



# IAS PARLIAMENT

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## Prelim Bits 02-04-2024 | UPSC Daily Current Affairs

### GI Tags in News

Over 60 products from across India earn GI tags.

- This is the first time such a large number of Geographical Indication (GI) Tags have been given at a go.

GI Tags	
Assam	
GI Tags for Traditional Crafts from Assam	
<p>Asharikandi terracotta craft</p> 	<ul style="list-style-type: none"> <li>• In India, the single largest cluster where both Terracotta and Pottery crafts are found and practiced in traditional way is Asharikandi (Madaikhali) craft village.</li> <li>• In this village, over 80% of the families work in this ethnic art, or handicraft, and then sell their creations on the domestic and global markets.</li> </ul>
<p>Pani Meteka craft</p> 	<ul style="list-style-type: none"> <li>• It is crafted from Water Hyacinth.</li> <li>• Water hyacinth is a free-floating perennial aquatic plant (hydrophyte).</li> </ul>
<p>Sarthebari metal craft</p> 	<ul style="list-style-type: none"> <li>• Sarthebari is home to the bell metal industry, the second largest handicraft of Assam.</li> <li>• Bell metal is an alloy of copper and tin and utensils made from it are used for domestic and religious purposes.</li> </ul>
<p>Jaapi</p> 	<ul style="list-style-type: none"> <li>• The jaapi is a conical hat made of bamboo and covered with dried tokou (a palm tree found in rainforests of Upper Assam) leaves.</li> </ul>

<p>Mising handloom Products</p> 	<ul style="list-style-type: none"> <li>• The Weaving Craft of the Mising community living in two district of Assam, like Lakhimpur and Dhemaji district.</li> <li>• The different varieties of cotton, silk, muga production and weaving art are entirely carried out by women of the society who make different products including Assam's iconic makhela chador.</li> </ul>
<p>Bihu dhol</p> 	<ul style="list-style-type: none"> <li>• The Assam Bihu Dhol is a drum-like musical instrument from Assam with a barrel shape carved and hollowed out of a single piece of quality wood.</li> </ul>
<b>GI Tags from Bodo Community of Assam</b>	
<ul style="list-style-type: none"> <li>• Jotha; Gongar Dunjia; Gongona; Thoraka; Gamsa; Keradapini; Sifung; Jwmgra; Serja; Dokhona; Khardwi; Eri Silk; Kham</li> </ul>	
<b>GI Tags from Banaras region of Uttar Pradesh</b>	
<ul style="list-style-type: none"> <li>• Banaras Thandai; Banaras Lal Bharwamirch; Banaras Tabla; Banaras Lal Peda; Banaras Shehnai</li> </ul>	
<b>GI Tags from Tripura</b>	
<ul style="list-style-type: none"> <li>• Pachra-Rignai; Matabari Peda</li> </ul>	
<b>GI Tags from Meghalaya</b>	
<ul style="list-style-type: none"> <li>• Meghalaya Garo Textile; Meghalaya Chubitchi; Meghalaya Lyrnai Pottery</li> </ul>	

*Till date, around 635 products in India have been given the GI tag.*

<b>Quick Facts</b>
<b>Geographical Indication (GI) Tag</b>
<ul style="list-style-type: none"> <li>• It is defined under Article-23 and 24 of the Trade-Related Aspects of Intellectual Property Rights (TRIPS) Agreement of the World Trade Organization (WTO).</li> <li>• GI tag is a form of certification that recognizes unique products based on their origin.</li> <li>• GI tagged products can be natural or man-made.</li> <li>• The raw materials for such products do not necessarily have to come from that region, unless it is an agricultural tag.</li> <li>• The essential difference between GI and other intellectual properties (IP) is that, GI is a collective Intellectual Property Right.</li> <li>• India is a member of WTO and enacted the Geographical Indications of Goods (Registration &amp; Protection) Act, 1999 that came into force from 2003.</li> <li>• The first GI tag in the country was given two decades ago to the famous Darjeeling tea.</li> </ul>

## References

1. [The Hindustan Times - Items from Assam get GI tag](#)
2. [Times of India - Assam's 19 iconic items awarded coveted GI Tag](#)
3. [The Hindu - Over 60 products from across India earn GI tags](#)

