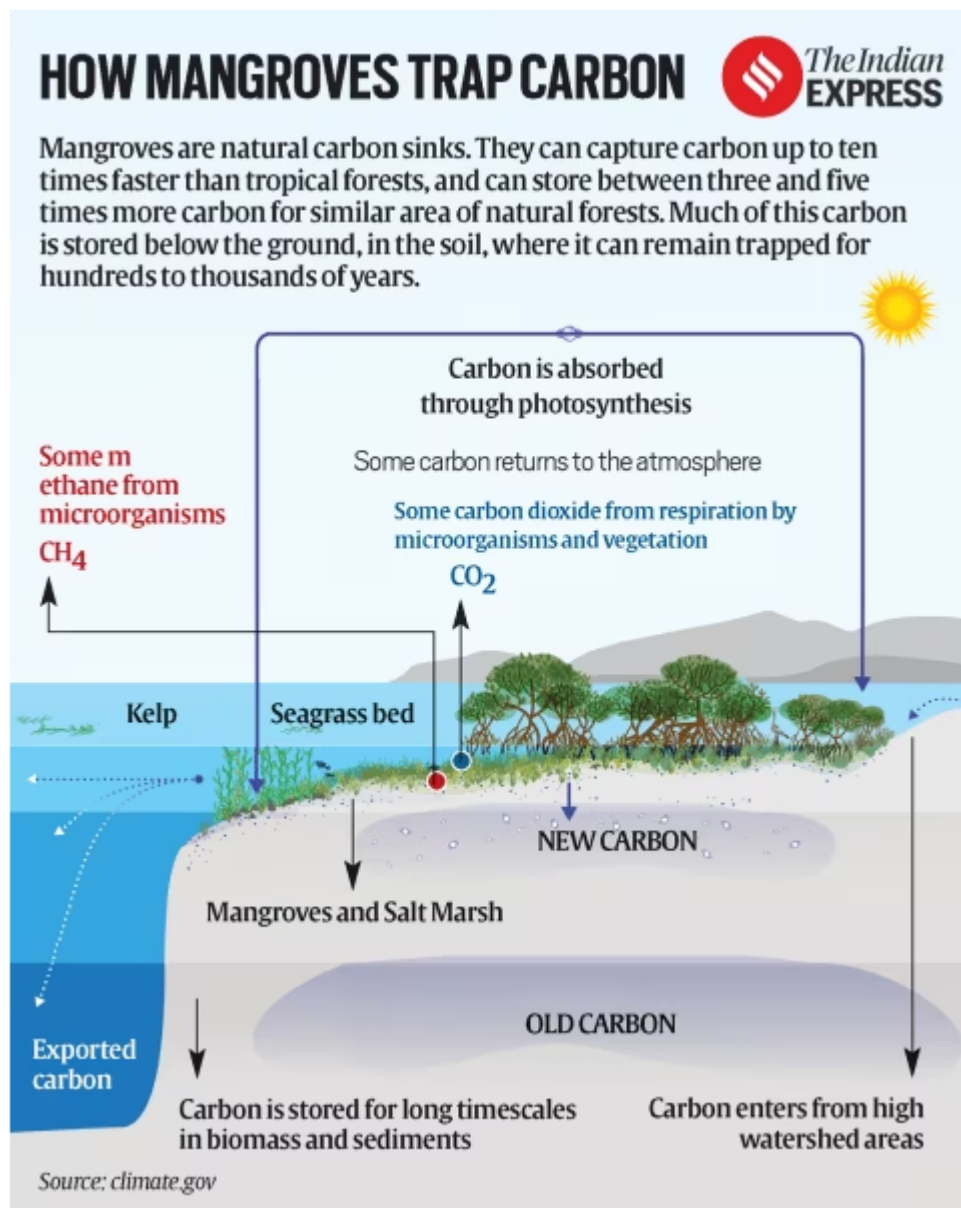
*Volunteers in Chargheri village of Sunderbans help in planting lakhs of mangroves which offer a dense forest cover and a rich carbon sink.*

*The [Sunderbans](#) is a complex network of islands set in the delta on the Bay of Bengal and spread across West Bengal and Bangladesh.*

- **Blue carbon** - It is coined in 2009, a term for *carbon captured by and stored in the*

*world's ocean and coastal ecosystems.*

- **Key ecosystems of blue carbon** - Mangroves, salt marshes and seagrass meadows
- These ecosystems sequester and store more carbon per unit area than terrestrial forests.



