

OFFICERS' Pulse

DIGEST

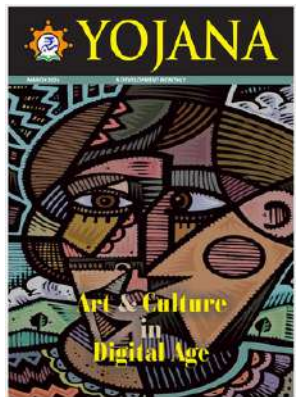
March 2024



The Indian EXPRESS

DownToEarth

Business Standard



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Current Affairs Monthly
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Schemes

1) Electric Mobility Promotion Scheme 2024

What's in the news?

- The Ministry of Heavy Industries has launched the **Electric Mobility Promotion Scheme 2024 (EMPS 2024)** with an outlay of Rs 500 crore.
- This initiative is geared towards **encouraging the adoption of electric vehicles (EVs)** across the country.
- The Centre announced the new scheme following the **conclusion of the second phase of the Faster Adoption and Manufacturing of Electric Vehicles (FAME-II) programme** in March 2024.

About EMPS

- EMPS 2024 focuses on **subsidising the purchase of electric two-wheelers (e-2Ws) and electric three-wheelers (e-3Ws)**.
- To promote advanced technologies, **incentives will only be extended to vehicles equipped with advanced batteries**.
- In addition to **commercial use, privately or corporate-owned registered e-2W will also be eligible under the scheme**.
- The latest scheme will offer subsidies of up to Rs 10,000 for electric two-wheelers. Additionally, a subsidy of up to Rs 25,000 will be provided for the purchase of small three-wheelers like e-rickshaws and e-carts, and a subsidy of up to Rs 50,000 will be provided for large three-wheelers.

2) Pradhan Mantri Kisan Maandhan Yojana

About

- The Pradhan Mantri Kisan Maandhan Yojana (PMKMY),

introduced by the central government in 2019, aims to provide **old age protection and social security for Small and Marginal Farmers (SMF)**.

- Under this scheme, **farmers aged 60 and above are guaranteed a minimum pension of Rs 3000 per month**.
- This **voluntary and contributory pension scheme is open to individuals aged 18 to 40**.

Eligibility:

- **All Small and Marginal Farmers having cultivable land holding up to 2 hectares falling in the age group of 18 to 40 years** are eligible to get benefit under the Scheme.
- Small and Marginal Farmers covered under any other statutory social security schemes and beneficiaries of higher economic status are **not eligible** for benefits under the scheme.

Benefits:

- The applicants between the **age group of 18 to 40 years** will have to make **monthly contributions ranging between Rs 55 to Rs 200 per month** till they attain the **age of 60**.
- Farmers would receive a **minimum assured pension of Rs 3000/- per month** after attaining the age of 60 years and if the farmer dies, the **spouse** of the farmer shall be entitled to receive **50% of the pension** as family pension.

Why in News?

- 23.38 lakh farmers have been enrolled under the farmers' pension scheme PMKMY so far.

3) Other Notable Topics

3.1. Saansad Adarsh Gram Yojana

About the Scheme

- Saansad Adarsh Gram Yojana (SAGY) is a **rural development programme** broadly focusing upon the **development in the villages** which includes social development, cultural development and spread motivation among the people on social mobilization of the village community.
- The programme was launched by the **Ministry of Rural Development** in **2014** with the aim to translate the comprehensive vision of **Mahatma Gandhi** about an ideal Indian village into reality, keeping in view the present context.
- Under SAGY, **each Member of Parliament adopts a Gram Panchayat and guides its holistic progress giving importance for social development at par with infrastructure.**
- By involving villagers and leveraging scientific tools, a **village development plan** is prepared under the leadership of a Member of Parliament. The distinct feature of this Yojana is that it is:
 - **Demand Driven**
 - **Inspired by Society**
 - **Based on People's Participation.**

Objective of SAGY

- To trigger processes which lead to a **holistic development of the identified Gram Panchayats;**

- To **substantially improve the standard of living and quality of life** of all section of the population through -
 - Improved basic amenities
 - Higher productivity
 - Enhanced human development
 - Better livelihood opportunity
 - Reduced disparities
 - Access to right and entitlements
 - Wider social mobilization
 - Enriched social capital;
- To **generate models of local level development and effective local government** which can motivate and inspire neighboring Gram Panchayats to learn and adapt;
- To **nurture the identified Adarsh Grams as schools of local development** to train other gram panchayats.

Activities in an Adarsh Gram

- Activities in an Adarsh Gram would include:
 - Personal Development
 - Social Development
 - Human Development
 - Economic Development
 - Environmental Development
 - Social Security
 - Basic amenities & services
 - Good Governance.

Initiatives

1) Vote-from-home facility

What's in the news?

- The Election Commission of India (ECI), for the first time in a Lok Sabha Election, has provided the 'vote-from-home' (VfH) facility for the elderly and Persons with Disabilities in the 2024 Lok Sabha elections.
- Now, voters above 85 years of age and PwDs with 40% benchmark disability can choose to vote from home.
- Over 81 lakh voters are aged 85 or above, and there are more than 90 lakh registered PwD voters across the country.
- This process involves a full team of polling staff and security personnel, ensuring the secrecy of voting is maintained.
- The new initiative upholds the ECI's motto of ensuring - No voter is left behind.

Voting Process

- Eligible voters must complete **Form 12D** (Application for postal ballot facility) within five days of the election notification and submit it to the **returning officer**. PwD voters need to include a **baseline disability certificate** with their applications.
- A dedicated team, including polling officials and security personnel, visits the voter's residence to collect their votes. The **entire process is recorded for transparency**.

2) Jal Shakti Abhiyan: Catch the Rain

What's in the news?

- The **Union Ministry of Jal Shakti** has launched the fifth edition of "**Jal Shakti Abhiyan: Catch the Rain**" campaign.

- The campaign, themed "**Nari Shakti se Jal Shakti**," emphasises the integral role of women in water conservation and management.
- The campaign has **five focused interventions**:
 - (1) rainwater harvesting & water conservation;
 - (2) enumerating, geo-tagging & making inventory of all water bodies;
 - (3) setting up Jal Shakti Kendras (knowledge centers on water) in all districts;
 - (4) intensive afforestation and
 - (5) awareness generation.

About the campaign

- The **Ministry of Jal Shakti** launched the Jal Shakti Abhiyan in **2019**, which was a national call to action that involved millions of people in **water conservation and recharge**, covering 256 water stressed districts.
- Since the launch of "Jal Shakti Abhiyan: Catch The Rain" Campaign in 2021, it has been **implemented every year, covering all the blocks of all districts** (rural as well as urban areas) **across the country**.

3) National Action Plan for Prevention and Control of Snakebite Envenoming

What's in the news?

- The Government of India has launched a **National Action Plan for Prevention and Control of Snakebite Envenoming (NAP-SE)** with a vision to **reduce snakebite deaths by half by 2030**.
- NAPSE provides a broad framework for states to develop their own action plan for management, prevention and control of

snakebites through the 'One Health' approach.

- *One Health is an integrated, unifying approach that aims to sustainably balance and optimize the health of people, animals and ecosystems.*
- *It recognizes that the health of humans, domestic and wild animals, plants, and the wider environment (including ecosystems) are closely linked and interdependent.*
- Key strategies of the action plan include **capacity building** of health professionals, promote the **accessibility** of treatments, strengthen the **emergency care services**, strengthen **surveillance** of Snakebite cases and deaths, **operational research** on the Anti venoms and diagnostics, **community outreach** activities to spread awareness about snakebite prevention and management, etc.

Background

- Snakebite envenoming is a **potentially life-threatening disease** following the bite of a venomous snake.
- Venomous snake bites can result in **medical issues** which can be deadly or lead to permanent impairment if timely and appropriate treatment is not given.
- The majority of snakebite envenomation deaths and catastrophic sequelae **can be avoided** with prompt availability to safe and effective antivenoms, timely transport and referral.
- In India, **around 50,000 deaths occur of an estimated 3-4 million snake bites annually** which accounts for half of all snakebite deaths globally.
- In India, around **90% of snake bites** are caused by the '**big four**' among the crawlers - common

krait, Indian cobra, Russell's viper and saw scaled viper.

- Administration of **polyvalent anti-snake venom (ASV)** containing antibodies against cobra, Russell's viper, common krait and saw scaled viper is effective in 80% of the snakebite cases, however, **lack of trained human resources and health facilities** to treat snakebite patients remains a cause of concern.

4) Other Notable Topics

4.1. CHAMPIONS Portal

About

- The CHAMPIONS (Creation and Harmonious Application of Modern Processes for Increasing the Output and National Strength) portal is a **platform for resolution, redressal and remedies.**
- It is a facility provided by the **Ministry of Micro, Small and Medium Enterprises** for:-
 - Ensuring a speedy, convenient, and effective redressal of MSMEs grievances.
 - Handholding and helping MSMEs in their navigation of various government schemes/policies.
 - Providing guidance and advisory services in areas of Finance, Marketing, Technology, Raw Material, Labour, Infrastructure and Capacity Building.
 - Connecting MSMEs with key officials of Ministry, State Governments, Lending Institutions and Government agencies.
 - Disseminating of information and details of all schemes of the Ministry of MSME.

- Last year, the Ministry of MSME launched the **Champions 2.0 Portal** to address the challenges faced by MSMEs in **managing their cluster projects** efficiently using advanced geo-tagging technology.

4.2. SWATI Portal

What's in the news?

- **Principal Scientific Advisor to the Government of India** has launched "Science for Women-A Technology & Innovation (SWATI)" Portal, aimed at creating a **single online portal representing Indian Women and Girls in STEMM (Science, Technology, Engineering, Mathematics & Medicine)**.
- The database of SWATI Portal will serve in **policy making to address the challenges of Gender-gap in science**.
- The portal seeks to encourage women to enter the field of science in academia and industry.

- The Portal is developed, hosted and maintained by the **National Institute of Plant Genome Research (NIPGR), New Delhi**.

Related Information

Office of the Principal Scientific Adviser

- The Government of India established the Office of the Principal Scientific Adviser (PSA) in **1999**.
- The PSA's office aims to provide **pragmatic and objective advice to the Prime Minister and the cabinet in matters of Science and Technology**.
- The Office of PSA was placed under the **Cabinet Secretariat** in 2018.

Environment

1) Earth Hour

What is Earth Hour?

- Earth Hour is an international initiative that requires people, government offices, workplaces, and other urban centres to **switch off the non-essential lights in a symbolic call for environmental protection.**
- It is a **global annual initiative of the World Wide Fund for Nature**, an international non-governmental organization.
- The day aims to increase awareness and spark global conversations on protecting nature, tackling the climate crisis, and working together to shape a brighter future for us all.
- The event, which was first observed in **Sydney (Australia) in 2007**, has grown into a global movement, inspiring millions of people to switch off non-essential lights for an hour.

Why in News?

- Millions of people around the world observed the annual Earth Hour on 23th March to raise awareness about climate change.

2) Mass coral bleaching of Great Barrier Reef

Coral reefs

- Coral reefs are **large underwater structures** composed of the skeletons of colonial **marine invertebrates called coral.**
- Corals are **animals**, even though they may exhibit some of the characteristics of plants and are often mistaken for rocks. In scientific classification, corals fall under the **phylum Cnidaria** and the **class Anthozoa.**

Symbiotic relationship

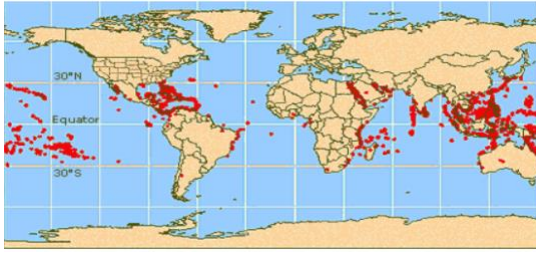
- Most reef-building corals contain photosynthetic algae, called **zooxanthellae**, that live in their tissues. The corals and algae have a **symbiotic relationship.**
- The coral provides the algae with a protected environment and compounds they need for photosynthesis. In return, the algae produce oxygen and help the coral to remove wastes.
- The presence of the zooxanthellae also provides colored pigments to help protect the coral's white skeleton from sunlight.

Significance of Coral reefs

- Coral reefs only **occupy 0.1% of the area of the ocean but they support 25% of all marine species** on the planet.
- Because of the diversity of life found in the habitats created by corals, reefs are often called the **"rainforests of the sea."**

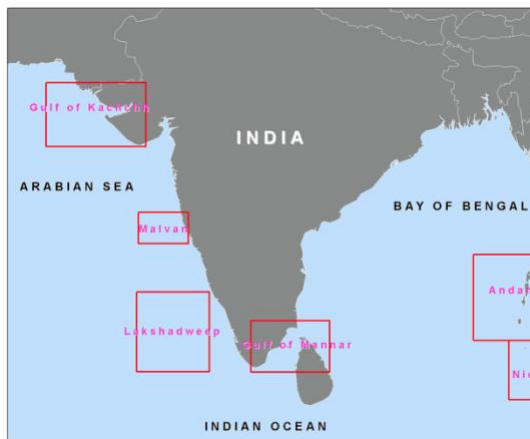
Geographical distribution

- The reef-building corals prefer to grow at
 - **depths shallower than 30 m (100 ft),** or
 - where the **temperature range is between 16-32°C,** and
 - **light levels are high**
- The majority of reef building corals are found within tropical and subtropical waters. These typically occur between **30°N and 30°S of the equator.**
- The **largest of these coral reef systems, the Great Barrier Reef** in Australia.



Coral reefs in India

- Coral reefs are present in the areas of **Gulf of Kutch, Gulf of Mannar, Andaman & Nicobar, Lakshadweep Islands and Malvan coast of Maharashtra.**



Main threats to coral reefs

- **Climate change:** Warmer water temperatures can result in **coral bleaching**. When water is too warm, corals expel the algae (zooxanthellae) living in their tissues causing the coral to turn completely white. This is called **coral bleaching**. When a coral bleaches, it is not dead. Corals can survive a bleaching event, but they are under more stress and are subject to mortality.
- **Ocean acidification:** Ocean acidification is caused by rising levels of CO₂ in the atmosphere. Oceans absorb some of the CO₂. As CO₂ enters the ocean, it reacts with water increasing hydrogen ion concentration (thus decreasing ocean pH) and decreasing the carbonate ion concentration. A reduction in carbonate ions affects the **Calcification process** of Corals.

- *Calcification is the process by which corals form their skeletons by combining calcium ions and carbonate ions to create calcium carbonate.*

- **Pollution:** Urban and industrial waste, plastics, sewage, agrochemicals, and oil pollution are poisoning reefs. Some pollutants, such as sewage and runoff from farming, increase the level of nitrogen in seawater, causing an overgrowth of algae.
- **Sedimentation:** Erosion caused by construction, mining, logging, and farming is leading to increased sediment in rivers. This ends up in the ocean, where it can smother corals by depriving them of the light needed to survive.
- **Destructive fishing practices:** These include cyanide fishing, blast or dynamite fishing, bottom trawling, and muro-ami (banging on the reef with sticks). **Bottom-trawling** is one of the greatest threats to cold-water coral reefs.

Why in News?

- A mass bleaching event is unfolding on **Australia's Great Barrier Reef**, as warming seas threaten the home to thousands of marine species. The ongoing event is the **fifth mass coral bleaching in eight years**.
- Coral bleaching is caused when **corals get stressed by extreme conditions** such as temperature, light and nutrients. As a stress response, they **release symbiotic algae** called **zooxanthellae**, habituating in their living tissues, **causing them to turn white**.
- Bleaching of coral **does not imply it is dead**, but **long term bleaching or stress can lead to their mortality**.