## Ozone on Jupiter's Moon

*In a groundbreaking research collaboration featuring Indian scientists, new evidence has been unearthed pointing to the existence of ozone on Callisto, one of Jupiter's moons.*

### Callisto

- Callisto is Jupiter's second largest moon after Ganymede and the third largest moon in our solar system, after Ganymede and Titan.
- It's about the same size as Mercury.
- Callisto was discovered Jan. 7, 1610, by Italian scientist Galileo Galilei along with Jupiter's three other largest moons: Ganymede, Europa and Io.
- Callisto is named for a woman turned into a bear by Zeus in Greek mythology.
- Zeus is identical to the Roman god Jupiter.
- Callisto's rocky, icy surface is the oldest and most heavily cratered in our solar system.
- Callisto is on the list of possible places where life could exist in our solar system beyond Earth.

- The ozone in Callisto was found by examining the chemical evolution of Sulphur dioxide ice under ultraviolet light.
- The discovery was reached by studying the response of Sulphur dioxide-rich ice to ultraviolet radiation, revealing significant insight into the compositional developments on Callisto's surface.
- The discovery of ozone on Callisto, Jupiter's moon, marks a significant milestone in space research.
- The detection of ozone in Callisto's atmosphere could suggest that conditions there might be more conducive to life than previously thought.
- In addition to the ozone, the researchers observed an unidentified band in the absorption spectrum hinting at a common molecular source in their surface compositions or chemical processes.

*Similar band was also observed on Ganymede, Jupiter's largest moon in 1996.*

### Ozone (O<sub>3</sub>)

- Ozone is a molecule composed of three oxygen atoms.
- Ozone (O<sub>3</sub>) is found mainly in the stratosphere between 10 and 50 km from the Earth's surface.
- Ozone plays a critical role on Earth by shielding life from the sun's harmful ultraviolet-B and ultraviolet-C radiation.
- UV rays are known to cause skin cancer and many other diseases and deformities in plants and animals.
- By absorbing these dangerous rays, the ozone layer prevents them from causing widespread ecological disruption and health issues like skin cancer.
- Against this backdrop, the detection of ozone on celestial objects like Callisto sparks excitement about the moon's ability to harbor life-sustaining environments.

*After Saturn, Jupiter has the most moons in the Solar System. (Saturn - 146 moons; Jupiter - 95 moons)*

## References

1. [The Hindu - Ozone on Jupiter's moon Callisto](#)
2. [YTech - Ozone Detected on Callisto](#)
3. [NASA - Callisto](#)

## Kodaikanal Solar Observatory (KoSO)

*125 years of Kodaikanal Solar Observatory (KoSO).*

### Kodaikanal

- It is situated in the Palani Hills, on the Western Ghats.
- Kodaikanal was created in 1845 by U.S. missionaries and British civil servants as a hill station.
- Kodaikanal contains a meteorological observatory that engages in astrophysical research.

- **Madras Observatory** - In 1792, the British East India Company established the Madras Observatory, a first of its kind in this part of the world.

*Madras Observatory is famous for the discovery of 58 asteroids and 21 variable stars.*

- In Madras Observatory, astronomical observations of the Sun, the Moon, bright stars and planets recorded during 1812-1825 were preserved in two large data volumes.
- The first dedicated solar observations were recorded later in 1878 from the Trigonometrical Survey Office in Dehradun.

*The spectroscopic observations taken during the August 18, 1868, total solar eclipse from Guntur in Andhra Pradesh led to the discovery of helium, the Universe's second-most abundant element after hydrogen.*

- For the first time, celestial and solar photography were attempted from the Madras Observatory during the total annual solar eclipse on December 12, 1871.
- **Great Drought** - Scanty rainfall over south India during the winter monsoon of 1875 triggered one of the worst droughts the country had experienced till then.
- India, along with China, Egypt, Morocco, Ethiopia, southern Africa, Brazil, Columbia and Venezuela, suffered concurrent multi-year droughts during 1876-1878.
- This drought was later named the Great Drought, and an associated global famine that killed nearly 50 million.
- The drought was thought to be due to multiple reasons such as
  1. Solar activity;
  2. Cool Pacific Ocean conditions
  3. El Nino (1877-1878)
  4. Strong Indian Ocean Dipole
  5. Warm North Atlantic Ocean conditions
- **Smith Commission** - The Famine Commission of the British Raj, led by Charles

Michie Smith, recommended that the Government of India take regular solar observations.