- **Mangroves as carbon sink** - After seagrass, mangroves are the most efficient carbon trapping systems which can **remove 10 times more carbon** from the air than other forests.
- While other trees release the stored carbon back to atmosphere when they die, mangroves transfer the carbon to the soil, where it stays unaffected even if the tree is destroyed.

## Mangrove Initiatives

- **Mangrove Initiative for Shoreline Habitats and Tangible Incomes (MISHTI)** - It was launched by India in 2023 to protect and revive mangrove ecosystems on the Indian coast.
- **Mangrove Alliance for Climate (MAC)** - It was launched at CoP-27 (Egypt, 2022) to unite countries to scale up, accelerate conserve and restore the mangrove ecosystems.
- After the devastation caused by **Cyclone Amphan** in 2020, West Bengal Chief Minister had announced that 5 crore mangroves would be planted in the Sunderbans under the [Mahatma Gandhi National Rural Employment Guarantee Act](#).

**Related link** - [The Budget Push to Mangroves](#)

## Reference

[The Indian Express| Mangroves as carbon sink](#)

## Compulsory Blending Obligation (CBO) of CBG

*The National Biofuels Coordination Committee (NBCC) gave its nod to mandatory blending of compressed biogas (CBG) with compressed natural gas (CNG) and piped natural gas (PNG) from 2025-26.*

- **Biogas** - It is an *energy-rich gas produced by anaerobic decomposition of biomass*.
- Sources include Agriculture residue, cattle dung, sugarcane press mud, municipal solid waste, and sewage treatment plant waste, among others.
- It can be *burnt directly as a fuel*, or purified and upgraded by removing carbon dioxide, hydrogen sulfide, and then *compressed to make compressed Biogas (CBG)*.
- **CBG** - It has **more than 90% of methane**, which is similar to commercially available natural gas in composition and energy potential.

*[Sustainable Alternative Towards Affordable Transportation \(SATAT\) scheme](#) was launched in 2018, under which 5,000 CBG plants were envisaged by 2023 to produce 15 million tonnes of CBG.*

- **Compulsory blending obligation** - It will be
  - 1 % of total CNG and domestic PNG consumption for FY26
  - 3 % for FY27
  - 4 % for FY28
  - 5 % blending from FY29
- **A Central Repository Body (CRB)** will be responsible for monitoring and implementing the blending mandate.
- **Objectives** - It aims to
  - Stimulate demand for CBG in city gas distribution sector
  - Import substitution for liquefied natural gas (LNG) thus saving forex
  - Promote circular economy for achieving the target of net-zero emission, etc



- India is a major consumer of natural gas and depends on imports to meet around half of its requirement.
- It aims to increase the share of natural gas in the primary energy mix to 15% by 2030 from a little over 6% at present.

## Reference

[The Indian Express| Compulsory Blending Obligations of CBG](#)

## Other Important News

### Guru Nanak

- [Guru Nanak Dev](#) (1469-1539) was the ***founder of Sikhism***.
- He was born in Talwandi (now Nankana Sahib, near Lahore).
- Nanak was a Bhakti saint who preached that the most important form of worship is Bhakti, or devotion to Waheguru.
- **Guru Nanak Jayanti**, also known as Gurpurab, is the birth anniversary of Guru Nanak.

