

MARCH CURRENT AFFAIRS

BIOASIA 2024

Why in News?

- The 21st edition of **BioAsia, Asia's premier biotechnology and life sciences convention** began in **Hyderabad, India**.
- The annual event witnesses participation from leading global scientists, researchers, politicians and industry captains discussing latest developments and future opportunities.

About BIOASIA 2024 SUMMIT:

- The flagship **initiative started in 2003 by Government of Telangana**.
- It has become a leading ideas exchange platform at the intersection of scientific research and business bringing together diverse stakeholders from pharma giants to startups.
- The **theme for current year summit is "Transforming Life Sciences with Data and AI"** highlighting the immense potential in deploying advanced analytics alongside machine learning promises for revolutionizing drug discovery, healthcare delivery etc through evidence based interventions.
- The opening session witnessed keynote addresses from Nobel Laureate Gregg Semenza, Bristol Myers Squibb CEO Christopher Boerner and Providence health network head Rodney Hochman setting stage for deliberations around harnessing cross domain synergies.
- **With over 50 countries participation, multiple tracks have been designed** covering pharmaceutical innovations, medtech advances, investment



roadmapping, data powered R&D etc where industry thought leaders would discuss ideas furthering affordable and accessible solutions.

- Alongside main conference, **BioAsia offers specially curated workshops, exhibition arena for cutting edge products display from young ventures, B2B meeting spaces, lab/facility visits like Genome Valley tour etc facilitating greater engagement.**
- **BioAsia 2024 has teamed up with the Ministry of Micro, Small, and Medium Enterprises (MSME) to provide support to micro, small and medium (MSME) sector.**
- With a dedicated MSME Pavilion, featuring leading companies from the sector, BioAsia 2024 offers an opportunity for MSMEs to make key partnerships, expand their businesses and showcase India's prowess in the global life sciences arena.

GAGANYAAN MISSION

Why in News?

The Prime Minister announced the names of the **four astronauts undergoing training for India's Gaganyaan mission** during his visit to the Vikram Sarabhai Space Centre.

The astronauts are **Group Captain Prashanth Balakrishnan Nair, Group Captain Ajit Krishnan, Group Captain Angad Pratap, and Wing Commander Subhanshu Shukla.**

About Gaganyaan Mission:

- Gaganyaan is a **mission by the Indian Space Research Organisation (ISRO) to demonstrate human space flight capability.**
- Gaganyaan will send a **manned mission to an orbit of 400 km for three days and bringing them safely back to Earth.**
- The space mission was **first announced by Prime Minister Narendra Modi in 2018 in his independence day address to the nation.**
- Ahead of the manned mission, ISRO planned to send **two unmanned missions to space as part of the Gaganyaan mission.**

- The Gaganyaan spacecraft **will be placed in a low earth orbit (LEO) 400 kilometres.**
- The **astronauts selected for the Gaganyaan mission underwent training in Russia,** where they will be acquainted with flying in weightless conditions.
- Various entities including the **Indian Armed Forces, Defence Research Development Organization, Indian Meteorological Department, Indian maritime agencies, academic institutes, CSIR Labs,** and **industry partners are collaborating for the success of the Gaganyaan mission.**
- The spacecraft comprises the **Orbital Module (OM), Service Module (SM), and Crew Module (CM).**
- The **OM orbits the Earth and consists of advanced avionics systems.**
- The **SM supports the CM while in orbit,** providing necessary systems and mechanisms.
- The **CM provides a human-friendly environment in space.**
- It will be **launched by ISRO's Geosynchronous Satellite Launch Vehicle (GSLV) Mk III.**
- This manned mission will be the **first of ISRO's human spaceflight missions.**
- ISRO is developing the spacecraft and Russia is helping in the training of the astronauts.
- The total programme cost is expected to be under Rs.10000 crore.
- Gaganyaan is significant because it is the **first indigenous mission that will send Indian astronauts to space.**
- If it succeeds, India will be the fourth country to have sent a human to space, the other three being the **US, Russia and China.**



TYPES OF ORBITS:

High Earth Orbit (HEO)

- HEO lies **at and beyond 35,786 kilometers from Earth's surface.**
- It is a sort of "sweet spot" in which satellite orbit matches the rotation of the Earth.
- Application: **A satellite in this orbit seems to stay in place over a single longitude, although it may drift north to south.** This special, high Earth orbit is known as geosynchronous orbit.

Medium Earth Orbit (MEO)

- MEO lies **between 2,000 km to 35,780 km from the surface of the Earth.** Two Medium Earth Orbits are the semi-synchronous orbit and the Molniya orbit. MEO satellites have orbital periods ranging from 2 to 24 hours. Satellites in MEO have an orbital period between 2 to 24 hours.
- Application: This is the orbit used by the Global Positioning System (GPS) satellites such as GLONASS (Altitude of 19,100 kilometers) and Galileo (Altitude of 23,222 kilometers).

Low Earth Orbit (LEO)

- LEO has **an altitude between 160 km to 2000 km above the Earth's surface.** Satellites in this orbit take approximately 88 - 127 minutes to circle Earth.
- The **International Space Station (ISS)** is placed in this orbit, traveling about 16 times around Earth per day.



PM-AJAY

Why in News?

The **Ministry of Social Justice and Empowerment** inaugurated and laid the foundation stone for 34 residential hostels across various states and central institutes (under PM-AJAY), in order to cater to the accommodation needs of **Scheduled Castes (SC) and Other Backward Classes (OBC) students**.

About PM-AJAY:

- **Pradhan Mantri Anusuchit Jaati Abhyuday Yojana (PM- AJAY) is a 100% Centrally Sponsored Scheme.**
- PM-AJAY (Pradhan Mantri Anusuchit Jaati Abhyuday Yojna) is **aimed at reducing poverty among Scheduled Castes (SC) communities and increasing literacy rates while encouraging SC enrollment in schools.**
- It is a merged scheme of three Centrally Sponsored Schemes, namely Pradhan Mantri Adarsh Gram Yojana (PMAGY), Special Central Assistance to Scheduled Castes Sub Plan (SCA to SCSP), and Babu Jagjivan Ram Chhatrawas Yojana (BJRCY).
- The main objective of the scheme is to increase the income of the target population by way of various income generating schemes, skill development and infrastructure development.
- It is **being implemented since 2021-22** as different components, which are as under: –
 - **Development of SC-dominated villages into “Adarsh Gram”** (model villages) to uplift their socio-economic status.
 - **Provision of grants-in-aid** for District/State-level Projects focused on the socio-economic betterment of SC communities.



- **Construction of hostels in Higher Educational Institutes (HEIs)** that are top-ranked according to the National Institutional Ranking Framework (NIRF), providing accommodation and support for SC students.
- **Financial support for Monitoring and Evaluation** to ensure effective implementation and impact assessment of the scheme.

VIKRAMADITYA VEDIC CLOCK

Why in News?

Prime Minister Narendra Modi, in a virtual address on 'Viksit Bharat Viksit Madhya Pradesh', **inaugurated a Vedic Clock in Ujjain.**

The clock is mounted on an 85-foot tower within Jantar Mantar in Ujjain.

About Vikramaditya Vedic Clock:

- The 'Vedic Clock' is the world's first timepiece **engineered to display time based on the ancient Indian traditional Panchang** (time calculation system)
- It **aims to restore the tradition of Indian time calculation** based on astronomical theories.
- It provides information on planetary positions, Muhurat, astrological calculations, moon position, Parva, Ghati, Nakshatra, and more.
- Additionally, **it indicates Indian Standard Time (IST) and Greenwich Mean Time (GMT).**
- The Vedic clock **operates by calculating time between the two sunrises** which



will be split into 30 segments, with each hour comprising 48 minutes, according to ISD.

- The **measurement will begin at 0:00, coinciding with sunrise, and will continue for 30 hours** (where each hour equals 48 minutes).
- It has been **developed by Lucknow-based Sanstha Arohan**, using digital interventions, enabling it to be connected to the internet and provide a wide range of features through a mobile app named after the clock.
- **Ujjain is historically significant for time calculation**, with the standard time of the world determined from Ujjain 300 years ago.
- The Vikrami Panchang and Vikram Samvat calendars are also released from Ujjain.
- **Ujjain is situated precisely at the intersection point of the zero meridian and the Tropic of Cancer**.
- **Before the adoption of the 82.5E longitude for IST, Ujjain (75.78E) was regarded as India's time meridian**.

About Greenwich Mean Time (GMT)

- Greenwich Mean Time is the **mean solar time at the Royal Observatory in Greenwich, London**. It serves as the **benchmark for timekeeping**
- GMT was established in the 19th century when the **Royal Observatory was designated as the prime meridian (0° longitude), dividing the Earth into Eastern and Western Hemispheres**.
- GMT is converted to local time in various regions by adding or subtracting the appropriate number of hours, based on their time zone relative to Greenwich.
- For example, Eastern Standard Time (EST) is GMT-5, meaning it's five hours behind GMT.
- **Indian Standard Time (IST) is 5 hours 30 minutes ahead of Greenwich Mean Time (GMT)**.

About Jantar Mantar:

- A Jantar Mantar is **an assembly of stone-built astronomical instruments**, designed to be used with the naked eye.

- There were **five Jantar Mantars in India.**
- All were built at the command of the **Raja Jai Singh II**, who had a keen interest in mathematics, architecture and astronomy.
- In the early 18th century, Maharaja Jai Singh II of Jaipur constructed five Jantar Mantar in total, in **New Delhi, Jaipur, Ujjain, Mathura and Varanasi**; they were completed between 1724 and 1735.