- In August 1893, the Government of India sanctioned a Solar Physics Observatory under the meteorological budget.
- As a result Kodaikanal was chosen as the ideal location for setting the observatory to take regular solar observations.
- In 1895, Lord Wenlock, the then Governor of Madras, laid its foundation stone.
- The Madras Observatory was merged with the KoSO following the reorganization of all Indian observatories on April 1, 1899.
- **Bhavnagar Telescope** - The Bhavnagar Telescope, named after Maharaja of Bhavnagar, operated during KoSO's initial years.
- This 16-inch Newtonian (later Cassegrain) mobile telescope remained India's largest from 1888-1968.
- It was imported from Dublin, Ireland, and was first established at the Maharaja Takhtasinghji Observatory in Poona (now Pune) around 1888.
- However, the Poona observatory closed down and the telescope was sent to KoSO in 1912.
- **Observations made by KoSO -**
  1. Examination of the Sun's disc from spots and faculae.
  2. Tracing bright lines from the Sun's chromospheres and prominences.
  3. Visual and photographic observations of bright lines widened in the spectra of sunspots.
  4. Measuring solar radiations on clear sky days.
  5. Direct photography of the Sun in monochromatic lights of calcium and hydrogen.

*The radial motion of sunspots, better known as the Evershed Effect, was discovered from the sunspot observations made at KoSO by John Evershed, KoSO director from 1911-1922.*

- Until the end of World War II in 1945, KoSO remained an observatory dedicated to solar physics.
- Thereafter, it expanded its ambit to study cosmic rays, radio astronomy, ionospheric physics, stellar physics and more areas.
- **Contemporaries** - The contemporaries, Maharaja Takhtasinghji Observatory, Lucknow Observatory, and Calcutta Observatory, did not stand the test of time.

*KoSO is the only observatory offering high-resolution digitised images for such a long period (with coverage of more than 75%).*

## References

1. [The Indian Express - Great Drought, 1876 led to KoSO establishment](#)
2. [IIAP - Kodaikanal Solar Observatory \(KSO\)](#)
3. [Scroll.in - 125 years of gazing at the brightest star in the earth's sky](#)

## Havana Syndrome

*According to a joint media intelligence, members of a Russian military intelligence unit could have targeted the brains of US officials by using directed energy weapons.*

- Havana syndrome refers to a set of mental health symptoms that are said to be experienced by United States intelligence and embassy officials in various countries.
- Generally, the word 'syndrome' simply means a set of symptoms.
- It does not mean a unique medical condition, but rather a set of symptoms that are usually experienced together whose origins may be difficult to confirm.
- Havana syndrome was first reported by U.S. embassy officials in the Cuban capital of Havana in 2016.
- The officials began experiencing extreme headaches and hearing piercing sounds at night.
- The exact cause of Havana Syndrome remains unknown, however, it is assumed to be linked to possible sonic weaponry from Russia.
- The condition is characterized by unexplained symptoms that include migraines, fatigue, vertigo, anxiety, dizziness, memory lapses and cognitive impairment.
- **India** - In India, first such case was reported in the year 2021, when a US intelligence officer travelling to New Delhi with CIA director William Burns reported symptoms of Havana Syndrome.
- Sources in the Indian security establishment said that they were not aware of any weapon with such capacities being in the possession of an Indian agency.

## References

1. [The Indian Express - What is Havana Syndrome?](#)
2. [Time - What is Havana Syndrome?](#)
3. [Aljazeera - Official reported symptoms of 'Havana Syndrome'](#)
4. [BBC - Havana syndrome](#)

## Securities Appellate Tribunal (SAT)

*Lack of full Bench takes a toll on SAT's functioning and efficiency.*

- Securities Appellate Tribunal is a statutory body established under the provisions of Section 15K of the Securities and Exchange Board of India Act, 1992.
- SAT also aims to exercise jurisdiction, powers and authority conferred on the Tribunal by Act or any other law for the time being in force.
- SAT was setup to hear and dispose of appeals against orders passed by the:
  1. Securities and Exchange Board of India or by an adjudicating officer under the Act.
  2. Pension Fund Regulatory and Development Authority (PFRDA) under the PFRDA Act, 2013.
  3. Insurance Regulatory Development Authority of India (IRDAI) under the Insurance Act, 1938.
  4. General Insurance Business (Nationalization) Act, 1972.
  5. Insurance Regulatory and Development Authority Act, 1999 and the Rules and



Regulations framed thereunder.