About Great Barrier Reef

- The Great Barrier Reef is the **world's largest coral reef system** composed of over 2,900 individual reefs and 900 islands stretching for over 2,300 kilometres over an area of approximately 3.4 lakh square kilometres.
- Often dubbed as the **world's largest living structure**, the Great Barrier Reef is found in the north-eastern coast of **Australia**.



- It has a geological history going back an estimated 23 million years to the **Miocene epoch**, and has survived many challenges.
- It has been on **UNESCO's World Heritage Site List** since 1981.
- It also holds great scientific interest as the habitat of species such as the **dugong** ('sea cow') and the **large green turtle**, which are threatened with extinction.

3) India's Leopard count

Indian Leopards

- The **Indian leopard** (*Panthera pardus fusca*) is a majestic big cat **found throughout the Indian subcontinent**.
- Indian leopards are **incredibly adaptable** and can **thrive in various habitats**, including **tropical rainforests, dry scrubs, grasslands**, and even the **foothills of the Himalayas**.

- They have a **golden yellow to tawny coat** adorned with **black rosettes**.
- Indian leopards are **solitary** and **nocturnal creatures**.
- They are **excellent climbers** and spend a considerable amount of time in trees, stalking prey, resting, or seeking refuge.



Feeding Habits

- Indian leopards are **carnivores** and their diet primarily consists of medium-sized herbivores like chital, sambar deer, and langur monkeys. They may also hunt smaller prey like rodents and birds, and occasionally take livestock, especially when their natural prey is scarce.

Threats

- **Habitat loss and fragmentation** due to **deforestation** for agriculture, **urbanization**, and **infrastructure projects**.
- **Poaching for skin** and use of body parts for **traditional medicines** also threatens leopard populations.
- **Human-Wildlife conflicts** have increased due to human settlements expanding and encroaching on leopard habitats.
- In recent years, there has been a **decline in prey populations**, which is impacting the survival of leopards.

Why in News?

- The **Union Ministry of Environment, Forest and Climate**

Change has released the 'Status of Leopards in India, 2022' report which reveals that **India's leopard numbers rose by 8%** from 12,852 in 2018 to 13,874 in 2022.

- **Central India and Eastern Ghats** has the **highest population** of leopards (8,820), followed by the **Western Ghats** (3,596), and the **Shivalik Hills and Gangetic Plains** (1,109).
- Statewise, **Madhya Pradesh** boasts of the largest population of leopards (3,907), followed by **Maharashtra** (1,985), **Karnataka** (1,879) and **Tamil Nadu** (1,070).

Decline:

- Nonetheless, leopard populations **declined in a few regions**. The report showed that the **Shivalik Hills and Gangetic Plains** recorded a worrying 3.4% per annum decline.
- One factor behind this can be the **increase in tiger populations**. Other factors include a **number of external threats**, such as **poaching and habitat loss**. **Road accidents** are also a significant cause of leopard fatalities.
- While a **rise in the tiger population has been known to adversely impact** the habitat and resources available to leopards and other creatures lower down the predator chain, **tiger conservation efforts have also helped grow leopard populations**.

Leopard-human conflict:

- Leopards' **adaptability in terms of habitat and dietary preferences** help them to thrive in agro-pastoral areas, plantations, and near human settlements. This, however, has led to **increasing leopard-human conflict**.
- For instance: In the **Shivalik region**, **roughly 65% of the leopard population is present outside protected areas**.

4) Karaivetti Bird Sanctuary & Longwood Shola Reserve Forest

About the Karaivetti Bird Sanctuary

- The Karaivetti Bird Sanctuary is a 4.537-square-kilometre protected area located in the Ariyalur District of **Tamil Nadu**.
- The sanctuary is a **large irrigation tank** located in the **northern alluvial plains** of the **Kaveri River**.
- The sanctuary is **one of the largest inland wetlands** of Tamil Nadu and also **helps in irrigation and recharging the groundwater** of the area.
- The Sanctuary is an **important breeding and foraging site** for both resident and migratory birds.
- The site acts as a home for more than 500 species of flora and fauna. The **Indian Flap-shelled Turtle** can be found nesting in the swampy regions here.

Longwood Shola Reserve Forest

- The Longwood Shola Reserve Forest is located in the Nilgiris District, **Tamil Nadu**.
- It features **intermittent freshwater marshes and streams nested within a "shola"** (a tropical montane forest of southern India which is usually found in patches separated by grasslands).
- It serves as the home for more than 700 species of flora and fauna.
- The Site is one of the key conservation areas of the endangered **black-chinned Nilgiri laughing thrush** (*Strophocinclacachinnans*), the **Nilgiri blue robin** (*Myiomela major*) and the vulnerable **Nilgiri wood-pigeon** (*Columba elphinstonii*).
- It is mainly **threatened by encroachment, invasive species and deforestation**.

Why in News?

- The **Karaivetti Bird Sanctuary and Longwood Shola Reserve Forest**

have been designated as Ramsar sites by the Ministry of Environment, Forest and Climate Change and the Ramsar sites Secretariat.

- With this, **Tamil Nadu** now has 16 Ramsar wetlands, the **highest** in the country.
- A Ramsar site is a wetland site designated to be of **international importance** under the **Ramsar Convention**, also known as **The Convention on Wetlands**.
 - *Refer Pulse June 2023 Digest edition 'Amrit Dharohar' topic for details about Ramsar convention.*

5) Why do global sea surface temperatures matter?

Context

- The **European Union's Copernicus Climate Change Service (C3S)** revealed that the **global sea surface temperatures** — the temperature of the ocean's surface layer — **were highest on record in February 2024**.
 - *C3S is one of six thematic information services provided by the Copernicus Earth Observation Programme launched by the **European Union** in 2014.*
- The average global sea surface temperature soared to an unprecedented high of **21.06 degrees Celsius**.
- This figure eclipses the previous record set in August 2023 by a slight yet significant margin, a continuous trend of escalating ocean temperatures that have been meticulously recorded since 1979.

Why are the oceans getting warmer?

- Since the **Industrial Revolution** kicked off in the 19th Century, human activities such as burning fossil fuels have released **high**

levels of greenhouse gases (GHGs) in the atmosphere.

- As a result, the **average global temperature has risen at least 1.2 degree Celsius above pre-industrial times**.
- Notably, **almost 90 per cent of the extra heat trapped by GHGs has been absorbed by the oceans**, making them steadily warmer over the decades.
- Apart from global warming, there are **other factors** which have led to a spike in ocean temperatures. For instance, **El Niño** — a weather pattern that refers to an abnormal warming of surface waters in the equatorial Pacific Ocean — has contributed to both ocean warming and rising global surface temperatures.

Why are rising sea surface temperatures a cause of worry?

- Higher ocean temperatures can have **irreversible consequences for marine ecosystems**. For instance, warmer oceans lead to an **increase in ocean stratification** — the natural separation of an ocean's water into horizontal layers by density, with warmer, lighter, less salty, and nutrient-poor water layering on top of heavier, colder, saltier, nutrient-rich water. Usually, ocean ecosystems, currents, wind, and tides mix these layers.
- The **rise in temperatures**, however, has made it **harder for water layers to mix with each other**. Due to this, **oceans are able to absorb less carbon dioxide** from the atmosphere and the **oxygen absorbed isn't able to mix properly** with cooler ocean waters below, **threatening the survival of marine life**.
- **Nutrients are also not able to travel up** to the surface of the oceans from below. This could

threaten the population of phytoplankton — single-celled plants that thrive on the ocean surface and are the base of several marine food webs.

- Warmer oceans cause **marine heat waves (MHWs)**, which occur when the surface temperature of a particular region of the sea rises to 3 or 4 degree Celsius above the average temperature for at least five days.
 - Between 1982 and 2016, such heat waves have **doubled in frequency and have become longer and more intense.**
- MHWs are **devastating for marine ecosystems** as they contribute to **coral bleaching**, which reduces the reproductivity of corals and makes them more vulnerable to life-threatening diseases. They also **impact the migration pattern of aquatic animals.**
- Higher ocean temperatures may also result in **more frequent and more intense storms like hurricanes and cyclones.** Warmer temperatures lead to a **higher rate of evaporation as well as the transfer of heat** from the oceans to the air.
- When storms travel across hot oceans, they gather more water vapour and heat. This results in **more powerful winds, heavier rainfall, and more flooding** when storms reach the land — meaning heightened devastation for humans.

6) MethaneSAT

What's in the news?

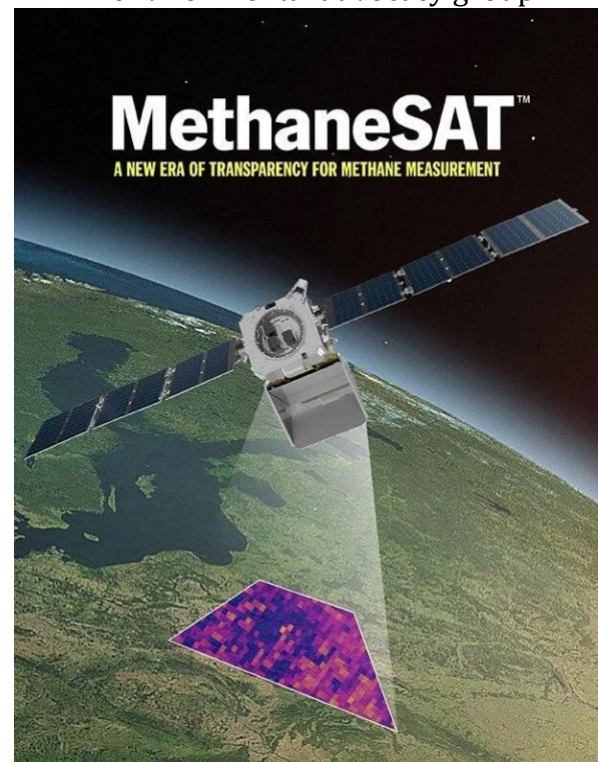
- MethaneSAT — a satellite which will track and measure methane emissions at a global scale — was recently launched by SpaceX (an American spacecraft launch service provider) from California.

Need to track and measure methane emissions

- Methane is an **invisible but strong greenhouse gas**, and the **second largest contributor to global warming after carbon dioxide**, responsible for **30 per cent of global heating** since the Industrial Revolution.
- Over a period of 20 years, **methane is 80 times more potent at warming than carbon dioxide.**
- The gas also contributes to the **formation of ground-level ozone** — a colourless and highly irritating gas that forms just above the Earth's surface. Exposure to ground-level ozone could be contributing to **one million premature deaths every year.**
- **Fossil fuel operations** account for about **40 per cent of all human-caused methane emissions.**

What is MethaneSAT?

- The entity behind MethaneSAT is the **Environmental Defense Fund (EDF)** — a US-based nonprofit environmental advocacy group.



- Equipped with a **high-resolution infrared sensor and a spectrometer**, MethaneSAT will orbit the Earth and create a large amount of data, which will tell how much methane is coming from where and who's responsible.
- The data collected by MethaneSAT will be **made public for free in near real-time**. This will allow stakeholders and regulators to take action to reduce methane emissions.

Why is it significant?

- The launch of MethaneSAT has come at a moment when the world is implementing more stringent methane management policies.
- For instance, more than 150 countries signed the **Global Methane Pledge** in 2021, to **cut their collective methane emissions by at least 30 per cent from 2020 levels by 2030**. MethaneSAT will help them meet these targets.
 - **Note:** India is not a signatory to the Global Methane Pledge.
- The satellite will also usher in a **new era of transparency**. Its publicly available data, which can be accessed by anyone in the world, will keep track of methane commitments made by governments and corporations.

7) Other Notable Topics

7.1. Green Climate Fund

About

- The Green Climate Fund (GCF) is the **world's largest dedicated fund helping developing countries respond to climate change**.
- It was set up by the **United Nations Framework Convention on Climate Change (UNFCCC)** in **2010**.

- *Refer Pulse December 2023 Digest edition 'COP-28' topic for details about UNFCCC.*

- It is designed as an **operating entity of the Convention's financial mechanism** and is **headquartered in the Republic of Korea**.
- The GCF's aim is to **expand collective human action to respond to climate change**. It allocates its resources to low-emission and climate-resilient projects and programmes in developing countries.
- The Fund pays **particular attention to the needs of societies that are highly vulnerable** to the effects of climate change, in particular Least Developed Countries (LDCs), Small Island Developing States (SIDS), and African States.

Why in News?

- Small Industries Development Bank of India (SIDBI) has received \$24.5 million from Green Climate Fund (GCF) for its maiden anchored project '**Avaana Sustainability Fund (ASF)**' valued at \$120 million.
- The primary aim of the ASF project is to **invest in early-stage companies harnessing technology-led innovation to spur climate solutions and sustainability** in India.

About SIDBI

- SIDBI was established in **1990** under an **Act of Parliament**.
- It acts as the **principal financial institution for promotion, financing and development of the Micro, Small and Medium Enterprise (MSME) sector** as well as for co-ordination of functions of institutions engaged in similar activities.
- SIDBI **facilitates and strengthens credit flow to MSMEs** and **addresses both financial and**

developmental gaps in the MSME eco-system.

7.2. Kaziranga National Park

About

- The Kaziranga national park is located in **Assam** and was formed in 1908 on the recommendation of **Mary Curzon** (wife of Lord Curzon).
- Located on the edge of the **Eastern Himalayan biodiversity hotspot**, the park is famous for its **Indian one-horned rhinoceros**. About 2200 rhinoceros exist in this park, **approximately 2/3rd of their total world population**.
- Other animals that can be seen in Kaziranga are Hoolock Gibbon, Tiger, Leopard, Indian Elephant, Sloth Bear, Wild water buffalo, swamp deer, etc.
- Due to the difference in altitude between the eastern and western areas of the park, one can see **four types of vegetation** in the park: **alluvial inundated grasslands, alluvial savanna woodlands, tropical moist mixed deciduous forests, and tropical semi-evergreen forests**.
- **River Brahmaputra** flows adjacent to the park.
- In 1985, the park was declared as a **World Heritage Site** by **UNESCO**. Kaziranga was declared as a **Tiger Reserve** in 2006.

Related Information

Protected Areas in India

1. National Parks:

- National Parks are secured under the **Wildlife protection Act, 1972**.
- These are designated **protected areas** with the **strictest level of protection**.
- An area, whether within a sanctuary or not, can be notified by the **state government** to be constituted as a **National Park**, by reason of its **ecological, faunal, floral,**

geomorphological, or zoological association or importance, needed to for the purpose of protecting & propagating or developing **wildlife** therein or its environment.

- **No human activity** is permitted inside the national park except for the ones permitted by the **Chief Wildlife Warden** of the state.
- National Parks prioritize the **preservation of entire ecosystems**, encompassing **flora, fauna, natural landscapes, and geological formations**.
- **No alteration of the boundaries** of a National Park shall be made except on a **resolution passed by the Legislature of the State**.
- A national park can never be downgraded to a wildlife sanctuary.

2. Wildlife Sanctuaries:

- Wildlife sanctuaries are secured under the **Wildlife protection Act, 1972**.
- The **State Government** may designate some areas as **wildlife sanctuaries** if they are thought to be of significant **ecological, geomorphological, and natural value**.
- It is **species-centric** in its **conservation approach**.
- **Limited human interference** is permitted in wildlife sanctuaries. **Grazing, firewood collection by tribals is allowed but strictly regulated**.
- A Sanctuary can be promoted to a National Park.