- The largest example is the equinoctial sundial belonging to Jaipur's assembly of instruments
- It is the **world's largest stone sundial, and is known as the Samrat Yantra.**
- The **Jaipur Jantar Mantar is a UNESCO World Heritage Site.**

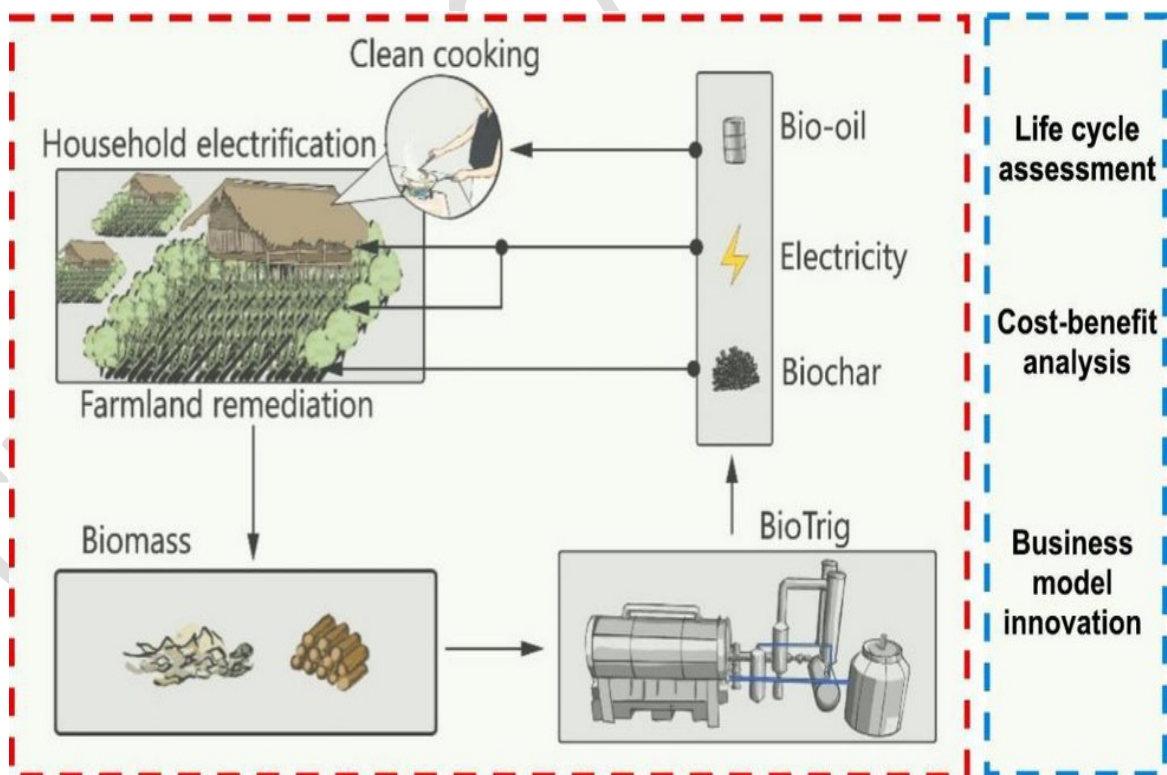
✚ **TROPIC OF CANCER:** It passes through Gujarat, Rajasthan, Madhya Pradesh, Chhattisgarh, Jharkhand, West Bengal, Tripura and Mizoram.

✚ **INDIAN STANDARD MERIDIAN :** Standard Meridian is a **longitude that determines a standard time for the whole country.** The standard meridian of India is 82°30'E.

- The standard meridian of India passes through the city of Mirzapur in Uttar Pradesh.
- In India, the standard meridian passes through the states of **Uttar Pradesh, Odisha, Andhra Pradesh, Madhya Pradesh, and Chattisgarh.**
- The Indian Standard Time is five and a half hours ahead of the Greenwich Mean Time (GMT).

BioTRIG

- A **waste management technology called 'BioTRIG,'** utilizing pyrolysis at the community level in rural India.
- Pyrolysis is a kind of chemical recycling that **turns leftover organic materials into their component molecules.**
- Waste is sealed inside an oxygen-free chamber. The sealed waste is then heated above 400 degrees Celsius. During this process, useful chemicals are produced.
- The **BioTRIG system could help to reduce greenhouse gas emissions from communities** by nearly 350 kg of CO₂-eq per capita per annum.
- This **process converts organic waste into useful products like bio-oil, syngas, and biochar fertilizer.**
- The BioTRIG system aims to address various rural challenges, including indoor air pollution, soil degradation, and lack of reliable electricity.
- It **represents a sustainable solution that can improve the quality of life for rural communities,** especially those living below the poverty line.



WORLD POVERTY CLOCK

Why in News?

India has managed to bring down 'extreme poverty' below 3 per cent of its population, latest data on the World Poverty Clock showed.

This accomplishment is in line with the United Nations' Sustainable Development Goal (SDG) 1.1 of eradicating extreme poverty by 2030.

About:

- The **World Poverty Clock provides real-time poverty estimates through 2030** for nearly every country in the world.
- It **monitors progress against Ending Extreme Poverty, which is the UN's first SDG.**
- It is **funded by the International Fund for Agricultural Development (IFAD) and the Federal Ministry for Economic Cooperation and Development of Germany.**
- The Clock shows the number of people living in extreme poverty worldwide, disaggregated by age, gender and rural/urban location.
- Every second, some escape while others fall into poverty and the clocks count all of them.
- The **escape rate calculates the current rate of poverty reduction in the world.**
- The clock has taken \$2.15 a day income to present the finding.
- Accordingly, nearly 3.44 crore people are living in extreme population in 2024 against 4.69 crore in 2022.
- As a share of total population, number of people living in extreme poverty has come down to 2.4 per cent from 3.3 per cent in 2022.

Growth in poverty control

	Total population	Number of people living in extreme poverty	%
	(in crore)		
2016	132.37	7.59	5.7
2018	135.29	6.26	4.6
2020	138.21	6.73	4.9
2022	140.85	4.69	3.3
2024	143.48	3.44	2.4

Source: www.worldpoverty.io

- A recent discussion paper by NITI Aayog, titled 'Multidimensional Poverty in India since the year 2005-06,' said that multidimensional poverty has declined sharply from 29.17 per cent in 2013-14 to 11.28 per cent in 2022-23, resulting in 24.82 crore individuals escaping multidimensional poverty during the 9-year period.
- The paper focused on the prevalence of multidimensional poverty in India from 2005-06 to 2022-23, utilising both NFHS (National Family Health Surveys) data and projection methods for years when NFHS data was unavailable.

CAVUM CLOUDS

Why in News?

NASA's Terra satellite recently captured a **cluster of cavum clouds over the Gulf of Mexico off Florida's west coast.**

About Cavum Clouds:

- A cavum cloud (also known as a fallstreak hole, hole punch cloud, hole punch cloud, punch hole cloud, skypunch, cloud canal or cloud hole) **is a large gap, usually circular or elliptical, that can appear in cirrocumulus or altocumulus clouds.**
- The holes are caused by supercooled water in the clouds suddenly evaporating or freezing, and may be triggered by passing aircraft.
- Because of their rarity and unusual appearance, cavum clouds have been mistaken for or attributed to unidentified flying objects.
- Recently, it was found that **Cavum clouds are formed when aircraft pass through mid-level altocumulus clouds containing supercooled liquid water droplets.**



- They are a result of aeroplanes flying through banks of altocumulus clouds, causing supercooled water droplets to freeze into ice crystals due to adiabatic expansion.
- Such holes are formed when the water temperature in the clouds is below freezing, but the water, in a supercooled state, has not frozen yet due to the lack of ice nucleation.
- When ice crystals do form, a domino effect is set off due to the Wegener-Bergeron-Findeisen process, causing the water droplets around the crystals to evaporate; this leaves a large, often circular, hole in the cloud.
- It is thought that the introduction of large numbers of tiny ice crystals into the cloud layer sets off this domino effect of fusion which creates the hole.

SEEI 2023

Why in News?

The 22nd Foundation Day of the Bureau of Energy Efficiency was recently celebrated with the theme "Energy Transition through Electrification and Decarbonization in India" and the State Energy Efficiency Index 2023 was released.

About State Energy Efficiency Index (SEEI) :

- The State Energy Efficiency Index 2023 (SEEI 2023) has been developed by Bureau of Energy Efficiency (BEE) in collaboration with Alliance for an Energy Efficient Economy (AEEE).
- It is the 5th edition of the index, developed by the Bureau of Energy Efficiency (BEE), a statutory body under the Ministry of Power.
- SEEI 2023 comprises 65 qualitative, quantitative, and outcome-based



indicators, both common and programme-specific, distributed across seven (7) demand sectors: Buildings, Industries, Municipal Services, Transport, Agriculture, DISCOMs, and Cross-Sector.

- In SEEI 2023, 36 states and union territories have been assessed for their energy efficiency progress in FY 2022-23.
- **States have been categorized as 'Front Runner,' 'Achiever,' 'Contender,' or 'Aspirant' based on their efforts and achievements.**
- **States and UTs are also classified into four groups based on their total final energy consumption (TFEC) for peer-to-peer performance comparison: Group 1 (>15 million tonnes of oil equivalent (MTOE)), Group 2 (5-15 MTOE), Group 3 (1-5 MTOE), and Group 4 (<1 MTOE).**

Key Findings of SEEI 2023:

- **Front runner (>=60):** Seven states in 'Front runner' category in SEEI 2023: Karnataka (score 86.5), Andhra Pradesh (83.25), Haryana, Kerala, Maharashtra, Punjab, and Telangana.
- **Achiever (50-59.75):** Two states, Assam and Uttar Pradesh are in the 'Achiever' category,
- **Contender (30-49.75):** Three states, Goa, Jharkhand, and Tamil Nadu, are in the 'Contender' category.
- **Aspirant (<30):** Maharashtra and Haryana most improved states, with score increases of 18.5 and 17 points, respectively.
- 15 states have improved their scores compared to SEEI 2021- 22.
- Substantial decline in score observed in Rajasthan, primarily attributed to lack of reported data.