- It works under the jurisdiction of the Ministry of Finance & has only one bench which sits at Mumbai.
- It has the same powers as vested in a civil court & if any person feels aggrieved by SAT's decision or order can appeal to the Supreme Court.

### Quick Facts

#### Securities and Exchange Board of India (SEBI)

- SEBI was established in 1992 in accordance with the provisions of the Securities and Exchange Board of India Act, 1992 (SEBI Act).
- The SEBI headquarters is located in Mumbai.
- SEBI is run by a board of directors, including:
  1. A chair who is elected by the parliament.
  2. Two officers from the Ministry of Finance.
  3. One member from the Reserve Bank of India.
  4. Five members who are also elected by the parliament.
- **Powers of SEBI -**
  1. To protect the interests of investors.
  2. To promote the development of the capital/securities market.
  3. To register intermediaries like stock brokers, merchant bankers, portfolio managers.
  4. To regulate their functioning by prescribing eligibility criteria, conditions to carry on activities and periodic inspections.
  5. To impose penalties such as monetary penalties, including suspending or cancelling the registration.
  6. To regulate trading, clearing and settlement on stock exchanges.

### References

1. [Business Standard - Lack of full Bench takes a toll on SAT](#)
2. [The Hindu Business Line - Vacancies in SAT should be promptly filled](#)

### Other Important News

#### Ex- Ayutthaya

- Exercise Ayutthaya is the bilateral exercise between the ***Indian Navy and the Royal Thai Navy (RTN)***.
- The exercise's name translates to "The Invincible One" or "Undefeatable".
- It symbolizes the importance of the ancient cities of ***Ayodhya in India and Ayutthaya in Thailand***, holds historic legacies and has rich cultural ties.
- **Ayutthaya** is the former capital of Thailand, named after Ayodhya, the birthplace of Rama, which establishes a connection to Hinduism and the Ramayana.

#### Leap second/ Coordinated Universal Time (UTC)

*A recent study suggests that glaciers are melting so fast that we may need to delay adding that 'negative leap second' to keep clocks aligned with Earth's rotation.*

- Coordinated Universal Time (UTC) is the primary time standard **used globally to regulate clocks and time.**

- UTC is successor to Greenwich Mean Time (GMT), introduced in 1960 based on the same GMT.

- It establishes a reference for the current time, forming the basis for civil time and time zones.

- UTC is maintained by atomic clocks at laboratories around the world, and is widely broadcast by radio signals.

### **Negative leap second**

- To account the speedup of Earth, timekeepers have periodically added a **"leap second"** to clocks around the world since the 1970s.

- For the first time in history timekeepers was planned to subtract the leap second (negative leap second).

- It is because the accelerating melt from Antarctica and Greenland which acted like a brake thus slowing the Earth's rotation back down just enough until 2029 or later.

### **Vote-from-home facility**

*The Election Commission of India has extended its 'vote-from-home' facility for the upcoming Lok Sabha elections, 2024.*

- **Home Voting** - Election commission officials visit the home of voters to collect their votes.

- **Persons eligible to vote-from-home**

- People aged 85 and above
- Persons with Disabilities - Benchmark disability should be not less than 40%.

- Mediapersons covering 'polling day activities'.

- Workers from essential services such as metros, railways and health care.

- **Service voters** - Personnel of the armed forces & Central Armed Police Forces.

### **Democratic Republic of Congo**



*President Felix Tshisekedi of the Democratic Republic of Congo recently appointed as the country's 1<sup>st</sup> female Prime Minister.*

- The Democratic Republic of the Congo (DRC) is a country in **Central Africa** with its capital Kinshasa.