3. Conservation Reserves:

- Conservation Reserves can be **declared by the State Governments** in any area owned by the **Government**, particularly the **areas adjacent to National Parks and Sanctuaries** and those **areas which link one Protected Area with another**.

- Such a declaration should be made after having **consultations with the local communities**.
- The **rights of people living inside** a Conservation Reserve are **not affected**.

4. Community Reserves:

- Community Reserves can be **declared by the State Government in any private or community land**, not comprised within a National Park, Sanctuary or a Conservation Reserve, where an individual or a **community** has **volunteered** to conserve wildlife and its habitat.
- As in the case of a Conservation Reserve, the **rights of people living inside** a Community Reserve are **not affected**.
- **Conservation reserves and community reserves** were first introduced in the **Wildlife (Protection) Amendment Act of 2002**.

5. Tiger Reserves:

- In India, **Tiger reserves** were set up as a part of **Project Tiger** initiated in **1973**.
- Tiger Reserves are notified by **State Governments** as per provisions of the **Wildlife (Protection) Act, 1972** on advice of the **National Tiger Conservation Authority (NTCA)**.
- **Tiger reserves are created on the basis of a 'core-buffer' strategy.**
 - **Core area**
 - A particular expanse of land is identified and marked as the **'core area** of the reserve.
 - These areas are kept free of human activities.
 - It usually has the legal status of a **National**

Park or Wildlife Sanctuary.

- **Buffer zone**
 - The **buffer areas** usually surround the core area and are comparatively less frequented by wildlife.
 - **It is subjected to 'conservation-oriented land use'** and hence Certain everyday activities necessary for daily life and living of surrounding villages are allowed.

7.3. Asian waterbird census

About

- The Asian waterbird census (AWC) is an **integral part** of the global waterbird monitoring programme, the **International Waterbird Census (IWC)**, coordinated by **Wetlands International**.
- The AWC was initiated in **1987** in the **Indian subcontinent** and since has grown rapidly to **cover major regions of Asia**, from Afghanistan eastwards to Japan, Southeast Asia and Australasia.
- In **India**, AWC is **jointly coordinated** by the **Bombay Natural History Society (BNHS)** and **Wetlands International**.
- The census has three major **objectives**:
 - To obtain information on an **annual basis of waterbird populations** at wetlands in the region;
 - To monitor on an annual basis the **status and condition of wetlands**;
 - To encourage greater interest in waterbirds and wetlands amongst people,

and thereby **promote the conservation of wetlands and waterbirds** in the region.

Related Information

Bombay Natural History Society (BNHS)

- It is a **pan-India wildlife research organisation** to promote the cause of nature conservation.
- It was established in **1883** as a **non-governmental organisation**. The **logo** BNHS is the **Great hornbill**.
- It's primary goal is to **spread awareness** about nature through science-based research, conservation advocacy, education, scientific publications, nature tours and other programmes.
- The BNHS is a partner of the **Birdlife International** in India.
 - *BirdLife International is a worldwide alliance of nongovernmental organizations that promotes the conservation of birds and their habitats.*

Wetlands International

- Wetlands International is a **global non-profit organization** dedicated to the **conservation and restoration of wetlands** around the world.
- It works across several countries through a network of offices, partners, and experts.

7.4. Debt for climate swap

What is a debt for climate swap?

- A debt-for-climate swap is an **agreement between the creditor and a debtor** by which the **former forgoes a portion of the latter's foreign debt, or provides it debt relief**, in return for a commitment by the government to **invest in a specific environmental project**.
- This could be **developing climate-resilient infrastructure, protecting biodiversity, etc.**

- In the past decade, debt-for-climate swaps have grown relatively popular among low- and middle-income countries.

Background

- Debt-for-nature swap first used in the **1980s** in **Latin America**, where the countries aimed to **reduce unsustainable external debts and address worsening environmental conditions**.
- Debt-for-climate swaps emerged as a broader concept in the **2000s** for not only **conservation** but also **climate mitigation and adaptation**.

Significance

- Debt for climate swap was introduced as a **debt restructuring device** that aims to combat climate change by ensuring that **debt-ridden countries do not incur additional debt while addressing climate change locally**.
- They possess **dual objectives**: to promote **specific investment and policy action** on one hand and promote **debt relief** on the other.
- The **small island developing states (SIDS)** can make use of debt-for-climate swaps, to address challenges such as: adapting to increasing **climate risk** and recovering from **financial distress**.
- **For instance**: In 2021, **Belize**, a country on the northeastern coast of Central America, reduced its debt by 10 per cent of its GDP and acquired funds to protect the world's second-largest coral reef by striking a \$553-million swap deal with The Nature Conservancy (TNC), a US-based environmental organisation.

7.5. Eco sensitive zones

About Eco sensitive zones (ESZ)

- As a general principle, **land falling within 10 kms** (in some exceptional cases it can even go

beyond that) of the **boundaries of the National Parks and Wildlife Sanctuaries** are categorised as **Eco-Fragile Zones or Eco-sensitive Zones**.

- They are declared under the **Environment Protection Act, 1986** and are notified by the **Ministry of Environment, Forest and Climate Change (MoFCCC)**.
- The purpose of declaring Eco-sensitive Zones around National parks and Sanctuaries is to create some kind of "**Shock Absorber**" for the Protected Areas.
- They would also act as a **transition zone** from areas of high protection to areas involving lesser protection.
- The activities in the eco-sensitive zones would be of a **regulatory nature rather than prohibitive nature**, unless and otherwise so required.

Declaration of ESZs:

- **Survey and identification** of ESZs are conducted by the **respective State Governments** for **consideration of the Central Government** for declaration of the ESZs around National Parks and Wildlife Sanctuaries.
- On the basis of proposals and recommendations of the State Government, **MoFCCC** notifies the ESZs under the Environment (Protection) Act.

7.6. National Board for Wildlife

About NBWL

- The National Board for Wildlife (NBWL) is a **statutory board** set up in **2003** by an amendment to the **Wildlife Protection Act, 1972**.
- It is the apex body for **wildlife conservation** in India. The Board is responsible for promotion of conservation and development of wildlife and forests.

- NBWL is chaired by the **Prime Minister of India**. The NBWL has **47 members** including the chairperson. The committee includes **government officials** as well as "**non-official members**", or **independent experts**.
- Every new government constitutes a new board, based on the provisions of the WLPA, with the new PM as the chair.
- The **Standing Committee** of NBWL is chaired by the **Union Minister of Environment, Forest and Climate Change**, who is also the **vice chairperson of the NBWL**. The Standing Committee performs such duties as may be delegated by the National Board.

Powers of NBWL

- The NBWL **advises the central and state governments** on the ways and means of promoting wildlife conservation and controlling poaching and illegal trade of wildlife and its products.
- It can also make **recommendations on setting up of national parks and other protected areas** and on matters relating to restriction of activities in those areas.
- The NBWL has **special responsibilities with respect to tiger reserves**, specifically, to **ensure that no tiger reserves or areas linking different tiger reserves are diverted towards ecologically unsustainable use**, without prior approval.
- The NBWL has the power to **approve projects in and around national parks and sanctuaries**.
- **No alteration of the boundaries of national parks and wildlife sanctuaries can be done without the permission of the NBWL**.
- The Wildlife Protection Act mandates that **without the approval of the Board, de-**

**reservation of Tiger Reserves,
construction of tourist-lodges
and destruction/diversion of
wildlife habitat cannot take place.**

Flora & Fauna

1) Great Indian Bustard

About GIB

- Great Indian Bustard (*Ardeotis nigriceps*) is **one of the heaviest flying birds endemic to the Indian subcontinent**.
- Bustards generally favour flat open landscapes with minimal visual obstruction and disturbance, therefore adapt well in **grasslands**.
- Historically, the great Indian bustard was distributed throughout Western India, spanning 11 states, as well as parts of Pakistan.
- Today, its population is **confined mostly to Rajasthan and Gujarat**. Small populations occur in Maharashtra, Karnataka and Andhra Pradesh.

Protection Status:

- IUCN Red List: **Critically Endangered**; CITES: **Appendix I**; Wildlife Protection Act (2022): **Schedule I**.

Conservation Issues:

- The biggest threat to this species is **hunting**, which is still prevalent in Pakistan. This is followed by **collisions** with high tension electric wires and fast moving vehicles.
- **Other threats** include **habitat loss and alteration** as a result of widespread agricultural expansion and mechanized farming, **infrastructural development** such as irrigation, roads, electric poles, as well as **mining and industrialization**.



Why in News?

- The Supreme Court has said it will **review its April 2021 order to bury underground all power lines in the habitat of the Great Indian Bustard (GIB)**, after the Centre found the order “practically impossible to implement” over long distances.
- The court has created a **seven-member committee** that will suggest steps to **protect and conserve the GIB**, identifying critical areas where power lines may have to go underground.
- Following the deaths of a number of birds due to **collisions with power lines** over the years, the top court three years ago ordered that the overhead transmission network should be sent underground in key habitats of the GIB.

2) Other Notable Topics

2.1. Kashmiri stag

About Kashmiri stag

- The Kashmir stag (*Cervus hanglu hanglu*), also called **hangul**, is a subspecies of **Central Asian Red Deer, endemic to Kashmir and surrounding areas**.
- It is found in **dense riverine forests** in the valleys and mountains of Jammu and Kashmir and northern Himachal Pradesh.
- In Kashmir, it is found primarily in the **Dachigam National Park** and in **Tral Wildlife Sanctuary**.



Trends in Population Size

- Since 1947, the population of hangul has witnessed a **sharp decline**. In 1947, around 2,000 were spotted and the number fell to 384 by 1968.
- The hangul population was estimated at a mere 197 in 2004, touching the lowest of 183 in 2015

and showed a **steady increase** to 261 in 2021.

Causes for Declining Population Levels

- **Low breeding** amongst Hanguls due to existence of a **female biased sex ratio**.
- Limited access to its vital food resource due to **overgrazing**.
- **Establishment of factories and mines** near the habitat of Hangul deer.

Conservation status

- **Protection Status:** IUCN Red List: **Critically Endangered**; CITES: **Appendix I**; Wildlife Protection Act (2022): **Schedule I**.

Agriculture

1) World's Largest Grain Storage Plan

What's in the news?

- To address the shortage of food grain storage capacity in the country, the Government has launched the '**World's Largest Grain Storage Plan in Cooperative Sector**', which has been rolled out as a pilot project in different states/UTs of the country.
- Currently, there exists a **huge gap** between grain production and storage capacity in the country.
- Data shows that **storage capacity with regards to foodgrain production is only 47% in India**, whereas it is 161% in the US, 149% in Brazil, 130% in Canada and 107% in China.
- Under the new programme, **700 lakh tonne of storage capacity** will be created over the next five years in the cooperative sector by constructing thousands of godowns and warehouses.
- The plan entails **creation of various agri infrastructure at the Primary Agricultural Credit Societies (PACS) level**, including setting up decentralised godowns, custom hiring centers, processing units, Fair Price Shops, etc. through convergence of various existing schemes of the Government of India under different Ministries.
- It will **reduce the burden on the Food Corporation of India, cut wastage of farm produce, and help farmers plan their sales better.**
- Thousands of PACS from across the country will join it in the next couple of years with an aim to reach **100% storage capacity before 2027.**

Economy

1) Consumer Confidence Survey

About

- The **Reserve Bank of India (RBI)** conducts nationwide Consumer Confidence Survey **every two months** among select households in major cities.
- It is conducted with an objective to **assess their current perception and future expectations on various economic parameters** such as on general economic situation, employment scenario, overall price situation and own income and spending.
- The survey **indicates how optimistic or pessimistic consumers are regarding their expected financial situation.**
- Consumer confidence is **key to economic growth** as consumption increases when they feel confident about the present economic situation and their own financial conditions.
- If the consumers are optimistic, spending will be more, whereas if they are not so confident, then their poor consumption pattern may lead to recession.

Why in News?

- According to the latest Consumer Confidence Survey of RBI, **consumer confidence in India is at its highest level since mid-2019.**
- Consumers' confidence in their current economic situation has been on a path of sustained recovery and the sentiment on both the general economic situation and employment has improved.
- The '**future expectations index**', which judges consumer sentiment for the upcoming 12 months, **also improved to its highest since mid-2019.**

2) Securities Appellate Tribunal

About

- Securities Appellate Tribunal is a **statutory body** established under the **Securities and Exchange Board of India Act, 1992.**
- It was mainly established to **hear and dispose of appeals** against orders passed by SEBI or by an adjudicating officer under the SEBI Act.
- SAT hears and disposes of appeals against orders passed by the **Pension Fund Regulatory and Development Authority (PFRDA)** under the PFRDA Act, 2013.
- SAT also hears and disposes of appeals against orders passed by the **Insurance Regulatory Development Authority of India (IRDAI).**
- SAT has only one bench which sits at **Mumbai.**

Composition

- SAT consists one **Presiding Officer** and such number of **Judicial and Technical Members** as the **Central Government** may determine.
- The person so appointed as the **Presiding Officer** should meet with the **following requirements:**
 - The retired or sitting Judge of the Supreme Court
 - The retired or sitting Chief Justice of a High Court
 - The retired or sitting Judge of High Court, who has completed at least seven years of service as a Judge in a High Court.

Appeal

- Every person aggrieved by any order or decision of Securities Appellate Tribunal can file an **appeal to the supreme court.** Also, the appeal **only can be made on any question of law.**

Why in News?

- The Finance Ministry has appointed P S Dinesh Kumar, a retired judge, as the presiding officer of the Securities Appellate Tribunal for four years.

3) National Urban Cooperative Finance and Development Corporation Limited

About Co-operative banks

- Co-operative banks are financial entities **established on a co-operative basis and belonging to their members**. This means that the **customers of a co-operative bank are also its owners**.
- These banks provide a wide range of regular banking and financial services.

Cooperative movement in India

- By definition, cooperatives are organisations formed at the grassroots level by people to **harness the power of collective bargaining towards a common goal**.
- The aim of the co-operative movement was to help farmers overcome the burden of debt and help them sell their products easily to get maximum profit.
- In **agriculture**, cooperative dairies, sugar mills, spinning mills etc are formed with the pooled resources of farmers who wish to process their produce.
- In **banking and finance**, cooperative institutions are spread across rural and urban areas. **Village-level primary agricultural credit societies (PACSS)** formed by farmer associations are the best example of grassroots-level credit flow. These societies anticipate the credit demand of a village and make the demand to the district central cooperative banks (DCCBs).

Structure of co-operative banks in India

- Broadly, co-operative banks in India are divided into two categories - **urban and rural**.
- The rural co-operative credit system in India is primarily mandated to ensure flow of credit to the **agriculture sector**. It comprises **short-term and long-term co-operative credit structures**.
 - The short-term co-operative credit structure operates with a **three-tier system - Primary Agricultural Credit Societies** at the village level, **Central Cooperative Banks (CCBs)** at the district level and **State Cooperative Banks (StCBs)** at the State level.
 - Meanwhile, the long-term institutions are either **State Cooperative Agriculture and Rural Development Banks (SCARDBs)** or **Primary Cooperative Agriculture and Rural Development Banks (PCARDBs)**.
- **Primary Cooperative Banks (PCBs), also referred to as Urban Cooperative Banks (UCBs)**, cater to the financial needs of customers in urban and semi-urban areas. UCBs are of two kinds- **multi-state** and those operating in a **single state**.