About BEE: Bureau of Energy Efficiency

- The Bureau of Energy Efficiency is **an agency of the Government of India, under the Ministry of Power, created in March 2002** under the provisions of the nation's 2001 Energy Conservation Act.

- The agency's **function is to encourage the efficient use of energy in India** by developing programs to support it.
- The mission of the Bureau of Energy Efficiency is to institutionalise energy efficiency services, enable delivery mechanisms in the country and provide leadership to energy efficiency in all sectors of the country.
- Its **primary objective is to reduce energy intensity in the economy.**
- The broad objectives of BEE are as follows:
 - To exert leadership and provide policy recommendation and direction to national energy conservation and efficiency efforts and programs.
 - To coordinate energy efficiency and conservation policies and programs and take it to the stakeholders
 - To establish systems and procedures to measure, monitor and verify energy efficiency results in individual sectors as well as at a macro level.
 - To leverage multi-lateral, bi-lateral, and private sector support in implementation of Energy Conservation Act and efficient use of energy and its conservation programs.
 - To demonstrate delivery of energy efficiency services as mandated in the EC bill through private-public partnerships.
 - To interpret, plan and manage energy conservation programs as envisaged in the Energy Conservation Act.
 - To promote research and development in energy efficiency and energy conservation.
 - To develop testing and certification procedures for energy consumption of equipment and appliances and promote the testing facilities.
 - To strengthen consultancy services in the field of energy conservation.

ENERGY IS LIFE



CONSERVE IT

ADITI SCHEME

Why in News?

India Defence Minister Rajnath Singh launched the ADITI scheme on 4 March 2024. The scheme was launched to develop defence technologies and boost innovation.

About:

- Raksha Mantri Shri Rajnath Singh launched **Acing Development of Innovative Technologies (ADITI) with iDEX scheme** to promote innovations in critical and strategic defence technologies, during DefConnect 2024 in New Delhi on March 04, 2024.
- ADITI scheme is part of iDEX (Innovations for Defence Excellence) with DIO (Defence Innovation Organization) and DDP (Department of Defence Production) to work together and improve the defence sector.
- The objective of the ADITI scheme is to promote innovation in the defence sector.
- This scheme aims to improve India's technological security, national security, and defence capabilities.
- Under the scheme, **start-ups are eligible to receive grant-in-aid of up to Rs 25 crore** for their research, development, and innovation endeavours in defence technology.
- The scheme will nurture the innovation of youth, and help the country leap forward in the field of technology.
- The ADITI scheme worth Rs 750 crore for the period 2023-24 to 2025-26 .
- It aims to develop about 30 deep-tech critical and strategic technologies in the proposed timeframe.



- It also envisages to create a 'Technology Watch Tool' to bridge the gap between the expectations and requirements of the modern Armed Forces and the capabilities of the defence innovation ecosystem.
- In the first edition of ADITI, 17 challenges – Indian Army (3), Indian Navy (5), Indian Air Force (5) and Defence Space Agency (4) - have been launched.

SWEDEN JOINED NATO

Why in News?

- **Sweden became NATO's newest member** on Thursday (7 March 2024), upon depositing its instrument of accession to the North Atlantic Treaty with the Government of the United States in Washington DC.
- Sweden's NATO membership was delayed due to objections from Turkey and Hungary, but eventually received approval.
- With Sweden's accession, **NATO now counts 32 countries among its members.**

About NATO:

- The North Atlantic Treaty Organization also called the North Atlantic Alliance, is an **intergovernmental military alliance of 32 member states – 30 European and two North American.**
- It was **established in the aftermath of World War II**, the organization implements the North Atlantic Treaty, signed in Washington, D.C., on **4 April 1949.**
- NATO is a **collective security system**: its independent member states agree to defend each other against attacks by third parties.
- During the Cold War, NATO operated as a check on the threat posed by the Soviet Union.



- The alliance remained in place after the dissolution of the Soviet Union and the Warsaw Pact and has been involved in military operations in the Balkans, the Middle East, South Asia, and Africa.
- **NATO's main headquarters are located in Brussels, Belgium**, while NATO's military headquarters are near Mons, Belgium
- NATO formed with twelve founding members and has added new members ten times, most recently when Sweden joined the alliance on 7 March 2024.
- In addition, NATO currently recognizes Bosnia and Herzegovina, Georgia, and Ukraine as aspiring members.

GI TAGS

Why in News?




Over 60 products from across India have received Geographical Indication (GI) tags, marking the largest batch of GI tags awarded at once.



About:

THE MAJOR PRODUCTS ARE:

STATE	PRODUCT	DESCRIPTION
Bengal	The Banglar muslin – Handloom Craft	 <p>It has finest cotton, high tensile strength threads.</p>

<p>Gujarat</p>	<p>Ambaji White Marble</p>	 <p>Pure white color, light grey veins. Formed from re-crystallised limestone under intense pressure and heat</p>
<p>Assam</p>	<p>Majuli mask</p>	 <p>Different varieties and sizes, categorized into Mukha bhaona (face mask), Lotokoi (hanging mask), Cho Mukha (huge mask).</p>
<p>Assam</p>	<p>Asharikandi Terracotta Craft</p>	 <p>Asharikandi Terracotta Craft refers to a traditional craft form practised in the village of Asharikandi in Assam. It involves the creation of pottery and other decorative items using locally sourced terracotta clay.</p>

<p>Assam</p>	<p>Sarthebari Metal Craft</p>	 <p>Sarthebari is home to the Bell Metal industry, the second largest handicraft of assam after bamboo craft. Exquisite metalwork, particularly in brass and bell metal</p>
<p>Assam</p>	<p>Pani Meteka Craft</p>	 <p>It refers to a type of traditional craft that involves weaving straw or reeds into decorative objects such as baskets, hats, and ornaments.</p>
<p>Assam</p>	<p>Majuli Manuscript Painting</p>	 <p>The manuscript paintings of Majuli are a form of religious art closely linked to the island's Vaishnavite culture, centred</p>

		<p>around worship. Majuli Manuscript Painting are inspired by the Pala school of Painting art.</p>
Andhra Pradesh	Narasapur Crochet Lace Products	 <p>Crochet lace products were introduced to Narasapur by missionaries. Handmade crochet lace-work is one of the most common form of industry in the town.</p>
Odisha	Cuttack Rupa Tarakasi (Silver Filigree)	 <p>Tarakasi is a type of silver filigree work from Cuttack, a city in Odisha in the eastern part of India. This highly skilled art form is more than 500 years old and is traditionally done by local artisans on the Eastern shores of Odisha. The incorporation of silver filigree into jewellery dates back to around 3500 BCE in Mesopotamia, and it is still practised today as Telkari work.</p>

Tripura	Risa Textile	 <p>Risa Textile is a traditional tribal attire from Tripura, known for its vibrant designs and cultural significance</p>
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About Geographical Indication (GI) Tag:

- A geographical indication (GI) is a name or sign used on products which corresponds to a specific geographical location or origin (e.g., a town, region, or country).
- The use of a geographical indication, as an indication of the product's source, is intended as a certification that the product possesses certain qualities, is made according to traditional methods, or enjoys a good reputation due to its geographical origin.
- The registration of a geographical indication is valid for a period of 10 years.
- It can be renewed from time to time for a further period of 10 years each.
- Nodal Agency: Department for Promotion of Industry and Internal Trade (DPIIT), Ministry of Commerce and Industry.
- A GI tag enables the producers of such products to prevent unauthorized use of the indication by third parties who do not conform to the standards or criteria established for that product.



- Geographical Indications are covered as a **component of intellectual property rights (IPRs) under the Paris Convention** for the Protection of Industrial Property. GI is also governed by the **World Trade Organisation's (WTO's) Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS). (1994)**
- **In India, the Geographical Indications of Goods (Registration and Protection) Act 1999 came into force in 2003** to comply with the obligations under TRIPS. The Act provides for the registration and protection of GIs in India.
- This **tag is issued by the Geographical Indication Registry** under the Department of Industry Promotion and Internal Trade, **Ministry of Commerce and Industry.**
- The **first product to get a GI tag in India was Darjeeling Tea** in 2004.

Benefits of GI Tags:-

- It **preserves and promotes the cultural and historical identity of a region and its people** by highlighting their distinctive skills, traditions and heritage.
- It **increases the market value and competitiveness of the products.**
- It **ensures the quality and authenticity of the products** by preventing counterfeiting and misrepresentation by unauthorized parties who may try to imitate or exploit the reputation of the products.
- It **provides legal protection and enforcement against infringement and misuse of the indication by unauthorized parties** who may violate the rights and interests of the legitimate producers and consumers of the products.
- It **generates income and employment opportunities for the local communities** involved in the production and processing of the products by enhancing their skills, capacities and livelihoods.
- It **fosters innovation and creativity by encouraging the development and improvement of products** by incorporating new technologies, methods and standards.

CYCAS CIRCINALIS

Why in News?

Cycas circinalis (Eenthu Pana) faces the threat of extinction in northern Kerala due to an unidentified and rapidly spreading plant disease.

About Cycas Circinalis:

- Cycas circinalis, also known as **the Queen Sago**, is a species of cycad known in the wild only from southern India.
- Cycas circinalis is the only gymnosperm species found among native Sri Lankan flora.
- It is classified within the cycads family (Cycadaceae), which ranks among the planet's most threatened plant groups.
- These plants originated 300 million years ago during the Carboniferous period, making cycads the oldest surviving group of seed plants.
- They are **recognized by names in India**-It is called **Eenthu Pana in Kerala** and has various names like **Mund isalu (Kannada), madana kama raja (Tamil), and Malabari supari (Marathi) in different states.**
- It is an evergreen shrub that can grow up to 6 meters tall and can tolerate full sun or shade.
- It is commonly found in dense, scrubby woodlands in hilly regions that experience seasonal dryness.
- During extremely arid periods, it may shed its leaves.
- It requires complete dryness for processing, which is challenging since it is usually harvested during the rainy season.
- Typically, it takes 40 to 50 years for the trees to bear fruit.
- It is recognized as an Indian native plant, found exclusively in the Western Ghats region, spanning the states of **Kerala, Karnataka, Tamil Nadu, and southern Maharashtra.**
- Among the nine cycad species identified in India, six are native to the country.
- It is a **valuable plant used for nutrition by many local communities in the Western Ghats.**



BLUE LINE

Why in News?