- It is the **2<sup>nd</sup> largest country in Africa and the 11<sup>th</sup> largest in the world by population.**

- DRC is bordered by **9 countries** (The Central African Republic, Zambia, Angola, Burundi, The Congo, Rwanda, South Sudan, Uganda, Tanzania) and it has a coastline on the **Atlantic Ocean** to the west.

- Most of the country is made up of the central Congo basin and holds the **world's 2<sup>nd</sup> largest rainforest (Congo Rainforest).**



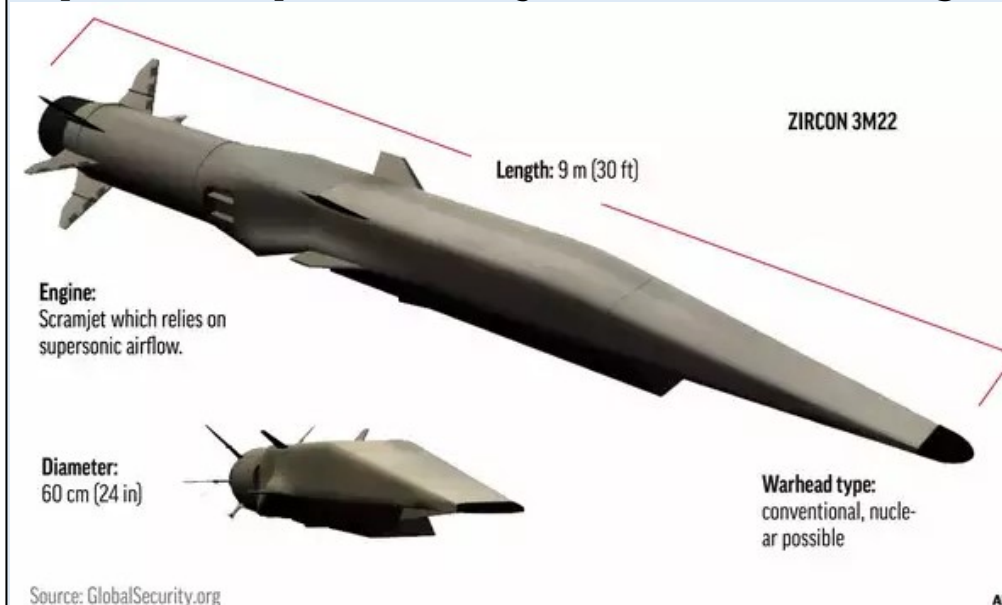
**3M22 Zircon missiles**

*Russia has recently used 5 of its new hypersonic Zircon missiles to attack Kyiv, Ukraine.*

- The Zircon is a nuclear capable hypersonic cruise missile developed by **Russia**.

- It is capable of penetrating any existing anti-missile defenses by flying **9 times faster than the speed of sound** (7,000 miles per hour) at a range of more than **1,000 kilometers (over 620 miles)**.

- It is intended to be launched from naval vessels (submarines or surface ships) and is capable of hitting both **land and sea targets**.



## **National Information System for Climate and Environment Studies (NICES) programme**

- **Aim** - It envisages realisation of national level climate database generation.

- The data base will be derived from Indian and other Earth Observation satellites from polar and geostationary missions for climate change impact assessment and mitigation.