What laws govern cooperative societies?

- The functioning of Cooperative Banks is guided by the **Cooperative Societies Act of the respective states**.
- While the administrative control of the cooperatives are with the states, its banking functions are regulated by the **Reserve Bank of India**

under the Banking Regulation Act, 1949.

- In 2002, the Centre passed a **Multi-State Cooperative Societies Act** that allowed for registration of societies with operations in more than one state.
- The **Banking Regulation (Amendment) Act, 2020** was passed in 2020 to **bring all urban cooperative banks and multi-state cooperative banks under the direct supervision of the RBI**, following public scandals in certain banks and claims of mismanagement.
- The **National Cooperative Development Corporation (NCDC)**, a statutory Corporation under the **Ministry of Cooperation**, works for the promotion of the cooperative movement in India. It is tasked with planning, promoting, coordinating and financing cooperative development programmes at the national level.

Why in News?

- The Union Ministry of Cooperation has launched the **umbrella organization for Urban Cooperative Banks (UCBs), the National Urban Cooperative Finance and Development Corporation Limited (NUCFDC)**.
- The main objective of NUCFDC is to help UCBs adhere to the Banking Regulations Act and bring professionalism in their work.
- The umbrella organization will provide various facilities to UCBs, facilitate dialogue between banks and regulators, and work on improving communication.
- NUCFDC has received RBI's approval to function as a **non-**

banking finance company and a **self-regulatory organisation** for the urban cooperative banking sector.

4) Other Notable Topics

4.1. National Financial Reporting Authority

About NFRA

- The National Financial Reporting Authority (NFRA) was constituted in **2018** under the **Companies Act, 2013** to continuously improve the quality of all corporate financial reporting in India.
- Functions and Duties:
 - **Recommend accounting and auditing policies and standards** to be adopted by companies for approval by the Central Government;
 - **Monitor and enforce compliance** with accounting standards and auditing standards;
 - **Oversee the quality of service of the professions** associated with ensuring compliance with such standards and suggest measures for improvement in the quality of service;
 - Perform such other functions and duties as may be necessary or incidental to the aforesaid functions and duties.
- The Authority consists of a **chairperson and three full time members appointed by the Central Government.**

4.2. AT-1 Bonds

About

- Additional-Tier 1 (AT1) bonds are **perpetual debt instruments** issued by banks to raise money and build up their core equity capital.
 - A perpetual instrument is one with **no maturity date**, implying that the issuer – a bank in this case – **does not pay the principal amount back to investors** but makes **periodic interest payments** throughout the life of the bond.
- In practice, however, AT-1 bonds typically come with a **'call option'**,

which means that the bank issuing these instruments can **redeem them or repay investors after a specified period.**

- For AT-1 bonds, banks typically shell out a **higher rate of interest.**
- However, there are **certain features of the instrument that make them riskier** than several other bonds.
- If a bank faces **financial stress, it can hold off interest payments or pay a lower amount.**
- Most alarming for investors is the clause which **permits banks to write off AT-1 bonds in case of severe financial stress.**

Organisations

1) Sweden joined NATO

About NATO

- Formed in **1949** with the signing of the **Washington Treaty**, NATO is a **security alliance of 31 countries from North America and Europe**.
- Established in the Cold War as a bulwark against Soviet aggression, NATO's fundamental goal is to safeguard the freedom and security of all its members by political and military means.
- Article 5 of the Washington Treaty** states that an attack against one Ally is an attack against all — is at the core of the Alliance, a promise of **collective defence**.
 - Article 5 has been **invoked only once** in NATO history. It happened after the **September 11 attacks** on the United States in 2001, which led the alliance into Afghanistan.
- A **"NATO decision"** is the expression of the collective will of all 31 member countries since all decisions are taken by **consensus**.
- NATO is funded by Allies both **directly and indirectly**. Direct contributions are made to NATO budgets and programmes on an agreed cost-share formula, based on Gross National Income. Indirect funding is where allies commit capabilities or troops to a military operation.
- At present, NATO has **31 members**. In 1949, there were **12 founding members** of the Alliance: Belgium, Canada, Denmark, France, Iceland, Italy, Luxembourg, the Netherlands, Norway, Portugal, the United Kingdom and the United States.
- The other member countries are: Greece and Turkey (1952), Germany (1955), Spain (1982), the

Czech Republic, Hungary and Poland (1999), Bulgaria, Estonia, Latvia, Lithuania, Romania, Slovakia and Slovenia (2004), Albania and Croatia (2009), Montenegro (2017) North Macedonia (2020) and Finland (2023).

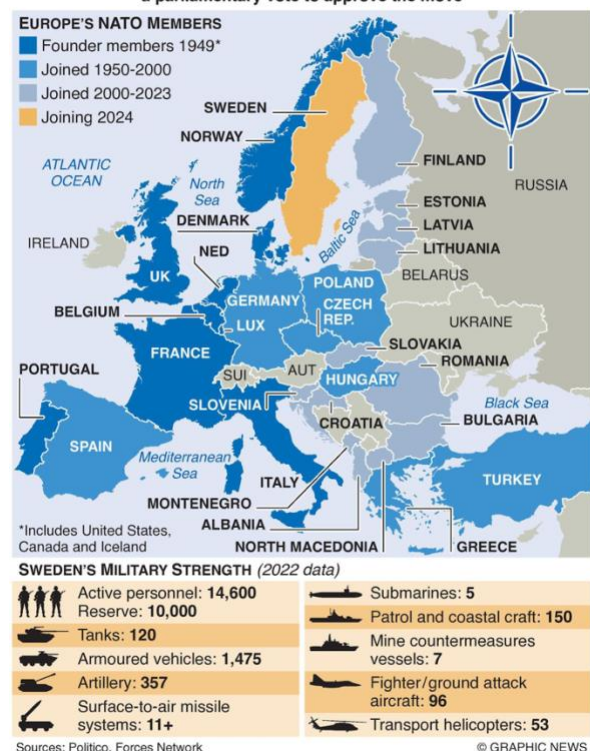
- NATO's Headquarters are located in **Brussels, Belgium**.

Why in News?

- Sweden** has joined NATO as the 32nd member of the transatlantic military alliance, ending decades of post-World War II neutrality as concerns about Russian aggression in Europe have spiked following Russia's 2022 invasion of Ukraine.

Sweden clears final hurdle to join NATO

Sweden will be the 32nd country to join NATO, after Hungary held a parliamentary vote to approve the move



Related Information

NATO Plus

- NATO Plus is a security arrangement that **brings together NATO and five aligned nations (Australia, New Zealand, Japan, Israel, and South Korea)** to

enhance global defence cooperation.

2) Grid Controller of India Limited

About

- Grid Controller of India Limited (GRID-INDIA), formerly known as Power System Operation Corporation Limited (POSOCO), is a **wholly owned Government of India Enterprise** under the **Ministry of Power**.
- Established in **2009**, GRID-INDIA holds the mandate of **overseeing the seamless and uninterrupted operation of the Indian Power System, ensuring the efficient transfer of electric power within and across regions, facilitating trans-national power exchanges with a focus on reliability, economy, and sustainability**.
- It also facilitates **competitive and efficient wholesale electricity markets** and **administers settlement systems**.

Why in News?

- GRID-INDIA achieved a significant milestone by being conferred with the **status of Miniratna Category-I Central Public Sector Enterprise (CPSE)**.

Criteria for grant of Maharatna, Navratna and Miniratna status

Criteria for grant of Maharatna status to Central Public Sector Enterprises (CPSEs):

- The CPSEs meeting the following criteria are eligible to be considered for grant of Maharatna status.
 - Having Navratna status;
 - Listed on Indian stock exchange with minimum prescribed public shareholding under SEBI regulations;
 - An average annual turnover of more than Rs. 25,000 crore during the last 3 years;

- An average annual net worth of more than Rs. 15,000 crore during the last 3 years;
- An average annual net profit after tax of more than Rs. 5,000 crore during the last 3 years;
- Should have significant global presence/international operations.

Criteria for grant of Navratna status to CPSEs

- The CPSEs which are Miniratna I, Schedule 'A' and have obtained 'excellent' or 'very good' Memorandum of Understanding (MoU) rating in three of the last five years and having composite score of 60 or above in following six selected performance indicators are eligible to be considered for grant of Navratna status.

	(Maximum Weight)
	100
1. Net Profit to Net worth	25
2. Manpower Cost to total Cost of Production or Cost of Services	15
3. PBDIT to Capital employed	15
4. PBIT to Turnover	15
5. Earning Per Share	10
6. Inter Sectoral Performance	20

Criteria for grant of Miniratna status to CPSEs

- **Miniratna Category-I status:-** The CPSEs which have made profit in the last three years continuously, pre-tax profit is Rs.30 crores or more in at least one of the three years and have a positive net worth are eligible to be considered for grant of Miniratna-I status.
- **Miniratna Category-II status:-** The CPSEs which have made profit for the last three years continuously and have a positive net worth are eligible to be considered for grant of Miniratna-II status.
 - Miniratna CPSEs should have not defaulted in the repayment of loans/interest

- payment on any loans due to the Government.
- Miniratna CPSEs shall not depend upon budgetary support or Government guarantees.

3) Other Notable Topics

3.1. Commodity Boards

About

- There are **five statutory Commodity Boards** under the **Department of Commerce, Ministry of Commerce and Industry**.
- These Boards are responsible for **production, development and export of tea, coffee, rubber, spices and tobacco**.

1. Coffee Board of India

- The Coffee Board is a **statutory organization** constituted under the **Coffee Act, 1942** and functions under the **administrative control of the Ministry of Commerce and Industry**.
- The Board comprises **33 Members including the Chairperson**.
- The Board is mainly focusing its activities in the areas of research, extension, development, market intelligence, external & internal promotion and welfare measures.
- The Board has a **Central Coffee Research Institute at Balehonnur (Karnataka)** with a Sub-Station at Chettalli (Karnataka) and Regional Coffee Research Stations at Chundale (Kerala), Thandigudi (Tamil Nadu), Narasipatnam (Andhra Pradesh) and Diphu (Assam), apart from the extension units located in coffee growing regions of Karnataka, Kerala, Tamil Nadu, Andhra Pradesh, Orissa and North Eastern Region.

2. Rubber Board

- The Rubber Board is a **statutory organization** constituted under the **Rubber Act, 1947** and functions under the **administrative control of the Ministry of Commerce and Industry**.
- The Board is headed by a **Chairman** appointed by the Central Government and has **28 members** representing various interests of the natural rubber industry.
- The Board's headquarters is located at **Kottayam in Kerala**.
- The Board is responsible for the development of the rubber industry in the country by assisting and encouraging research, development, extension and training activities related to rubber.
- It also maintains statistical data of rubber, takes steps to promote marketing of rubber and undertake labour welfare activities.

3. Tea Board

- The Tea Board was set up as a **statutory body** in 1954 as per the **Tea Act, 1953**. As an apex body, it looks after the **overall development of the tea industry**.
- The Board consists of **32 Members**, including Chairman and Deputy Chairman appointed by the **Government of India** representing different sections of the Tea industry.
- The Board's Head Office is situated in **Kolkata** and there are two Zonal offices-one each in North Eastern Region at Jorhat in Assam and in Southern Region at Coonoor in Tamil Nadu.
- Besides, there are 18 regional offices spread over in all the major tea growing states and four metros. For the purpose of tea promotion, **three overseas offices** are located at **London, Dubai and Moscow**.
- Being the **regulatory body**, the Board exerts control over the

producers, manufacturers, exporters, tea brokers, auction organizers and warehouse keepers through various control orders notified under Tea Act.

4. Tobacco Board

- The Tobacco Board was constituted as a **statutory body** in 1976 under the **Tobacco Board Act, 1975**.
- The Board is headed by a **Chairman** with its headquarters at **Guntur, Andhra Pradesh** and is **responsible for the development of the tobacco industry**.
- While the primary function of the Board is **export promotion** of all varieties of tobacco and its allied products, its functions extend to **production, distribution** (for domestic consumption and exports) and **regulation** of Flue Cured Virginia (FCV) tobacco.

5. Spices Board

- Spices Board is a **statutory body** constituted in 1987 under the **Spices Board Act, 1986** by merging the erstwhile Cardamom Board and the Spices Export Promotion Council under the **administrative control of the Department of Commerce**.
- Spices Board is responsible for the **overall development of cardamom industry and export promotion of 52 spices** listed in the schedule of the Spices Board Act, 1986.
- The primary function of the Board includes development of small and large cardamom, promotion, development, regulation of export of spices and control on quality of spices for export.
- The Spices Board also undertakes **research activities** on cardamom.

3.2. National Anti Doping Agency About

- The National Anti Doping Agency is an **autonomous body under the Ministry of Youth Affairs & Sports**.
- Established in **2009**, it is the **apex body to promote anti-doping efforts** in the country, **ensure clean sport practices** and **create anti-doping education & awareness**.

3.3. Petroleum and Natural Gas Regulatory Board

About PNGRB

- Petroleum and Natural Gas Regulatory Board (PNGRB) is a **statutory body** for the Petroleum and Natural Gas Sector constituted under the PNGRB Act, 2006.
- The objective of PNGRB is to **protect the interests of consumers and entities** engaged in specified activities relating to petroleum, petroleum products and natural gas and to **promote competitive markets**.
- The board has also been mandated to **regulate** the refining, processing, storage, transportation, distribution, marketing and sale of petroleum, petroleum products and natural gas excluding production of crude oil and natural gas so as to ensure uninterrupted and adequate supply of petroleum, petroleum products and natural gas in all parts of the country.
- The appeals against the decisions of the Board go before the **Appellate Tribunal** established under the **Electricity Act, 2003**.

3.4. International Organization for Migration

About

- Established in **1951**, International Organization for Migration (IOM) is the **leading inter-governmental**

organization in the field of migration.

- IOM works to ensure the orderly and humane management of migration, to promote international cooperation on migration issues, to assist in the search for practical solutions to the challenges of migration and to provide humanitarian assistance to migrants in need, including refugees and internally displaced people.
- In 2016, **IOM entered into an agreement with the United Nations, becoming a related organization.**
- IOM serves as **coordinator of the United Nations network on**

migration, established by the Secretary-General in 2018.

- According to IOM's latest strategic plan, the organization's **three main objectives** for 2024-2028 are: to save lives and protect people on the move, drive solutions to displacement and facilitate pathways for regular migration.

Science and Technology

1) Pushpak Reusable launch Vehicle

What's in the news?

- The Indian Space Research Organisation (ISRO) has reached a significant milestone in **reusable launch vehicle (RLV) technology** with the successful landing experiment of the **RLV LEX-02**.



- The experiment, conducted at the **Aeronautical Test Range in Chitradurga, Karnataka**, marks a crucial step forward in the development of RLVs.

About the Mission

- The RLV LEX-02 mission demonstrated the **autonomous landing capability** of the reusable launch vehicle named **Pushpak** from challenging initial conditions after release from a helicopter.
- The vehicle was lifted by an Indian Air Force Chinook helicopter and released from an altitude of 4.5 km.
- This mission **successfully simulated the approach and high-speed landing conditions of an RLV returning from space**.
- The mission builds on the success of the RLV-LEX-01 mission which was accomplished last year.
- This mission is part of the ISRO's efforts to develop essential technologies for a **fully reusable launch vehicle to enable low-cost access to space**.

Related Information

What is a Reusable Launch Vehicle (RLV)?