Recently, the **borders between Israel and Lebanon** have been under intensified attack by Hezbollah.

The **border between Israel and Lebanon, known as the "Blue Line,"**

About Blue Line:

- The Blue Line is a **border demarcation line dividing Lebanon from Israel and the Golan Heights.**
- It's **not an official international border but a demarcation line.**
- It was **established by the United Nations in 2000** after Israeli troops withdrew from southern Lebanon.
- It serves as the **boundary between Lebanon and Israel**, aiming to prevent conflicts and provide a basis for security arrangements in the region.
- It is the **subject of an ongoing border dispute between Israel, Lebanon, and Hezbollah.**



S.NO	BOUNDARY LINE/NAME	BETWEEN COUNTRIES
1	17th Parallel	Erstwhile North and South Vietnam. (Became irrelevant after reunification)

2	20th Parallel	Libya and Sudan
3	22nd Parallel	Egypt and Sudan
4	25th Parallel	Mauritania and Mali
5	31st Parallel	Iran and Iraq
6	38th Parallel	North Korea and South Korea
7	49th Parallel	The USA and Canada
8	Durand Line	Pakistan and Afghanistan
9	McMahon Line	India and China
10	Radcliffe Line	India and Pakistan
11	Siegfried Line	France and Germany
12	Blue Line	Lebanon and Israel

ORANS

Why in News?

Villagers in **Rajasthan** oppose the state government's proposal to classify sacred groves known as orans as deemed forests, fearing loss of access and livelihood.

About:

- The **community has a close relationship with orans**, which hold cultural and religious significance,
- **Communities rely on orans for cultural, religious, and economic reasons**, using them for cattle herding, pastures, and gathering forest



produce.

- There are at least 5,000 camels and 50,000 sheep dependent on the Degray oran located in the village.
- **These people will have to vacate the land** if the state forest department takes over.
- **These concerns are legitimate** as even the places of worship, last rites and religious events take place inside the oran and are related to the trees, water bodies and other entities of the scared groves.
- They fear that this classification will deprive them of access to the forests and threaten their way of life.
- Legal experts clarify that while deemed forests are protected from certain activities like mining, they do not restrict community access to grazing or worship.

About SACRED GROVES:

- Sacred groves or sacred woods are **groves of trees that have special religious importance within a particular culture.**
- Sacred groves feature in various cultures throughout the world.
- **These patches of forests are typically protected and managed by the community itself.**
- They are **found in various cultures worldwide, including India, Africa, Japan, Europe, and the Americas.** Each culture has its unique traditions and beliefs associated with these sacred spaces.
- **Sacred groves often act as biodiversity hotspots,** harbouring a rich variety of flora and fauna.
- **These groves hold deep cultural and spiritual value for local communities.** They are often associated with deities, spirits, and ancestors.



- Communities use them for various purposes, including: Religious ceremonies, Rituals, Traditional medicine practices, Cultural gatherings.
- Encroachment for agriculture or development, deforestation for timber or fuelwood, unsustainable resource extraction of medicinal plants or non-timber forest products, development projects like roads or dams etc are the major **threats for sacred groves.**
- Several conservation measures have to be taken:
 - Working with local communities to develop sustainable management plans for the groves.
 - Raising awareness about the importance of sacred groves for biodiversity conservation and cultural heritage.
 - Studying the ecological and cultural value of sacred groves to inform conservation strategies.
 - Lobbying for legal recognition and protection of sacred groves.

DEEMED FOREST:

- Deemed Forests are **physical parcels that look to be forested but aren't listed as such in historical or official records.**
- **In India, deemed forests account for about 1% of total forest land.**
- It also said that forests had to be protected irrespective of how they were classified and who owned them.
- This brought in the concept of 'deemed forests,' or tracts that were not officially classified as such in government or revenue records.

NATIONAL CREATORS AWARD

Why in News?

The Prime Minister presented the **inaugural National Creators Award**, celebrating the talent and impact of content creators in various fields.

The award ceremony, **honoured winners across storytelling, social change advocacy, education, gaming, and other domains.**

About NATIONAL CREATORS AWARD:

- The National Creators Award **celebrates the remarkable contributions of digital content creators** who have brought about positive social change and innovation.
- Over 200 creators were nominated across categories ranging from The Best Storyteller Award to Favourite Celebrity Creator to New India Champion.
- It was the **first time that the Government of India decided to honour social media creators** for their efforts.
- The National Creators Awards 2024 **aimed at recognising the efforts of these creators for making India move towards digitizations.**
- It celebrates talented people who make a big difference **in areas like storytelling, social change advocacy, environmental sustainability, education and gaming.**
- By recognizing excellence and impact, the National Creators Award aims to inspire others to use their creativity for constructive purposes.
- This **award is given in 20 categories.** Below we have listed them for your reference.
 1. Best storyteller award
 2. Celebrity creator of the year
 3. The disruptor of the year
 4. Green champion award
 5. Cultural ambassador of the year
 6. Best creator for social change
 7. Most impactful agri creator
 8. International creator award
 9. Best Travel Creator award
 10. Heritage Fashion Icon Award



11. Most creative creator (Male and female)
12. Best creator in gaming category
13. Best creator in the food category
14. Best creator in the education category
15. Best nano creator
16. Best micro creator
17. Best health and fitness creator
18. Tech creator award
19. Swachhta ambassador award
20. The new India Champion award

Eligibility Criteria For National Creators Awards

- **18+ years old** on nomination day.
- 19 categories for Indians only.
- 1 category for international creators (digital content).
- **Content must be shared on any of the listed digital platforms**, including Instagram, YouTube, Twitter, LinkedIn, Facebook, ShareChat, Koo, Roposo, or Moj.
- Content **can be in English or any Indian language**.
- Creators have the option to nominate themselves in up to 3 categories.
- Individuals nominating others have the opportunity to nominate across all 20 categories.
- Nominations for the National Creators Award 2024 were invited through the Innovate India website between 10 to 29 February 2024.

ABOUT CONTENT CREATOR:

- The creator economy is a modern economic landscape where content creators can use digital platforms to produce and distribute content. It's also known as the influencer economy.
- In the creator economy, creators can monetize their content through advertising, Sponsorships, Subscriptions, Merchandise sales, Crowdfunding, Brand deals, Ad share revenue, Affiliate links, Monetary tips, and Courses.

- The creator economy involves creators, audiences, digital platforms, marketers, and agencies. It's centred around social media channels where users and creators interact to form online communities.

NOMINATION TO RAJYA SABHA

Why in News?

Prime Minister Narendra Modi announced that Indian educator, author, and philanthropist **Sudha Murty has been nominated to the Rajya Sabha by President Droupadi Murmu.**

About:

- Under **Article 80 (3) of the Constitution**, out of the 245 members in the Rajya Sabha, **12 are nominated by the President on the recommendation of the government.**
- According to the Article's provisions, the nominated members should have special knowledge or practical experience in areas such as literature, science, art, and social service.
- Murty is **both an author and a philanthropist.**
- A nominated member, however, is allowed to join a political party within the first six months of taking a seat.
- The **Tenth Schedule of the Constitution** says, "A nominated member of a House shall be disqualified for being a member of the House if he joins any political party after the expiry of six months from the date on which he takes his seat".



About Rajya Sabha Nominated Members:

The **maximum strength of the Rajya Sabha is fixed at 250**, out of which, 238 are to be the representatives of the states and union territories (elected indirectly) and **12 are nominated by the president**.

At present, the Rajya Sabha has 245 members.

Of these,

- 229 members represent the states,
- 4 members represent the union territories and
- 12 members are nominated by the president.

The **Fourth Schedule of the Constitution** deals with the allocation of seats in the Rajya Sabha to the states and union territories.

Powers and privileges of Nominated Members:

- Nominated members of Rajya Sabha **enjoy all the powers and privileges to which the elected MPs are entitled**.
- They can **take part in the proceedings of the House in a normal manner**.
- **Nominated members are not allowed to vote in the election of the President**.
- However, they do have the right to vote in the election of the Vice-President.

The rationale behind this principle of nomination is to provide eminent persons a place in the Rajya Sabha without going through the process of election.

It gives an opportunity to those who might be willing to participate in the debate with an amount of learning and importance which we do not ordinarily associate with the House of the People (Lok Sabha)

There has been **criticism that several nominated members have poor attendance and do not appear to show much interest in legislative work**.

In this context, cricketer Sachin Tendulkar, actor Rekha, and businesswoman Anu Aga have faced criticism in recent years.

PARROT FEVER

Why in News?

In a recent outbreak, psittacosis, also known as parrot fever, has claimed the lives of five individuals across Europe this year.