### NATPOLREX-IX

- The 9<sup>th</sup> **National Level Pollution Response Exercise** (NATPOLREX-IX) was conducted by the Indian Coast Guard off Vadinar, Gujarat recently.
- It demonstrates the level of preparedness and coordination between various resource agencies to respond to a marine oil spill invoking provisions of the [National Oil Spill Disaster Contingency Plan](#) (NOSDCP).
- The **Indian Coast Guard** functions as the Central Coordinating Authority for response to Oil spills in Indian waters.

### 1<sup>st</sup> Night Sky Sanctuary

- South East Asia's 1<sup>st</sup> Night Sky Sanctuary will be setup in Ladakh with the help of Indian Institute of Astrophysics, Bengaluru.
- It will be located within the Changthang Wildlife Sanctuary and adjacent to the Indian Astronomical Observatory (2<sup>nd</sup>-highest optical telescope in the world).

### Leh Berry

- [Leh Berry](#) is a juice made from the ***sea buckthorn fruit of Leh, Ladakh***.
- The sea buckthorn fruit is known as the "King of Vitamin C".
- It contains over 100 nutrients, 8 vitamins, 24 minerals, 18 amino acids, and antioxidants.
- It got Geographical Indication (GI) tag recently.

### YANTRA platform

- The Union Minister of AYUSH has recently participated in the Yoga and Ayurveda in Neurosciences, Therapeutics and Research Approaches (YANTRA) conference, 2023 recently.
- YANTRA, 2023 is an international conference on Integrative Medicine with a theme on models of integration in healthcare.
- It was held at the National Institute of Mental Health and Neurosciences (NIMHANS) in association with Jignasa, which provides a common platform to address all aspects related to AYUSH systems.

### **National Cadet Corps (NCC)**

- NCC celebrated its 75<sup>th</sup> Anniversary on November 26, 2023.
- It was established in 1948 as a ***largest uniformed youth organization*** of Indian Armed Forces with its headquarters in ***New Delhi***.
- It aims at developing character, comradeship, discipline, secular outlook, the spirit of adventure and ideals of selfless service amongst young citizens.
- It is open to school and college students on voluntary basis as a ***Tri-Services Organization***, comprising the Army, the Navy and the Air Force.

### **Ayushman Arogya Mandir**

- The Union Government has decided to rename the existing [Ayushman Bharat Health and Wellness Centres \(AB-HWCs\)](#) as 'Ayushman Arogya Mandir'
- The new tag line will be ***Arogyam Parmam Dhanam***.
- National Health Policy, 2017 envisioned the Health and Wellness Centres.

### **Solar flares**

- Recently scientists have detected disturbances in Earth's magnetic field called ***G1 geomagnetic storms***, which are temporary disturbances in the planet's magnetic field due to solar sparks.
- As a result of this geomagnetic storm, people living in northern and southern latitudes can witness more beautiful northern and southern lights, also known as [aurorae](#).
- Solar flares are categorised into 4 different classes
  - **B** (Too small to harm Earth),
  - **C** (Noticeable consequences on the planet),
  - **M** (Bit more serious and can cause limited radio blackouts),
  - **X** (Most dangerous, potentially causing planet-wide radio blackouts with strong radiation emissions).

### **Yuva Sangam**

- Ministry of Education has recently launched the 3<sup>rd</sup> phase of Yuva Sangam under the ***Ek Bharat Shreshtha Bharat*** campaign.
- Under the programme, the students within the age group of ***18 to 30*** will get multi-dimensional exposure in 5 broad areas.
  - Paryatan (tourism), Parampara (traditions), Pragati (development), Prodyogik (technology) and Paraspar sampark (people-to-people connect) in the host States.
- ***Ek Bharat Shreshtha Bharat (EBSB)*** is a government initiative that promotes cultural exchange and national integration between India's states and union territories.

### **India-EU Semiconductor Pact**

- India and the European Union has recently signed a Memorandum of Understanding on semiconductors.
- It will help in building a "robust supply chain" and support innovation between the two countries.