- Primarily, launch vehicles comprise **three or four stages** apart from the **payload**, which needs to be launched into a polar or a geosynchronous orbit, depending on a mission's requirements.
- The RLV that ISRO is building has **only two stages to propel the vehicle into orbit**.
- Once the fuel in the first stage has been expended, the vehicle will shed it, and carry on with the second stage.
- Once it has been shed, the first stage will **re-enter the atmosphere and land in an autonomous fashion at a pre-determined location**. After some maintenance, it will be **available for reuse**.

2) India's Nuclear Programme Background

What is Nuclear energy?

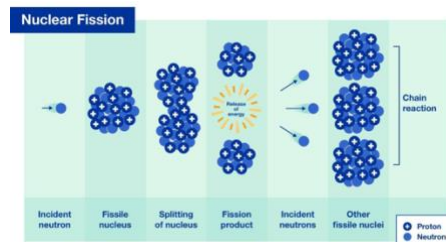
- Nuclear energy is a **form of energy released from the nucleus**, the core of atoms, made up of protons and neutrons.
- This source of energy can be produced in two ways: **fission – when nuclei of atoms split into several parts – or fusion – when nuclei fuse together**.

What is Nuclear Fission?

- Nuclear fission is a reaction where the **nucleus of an atom splits into two or more smaller nuclei, while releasing energy**.
- For instance, when hit by a neutron, the nucleus of an atom of **uranium-235** splits into two smaller nuclei, for example a barium nucleus and a krypton nucleus and two or three neutrons.
- These **extra neutrons will hit other surrounding uranium-235**

atoms, which will also split and generate additional neutrons in a multiplying effect, thus generating a **chain reaction in a fraction of a second**.

- Each time the reaction occurs, there is a **release of energy in the form of heat and radiation**.
- The **heat can be converted into electricity** in a nuclear power plant, similarly to how heat from fossil fuels such as coal, gas and oil is used to generate electricity.



What is Nuclear Fusion?

- Nuclear fusion is the process by which **two light atomic nuclei combine to form a single heavier one while releasing massive amounts of energy**.
- Fusion reactions take place in a **state of matter called plasma** — a hot, charged gas made of positive ions and free-moving electrons with unique properties distinct from solids, liquids or gases.

Why in News?

- The vital second stage of India's three-stage nuclear programme got a boost recently with the commencement of '**core loading**' at the **country's first indigenous Fast Breeder Reactor (FBR) at Kalpakkam, Tamil Nadu**.
 - Core loading is the process of **placing nuclear fuel assemblies inside the core of a nuclear reactor**.
 - The completion of core loading will effectively mark the **first approach to 'criticality'** — the initiation of a self-sustaining nuclear

fission reaction that will eventually lead to the generation of power by the 500 megawatt electric (MWe) FBR.

- Once commissioned, **India will be the second country after Russia to have a commercial operating FBR**. China has a small programme on fast breeders; programmes in countries such as Japan, France, and the United States were shut down amid safety concerns.

India's Three Stage Nuclear Power Programme

- The **Department of Atomic Energy's (DAE's)** three-stage power programme envisages a pathway to **utilising India's modest uranium and abundant thorium reserves** (found in coastal and inland placer sands on the beaches of Kerala, Tamil Nadu, Odisha, Andhra Pradesh, Maharashtra, and Gujarat, and in the inland riverine sands of Jharkhand and West Bengal) to generate electricity.
 - The three stages are:
 - **STAGE I - Natural uranium fuelled Pressurized Heavy Water Reactors (PHWRs)** - In the first stage, India used pressurised heavy water reactors (PHWRs) and **natural uranium-238 (U-238)**, which contains minuscule amounts of **U-235**, as the fissile material.
 - **STAGE II - Fast Breeder Reactors (FBRs) utilizing plutonium based fuel** - In stage II, India will use **plutonium (Pu239) together with U-238** in the PFBR to **produce energy, U-233, and more Pu-239**. The Department of Atomic Energy (DAE) set up a

special-purpose vehicle in 2003 called **Bharatiya Nabhikiya Vidyut Nigam, Ltd. (BHAVINI)** to implement stage II.

- **STAGE III - Advanced nuclear power systems for utilization of thorium** - In stage III, **Pu-239 will be combined with thorium-232 (Th-232)** in reactors to produce energy and U-233.
- India owes the vision of the three-phase programme of nuclear power to ensure energy security to **Dr Homi J Bhabha**, the father of India's nuclear programme, and **Dr Vikram Sarabhai**, who recognised the **need for developing FBRs**, as these reactors **generate more nuclear fuel than they consume** due to the gainful conversion of fertile isotopes into fissile material.

Related Information

Pressurized Heavy water reactor

- A pressurized heavy water reactor is a type of nuclear reactor that makes use of **heavy water as its coolant and moderator**. Heavy water contains an **isotope of hydrogen called deuterium**.
- Deuterium absorbs fewer neutrons than hydrogen, which is extremely important as nuclear fission reactions require neutrons to carry out their chain reactions.
- **The heavy water is kept under pressure which increases its boiling point** so that it can operate at high temperatures without boiling.

Fast Breeder Reactor

- Neutrons produced by fission have high energies and move extremely quickly. These so-called **fast neutrons do not cause fission as efficiently as slower-moving ones** so they are slowed down in most

reactors by the **process of moderation**.

- In contrast to most normal nuclear reactors, however, a **fast breeder reactor uses a coolant that is not an efficient moderator, such as liquid sodium**, so its neutrons remain high-energy.
- Although these fast neutrons are not as good at causing fission, **they are readily captured by an isotope of uranium (U238), which then becomes plutonium (Pu239)**. This plutonium isotope can be reprocessed and used as more reactor fuel or in the production of nuclear weapons.

Thorium as a Nuclear fuel

- Thorium (Th-232) is **not itself fissile and so is not directly usable in a thermal neutron reactor**.
- However, **upon absorption of a neutron it will transmute to uranium-233 (U-233)**, which is an excellent fissile fuel material.
- In this regard it is **similar to uranium-238** (which transmutes to **plutonium-239**).

3) Icecube Neutrino Observatory

What are Neutrinos?

- A neutrino is a **subatomic particle that is very similar to an electron, but has no electrical charge and a very small mass**, which might even be zero.
- Neutrinos are **one of the most abundant particles in the universe**.
- These miniscule subatomic particles that **hardly interact with anything**. This means that they can travel massive distances undisturbed and that in turn means that it is **much easier to trace them back to their source, helping us understand more about the distant universe**.

- Because they have **very little interaction with matter**, they are **incredibly difficult to detect**.

About IceCube Neutrino Observatory

- The IceCube neutrino observatory is a **device at the earth's South Pole** that detects neutrinos.
- It was built and is maintained by the **IceCube Collaboration, which consists of many universities worldwide led by the University of Wisconsin, Madison (USA)**.
- IceCube is the **world's biggest 'neutrino telescope'**; its sensors are distributed throughout a cubic kilometre of ice.



- It consists of **thousands of sensors buried more than 1.4 km beneath the ice plus multiple detectors above the surface**.

Why in News?

- Scientists from the IceCube Neutrino Observatory announced they have **discovered evidence for the elusive astrophysical tau neutrinos**.
- Astrophysical neutrinos is the name for **high-energy neutrinos that come from the farthest reaches beyond our galaxy**.
 - These particles come in **three different "flavours": electron, muon and tau**.
 - The last has proven to be **especially difficult to observe and detect**, earning the moniker of **"ghost particle"**.

4) Chandra X-Ray Observatory

About Chandra X-ray telescope

- NASA's Chandra X-ray Observatory is a **telescope specially designed to detect X-ray emission from very hot regions of the Universe** such as exploded stars, clusters of galaxies, and matter around black holes.
- Deployed in **1999**, Chandra was **one of NASA's four Great Observatories**, which also included the **Spitzer Space Telescope** (an infrared mission), the **Compton Gamma Ray Observatory**, and the still-operational **Hubble Space Telescope**.
- Because X-rays are **absorbed by Earth's atmosphere**, Chandra **orbits above it, up to an altitude of 1,39,000 km in space**.

Significance

- Chandra has been instrumental in **studying X-rays from celestial objects, providing unique insights into black holes, neutron stars, and exoplanets beyond our galaxy**.
- While several other X-ray missions have launched since then, each with their own strengths — including **NASA's NuStar**, the **joint JAXA/NASA XRISM mission** and **ESA's XMM-Newton** — none can match the sharpness of Chandra's X-ray vision.
- Its unparalleled sensitivity and imaging capabilities have positioned it as a vital tool for astronomers.



Why in News?

- NASA may be forced to shut down the Chandra X-ray Observatory because of financial constraints and budget cuts.

5) Atmospheric Research Testbed in Central India

What's in the news?

- The first phase of India's Atmospheric Research Testbed in Central India (ART-CI) was recently inaugurated at **Silkheda in Sehore district, Madhya Pradesh**.
- Funded by the **Ministry of Earth Sciences (MoES)**, the facility will house **25 high-end meteorological instruments for studying vital cloud processes associated with the monsoons over central India's Monsoon Core Zone (MCZ)**.
 - *The core monsoon zone is a region in India stretching from Gujarat in the west to West Bengal in the east.*
 - *India Meteorological Department demarcates it as an agricultural region where cropping is mostly rainfed.*

What is the Atmospheric Research Testbed (ART)?

- The ART is an **open-field, focused observational and analytical research programme** which aims to conduct **ground-based observations of weather parameters** like temperature, wind speeds, etc. during the southwest monsoon season from June to September.
- Studying these systems and their associated cloud parameters will be used to generate high volumes of data over a long period.
- It can then be compared with the existing weather models so that improvements can be made to obtain **accurate rainfall predictions**.

- The **Indian Institute of Tropical Meteorology (IITM), Pune**, is in charge of the operations.

Why is having an Atmospheric Research Testbed important?

- At present, **45% of India's labour force is employed in the agriculture sector**. Much of Indian agriculture is **rain-fed**, as is **cultivation along the Monsoon Core Zone (MCZ)**.
- The **southwest monsoon season** accounts for **70 per cent of the country's annual average rainfall (880mm)**. Throughout India, the **majority of Kharif cultivation is undertaken between July and August**.
- With ART, scientists will be able to generate and obtain **long-term observations** on cloud microphysics, precipitation, convection, and land-surface properties, which will be used to **enhance rainfall forecasts**. More accurate forecasts will ultimately help the **farming community plan their activities better**.

Why Madhya Pradesh?

- The ART has been established at Silkheda, a location that **falls directly in line with the path of major rain-bearing synoptic systems**. This will **facilitate direct monitoring and tracking**.
- Besides, the locality is **pristine and free of anthropogenic and other pollutants**, making it the best site in central India for setting up sensitive, high-end meteorological instruments and observatories for recording data.

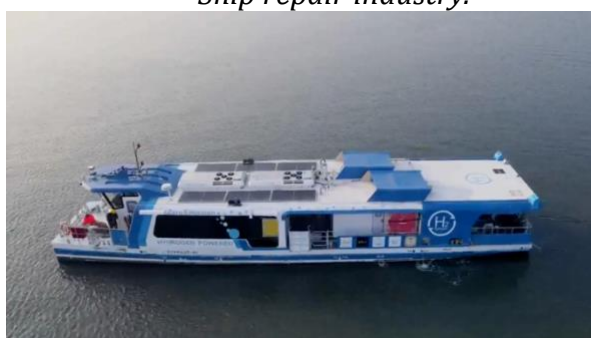
6) India's first indigenously developed hydrogen fuel cell ferry

What's in the news?

- Prime Minister Narendra Modi recently launched **India's first**

indigenously developed hydrogen fuel cell ferry.

- The vessel, **manufactured by Cochin Shipyard Limited (CSL)**, will be deployed for service at **Varanasi in Uttar Pradesh**.
 - *CSL was incorporated in 1972 as a **fully owned Government of India company**. In the last three decades the company has emerged as a forerunner in the Indian Shipbuilding & Ship repair industry.*



What are the special features of the vessel?

- Hydrogen fuel cell vessels **do not use conventional batteries as the primary storage house of electrical energy**. The vessels run on **hydrogen fuel**, which is stored in cylinders.
- The hydrogen fuel cell-powered vessel has **zero emission, zero noise and is energy-efficient**, which makes it more environment-friendly.
- Since there are no moving parts, the ferry requires **less maintenance** than combustion vessels.

How do hydrogen fuel cells work?

- A hydrogen fuel cell **generates electricity by utilising the chemical energy contained in hydrogen**. It releases only pure water, **not discharging pollutants**.
- Hydrogen is loaded into cells. The energy within the hydrogen is converted into electricity and heat,

which is then used to power the vessel's propulsion mechanism.

- In the fuel cell, the **hydrogen reacts with the oxygen in the air to produce electricity**. Unlike batteries, hydrogen fuel cells **do not require recharging**. Provided uninterrupted supply of fuel and oxygen, these cells would work continuously.

Significance

- While hydrogen fuel cell technology has been under development for maritime applications, only a few countries globally have done demonstration projects.
- This ferry, thus, has given India an early mover advantage to tap the potential of hydrogen as an emerging green fuel in the marine sector.
- The '**Harit Nauka**' (green boat) initiative of the **Ministry of Ports, Shipping and Waterways** envisages a **green transition of inland vessels**. In line with this, the ferry can be replicated in other parts of the country for urban mobility.
 - *Under the Harit Nauka initiative, all states have to make efforts to **use green fuels for 50 per cent of inland waterways-based passenger fleets** in the next one decade, and **100 per cent by 2045**.*

7) India receives 'Measles and Rubella Champion' Award

About Measles

- Measles is a **highly contagious viral respiratory disease** which **affects mostly children**.
- It is one of the leading causes of death and disability among young children.
- Measles spreads by **coughing and sneezing, close personal contact**

or direct contact with infected nasal or throat secretions.

- Death due to measles are caused by the complications associated with the disease like blindness, encephalitis, severe diarrhoea and pneumonia.

About Rubella

- Rubella is a **contagious viral infection** best known by its **distinctive red rash**. It's also called **German measles or three-day measles**.
- This infection may cause **mild or no symptoms** in most people. However, it can cause **serious problems for unborn babies** whose mothers become infected during pregnancy.
- Rubella isn't the same as measles, but the **two illnesses share some signs and symptoms**, such as the red rash.
- **Rubella is caused by a different virus than measles**, and **rubella isn't as infectious or as severe as measles**.
- Measles and Rubella are **vaccine preventable diseases (VPDs)** and Measles & Rubella (MR) Vaccine is part of India's **Universal Immunization Programme (Refer Pulse October 2023 Digest edition)** since 2017.

Why in News?

- In recognition of the country's efforts to combat Measles and Rubella, India has been bestowed with the prestigious **Measles and Rubella Champion Award** by **The Measles and Rubella Partnership**.
 - The Measles and Rubella Partnership comprises a **multi-agency planning committee**, including the American Red Cross, GAVI, UNICEF, and WHO, all dedicated to reducing global

measles deaths and preventing rubella illness.

- The Government of India's proactive MR vaccination campaign in high-risk areas and innovative strategies to reach underserved populations, robust surveillance systems and effective public-awareness initiatives have played a key role in safeguarding the health and well-being of its population.

8) IndiaAI Mission

What's in the news?

- The Union Cabinet has approved the **IndiaAI Mission** with an outlay of Rs 10,372 crore for the next five years.
- The IndiaAI mission will establish a **comprehensive ecosystem catalyzing AI innovation** through strategic programs and partnerships across the public and private sectors.