About:

- Parrot fever, also known as psittacosis, is a **respiratory bacterial infection caused by the bacterium Chlamydia psittaci**.
- It **primarily affects birds** but **can be transmitted to humans** through inhalation of contaminated particles from feathers or droppings.
- As per the World Health Organization (WHO), four deaths have been recorded in Denmark and one in the Netherlands. Additionally, numerous cases have been reported in Austria, Germany, and Sweden, with individuals experiencing symptoms akin to pneumonia, including cough, difficulty breathing, and chest pain.
- **Parrot fever is a rare but potentially serious bacterial infection.**
- Symptoms of psittacosis include **fever, headache, muscle pains, coughing, difficulty breathing, and symptoms resembling pneumonia.**
- **Severe cases may lead to complications** such as myocarditis or other neurological symptoms.
- **Treatment typically involves antibiotics**, such as doxycycline or tetracycline, administered orally for two to three weeks.
- Supportive care, including over-the-counter medications for symptomatic relief and maintaining proper hygiene practices, is also crucial for recovery.
- Preventive measures such as thorough handwashing after handling birds, avoiding close contact with sick birds, and using protective gear when cleaning bird cages are essential to prevent the transmission of psittacosis, especially in environments like aviaries or poultry farms.



- While human-to-human transmission of psittacosis is rare, **awareness of the symptoms and proper precautions can help mitigate the spread of this bacterial infection.**

ZERO FOOD CHILDREN

Why in News?

A recent study had ranked **India as having the third-highest percentage of zero-food children** (children who had not eaten any food for 24 hours), estimating over 6 million affected, particularly prevalent in Uttar Pradesh (U.P.).

About Zero Food Children:

- Zero Food Children refers to **infants aged six to 23 months who have not consumed any food of substantial calorific content** (such as semi-solid, solid, soft, or mushy foods, infant formula, or fresh milk) **for the last 24 hours.**
- **At approximately six months of age, breastfeeding is no longer sufficient to provide the child with necessary nutrition.**
- These children suffer from extreme food deprivation, which can have severe consequences on their growth and development.
- **India has the third-highest percentage of children** who have not eaten any food for 24 hours.
- The study ranks India as having the third highest percentage (19.3%) of zero-food children, **after Guinea (21.8%) and Mali (20.5%).**
- In terms of numbers, India has the highest number of 'zero-food children' at more than six million.



- **Nigeria had the second-highest number of zero-food children (962,000), followed by Pakistan (849,000).**
- **The states of Uttar Pradesh (28.4%), Bihar (14.2%), Maharashtra (7.1%), Rajasthan (6.5%), and Madhya Pradesh (6%) account for nearly two-thirds of the total zero-food children in India,**

Steps taken by government to curb malnutrition in India:-

- **Integrated Child Development Services (ICDS) Scheme:** It was launched in 1975 to provide food, preschool education, primary healthcare, immunization, health checkups, and referral services to children under 6 years old and their mothers.
- **Pradhan Mantri Matru Vandana Yojana (PMMVY):** It is a Centrally Sponsored DBT scheme with a cash incentive of Rs.5000/- (in three instalments) being provided directly in the bank/post office account of Pregnant Women and Lactating Mothers.
- **National Nutrition Mission (NNM):** The government of India has launched the National Nutrition Mission (NNM), also known as POSHAN Abhiyaan, to eradicate malnutrition from the country.
- **Anaemia Mukt Bharat Abhiyan:** The mission was launched in 2018 to accelerate anaemia decline by one to three percentage points annually.
- **Mid-day Meal (MDM) scheme:** It aims to improve nutrition levels among school children in addition to increasing enrolment, retention, and attendance.
- **National Food Security Act (NFSA), 2013:** It ensures food and nutrition security for the most vulnerable section of society.

PRITZKER ARCHITECTURE PRIZE

Why in News?

Japanese architect Riken Yamamoto was this week declared winner of the 2024 Pritzker Architecture Prize, **the highest international award in the field**, which is sometimes referred to as the “Architecture Nobel”.

About Pritzker Architecture Prize:

- The Pritzker Architecture Prize is an **international architecture award presented annually "to honor a living architect or architects"**.
- It is given to those living architect **whose built work demonstrates a combination of those qualities of talent, vision and commitment which has produced consistent and significant contributions to humanity and the built environment through the art of architecture.**
- This **award is the highest international honour in the field.**
- It was **founded in 1979 by Jay A. Pritzker and his wife Cindy**, the award is funded by the Pritzker family and sponsored by the Hyatt Foundation.
- It is considered to be one of the world's premier architecture prizes, and is **often referred to as the Nobel Prize of architecture.**
- The Pritzker Architecture Prize claims **to be awarded "irrespective of nationality, race, creed, or ideology"**.
- The recipients receive **US\$100,000, a citation certificate, and, since 1987, a bronze medallion.**
- **Riken Yamamoto, the ninth laureate from Japan**, is known for projects like the Hiroshima Nishi Fire Station (2000) and the Koyasu Elementary School (2018), which emphasize transparency and interaction in architectural design.
- Riken Yamamoto's architectural vision prioritises family and community, with a focus on the visible and tangible aspects of architecture.
- Yamamoto's designs often incorporate innovative concepts such as "relational living" and preserving natural landscapes, as seen in projects like Hotakubo Housing and the Yokosuka Museum of Art.
- **Balkrishna Doshi, is the first Indian architect to win a Pritzker Prize (2018).** His renowned work is the Aranya Low-Cost Housing Complex, located in the city of Indore. **He is the only Indian to get this award.**



GORSAM KORA FESTIVAL

Why in News?

The Gorsam Kora festival, **symbolised the enduring friendship between India and Bhutan** commenced on 7th March and concluded on 10th March this year.

About Gorsam Kora Festival:

- The Gorsam Kora Festival **takes place in Arunachal Pradesh's Zeminthang Valley along the Nyanmjang Chu River.**
- This **annual festival is hosted at Gorsam Chorten**, a towering Stupa standing at 93 feet tall, constructed during the 13th century AD by a local monk named Lama Pradhar.
- It **holds historical significance as it served as the first resting place for the 14th Dalai Lama upon his escape from Tibet in 1959.**
- The festival encompasses **cultural performances and Buddhist rituals conducted at Gorsam Chorten**, which predates the renowned Tawang Monastery.
- It marks a significant occasion, **occurring on the last day of the first month of the Lunar calendar**, attracting numerous devotees, including a substantial presence of Bhutanese nationals.
- **Gorsam Kora draws pilgrims and Lamas from Bhutan, Tawang, and nearby regions**, fostering a sense of camaraderie and cultural interchange.
- The festival showcases a diverse range of events, featuring captivating performances by local cultural troupes and Indian army bands.
- Martial arts display such as Mallakhamb and Zanjh Pathaka add to the festival's allure and vibrancy.



Zemithang Valley

- Located in the picturesque **Tawang district**, the Zemithang Valley is steeped in history and **holds great significance** as the sanctuary where the 14th Dalai Lama sought refuge after escaping Tibet in 1959.
- The Gorsam Kora, an annual festival, is celebrated at the Gorsam Chorten, a towering 93-foot-tall Stupa constructed during the 13th century AD by Lama Pradhar- a revered local monk.



Tawang Monastery

- Tawang Monastery is a **Buddhist monastery located in Tawang, Arunachal Pradesh, India.**
- It is the **largest monastery in the country.**
- It is **situated in the valley of the Tawang Chu**, in close proximity to the Chinese and Bhutanese border.
- The Himalayan Buddhist community holds this historic landmark in high regard.
- It predates the Tawang Monastery, which is situated approximately 92 kilometers to the east in Tawang town.
- Its striking resemblance to Nepal's Boudhanath stupa is unmistakable, and **it shares a spiritual connection with Bhutan's Chorten Kora, located on the western ridge, which was constructed in 1740.**
- Every year, thousands of devotees, including a considerable number of Bhutanese nationals, attend the Gorsam Kora festival to commemorate this auspicious occasion on the final day of the first month of the Lunar calendar.



CITIZENSHIP AMENDMENT ACT (CAA)

Why in News?

The **Centre notified Rules for The Citizenship Amendment Act (CAA)**, paving the way for the implementation of the controversial law more than four years after it was passed by Parliament in December 2019.

About:

- The CAA will benefit thousands of Hindu, Sikh, Buddhist, Jain, Parsi, or Christian migrants from Pakistan, Bangladesh, and Afghanistan who entered India before December 31, 2014, and seek citizenship of India.
- This group of people has been living in India illegally or on long-term visas (LTV).
- The CAA aims to give citizenship to the target group of migrants even if they do not have valid travel documents as mandated in The Citizenship Act, 1955.
- The CAA presumes that members of these communities who entered India **faced religious persecution in these countries.**
- The law has also cut the period of citizenship by naturalisation from 11 years to five.
- Under the CAA Rules, immigrants from these countries are only supposed to prove the country of their origin, their religion, the date of their entry into India, and the knowledge of an Indian language to apply for Indian citizenship.
- The **rules have been relaxed very significantly.** The earlier essential requirement of a valid passport issued by Pakistan, Bangladesh, or Afghanistan, along with a copy of a valid Residential Permit of India, has been virtually done away with.
- According to the CAA Rules, a birth or educational institution certificate, “Identity Document of any kind”, “Any License or Certificate”, “Land or tenancy records”, or “Any other document” issued by these countries, which proves the applicant was their citizen, would serve as proof of citizenship of these countries.



- Any document that shows that “either of the parents or grandparents or great grandparents of the applicant is or had been a citizen of one of the three countries” is also acceptable.
- Importantly, these documents will be admissible even beyond their validity period. Sources said these documents can also be used to establish the religion of the applicant.
- The requirement of a certificate from an educational institution, certifying that the applicant knows one of the languages mentioned in the Eighth Schedule of the Constitution, has also been done away with. Now, merely a declaration to that effect, and the ability to speak the language, will be enough.
- The Rules list **20 documents, any of which would be admissible as proof of date of entry into India.** These include
 1. a valid visa or residential permit issued by the Foreigners’ Regional Registration Office (FRRO);
 2. slip issued by census enumerators in India;
 3. a driving licence,
 4. Aadhaar,
 5. ration card, or
 6. any letter issued by the government or a court;
 7. an Indian birth certificate;
 8. land or tenancy records;
 9. registered rent agreement;
 10. PAN card issuance document,
 11. a document issued by the central or a state government, PSU, or bank;
 12. certificate issued by an elected member of any rural or urban body or officer thereof, or a revenue officer;
 13. a post office account;
 14. an insurance policy;
 15. utility bills;
 16. court or tribunal records;
 17. EPF documents;
 18. school leaving certificate or academic certificate;
 19. a municipality trade license;
 20. a marriage certificate.