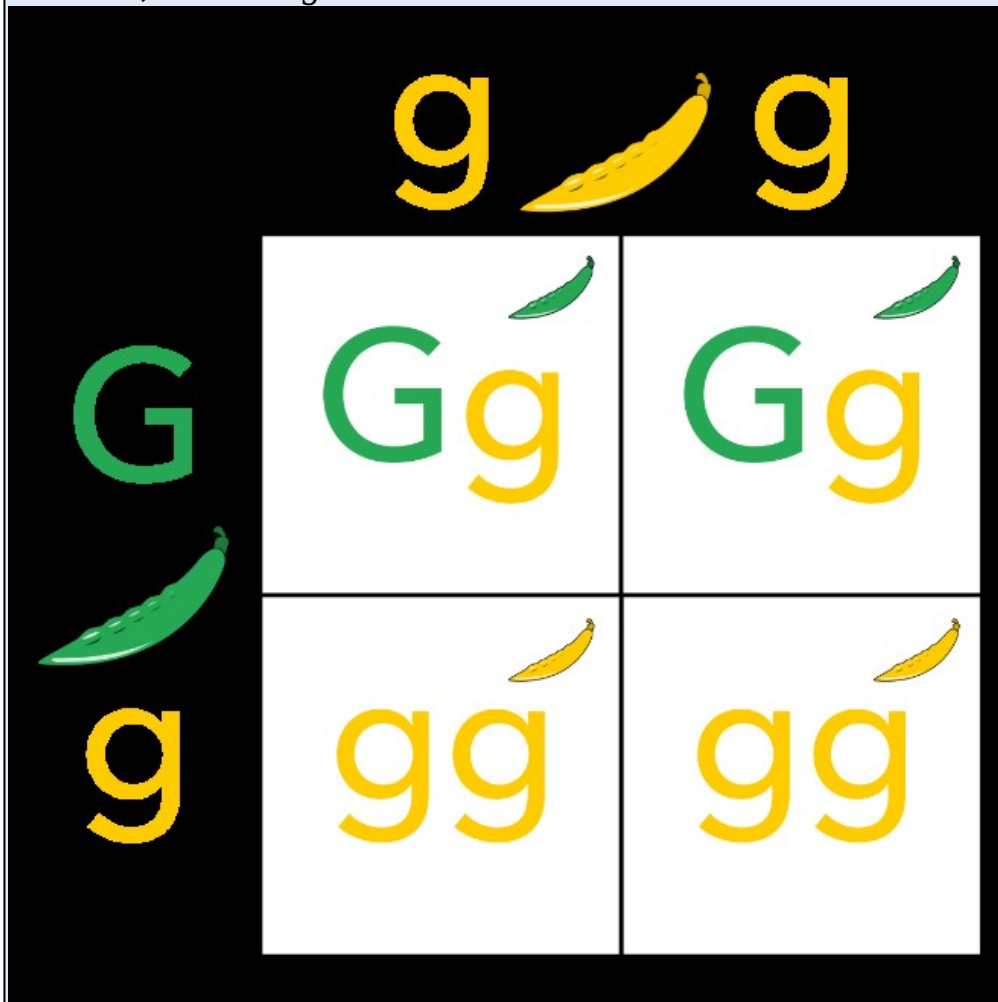
- **Incepted in** - 2012, developed and made accessible over 70 geophysical variables related to Terrestrial, Ocean, and Atmospheric conditions.

- **Operated by** - Indian Space Research Organisation (ISRO) and the Department of Space along with other ministries and institutions.

- It works under the framework of the **National Action Plan on Climate Change** to invite Indian researchers to join in combating climate change.

**Punnett Square**

- A Punnett Square is a useful tool that helps predict the variations and probabilities resulting from cross-breeding.
- The Punnett Square is named after British **geneticist Reginald Punnett**, who developed the approach in **1905**.
- Punnett Squares are commonly used in biology to understand **inheritance patterns**.
- It can also be used to understand the genetic traits in the offspring of animals, including humans.



## SCORES 2.0

Markets regulator SEBI recently launched the new version of SCORES, SCORES 2.0

- **SEBI Complaint Redress System (SCORES)** - It is an online system where investors in the securities market can lodge their complaints through web URL and an app launched in 2011.
- **SCORES 2.0** - The new version aims to strengthen the investor complaint redressal mechanism by introducing **auto-routing of complaints and monitoring** such grievances by designated bodies.
- It also includes timely redressal, **21 calendar days** from date of receipt of complaint and monitoring timely redressal of the investors' complaints.

## 'One Vehicle, One FASTag' initiative

National Highways Authority of India's 'One Vehicle, One FASTag' norm has come into force recently.

- It aims to discourage the **use of single FASTag for multiple vehicles or linking multiple FASTags to a particular vehicle.**
- FASTag is an **electronic toll collection system** in India, operated by the **National Highways Authority of India (NHAI).**

### East and West flowing peninsular rivers

Perennial Rivers	
West-flowing	East-flowing
Ghaggar- Hakra	Subarnarekha
Luni	Damodar
Sabarmati	Brahmani
Mahi	Mahanadi
Narmada	Godavari
Tapti	Krishna
Mandovi	Pennar
Kali	Palar
Sharavati	Ponnaiyar
Periyar	Kaveri
Pampa	Vaigai
	Thamirabarani



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