Components of the Mission

- The Mission will be implemented by **'IndiaAI' Independent Business Division (IBD)** under **Digital India Corporation (DIC)** and has the following components:
 - *DIC has been set up by the Ministry of Electronics and Information Technology (MeitY) to innovate, develop and deploy ICT and other emerging technologies for the benefit of the common man.*

1. IndiaAI Compute Capacity:

- The IndiaAI compute pillar will **build a high-end scalable AI computing ecosystem** to cater to the increasing demands from India's rapidly expanding AI start-ups and research ecosystem.
- The ecosystem will comprise **AI compute infrastructure of 10,000 or more Graphics Processing Units (GPUs)**, built through public-private partnership.

- *A Graphics Processing Unit is a chip or electronic circuit capable of rendering graphics for display on an electronic device.*

- Further, an **AI marketplace** will be designed to offer AI as a service and pre-trained models to AI innovators. It will act as a one-stop solution for resources critical for AI innovation.

2. IndiaAI Innovation Centre:

- The IndiaAI Innovation Centre will undertake the **development and deployment of indigenous Large Multimodal Models (LMMs) and domain-specific foundational models** in critical sectors.

3. IndiaAI Datasets Platform:

- The IndiaAI Datasets Platform will **streamline access to quality non-personal datasets for AI Innovation.**

4. IndiaAI Application Development Initiative:

- This Initiative will **promote the AI applications in critical sectors** for the problem statements sourced from Central Ministries, State Departments, and other institutions.
- The initiative will focus on developing/scaling/promoting adoption of impactful AI solutions with potential for catalyzing large scale socio-economic transformation.

5. IndiaAI FutureSkills:

- IndiaAI FutureSkills is conceptualized to **mitigate barriers to entry into AI programs** and will increase AI courses in undergraduate, masters-level, and Ph.D. programs.
- Further, **Data and AI Labs will be set-up in Tier 2 and Tier 3 cities** across India to impart foundational level courses.

6. IndiaAI Startup Financing:

- The IndiaAI Startup Financing pillar is conceptualized to **support and accelerate deep-tech AI startups** and provide them streamlined access to funding to enable futuristic AI Projects.

7. Safe & Trusted AI:

- Recognizing the need for adequate guardrails to advance the responsible development, deployment, and adoption of AI, the Safe & Trusted AI pillar will enable the implementation of **Responsible AI projects** including the development of indigenous tools and frameworks, self-assessment checklists for innovators, and other guidelines and governance frameworks.

Reports and Indices

1) Obesity on the rise, high levels of undernutrition persist in India

What's in the news?

- According to a new study published by Lancet journal, which examined the trends of malnutrition across the world over the last 32 years, **India has seen a steady increase in obesity levels.**
- At the same time, the **prevalence of undernutrition has also remained high in the country.**
- As a result, India has become one of the countries with a high “**double burden**”, the study blamed a **lack of access to affordable and nutritious food** for the prominence of undernutrition and obesity.

What are the parameters of being obese and underweight?

- According to the **World Health Organisation (WHO)**, **obesity is an abnormal or excessive accumulation of fat that poses health risks.**
- Adults are considered to be **obese**, if they have a **body mass index (BMI) of 30 kg/m² or more.**
 - *BMI is a person's weight in kilograms divided by the square of height in meters.*
- An adult is considered **underweight** if their **BMI is less than 18 kg/m².**

What does the data tell about obesity and thinness in India?

- **Obesity in women has spiked in the past three decades** — it increased from 1.2% in 1990 to **9.8%** in 2022. There were 44 million women living with obesity in 2022. Meanwhile, obesity in **men increased by 4.9 percentage points** during the same period, with 26 million men living with obesity in 2022.

- Notably, there has also been a **significant increase in childhood obesity.** While 0.2 million boys and 0.2 million girls were obese in 1990, 7.3 million boys and 5.2 million girls were obese in 2022.
- Despite a significant decline, the **prevalence of underweight continues** to be high across genders and age groups. The study found that **13.7% of women and 12.5% of men were underweight.**

How do socio-economic conditions affect obesity and undernutrition?

- Obesity is no longer the disease of the rich in India. **Eating junk food is cheaper and easier.** For example, the cost of samosas and pakoras available at roadside shacks is less than fruit and vegetables.
- There **continues to be a rural-urban divide when it comes to obesity.** An analysis of the **NFHS-5 data** from last year shows that the prevalence of obesity was 31.7% in urban women and 19% in rural women. It was 28.6% among urban men and 18.8% among rural men.
- **Undernutrition persists in extremely remote and rural parts** of poorer states where **access to any kind of food is low.**

What needs to be done?

- The study proposes that the **focus has to be on programmes that enhance healthy nutrition**, such as targeted cash transfers, food assistance as subsidies or vouchers for healthy foods, free healthy school meals, and primary care-based nutritional interventions.
- Other than ensuring food security, the study also mentioned that there is an **urgent need for supporting weight loss in those with obesity.**

Polity

1) Criteria for scheduling of tribes

Who are Scheduled Tribes?

- The framers of the Constitution took note of the fact that **certain communities** in the country were suffering from **extreme social, educational and economic backwardness** on account of the primitive agricultural practices, lack of infrastructure facilities and geographical isolation.
- The Constitution of India in **Article 366 (25)** prescribes that the Scheduled Tribes means such tribes or tribal communities as are deemed under **Article 342** of the Constitution to be Scheduled Tribes.
- Essentially, the **President is the sole authority to notify tribal communities as Scheduled Tribes** as per the Constitution of India, with the **Governor playing a recommendatory role.**
- The **Parliament is the sole authority to pass amendments** to the Constitution to modify the lists. Additionally, the **state governments** play an **advisory role**, wherein the process to include tribes in the ST list starts with the recommendation of the respective State governments, which are then sent to the Tribal Affairs Ministry, which reviews and sends them to the Registrar General of India for approval.
- The **National Commission for Scheduled Tribes** also monitors and approves the lists before it is sent to the Cabinet for a final go ahead.

Criteria for specification of a community as a Scheduled Tribe

- The **Constitution is silent** about the criteria for specification of a community as a Scheduled Tribe.

- An Advisory Committee on Revision of lists of SCs & STs (**Lokur Committee**), setup in 1965, recommended the following essential characteristics for a community to be identified as a Scheduled Tribe.
 - **Primitive way of life and habitation in remote and less easily accessible areas,**
 - **Distinctive culture,**
 - **Shyness of contact with the community at large,**
 - **Geographical isolation, and**
 - **General backwardness in all respects.**

How many Scheduled Tribes have been identified so far?

- **Article 342(1)** mandates to specify the tribes or tribal communities or part of or groups within tribes or tribal communities as Scheduled Tribe in relation to that State or Union Territory as the case may be.
- There are **over 700 tribes** (with overlapping communities in more than one State) which have been notified under Article 342 of the Constitution of India, spread over different States and Union Territories of the country.
- The **list of Scheduled Tribes is State/UT specific** and a community declared as a Scheduled Tribe in a State need not be so in another State.
- The Scheduled Tribes have been **specified in relation to all the States and Union Territories except Haryana, Punjab, Chandigarh, Delhi, and Pondicherry.**

Why in News?

- Lok Sabha has passed the **Constitution (Jammu and**

Kashmir) Scheduled Tribes Order (Amendment) Bill, 2024, which seeks to **add four communities -- Gadda Brahmin, Koli, Paddari Tribe, and Pahari Ethnic Group -- to the list of Scheduled Tribes in Jammu and Kashmir.**

2) End of immunity for MPs and MLAs over bribery

What's in the news?

- In a landmark judgment, a seven-judge Constitution Bench has ruled that Members of Parliament (MPs) and Members of Legislative Assemblies (MLAs) **cannot claim any immunity from prosecution for accepting bribes to cast a vote or make a speech** in the House in a particular fashion.
- The Bench unanimously **overruled its 1998 judgment in P.V Narasimha Rao v. State** and opened the doors for law enforcement agencies to initiate prosecution against legislators in bribery cases.

Constitutional Provisions

- **Article 105(2)** of the Indian Constitution **confers on MPs immunity from prosecution** in respect of anything said or any vote given in Parliament or on any parliamentary committee.
- Similarly, **Article 194(2)** grants **protection to MLAs.**

Details of the verdict

- The apex court **overturned the 1998 PV Narasimha Rao judgment** which held that members of parliament and legislative assemblies could **claim immunity** under Articles 105(2) and 194(2) of the Constitution for **receiving a bribe in contemplation of a vote or speech in the legislature.**
- The court held that such a claim to immunity **fails to fulfil the twofold test** that the claim is tethered to the

collective functioning of the House and that it is **necessary to the discharge of the essential duties** of a legislator.

- The court also clarified that the **immunities under Articles 105 (2) and 194 (2)** of the Constitution would also apply equally to Rajya Sabha proceedings, including the election of the vice president.

3) Model Code of Conduct

What's in the news?

- As the Election Commission of India (ECI) has announced the dates for the upcoming Lok Sabha elections, the **Model Code of Conduct (MCC) has come into force and will be in place till election results are announced.**

About MCC

- The **Election Commission of India** is given the power to **supervise and conduct free and fair elections** by **Article 324** of the Indian Constitution.
- The Model Code of Conduct is a **set of guidelines by the Election Commission of India for political parties and candidates** to maintain decorum in their campaigning.
- The Model Code of Conduct was first introduced by the Election Commission in the **assembly election in Kerala in 1960.** In **1962**, the Election Commission introduced the Model Code of Conduct for **general elections.**
- The guidelines of the Model Code of Conduct were made stricter by the Election Commission in **1991** after repeated flouting of norms by political parties.
- If the Election Commission finds a party or candidate in violation of the Model Code of Conduct, it can take **measures from issuing a warning to ordering an FIR against the concerned party or candidate.**

- Though the MCC **does not have any statutory backing**, it has come to acquire strength in the past three decades because of its strict enforcement by the ECI.

When and where does the MCC come into play?

- The MCC **comes into force immediately when the election schedule is announced** by the Election Commission and **remains in operation till the election process is complete, i.e. results are announced.**
- It is **enforced throughout India** in case of **General elections**, and the **State up for polls** in case of **Legislative Assembly elections.**
- **All organisations, committees, corporations, commissions** (for e.g. Transport authorities, Jal boards) **funded wholly or partially by the Centre or State are bound by the MCC.**
- While **listed political parties and candidates** are bound to follow the MCC, **even non-political organisations** which hold campaigns favouring a political party or candidate are bound to follow specific guidelines mentioned by the EC.

Guidelines under Model Code of Conduct

- The Model Code of Conduct **prohibits criticism of the private life of a candidate**, and all criticism must be confined to the policies, work, and programmes of a candidate or party.
- The MCC says that parties and candidates must ensure that their **supporters do not obstruct the meeting or procession** of other parties or candidates. Also, they **cannot use private land or buildings** for processions or meetings without the permission of their owners.
- The Model Code of Conduct says that a party or candidate **needs to inform the local police** in advance before organising a meeting or procession. It needs to notify the local police about the place, timing, and route of the meeting and procession.
- A **minister or other ruling party leaders cannot use official machinery**, such as aircraft or vehicles, for their electoral campaigning once the Model Code of Conduct is implemented.
- Also, the ruling party or its leaders **cannot monopolise public infrastructure** such as maidans, helipads, guesthouses, etc. Other political parties or candidates will have equal access to these places.
- Additionally, the ruling party **cannot advertise at the cost of the public exchequer** for its political campaigning or achievements of its government.
- Model Code of Conduct guidelines **keep changing to address contemporary issues.** The rise of **social media** has led to an evolution in the guidelines.
- In its latest guidelines under the Model Code of Conduct, the Election Commission of India emphasised
- The Mode Code of Conduct mandates all parties **not to engage** in an activity or deliver a speech that can **create tension or hate between different communities, castes, or religions.**
- Further, **no party can appeal for votes on caste, religious or communal grounds.** Additionally, **places of worship** such as mosques, temples, and churches **cannot be used** by political parties or candidates for electioneering purposes.

the **guidelines for social media campaigning**.

- It said that a party or candidate cannot post or share a remark against its rival that is **insulting and below dignity**. Similarly, an advertisement masquerading as news or **misleading advertisements** can't be shared on social media.

Punishments

- The Model Code of Code is inherently an **obligatory guideline** and cannot be used as a wholesome rulebook before a court of law.
- The warnings by the Election Commission are the general course of action in case of violation of the Model Code of Conduct.
- However, if violations fall under the Indian Penal Code, 1860, and the Representation of the People Act, 1951, then there are many **serious repercussions**, and the **violator could even go to jail**.

4) Ladakh and Sixth Schedule of the Constitution

What's in the news?

- In a meeting with representatives from Ladakh, which has been witnessing protests recently, the centre has agreed to examine whether the provisions of the Sixth Schedule of the Constitution can be implemented in Ladakh.

Background

- In 2019, the Government of India had **revoked the special status of Jammu and Kashmir under Article 370** of the Constitution and **bifurcated the state into the Union territories of Jammu and Kashmir, and Ladakh**.
- Ever since the separation, several organisations have demanded that **Ladakh be included under the Sixth Schedule**.

- In Ladakh, **more than 97% of the population belong to Scheduled Tribes** and many argue that this would **safeguard their land, resources, and unique culture**.

Benefits of adding Ladakh under the Sixth Schedule

- The Sixth Schedule under **Article 244** (Administration of Scheduled Areas and Tribal Areas) of the Constitution of India **guarantees certain protections for land and a nominal autonomy for citizens in designated tribal areas**.
- This Schedule contains **provisions regarding the administration of tribal areas** in the states of **Assam, Meghalaya, Tripura and Mizoram**.
- Inclusion under this Schedule would allow Ladakh to create **Autonomous District and Regional Councils (ADCs and ARCs)** — elected bodies with the power to administrate tribal areas.
- This would include the **power to make laws on subjects** such as forest management, agriculture, administration of villages and towns, inheritance, marriage, divorce and social customs. A majority of the population in Ladakh belongs to **Scheduled Tribes**.
- The ADCs and ARCs may also constitute **village councils or courts** to decide disputes between parties from Scheduled Tribes, and appoint officers to oversee the administration of the laws they enact.
- The Schedule also gives ARCs and ADCs the **power to collect land revenue, impose taxes, regulate money lending and trading, collect royalties** from licences or leases for the extraction of minerals in their areas, and **establish public facilities** such as schools, markets, and roads.

5) The Water (Prevention and Control of Pollution) Amendment Act, 2024

What's in the news?

- The Parliament has passed the Water (Prevention and Control of Pollution) Amendment Act, 2024 which seeks to **amend the Water (Prevention and Control of Pollution) Act, 1974** to rationalize minor offenses related to water pollution.

About Water (Prevention and Control of Pollution) Act, 1974

- The Water (Prevention and Control of Pollution) Act, 1974 was the first piece of legislation in independent India that **identified the need to have an institutional structure to address contamination of water bodies.**
- This led to the creation of the **Central Pollution Control Boards (CPCB) and State Pollution Control Boards (SPCB)** that were charged with monitoring and preventing public water resources from getting contaminated by sewage and industrial effluents.
- The Act made it **mandatory for industrial units to get permission** from their respective State boards before setting up factories and submitting themselves to checks on whether their manufacturing and other processes were complying with prescribed norms.