- **Citizenship is the status of a person recognized under law as being a legal member of a sovereign state or belonging to a nation.**
- In India, Articles 5 – 11 of the Constitution deals with the concept of citizenship.
- Citizenship is listed in the Union List under the Constitution and thus is under the exclusive jurisdiction of Parliament.
- The Constitution does not define the term 'citizen' but details of various categories of persons who are entitled to citizenship are given in Part II. (Articles 5 to 11).

Article 5: Citizenship at the commencement of the Constitution

Article 6: Citizenship of certain persons who have migrated to India from Pakistan

Article 7: Citizenship of certain migrants to Pakistan

Article 8: Citizenship of certain persons of Indian origin residing outside India

Article 9: People voluntarily acquiring citizenship of a foreign state not to be citizens.

Article 10 : Continuance of the rights of citizenship.

Article 11: Parliament to regulate the right of citizenship by law

ARTICLE 142

Why in News?

A five-judge or constitution bench of the **Supreme Court held that a court can directly grant divorce under Article 142 of the Constitution.**

About:

- The Court mentioned that in cases where the marriage has irretrievably broken down, without referring the parties to a family court first, where they must wait for 6-18 months for a decree of divorce by mutual consent.
- The decision enables couples to bypass the time-consuming process of obtaining a decree of divorce through family courts, which have a large number of similar cases pending.

About Article 142:

- Article 142 provides a **unique power to the Supreme Court**, to do “**complete justice**” **between the parties**, where, at times, the law or statute may not provide a remedy.
- Article 142 of the Constitution of India gives the **Supreme Court the power to pass any decree or make any order to ensure complete justice in any matter pending before it**
- Any **decree so passed or order so made shall be enforceable throughout the territory of India**

Significance:

- **Prevents Injustice:** It provides a special and extraordinary power to the Supreme Court to do complete justice to the litigants who have suffered traversed illegality or injustice in the proceedings.
- **Uphold citizen’s rights:** Article 142 has been invoked for the purpose of protecting rights of the different sections of the population.
- **Check on Government:** Works as a system of checks and balances with the Government or Legislature.

Criticisms:

- **Ambiguity:** The Supreme Court tried to explain the phrase ‘complete justice’ but it is still blurred. The judgments passed by the Apex Court have created a lot of confusion and there is no clarity on invoking Article 142.
- **Against Separation of powers:** The power has been criticised on grounds of the separation of powers doctrine, which says that the judiciary should not venture into areas of lawmaking and that it would invite the possibility of judicial overreach.
- **Promotes Judicial Overreach:** In some judgments, it is mentioned that it could be used when the law of statutes is silent. However, by analysing judgments on the use of Article 142 it seems like it is used to fill the lacuna of the law.
- **Negative impact on the economy:** The judgement on the ban on the sale of liquor near national and state highways has affected many hotels, bars, restaurants and liquor shops which resulted in the unemployment of lakhs of people.

- In recent years, there have been several judgments of the Supreme Court wherein it has been foraying into areas which had long been forbidden to the judiciary by reason of the **doctrine of 'separation of powers', which is part of the basic structure of the Constitution.** One such example is the ban on the sale of alcohol along national and state highways.

POBITORA WILDLIFE SANCTUARY:

Why in News?

- Assam Cabinet decides to **de-notify Pobitora Wildlife Sanctuary**, a prime rhino habitat, following a decision taken without prior Cabinet approval in 1998.
- The move seeks to address land rights issues and involve local communities in conservation efforts.
- The decision faces scrutiny from conservationists and requires approval from the Supreme Court and the National Board for Wildlife for de-notification.
- Previously, last year, the Supreme Court had issued notices to MoEF and the Assam govt. on plea against declaring an eco-sensitive zone around Pobitora Wildlife Sanctuary.

POBITORA WILDLIFE SANCTUARY

- Pobitora Wildlife Sanctuary is a wildlife sanctuary **on the southern bank of the Brahmaputra** in Morigaon district in Assam, India.
- It was **declared in 1987** and covers 38.85 km², providing grassland and wetland habitat for the Indian rhinoceros.
- It **holds one of the largest Indian rhinoceros population in Assam.**
- It is often called 'Mini Kaziranga'



because of the similar landscape and the sizeable population of the one-horned rhino.

- **Fauna:** Leopard, Leopard cat, Fishing cat, Jungle cat, Feral Buffalo, Wild pigs, Chinese pangolins, etc.
- **Flora:** Its maximum consists of the wet savannah of *Arundo donax* and *Saccharum*. The remaining area is covered by water bodies.

HYDERABAD LIBERATION DAY

Why in News?

The Central government has declared September 17 as 'Hyderabad Liberation Day' annually, commemorating the integration of Hyderabad into the Indian Union in 1948.

The announcement, made by the Ministry of Home Affairs through a gazette notification, honours the martyrs who liberated Hyderabad from Nizam's rule during Operation Polo.

HISTORY:

- In 1947, Hyderabad, the largest Princely State, encompassed present-day Telangana and parts of Karnataka and Maharashtra, ruled by the seventh Nizam, Mir Usman Ali.
- As India transitioned to independence, provinces were given the choice to join India, Pakistan, or remain independent`.
- Despite efforts by Home Minister Sardar Patel to integrate Hyderabad into India, the Nizam declared it an independent nation.
- Even after India's independence on August 15, 1947, Hyderabad did not get independence and continued to remain under the rule of the Nizams for 13 months.



- A Standstill Agreement was signed in November 1947, **granting India control over foreign affairs, defence, and communications** while **leaving domestic affairs to the Nizam.**
 - However, internal dissent grew, with the Hyderabad State Congress and Communist-led peasant movements opposing the Nizam's rule.
 - The Nizam's response was ruthless, employing the Razakars, a para-military force, to suppress dissent.
 - **In the face of escalating violence, the Union government initiated Operation Polo**, deploying the army to integrate Hyderabad into India on September 13, 1948.
 - **The city was liberated from Nizam's rule on September 17, 1948**, after a police action namely 'Operation Polo'.
 - Now to remember the martyrs who liberated Hyderabad and to infuse the flame of patriotism in the minds of youth, the Government of India decided to celebrate the 17th day of September every year as 'Hyderabad Liberation Day', the notification read.
- ✚ **Operation Vijay (1961)** – the operation by the Military of India that led to the capture of Goa, Daman and Diu and Anjdiv Islands from the Portuguese colonial holding in 1961.
- ✚ **Operation Blue Star (1984).**

OTHER MAJOR OPERATIONS:

YEAR	NAME OF OPERATION	COUNTRY ASSOCIATED
1990	Kuwait Airlift	Kuwait
2006	Operation Sukoon	Lebanon
2011	Operation Safe Homecoming	Libya
2015	Operation Rahat	Yemen
2015	Operation Maitri	Nepal Earthquake
2016	Operation Sankat Mochan	South Sudan

2020	Operation Vande Bharat	Corona pandemic
2020	Operation Samudra Setu	COVID-19
2021	Operation Devi Shakti	Kabul, Afghanistan
2022	Operation Ganga	Ukraine
2023	Operation Dost	Turkey-Syria Earthquake

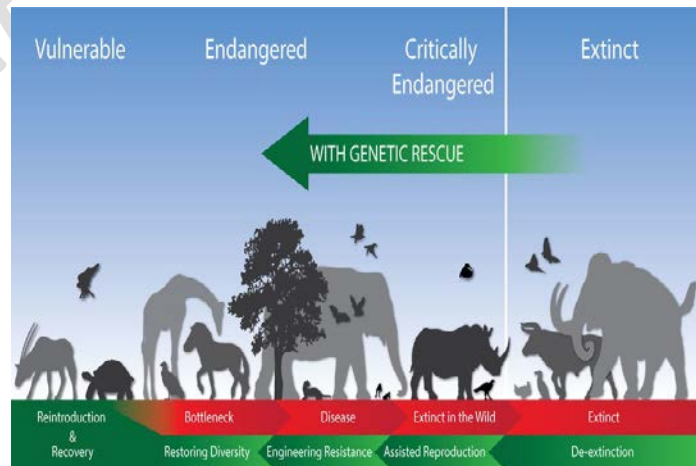
RANTHAMBORE NATIONAL PARK

Why in News?

Recently, during a study, **genetic rescue** was suggested as a strategy to preserve the tiger population in Ranthambore National Park.

About Genetic Rescue:

- Genetic rescue is a **conservation tool which tries to address these genetic factors by moving genes from one population to another** to increase the overall genetic diversity and minimize inbreeding.
- It is the **process of increasing population growth**.
- This is done by introducing new genetic diversity through the migration of individuals into another small population, a process known as gene flow.
- In practice, wildlife managers take individuals from a larger, healthier population and bring them to a smaller one to introduce new variation and aid in population growth.



- This strategy aims to reduce genetic problems, lower extinction risks, and improve the survival of endangered species and populations.
- It is commonly used in conservation biology to counteract inbreeding depression. This occurs when closely related individuals mate within a population, resulting in reduced success in reproduction and offspring viability.
- Genetic rescue can have positive or negative effects, influenced by factors such as the extent and duration of gene flow, as well as genetic and non-genetic factors that impact population dynamics.
- Moving animals around can pose risks, which is why it's usually considered a final option.

About Ranthambore National Park:

- Ranthambore National Park is a national park in Rajasthan, India, with an area of 1,334 km².
- It is bounded to the north by the Banas River and to the south by the Chambal River.
- It is located at the junction of the Aravali and Vindhya hill ranges.
- It is named after the historic Ranthambore Fort, which lies within the park.
- Ranthambore National Park was established as the Sawai Madhopur Game Sanctuary in 1955.
- It was declared one of the Project Tiger reserves in 1973.
- Ranthambore was designated as a national park in 1980.
- Kailadevi Wildlife Sanctuary and Sawai Mansingh Wildlife Sanctuary are connected to the core of Ranthambore NP by narrow corridors, forming part of the Tiger Reserve.
- It harbours dry deciduous forests and open grassy meadow.
- The most prevalent plant species in Ranthambore National Park is the "Dhok," scientifically known as *Anogeissus pendula*.



- Ranthambore is known for its Bengal tiger population.
- During the past few years, there has been a decline in numbers due to poaching and other reasons.

BUGUN LIOCICHLA TRIBE

Why in News?

The **Buguns, a major tribe** living near Eaglenest Wildlife Sanctuary in **Arunachal Pradesh**, have generously donated 1,470 hectares of land for the protection of the critically endangered songbird Bugun Liocichla.

About Bugun Liocichla Bird:

- The **Bugun Liocichla** is a small **babbler** measuring just 20 cm long, with olive-grey plumage and a black head and a yellow-orange eyebrow.
- **Scientific Name : Liocichla bugunorum**
- It is **only found in the Eaglenest Wildlife Sanctuary in Arunachal Pradesh, India.**
- It has been described as similar to a small laughing thrush.
- The Bugun Liocichla **was first spotted in 1995 and described as a new species in 2006.**
- The avian species is **critically endangered.**
- So far, just 14 individual birds have been spotted.
- But the **tree felling, timber trade and hunting by villagers posed a threat** to conservation efforts and the bird's future.
- Constant efforts by the forest department, however, bore fruit with Singchung Village Council finally deciding to donate the forest land to take up conservation and tourism promotion projects.



- **Major Conservation Centre – Braiduah Community Reserve, Arunachal Pradesh.**
- **Bugun Liocichla Utsav** is held to commemorate the bird's discovery.

About Bugun Tribe

- The Buguns (formerly Khowa) are **one of the earliest recognized schedule tribe of India**, majority of them, inhabiting the Singchung Sub-Division of West Kameng District of Arunachal Pradesh.
- Buguns, one of the major tribes, **mainly living adjacent to Eaglenest Wildlife Sanctuary** in Singchung sub-division of Arunachal Pradesh's West Kameng district.
- The Buguns are **known for their hard work in farming and their skill in extracting oil from a local wood species called Chiblem**, which is found in the forests.
- They have **separate borders with neighboring tribes** and speaks a distinct language called Khowa.
- The Bugun language, one of the two Bugunish/Kamenic language under Kho-Bwa languages is considered endangered by UNESCO.
- Buguns live in several exogamous clans. Traditionally, the predominant occupation was agriculture, supported with other allied activities like fishing and hunting, cattle rearing etc.
- **They have their own decision-making body called Nimiang**, which oversees the community's affairs.
- The Buguns are **traditionally followers of the animistic religion.**
- Buguns **have their own folklores, songs, dances, music and rituals.**
- A rare bird, the Bugun liocichla, was named after the tribe.
- The Bugun people celebrate their **annual festival known as "Pham-Kho."**
- **Profound Buddhist influence** has led to the adoption of many Buddhist rituals and the invitation of Buddhist lamas to participate in their communal rituals. As a result, many Buguns declared themselves as Buddhist in censuses.



AIR QUALITY REPORT 2023

Why in News?

The **World Air Quality Report 2023** has been released by the Swiss organization IQAir. According to the report, India ranked third worst out of 134 countries in terms of average annual PM2.5 concentration.

Key Highlights of the World Air Quality Report 2023

- **India ranked third in terms of air quality**, with an average annual concentration of particulate matter 2.5 (PM2.5) at 54.4 micrograms per cubic meter.
- **India performed better than only two of its neighbors, Bangladesh and Pakistan.**
- While Bangladesh remained the world's most polluted country, with an average PM2.5 concentration of 79.9 micrograms per cubic meter, Pakistan ranked second, with a level of 73.7.
- The **most affected areas were in West Asia, Africa, and Central and South Asia**, while French Polynesia, Mauritius, and Iceland had the least pollution.
- It also **named Delhi as the world's most polluted capital city for the fourth year in a row.**
- Begusarai, Bihar, has been described as the world's most polluted urban area.
- **India has ten of the top 11 most polluted cities globally**, with the remaining one being Lahore in Pakistan.
- 96 percent of India's population experiences PM2.5 levels that are more than seven times the WHO annual PM2.5 recommendation.

About Particulate Matter:

- Particulates or atmospheric **particulate matter (PM)** are **microscopic particles of solid or liquid matter suspended in the air.**
- They can originate in a variety of locations. In general, any form of burning or dust-generating activity produces PM.
- Sources of particulate matter **can be natural or anthropogenic.**

- They **have impacts on climate and precipitation** that adversely affect human health, in ways additional to direct inhalation.
- Types of atmospheric particles **include suspended particulate matter; thoracic and respirable particles; inhalable coarse particles, designated PM10; fine particles, designated PM2.5; ultrafine particles and soot.**
- Some particles are visible as soot or smoke due to their size or color, while others are so tiny that they can only be seen with an electron microscope.
- **PM comes in a variety of sizes.**
- Larger particles are typically derived from the soil.
- Smaller particles result from the combustion of fossil fuels, such as petrol in automobiles, diesel in trucks, and coal used in power plants.
- **PM 2.5 is an atmospheric particulate matter with a diameter of less than 2.5 micrometers**, which is approximately 3% the diameter of a human hair.
- PM 2.5 particles are small enough to penetrate deep into the lungs and even reach the bloodstream, and prolonged exposure can result in lung cancer, heart disease, stroke, and other chronic health problems.

STEAG : Signals Technology Evaluation and Adaptation Group

Why in News?

The Indian Army has established the “**Signals Technology Evaluation and Adaptation Group**” (STEAG), a specialized technology unit aimed at researching and assessing next-generation communication technologies for defence applications.

About:

- Operated under the Corps of Signals, STEAG will play a crucial role in enhancing the Army’s digital capabilities by scouting, evaluating, developing, and managing cutting-edge ICT solutions.
- **STEAG will undertake research**



and evaluation of futuristic communication technologies like 6G, Artificial Intelligence (AI), Machine Learning (ML) and quantum computing for military use.

- This unit will focus on areas such as Artificial Intelligence, 5G and 6G networks, machine learning, and quantum technologies.
- **STEAG will be headed by a Colonel rank officer.**
- It is **part of Indian Army's "On Path to Transformation" initiative**, aimed at realising Atmanirbharatha in defense.
- STEAG is mandated to nurture technologies spanning the complete spectrum of wired and wireless systems.
- **It will carry out technical scouting, evaluation, development, management of core ICT solutions**, and provide user interface support by maintenance and upgradation of contemporary technologies available in the environment.
- The setting up of **STEAG is part of the Army's efforts to develop technologies considering the future battlefield.**
- STEAG aligns with India's goals of self-reliance (Atmanirbhar) in high-end communication technologies, contributing to the nation's strategic autonomy.

BIMA SUGAM

Why in News?

Recently, the Insurance Regulatory and Development Authority of India (**IRDAI**) has **approved the setting up of Bima Sugam** — an online insurance marketplace (like an e-commerce platform) for buying, selling, and servicing insurance policies as well as settling claims.

About BIMA SUGAM:

- It is an **online insurance marketplace** (like an e-commerce platform) for **buying, selling, and servicing insurance policies as well as settling claims.**
- Bima Sugam functions as an e-



commerce platform where insurance companies can offer their products, providing customers with an end-to-end digital journey.

- It will onboard all the companies that offer life and non-life insurance products under one roof.
- It **eliminates paperwork** by offering policies in electronic format and allows customers to access all their policies – life, health, and non-life insurance – in one application or window.
- Bima Sugam **will serve as a unified platform, integrating with government databases, insurers, intermediaries, and insurance repositories.**
- It will fetch customer details, provide product information, and facilitate the purchase and servicing of insurance policies.
- Acting as a single interface, it will cater to customers, intermediaries, and agents, enabling them to connect and transact across various insurers (life, health, non-life).
- **Insurance policies are available in electronic format**, reducing reliance on physical documents.
- Bima Sugam **aims to make life insurance more affordable by streamlining processes and reducing administrative costs.**

About IRDAI:

- The Insurance Regulatory and Development Authority of India (IRDAI) is a **statutory body under the jurisdiction of Ministry of Finance, Government of India.**
- It is tasked with regulating and licensing the insurance and re-insurance industries in India.
- It was **constituted by the Insurance Regulatory and Development Authority Act, 1999**, an Act of Parliament passed by the Government of India.
- The **agency's headquarters are in Hyderabad, Telangana**, where it moved from Delhi in 2001.



- IRDAI is a **10-member body** including the chairman, five full-time and four part-time members appointed by the government of India.
- IRDAI **safeguards insurance customers' interests** as a statutory body under the IRDA Act 1999.
- IRDAI's **"Vision Insurance for All" initiative** aims for comprehensive coverage by 2047, allocating states and union territories to insurers for increased penetration.
- In 2023, IRDAI launched **"Bima Trinity" – Bima Sugam, Bima Vistar, Bima Vaahaks** – with insurers to streamline insurance activities.

KALYANA CHALUKYA DYNASTY

Why in News?

A **900-year-old Kannada inscription from the Kalyana Chalukya dynasty** has been found at Gangapuram, a temple town, in Telangana.