Provisions amended through the amendment act:

- **Consent of SPCB:** As per the original Act, **prior consent of the SPCB** is required for establishing any industry or treatment plant, which is likely **to discharge sewage into a water body, sewer, or land.**
 - The amendment specifies that the **central government,** in

consultation with the CPCB, **may exempt certain categories** of industrial plants from obtaining such **consent.**

- The amendment also adds that the **central government may issue guidelines** for the grant, refusal, or cancellation of consent granted by the SPCB.
- **Penalty for lack of consent:** Under the Act, establishing and operating **an industry without obtaining such consent** from the SPCB is punishable with **imprisonment up to six years and fine.**
 - The amendment **retains** this. It also **penalises tampering with monitoring devices** used in determining whether any industry or treatment plant can be set up.
- **Discharge of polluting matter:** Under the Act, the **SPCB may issue directions** to immediately **restrain any activity which is leading to discharge of noxious or polluting matter in water bodies.**
 - The Act also **prohibits violation of standards** (laid down by SPCB) regarding polluting matter in water bodies or on land, barring some exemptions. Violation of these provisions is **punishable with an imprisonment term** between one and a half years and six years, and a **fine.**
 - The **amendment removes the punishment** and instead, imposes a **penalty between Rs 10,000 and Rs 15 lakh.**
- **Chairman of State Board:** Under the Act, **chairman** of an SPCB is

nominated by the state government.

- The amendment adds that the **central government will prescribe the manner of nomination and the terms and conditions of service of the chairman.**
- **Penalty for other offences:** Under the Act, an offence for which punishment is **not explicitly specified** is punishable with an **imprisonment term** of up to three months or a **fine** of up to Rs 10,000, or both.
 - The amendment **removes imprisonment as a punishment**, and prescribes a penalty between Rs 10,000 and Rs 15 lakh.
- **Adjudicating officer to determine penalties:** The amendment allows the **central government to appoint adjudication officers** to determine penalties under the Act.
 - **Appeals** against orders passed by the adjudicating officer may be made before the **National Green Tribunal**, after depositing 10% of the penalty levied.
 - Penalties imposed by the adjudicating officer will be credited to the **Environment Protection Fund** established under the Environment (Protection) Act, 1986.
- **Cognizance of offences:** As per the Act, a court may take cognizance of an offence if a complaint is made by the CPCB or SPCB, or a person who has given a notice of the complaint to the Boards.
 - The amendment adds that **cognizance may also be taken if a complaint is made by the adjudicating officer.**

- **Offences by government departments:** Under the Act, the **head of a department** will be **deemed guilty for offences committed by government departments** and shall be liable to be proceeded against and punished accordingly.
 - The amendment specifies that the head of a department will be required to **pay a penalty equal to one month of their basic salary** if the department violates any provision of the Act.

Applicability

- **Water is a State subject**, and the **Centre cannot directly pass legislative laws** influencing water management.
- However, the **Centre can create legislation**, if **two or more States demand it**, and this can be made applicable by States over their territories if they adopt the legislation in their Assemblies.
- The amended version of the Act, passed by both Houses of Parliament, will **currently apply to Himachal Pradesh and Rajasthan and the Union territories.**
- Other States would be open to pass resolutions to extend its applicability to their territories.

6) Other Notable Topics

6.1. Maritime Anti Piracy Act, 2022

About

- The Maritime Anti Piracy Act was passed by the Parliament in 2022 to **give effect to the United Nations Convention on the Law of the Sea (UNCLOS)**, which provides a framework for combating piracy and armed robbery at sea.

- *UNCLOS, also known as the **Law of the Sea Treaty**, is an international treaty which was adopted and signed in **1982**.*
- *The Convention was formed to **ensure freedom of shipping navigation at the sea**.*
- *The Convention created **three new institutions on the international scene**:*
 - *the **International Tribunal for the Law of the Sea**,*
 - *the **International Seabed Authority**,*
 - *the **Commission on the Limits of the Continental Shelf**.*
- *India ratified UNCLOS in **1995**.*

Highlights of the Act

Definition of Piracy

- The Act defines piracy as “any illegal act of violence, detention, or destruction committed against a ship, aircraft, person or property, for private purposes, by the crew or passengers of a private ship or aircraft”.
- The provisions of this Act shall apply to the **high seas**.
 - For the purposes of this clause, high seas include the **Exclusive Economic Zone (EEZ) of India, the EEZ of any other State**, as well as all waters beyond the jurisdiction of any other State, i.e. **international waters**.
 - *UNCLOS defines EEZ as generally extending 200 nautical miles from shore, within which the coastal state has the right to explore and exploit,*

and the responsibility to conserve and manage, both living and non-living resources.

Arrest of persons and seizure of ship and property.

- The **authorised personnel** may, either generally or on suspicion that a ship is engaged in piracy on the high seas, **board such ship and arrest the persons or seize the pirate ship and property** on board.

Offences and Penalties

- An act of piracy will be punishable with:
 - (i) **imprisonment for life; or**
 - (ii) **death, if the act of piracy causes or attempts to cause death.**
- Offences will be considered **extraditable**.
 - This means that the accused can be transferred to any country for prosecution with which India has signed an extradition treaty.
 - In the absence of such treaties, offences will be extraditable on the **basis of reciprocity** between the countries.

Jurisdiction of the Courts

- The **central government**, in consultation with the **Chief Justice of the concerned High Court**, may notify Sessions Courts as the **Designated Courts** under this Act.
- The Designated Court will try offences committed by:
 - (i) a person in the custody of the Indian Navy or Coast Guard, regardless of his nationality, (ii) a citizen of India, a resident foreign national in India, or a stateless person.

- **Warships and government-owned ships employed for non-commercial purposes** will not be under the jurisdiction of the Court.

6.2. Zonal Councils

About

- The idea of creation of Zonal Councils was mooted by the first Prime Minister of India, **Pandit Jawahar Lal Nehru** in **1956**.
- He suggested that the States proposed to be reorganised may be grouped into four or five zones having an Advisory Council “**to develop the habit of cooperative working**” among these States.

Composition of Zonal Councils

- In the light of the vision of Pandit Nehru, **five Zonal Councils** were set up by the **States Re-organisation Act, 1956**. The present composition of each of these Zonal Councils is as under:
 - The **Northern Zonal Council**, comprising the States of Haryana, Himachal Pradesh, Jammu & Kashmir, Punjab, Rajasthan, National Capital Territory of Delhi and Union Territory of Chandigarh;
 - The **Central Zonal Council**, comprising the States of Chhattisgarh, Uttarakhand, Uttar Pradesh and Madhya Pradesh;
 - The **Eastern Zonal Council**, comprising the States of Bihar, Jharkhand, Orissa and West Bengal;
 - The **Western Zonal Council**, comprising the States of Goa, Gujarat, Maharashtra and the Union Territories of Daman & Diu and Dadra & Nagar Haveli;
 - The **Southern Zonal Council**, comprising the

States of Andhra Pradesh, Karnataka, Kerala, Tamil Nadu and the Union Territory of Puducherry.

- The **North Eastern States** i.e. (i) Assam (ii) Arunachal Pradesh (iii) Manipur (iv) Tripura (v) Mizoram (vi) Meghalaya and (vii) Nagaland are not included in the Zonal Councils and their special problems are looked after by the **North Eastern Council**, set up under the **North Eastern Council Act, 1972**.
- The State of **Sikkim** has also been included in the North Eastern Council vide North Eastern Council (Amendment) Act, 2002.

Organisational Structure of Zonal Councils

- **Chairman** - The **Union Home Minister** is the Chairman of each of these Councils.
- **Vice Chairman** - The **Chief Ministers of the States** included in each zone act as Vice-Chairman of the Zonal Council for that zone by **rotation**, each holding office for a period of **one year** at a time.
- **Members - Chief Minister and two other Ministers** as **nominated by the Governor** from each of the States and **two members from Union Territories** included in the zone.
- **Union Ministers** are also invited to participate in the meetings of Zonal Councils depending upon necessity.

Role & Objective of the Zonal Councils

- The Zonal Councils provide an excellent forum where irritants between Centre and States and amongst States can be resolved through **free and frank discussions and consultations**.
- Being **advisory bodies**, there is full scope for free and frank exchange of views in their meetings.
- Being compact high level bodies, specially meant for looking after the

interests of respective zones, they are capable of **focusing attention on specific issues** taking into account regional factors, while keeping the national perspective in view.

- The main objectives of setting up of Zonal Councils are as under :
 - Bringing out **national integration**;
 - Arresting the growth of **acute State consciousness, regionalism, linguism and particularistic tendencies**;
 - Enabling the Centre and the States to **co-operate and exchange ideas and experiences**;
 - Establishing a **climate of co-operation** amongst the States for successful and speedy execution of development projects.

Functions of the Councils

- A Zonal Council may discuss, and make recommendations with regard to:
 - any matter of **common interest in the field of economic and social planning**;
 - any matter concerning **border disputes, linguistic minorities or inter-State transport**;
 - any matter connected with or arising out of, the **re-organization of the States under the States Reorganisation Act**.

6.3. Juvenile Justice (Care and Protection of Children) Act, 2015

Key Provisions of the JJ Act, 2015

- In India, a juvenile is a **person less than 18 years of age**.
- The Juvenile Justice (Care and Protection of Children) Act, 2015, **addresses children in conflict**

with law and children in need of care and protection.

- The Act has **categorised the offences committed by children into three categories — petty offences, serious offences, and heinous offences**.
- The Act provides for **trying juveniles in the age group of 16-18 as adults in cases of heinous offences**.

Juvenile Justice Boards:

- The Act provides for one or more Juvenile Justice Boards to be **constituted in every district**. The JJ Board consists of a **Judicial magistrate of the first class and two social workers** of whom at least one should be a woman.
- In case of a **heinous offence** alleged to have been committed by a child, who has **completed or is above the age of sixteen years**, the **JJ Board shall conduct a preliminary assessment regarding his mental and physical capacity** to commit such offence, ability to understand the consequences of the offence and the circumstances in which he allegedly committed the offence.
- If the Board, after preliminary assessment passes an order that there is a need for trial of the said child as an **adult**, then the Board may order the **transfer of the case to the Children's Court** having jurisdiction to try such offences.

Child Welfare Committee:

- The Act provides for one or more Child Welfare Committees to be **constituted in every district** which consists of **One Chairperson and 4 other members** of whom at least 1 should be woman and another, an expert on the matters concerning children.
- The Committee is **responsible for restoring abandoned or lost children to their families, declaring**

them legally free for adoption, taking suo-moto cognizance of cases, taking action for rehabilitation of sexually abused children, coordinating with agencies involved in the care and protection of children, etc.

Adoption:

- The Act **streamlined adoption procedures** for orphans, abandoned and surrendered children and the existing **Central Adoption Resource Authority (CARA)** has been given the **status of a statutory body** to enable it to perform its function more effectively.
- The Act **fulfils India's commitment as a signatory** to the **United Nations Convention on the rights of the child**, the **Hague Convention on Protection of Children and Co-operation in respect of Inter-country Adoption (1993)**, and other related international instruments.

Implementation:

- The **National Commission for Protection of Child Rights (NCPCR)** is under a statutory obligation under the JJ Act to monitor the proper implementation of the provisions of the Act.

Juvenile Justice (Care and Protection of Children) Amendment Act, 2021

- In 2021, the Parliament passed The Juvenile Justice (Care and Protection of Children) Amendment Act, 2021 which amended the Juvenile Justice Act, 2015.
- The amendments include **authorizing District Magistrate including Additional District Magistrate to issue adoption orders** under the JJ Act, in order to ensure speedy disposal of cases and enhance accountability. Previously, civil courts oversaw this process.

International Relations

1) World Governments Summit 2024

About the Summit

- Established by the **United Arab Emirates (UAE)**, the World Governments Summit (WGS) has emerged as a pivotal global event aimed at **fostering international cooperation and shaping the trajectory of governments** for the betterment of humanity.
- Since its inception in **2013**, the summit is a **global knowledge exchange platform** for governments.
- The summit aims to further inspire and empower the next generation of governments.
- WGS has attracted prominent speakers, thought leaders, and participants from around the world.



Why in News?

- The World Governments Summit 2024 was held recently in **Dubai** with the theme 'Shaping Future Governments'.
- **Prime Minister Narendra Modi** participated in the Summit as **Guest of Honour** and delivered the special keynote address.

- The Summit saw participation of 20 world leaders, including 10 Presidents and 10 Prime Ministers. Governments and delegates from over 120 countries were represented at the global gathering.

2) AUKUS

What's in the news?

- Australia is set to provide 4.6 billion Australian dollars (\$3bn) to British industry to help support the **construction of nuclear-powered submarines under the AUKUS deal** with the United Kingdom and the United States and ensure its new vessels arrive on time.

About the Deal

- **Australia, the UK and the US** first announced the **AUKUS trilateral security alliance** in 2021 to **help Australia deploy nuclear-powered submarines in the Pacific region**.
- Officially, the deal was made to emphasise upon the countries' **"shared commitment to a free-and-open Indo-Pacific region"**. In effect, it seeks to **combat China's ambitions in the region**.
- **China** has claimed the AUKUS deal risks setting off an arms race in the Asia Pacific.

The Indo-Pacific region

- The region stretches from the **western or the Pacific coastline of the United States to the Indian Ocean**.
- It hosts **more than half of the world's population** and some of the biggest economies, accounting for **60% of the global GDP and two-thirds of global economic growth**. The strategic region covers **65% of the world's ocean and about 25% of its land area**.

- **China** has been an aggressive player in the South Pacific and Indian Oceans, staking territorial claims across the resource-rich region. China's increasing aggression against **Taiwan and in the South China Sea** has been of particular note.
- While China's territorial ambitions have elicited strong reactions from across the West, Australia, a traditional centre of influence in the Pacific, has been most directly impacted. Crucially, unlike Australia, **China has multiple nuclear-capable submarines.**

How will nuclear submarines help Australia?

- **Conventional diesel-engine submarines** have batteries that keep and propel the vessel underwater. The life of these batteries can vary from a few hours to a few days. While newer **Air-Independent Propulsion (AIP) submarines** have **additional fuel cells that increase the submarine's endurance**, these are **used only at strategic times** and can **only be replenished in port.**
- Both conventional and AIP subs **need to come to the surface** to recharge their batteries using the diesel engine.
- **Nuclear-powered submarines**, on the other hand, have an **internal nuclear reactor**, giving them **near infinite endurance** to operate and **stay submerged** – effectively, a nuclear submarine only needs to port/surface when it is out of food and other essential supplies for the crew. Typically, nuclear subs are also **faster than conventional submarines.**
- This allows them to reach far out into the ocean and launch attacks on the enemy, an important

capability for **blue water navies** (*maritime forces capable of operating in the deep waters of the open oceans*).

- It will give the Royal Australian Navy the capability to go into the South China Sea to protect its assets and conduct patrols, a capability which it currently does not possess.

3) International Big Cat Alliance

What's in the news?

- The Union Cabinet has approved the establishment of **International Big Cat Alliance (IBCA) with headquarters in India** with a one-time budgetary support of Rs.150 crore.
- This alliance aims to initiate '**Big Cat Diplomacy**' and will **focus on the protection and conservation of seven major big cats** — tiger, lion, leopard, snow leopard, puma, jaguar and cheetah.

What are 'Big cats'?

- 'Big Cat' is a term that is used in informal speech to apply to any large species of the family *Felidae*. Usually, it applies to the members of the genus *Panthera*.
- These include:
 1. **Tiger** (*Panthera tigris*)
 2. **Lion** (*Panthera leo*)
 3. **Jaguar** (*Panthera onca*)
 4. **Leopard** (*Panthera pardus*)
 5. **Snow Leopard** (*Panthera uncia*)
- Two other cats — **Puma** (*Puma concolor*) and **Cheetah** (*Acinonyx jubatus*) — are not part of *Panthera*. But they are usually included in most listings of 'big cats'.
- The Indian subcontinent has been historically home to the **Bengal tiger, Asiatic lion, Indian leopard, Indian/Asiatic cheetah as well as Snow leopard.**

- The **cheetah** was **declared extinct** in 1952. In 2022, the Government of India embarked on an ambitious programme to **introduce African cheetahs** to the **Kuno National Park in Madhya Pradesh**.

About IBCA

- **Membership** to the alliance will be open to **97 range countries**, which contain the natural habitat of these big cats, as well as **other interested nations, international organizations, etc.**
- The purpose of this alliance is to provide a platform for **dissemination of information on benchmarked practices, capacity building, resources repository, research and development, awareness creation, etc.** with regard to **protection and conservation of the Big cats**.
- Its major activities will include advocacy, partnership, knowledge e-portal, capacity building, eco-tourism, partnerships between expert groups and finance tapping.

Governance Structure

- The IBCA's governance structure will comprise a **General Assembly** consisting of all member countries, a **council** of at least seven but not more than 15 member countries elected by the General Assembly for a term of 5 years, and a **Secretariat**.
- Upon the recommendation of the Council, the General Assembly will appoint the **IBCA Secretary General** for a specific term.

Funding Mechanism

- India has committed to provide a **total grant assistance of \$100 million**, for **5 years**, post which the IBCA is expected to **sustain itself** through membership fees, and contributions from bilateral and multilateral institutions and the private sector.

4) Trade agreement with EFTA

What is the European Free Trade Association (EFTA)?

- EFTA is an **intergovernmental organization of four member countries that are not part of the European Union (EU): Iceland, Liechtenstein, Norway, and Switzerland**.
- The association was set up in **1960** for the promotion of free trade and economic integration for the benefit of its four Member States.



Why in News?

- India has signed a trade agreement with the four-nation European Free Trade Association.
- The agreement, officially dubbed **Trade and Economic Partnership Agreement (TEPA)**, covers various aspects such as trade in goods, rules of origin, intellectual property rights, services, investment promotion, government procurement, technical trade barriers, and trade facilitation.
- This is India's fourth such agreement since 2014. The previous agreements were signed with **Mauritius, the UAE, and Australia**.
- The two-way trade between India and EFTA was \$18.65 billion in 2022-23, compared to \$27.23 billion in the previous fiscal year, with a **trade deficit of \$14.8 billion**.
- **Switzerland** is currently **India's largest trading partner in the EFTA bloc**, followed by **Norway**.

- India is also separately negotiating a **comprehensive free trade agreement with the European Union (EU)**, a 27-nation bloc.

Highlights of TEPA

- EFTA has committed to **promote investments** with the aim to **increase the stock of foreign direct investments by USD 100 billion in India in the next 15 years**, and to **facilitate the generation of 1 million direct employment in India**, through such investments. The investments **do not cover foreign portfolio investment**.
- For the **first ever time in the history of FTAs**, a **legal commitment** is being made about promoting **target-oriented investment and creation of jobs**.
- EFTA is offering **92.2% of its tariff lines** which covers **99.6% of India's exports**. The EFTA's market access offer covers **100% of non-agri products and tariff concession on Processed Agricultural Products (PAP)**.
- India is offering **82.7% of its tariff lines which covers 95.3% of EFTA exports** of which **more than 80% import is Gold**. Sectors such as **dairy, soya, coal and sensitive agricultural products** are kept in the **exclusion list**.
- TEPA would **stimulate our services exports** in sectors of our key strength / interest such as IT services, business services, personal, cultural, sporting and recreational services, other education services, audio-visual services etc.
- Services offers from EFTA include better access through **digital delivery of Services (Mode 1)**, **commercial presence (Mode 3)** and improved commitments and

certainty for entry and **temporary stay of key personnel (Mode 4)**.

- TEPA has provisions for **Mutual Recognition Agreements in Professional Services** like nursing, chartered accountants, architects etc.
- TEPA provides an **opportunity to integrate into EU markets**. Over 40% of Switzerland's global services exports are to the EU. Indian companies can look to Switzerland as a base for extending its market reach to EU.
- TEPA also facilitates **technology collaboration and access to world leading technologies** in precision engineering, health sciences, renewable energy, Innovation and R&D.

Related Information

Modes of supply of services

- **International trade in services** typically occurs in any of these four modes of supply:
 - **Cross border supply of services (Mode 1)**: It is the supply of a service from the territory of one country into the territory of another country.
 - **Consumption abroad (Mode 2)**: It is the supply of a service in the territory of one country to the consumer of another country.
 - **Commercial presence (Mode 3)**: It is the supply of a service by a service supplier of one country, through commercial presence, in the territory of another country.
 - **Presence/Movement of natural persons/professionals (Mode 4)**: It is the supply of a service by a service supplier of one country,

through the presence of natural persons of a country in the territory of another country.

5) Other Notable Topics

5.1. Genocide Convention, 1948

About

- The **Convention on the Prevention and Punishment of the Crime of Genocide (Genocide Convention)** is an instrument of international law that **codified for the first time the crime of genocide**.
- The Genocide Convention was the **first human rights treaty adopted by the General Assembly of the United Nations** in 1948 and signified the international community's commitment to 'never again' after the atrocities committed during the Second World War (Holocaust).
- According to the Genocide Convention, **genocide is a crime that can take place both in time of war as well as in time of peace**.
- The **definition of the crime of genocide**, as set out in the Convention, has been **widely adopted at both national and international levels**.
- Importantly, the Convention establishes on State Parties the **obligation to take measures to prevent and to punish the crime of genocide**.

- That obligation have been considered as **norms of international customary law** and therefore, **binding on all States, whether or not they have ratified the Genocide Convention**.

Definition of genocide

- Under **article II of the Convention**, genocide means any of the following acts committed with intent to destroy, in whole or in part, a **national, ethnical, racial or religious group**, as such:
 - Killing members of the group;
 - Causing serious bodily or mental harm to members of the group;
 - Deliberately inflicting on the group conditions of life calculated to bring about its physical destruction in whole or in part;
 - Imposing measures intended to prevent births within the group;
 - Forcibly transferring children of the group to another group.

Status of membership

- The Genocide Convention has been ratified or acceded to by **153 States**.
- **India** has signed and ratified the Convention.

Art & Culture

1) Ayya Vaikunda Swamikal

About

- Vaikunda Swami (1809–1851), one of the earliest crusaders for social justice in south India was born at **Sasthan Koil Vilai**, the present **Samithoppu**, a village near **Kanyakumari**. In his boyhood, he was known as **Muthukutty**.
- He preached the **ideas of equality and advocated the rights of depressed class people** in the face of stiff opposition from upper castes as well as the **princely state of Travancore**.
- Vaikunda Swamikal **criticised the rule of the British and the rule of Rajah of Travancore as the rule of White devils and Black devils** respectively.
- Vaikunda Swamikal founded **Samathuva Samajam** to unite all the people of various castes. He organized **inter-dining** to accomplish it.
- His followers called him respectfully as **Ayya** (father). His cult was also known as **Ayya Vazhi** (The Path of Ayya).
- His message emancipated the people from the unjust social customs and superstitious beliefs. His ideas are collected into a text called **Akila Thirattu**.

Why in News?

- Prime Minister of India paid tributes to Ayya Vaikunda Swamikal on his birth anniversary.

2) Other Notable Topics

2.1. Chhau Dance

About

- Chhau dance is a **tradition from eastern India** that **enacts episodes**

from epics including the Mahabharata and Ramayana, **local folklore and abstract themes**.

- It is a **semi-classical Indian dance form with unique martial and folk traditions**.
- The dance is believed to have emerged from a **fusion of classical Hindu dances and the martial traditions of ancient regional tribes**.



- It **enacts episodes from epics** including the Mahabharata and Ramayana, **local folklore and abstract themes**.
- Its three distinct styles hail from the regions of **Seraikella, Purulia and Mayurbhanj, the first two using masks**:
 - **Purulia Chhau in West Bengal** is known for the use of dramatic masks, powerful movements, with themes based on mythology and epics.
 - **Seraikella Chhau from Jharkhand** is known for depicting scenes of hunting and warfare accompanied with vigorous movements.
 - **Mayurbhanj Chhau from Odisha** is known for its stylized movements, with themes inspired by nature.

- The dance is performed at night in an open space to traditional and folk melodies, played on the reed pipes *mohuri* and *shehnai*.
- Chhau dance is **intimately connected to regional festivals**, notably the **spring festival Chaitra Parva**.
- Chhau is usually **taught to male dancers** from families of traditional artists or from local communities.

2.2. Theyyam

About Theyyam

- Theyyam is a famous **ritual art** form that originated in **North Kerala**.
- It encompasses **dance, mime and music** and exalts the beliefs of the ancient tribals who gave a lot of importance to the worship of heroes and the spirits of their ancestors.
- The ceremonious dance is accompanied by the **chorus of such musical instruments** such as **Chenda, Elathalam, Kurumkuzal and Veekkuchenda**.
- There are **over 400 separate Theyyams, each with their own music, style and choreography**. The most prominent among these are Raktha Chamundi, Kari Chamundi, Muchilottu Bhagavathi, Wayanadu Kulaven, Gulikan and Pottan.



Characteristics of Theyyam

- Theyyam artists use **natural materials** like charcoal, rice paste, turmeric, and colored clays for makeup.
- The makeup uses a limited palette, **primarily red, black, yellow, and white**. **Each color has symbolic meaning:**
 - **Red:** Represents power, strength, and divinity.
 - **Black:** Depicts fierceness, protection, and warding off evil.
 - **Yellow:** Signifies prosperity, abundance, and knowledge.
 - **White:** Represents purity, peace, and blessings.
- The "**Mudi**" headpiece plays a significant role in theyyam. It is a **religious crown** composed of different coloured coconut and areca nut splices.

Defence

1) Mission Divyastra

What's in the news?

- India has announced the successful testing of indigenously developed **Agni-5 missile with Multiple Independently Targetable Re-entry Vehicle (MIRV) technology.**



What are Agni-5 missiles?

- Agni is a **long-range missile developed indigenously by the Defence Research and Development Organisation, DRDO.**
- The family of Agni missiles has been in the arsenal of the Indian armed forces since the early 1990s.
- Medium to Intercontinental versions of Agni missile systems 1 to 5 have **varying ranges** — starting from **700 km for Agni-1 to 5000 km and above for Agni-5.**
- This latest variant of the missile is equipped with the **MIRV**, first

developed at least five decades ago but in possession of only a handful of countries.

What is MIRV technology?

- The MIRV can **target multiple targets that can be hundreds of kilometers apart with a single missile.**
- This Agni, capable of carrying **nuclear warheads**, has a **range of more than 5,000 km**, making it a **long-range missile**, and is aimed mainly at thwarting the challenge from China.
- As of now, the **United States, Russia, China, France and the United Kingdom** are known to have MIRV-equipped missiles.
- These missiles can be launched from **land or from sea** from a submarine. While **Pakistan** is developing such a missile system, **Israel** too is suspected to either possess the missile or be developing it.

What makes MIRV technology specially lethal?

- In contrast to a traditional missile, which carries one warhead, MIRVs can carry **multiple warheads.**
- Warheads on MIRVed missiles can be **released from the missile at different speeds and in different directions.**

Key Takeaways From Other Articles

1) PM-SURAJ

News:

- The **Ministry of Social Justice and Empowerment** has launched the 'Pradhan Mantri Samajik Utthan and Rozgar Adharit Jankalyan' (PM-SURAJ) portal aimed at **offering credit support to the marginalized segments of society**.
- The portal will act as a **one-stop point** where people from disadvantaged sections of society can apply for and monitor the progress of all loan and credit schemes already available to them and being implemented by the Ministry of Social Justice and Empowerment and its departments.
- The credit support will be provided to eligible persons across the country and facilitated through **Banks, Non-Banking Finance Companies-Microfinance Institutions (NBFC-MFIs), and other organisations**.

2) Grey zone warfare

About

- Grey zone warfare generally means a **middle, unclear space that exists between direct conflict and peace in international relations**.
- A **multitude of activities** fall into this murky in-between — from nefarious economic activities, influence operations, and cyberattacks to mercenary operations, assassinations, and disinformation campaigns.
- Experts include **economic actions too**, such as debt traps and economic sanctions.

3) Natural Language Processing

About

- Natural language processing (NLP) is a **form of artificial intelligence that allows computers to understand human language, whether it be written, spoken, or even scribbled**.
- NLP is focused on **making human communication**, such as speech and text, comprehensible to computers.
- It is used in a wide variety of everyday products and services. Some of the most common ways it is used are through voice-activated digital assistants on smartphones, email-scanning programs used to identify spam, and translation apps that decipher foreign languages.

4) Digital Public Infrastructure

About

- Digital public infrastructure (DPI) refers to **digital networks that help provide citizens with social services**.
- Well-known examples include Aadhaar, the United Payments Interface (UPI), and Fastag.
- India's DPI, also referred to as **India Stack**, has enabled online, paperless, and cashless digital access to various public and private services.
- The India Stack consists of **three interconnected layers** - The **Identity Layer** (Aadhaar), the **Payments Layer** (Unified Payments Interface, Aadhaar Payments Bridge, Aadhaar Enabled Payment Service) and the **Data Layer** (Account Aggregator).
- The Identity Layer has been pivotal in providing a **digital identity to every Indian**. The Payments Layer enabled an **enormous surge of cashless payments**, both in value and volume terms. The Data Layer

transformed the authentication ecosystem in India and facilitated the KYC process.

5) Negotiable Warehouse Receipt

About

- The **Negotiable Warehouse Receipt (NWR)** system in the country enables farmers to store their produce for safe and scientific storage and preservation in warehouses near their farms and to seek **pledge loans from banks against the NWRs** issued against deposit of their stock.
- Hence, the NWR **helps the farmers to avoid distress sales of agricultural produce** during the peak marketing season and to **avoid the post harvest storage loss**.
- **Warehousing Development and Regulatory Authority (WDRA)**, a statutory body, ensures implementation of the NWR as per the provisions of the Warehousing (Development & Regulation) Act, 2007.
- **Electronic Negotiable Warehouse Receipt (eNWR)** is a **digital warehousing receipt issued by registered warehouses regulated and governed by WDRA**. The eNWR was launched in 2018.

6) Abel Prize

About

- Every year, the **King of Norway awards the Abel Prize to at least one scholar who has made a significant contribution to Mathematics**.
- The Government of Norway has been presenting the prize since 2003, and has **modelled it after the Nobel Prizes**, awarded in

neighbouring Sweden, including a cash prize of 9 million Norwegian kroner (approximately Rs 7 crore) for the laureates.

- The **Abel Prize for 2024** has been awarded to French mathematician Michael Talagrand for “contributions to probability theory and functional analysis, with outstanding applications in mathematical physics and statistics”.

7) Connectome

About

- The connectome is a **comprehensive map of connections between neurons in the brain**.
- Mapping the connectome **allows scientists to understand brain function and how attention deficit hyperactivity disorder or Alzheimer’s disease affect it**.
- Despite challenges posed by the brain’s complexity and the vast amount of data it processes, the connectome has simplified scientists’ understanding of the brain and paved the way for a clearer picture of our neurological health.

8) Azadirachtin

About

- Azadirachtin is an **extract of fruit from the Neem tree**, which is largely grown in India.
- It is used as a **commercial insect growth regulator** that controls the metamorphosis process as the insect passes from the larva stage to the pupa stage.