About Kalyana Chalukya Dynasty:

- The **Chalukyas ruled** parts of Southern and Central India **between the 6th century and the 12th century.**
- The kingdom of Chalukyas was centred around the Raichur Doab, between the Krishna and Tungabhadra rivers.
- **Badami Chalukyas:** They were the earliest Chalukyas with their capital at Badami (Vatapi) in Karnataka. Their rule started in the mid-6th century and declined after the death of their greatest king, Pulakesin II in 642 AD.
- **Eastern Chalukyas:** Emerged after the death of Pulakesin II in Eastern Deccan with the capital at Vengi. They ruled till the 11th century.
- **Western Chalukyas:** They **were the descendants of the Badami Chalukyas.**
- They emerged in the late 10th century and ruled from Kalyani.



- The Western Chalukya Empire, also known as the Kalyani Chalukyas, ruled the western Deccan and South India from the 10th to 12th centuries
- Primarily the Kannadiga dynasty, named after the capital city of Kalyani (modern-day Bidar, Karnataka).
- The empire was founded by Tailapa II during Rashtrakuta rule, governing Tardavadi in the Bijapur district. They defeated Rashtrakuta in 973.
- **The empire reached peak under Vikramaditya VI (1076-1126 CE), considered the 'Chalukya Vikrama era'.**
- Expanded into Deccan and southern India, defeating Cholas and gaining vast territories from the Kaveri River to the Narmada River.
- Administration: Hereditary, power passed to a male heir or brother. Feudatories managed territories
- The **Western Chalukya minted punch-marked gold coins called pagodas** with Kannada legends.
- Art and Architecture: **Contributed to Kannada and Telugu literature.** Their architecture is a link between the Badami Chalukya architecture of the 8th century and the Hoysala architecture of the 13th century. Known for 'Gadag style' temples in Tungabhadra-Krishna doab region.
- Temples depict religious and secular themes. **Notable temples include the Mallikarjuna temple of Bellary, Siddeshvara temple in Haveri, and Kallesvara temple in Davangere district.**

OPERATION SANKALP

Why in News?

Operation Sankalp in the Gulf of Aden completed 100 days, which involve deployment of 5000 person, 21 ships and 900 hour of maritime surveillance aircraft.

About Operation Sankalp:

- Operation Sankalp **was launched by the Indian Navy in December 2023, operating in key areas including the Gulf of Aden, Arabian Sea, and off the East Coast of Somalia.**

- Its objective is to safeguard India's maritime interests, counter maritime threats, combat piracy resurgence, and curb narcotics trade in the Indian Ocean Region.
- It also involve 40 hour of operation by destroyer INS Kolkata to secure Vessel Ruen and forced surrender of 35 pirates and freed 17 crews.
- This operation was carried out at a distance of 2600 km away from Indian coast by IAF C-17 aircraft dropped Marine commando and combat boat.



MUSHK BUDIJI RICE

Why in News?

The **Kashmir Himalaya is known for the cultivation of mushk budiji**, an indigenous rice variety distinguished for its rich aroma and unique taste.

Recently, scientists at the Sher-e-Kashmir University of Agricultural Sciences and Technology (SKUAST), Srinagar, reported that altitude and temperature play an important role in the development of this aroma.

About Mushk Budiji Rice:

- The Kashmir Himalaya is known for the cultivation of mushk budiji, **an indigenous rice variety distinguished for its rich aroma and unique taste.**
- Mushk budiji rice **was nearly extinct due to factors like rice blast disease and low yield and lack of profitability,** but a revival program initiated in 2007



has seen its slow resurgence.

- The researchers identified around 35 aromatic compounds in the rice variety across eight altitudes between 5,000 and 7,000 feet in the valley.
- They discovered compounds contributing to the rice's aroma, notably 2-acetyl-1-pyrroline (2-AP) found at higher altitudes.
- Additionally, gene-expression analysis revealed how environmental factors influence the rice's flavor profile through its genes.
- **Mushk budji Rice of Anantnag District in Jammu and Kashmir obtained the Geographical Indication Tag in 2023.**

MEME COINS

Why in News?

Meme coins, a **subset of cryptocurrencies**, have gained popularity within the digital currency realm.

About Meme Coins:

- Meme coins are **digital currencies created as a form of satire or humorous tribute to the internet culture.**
- They are also known as 'memetic tokens' or 'community coins'.
- Their key characteristics include extreme volatility, large or uncapped supplies, and easy creation facilitated by blockchain technology.
- They often feature **quirky names, logos, and branding that reference popular memes, jokes, or internet phenomena.**
- The nature of these coins are **highly volatile as they are driven by the current buzz surrounding the token.**
- They typically have a massive or **uncapped supply, leading to very low values per token.**
- It is **easy to create a meme coin as compared to traditional cryptocurrencies.**



- These **coins leverage blockchain technology**, often utilising smart contracts on platforms like Ethereum and Solana.
- **Dogecoin and Shiba Inu, Retik Finance** are notable examples of meme coins, with quirky branding and significant community engagement.
- However, investing in meme coins carries risks due to their speculative nature and lack of fundamental value.

BLACK CARBON

Why in News?

- Black carbon, **emitted from incomplete combustion of biomass and fossil fuels**, is a significant contributor to global warming and poses health risks.
- **At the COP26 climate talks in Glasgow in November 2021, India pledged to achieve net-zero emissions by 2070**, positioning itself as a frontrunner in the race to carbon neutrality.
- As per the Ministry of New and Renewable Energy, India has established a renewable energy capacity surpassing 180 GW by 2023 and is on track to achieve its goal of reaching 500 GW by 2030.
- **Pradhan Mantri Ujjwala Yojana (PMUY)**, a scheme of the government of India can contribute to net zero emission significantly by mitigating the black carbon emission.

About Black Carbon:

- Chemically, **black carbon (BC)** is a **component of fine particulate matter**.
- Black carbon **consists of pure carbon in several linked forms**.
- It is **formed through the incomplete combustion of fossil fuels, biofuel, and biomass**, and is **one of the main types of particle in both**



anthropogenic and naturally occurring soot.

- The process **also creates carbon dioxide (CO), carbon monoxide, and volatile organic compounds.**
- It is a **light-absorbing particle that contributes to climate change** by releasing heat energy into the atmosphere.
- It's the **second most important contributor to global warming** and is considered a short-lived climate pollutant.
- Unlike other greenhouse gas emissions, **Black carbon is quickly washed out** and can be eliminated from the atmosphere if emissions stop.
- **Black carbon absorbs solar energy, it warms the atmosphere.** When it falls to earth with precipitation, it darkens the surface of snow and ice, reducing their albedo (the reflecting power of a surface), warming the snow, and hastening melting.
- It contributes to global warming and poses severe risks. Studies have found a direct link between exposure to black carbon and a higher risk of heart disease, birth complications, and premature death.
- Most black carbon emissions in India arise from burning biomass, such as cow dung or straw, in traditional cookstoves.
- It gets emitted from gas and diesel engines, coal-fired power plants, and other sources that burn fossil fuel. It comprises a significant portion of particulate matter
- In India, the **residential sector is the largest source of black carbon emissions (47% of India's total black carbon emissions).**
- Prioritizing black carbon reduction aligns with India's global commitments to decarbonization and sustainable development goals, potentially preventing thousands of premature deaths annually.

GROUP OF FRIENDS

Why in News?

India, leading the **Group of Friends (GOF) comprising 40 member states**, convened a meeting to discuss strategies for strengthening legal frameworks against crimes targeting peacekeepers.

About GOF: Group Of Friends

- **The Group of Friends (GOF) was launched by India in 2022 to promote accountability for crimes against the Blue Helmets during its presidency of the UN Security Council.**
- **India, Bangladesh, Egypt, France, Morocco and Nepal are co-chairs of the GOF, which comprises 40 member states.**
- **India launched a new database hosted on the Unite Aware platform to record crimes against peacekeepers and monitor accountability efforts.**
- **The meeting underscores member states' commitment, led by India, to uphold the safety and dignity of peacekeepers worldwide.**



WHITE RABBIT COLLABORATION

Why in News?

The European Organization for Nuclear Research (**CERN**) **launched the White Rabbit Collaboration** to promote the adoption of its White Rabbit (WR) technology.

This technology has applications beyond particle physics and has been incorporated into the Precision Time Protocol (PTP) standard.

About White Rabbit Collaboration:

- It is a worldwide community that operates on a membership basis, **aiming to uphold a high-performance open-source technology** that meets user requirements and encourages its adoption by industry.
- The WR Collaboration will offer specialized support and training.

- It will also promote joint R&D projects between organizations with shared interests and complementary skills, while creating a testing environment that builds confidence in products using the open-source technology.



ABOUT WHITE RABBIT:

- **White Rabbit (WR) is a technology developed at CERN, the European Organization for Nuclear Research, to precisely synchronize devices in accelerators to sub-nanosecond accuracy.**
- It addresses the challenge of establishing a unified time standard across a network.
- It was **originally introduced in 2012**, this fully open-source technology has rapidly expanded beyond the realm of particle physics.
- White Rabbit **enables sub-nanosecond accuracy within Ethernet-based networks.**
- It **uses the Precision Time Protocol to achieve sub-nanosecond accuracy**, which allows for precise adjustment of clock phase and offset.
- WR **also provides the flexibility and modularity of real-time Ethernet networks.**
- These networks can be used solely for timing and synchronization in distributed electronic systems or for both timing and real-time data transfer.
- **In 2020, it was included in the worldwide industry standard known as Precision Time Protocol (PTP)**, governed by the Institute of Electrical and Electronics Engineers (IEEE).
- One of the key features of White Rabbit is its open-source nature and adherence to standards.



- **Companies and institutes can therefore adapt it to their needs** and incorporate it in their products and systems.
- **White Rabbit is used in the finance sector as well as in many research infrastructures**, and it is currently being evaluated for application in the future quantum internet.
- The technology could also play a key role in the future landscape of global time dissemination technologies, which currently rely heavily on satellites.

CLASSIC IAS ACADEMY

CLASSIC IAS ACADEMY