

GS ANALYST

MONTHLY CURRENT AFFAIRS MAGAZINE

- ✓ Coverage of Monthly topics for GS Paper 1, 2, 3 & 4
- ✓ Key Concepts & Prelims Specific Topics
- ✓ Questions for Answer Writing Practice

PRELIMS

- ☐ Kerala's Alangad jaggery
- ☐ European Union's Artificial Intelligence Act
- ☐ Central Tribal varsity in Telangana
- ☐ PM-JANMAN for PVTGs
- ☐ Central Tribal varsity in Telangana
- ☐ RBI to bring digital loan aggregators under regulation
- ☐ India's Winter Arctic Research COVID sub-variant JN.1

MAINS

- ☐ The Red Sea & complexities of Global Events
- ☐ Shivaji's Naval Prowess
- ☐ Modernisation of India-ASEAN FTA
- ☐ Women Quota in J&K, Puducherry
- ☐ Overhauling India's Postal Services: Post Office Bill 2023
- ☐ GST Rate Rationalisation
- ☐ Ecological Impact of Biofortified Seeds

KEY CONCEPTS

- ☐ Earth System Model (ESM)
- ☐ Kisan e-Mitra
- ☐ Seed Cooperative Society "Contact binary" satellite - 'Selam'
- ☐ Gelephu Smartcity Project
- ☐ Indira Gandhi Prize for Peace
- ☐ Gelephu Smartcity Project
- ☐ Tejas Jets & Prachand helicopters
- ☐ Tax Inspectors without Borders (TIWB)

CONTEMPORARY ISSUE BASED ESSAY
**GOOD GOVERNANCE: RULE OF LAW AND,
NOT RULE BY LAW**

– Disclaimer –

The current affairs articles are segregated from prelims and mains perspective, such separation is maintained in terms of structure of articles. Mains articles have more focus on analysis and prelims articles have more focus on facts.

However, this doesn't mean that Mains articles don't cover facts and PT articles can't have analysis. You are suggested to read all of them for all stages of examination.

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Section A [MAINS]

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PROBLEMS RELATED TO PENINSULAR RIVER BASINS IN INDIA

Context: A recent study published in the American Meteorological Society's Journal of Hydrometeorology sheds light on the heightened risk of widespread flooding in river basins across peninsular India compared to the Ganga and Brahmaputra.

About the research

- ◆ **Conducted:** the Indian Institute of Technology Gandhinagar.
- ◆ **Outcome:** It emphasizes the need to shift focus from

localized flooding to understanding the occurrence and drivers of widespread floods.

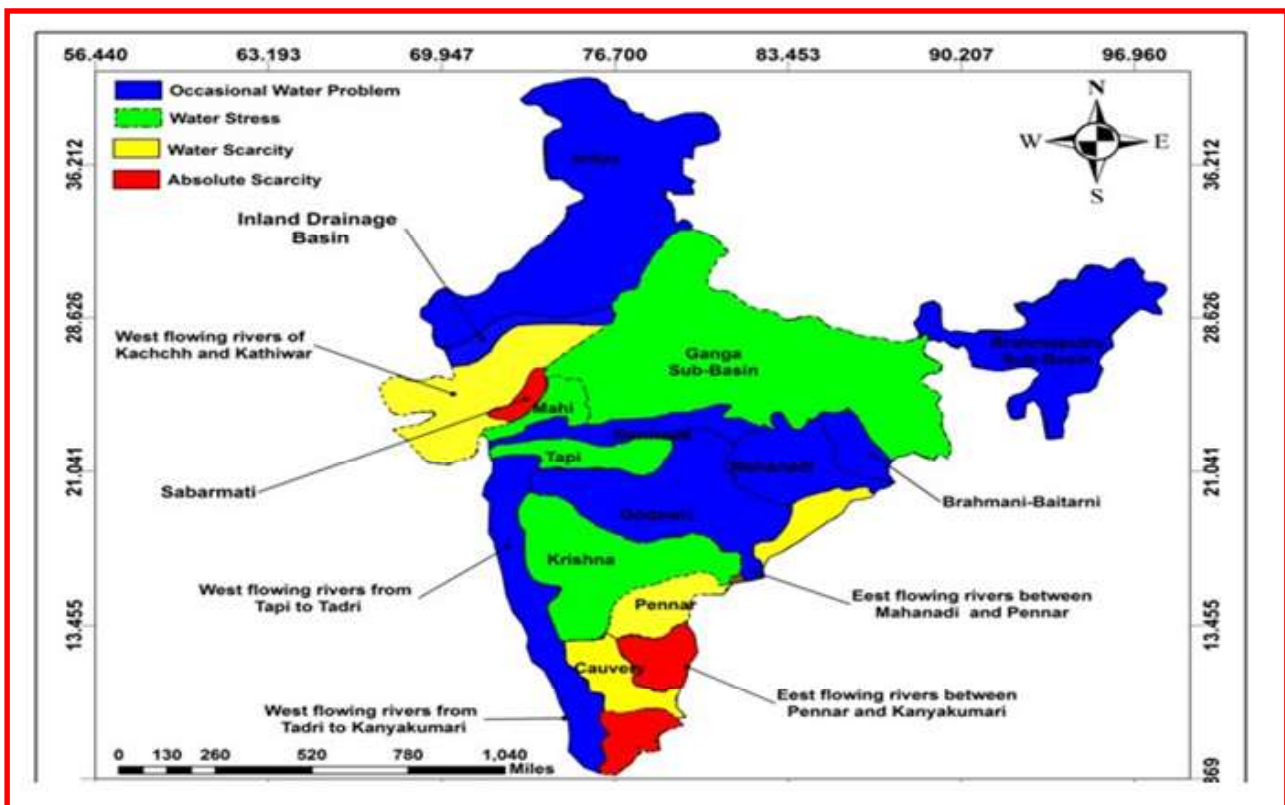
Peninsular River System:

- Peninsular River System is an Indian River System.
- It is one of the two important Indian River Systems, along with the Himalayan River System. Some of the major rivers of the Peninsular River System are the **Mahanadi, Godavari, Krishna, Kaveri, Narmada, and Tapti Rivers.**

Key-findings of the Research

Probability of Widespread Flooding:

- ◆ **Narmada Basin Takes the Lead:** The Narmada basin stands out with the highest probability (59%) of experiencing widespread flooding.
 - ▶ Followed by **Mahanadi (50%), Godavari (42%), Krishna (38%), and Cauvery (19%).**



- ◆ **Transboundary River Basins:** Ganga and Brahmaputra show probabilities of 21% and 18%, respectively, for widespread flooding.

Occurrence and Frequency Analysis

- ◆ **Frequency of Widespread Floods:** Mahanadi and Narmada river basins have the highest frequency, with 40 events during the period of 1959-2020.
 - ▶ **Krishna and Godavari basins witnessed over 20 widespread floods**, while Ganga, Brahmaputra, and Cauvery basins experienced less than 15 events.

- ◆ **Seasonal Trends:** Strong seasonal trends are observed in widespread flood probability. **Summer monsoon season** sees flooding in all seven river basins (except Cauvery) with August being a critical month.

- ▶ **Godavari, Mahanadi, and Narmada basins** record flooding in July, August, and September.

- ◆ **Seasonality Linked to Rainfall:** The **core monsoon region** (Godavari, Mahanadi, and Narmada) receives more rainy days in July to September.
 - ▶ Cauvery faces flooding in October-December due to northeast monsoon season.

Drivers of Widespread Flooding

◆ **Atmospheric Rivers and Global Examples:** The study associates widespread floods with large atmospheric circulations.

► Examples include the **2018 Kerala floods**, **2022 Pakistan floods**, and **lower Mississippi river floods** (2008, 2011, 2015–19), linked to **atmospheric rivers transporting moisture from tropics to extratropics**.

Atmospheric Rivers:

- Atmospheric rivers are relatively long, narrow regions in the atmosphere – **like rivers in the sky** – that transport **most of the water vapour outside of the tropics**.
 - Atmospheric River Formation:
 - Atmospheric rivers usually begin over tropical regions. Warm temperatures cause ocean water to evaporate and rise into the atmosphere. Strong winds help to carry the water vapour through the atmosphere.
 - As atmospheric rivers move over land, the water vapour rises up farther into the atmosphere. It then cools into water droplets, which fall as precipitation.
- **Impacts:** Heavy rainfall associated with ARs can cause **flooding, landslides and mudslides**. They can also lead to water supply disruption, and develop drought-like conditions.

The science behind atmospheric rivers

An atmospheric river (AR) is a flowing column of condensed water vapor in the atmosphere responsible for producing significant levels of rain and snow, especially in the Western United States. When ARs move inland and sweep over the mountains, the water vapor rises and cools to create heavy precipitation. Though many ARs are weak systems that simply provide beneficial rain or snow, some of the larger, more powerful ARs can create extreme rainfall and floods capable of disrupting travel, inducing mudslides and causing catastrophic damage to life and property. Visit www.research.noaa.gov to learn more.

A strong AR transports an amount of water vapor roughly equivalent to 7.5–15 times the average flow of water at the mouth of the Mississippi River.

ARs are a primary feature in the entire global water cycle and are tied closely to both water supply and flood risks, particularly in the Western U.S.

On average, about 30-50% of annual precipitation on the West Coast occurs in just a few AR events and contributes to the water supply — and flooding risk.

ARs move with the weather and are present somewhere on Earth at any given time.

ARs are approximately 250–375 miles wide on average.

Scientists’ improved understanding of ARs has come from roughly a decade of scientific studies that use observations from satellites, radar and aircraft as well as the latest numerical weather models. More studies are underway, including a 2015 scientific mission that added data from instruments aboard a NOAA ship.

WATER VAPOR COOLS

CALIFORNIA



3/2015

Image not to scale.

◆ **Impact of Climate Change:** Widespread flooding drivers are expected to change in timing, occurrence, and probability in a warming climate.

Global Tensions

◆ **Escalation of Tensions:** At the end of October, a bold terror attack by Hamas against Israel **disrupted regional stability**, drawing the **Yemen-based Houthi militia** into the conflict.

◆ **Red Sea’s Strategic Significance:** The announcement of **Houthi involvement brought the critical Red Sea into the heart of the conflict**, posing a threat to the Suez Canal, a vital artery for nearly 15% of global trade.

THE RED SEA & COMPLEXITIES OF GLOBAL EVENTS

Context: The Israel-Hamas war has opened a new front in the Red Sea, which will impact Asian economies.

- ◆ **Houthi Aggression at Sea:** In mid-November, the Houthis raided a cargo vessel with reported Israeli links in the Red Sea, showcasing their military capabilities and escalating tensions.



How significant is the Red Sea trade route?

- ◆ The Suez canal handles about **12% of global trade** and is accessed by vessels travelling from Asia via the 30km wide **Bab-el-Mandeb strait**.
- ◆ About half of freight shipped through the canal is made up of containerised goods. The route also provides a vital passage for shipments of oil from the **Persian Gulf to Europe and North America**.
- ◆ Rerouting shipments around the **Cape of Good Hope** adds about 3,000-3,500 nautical miles (6,000km) to journeys connecting Europe with Asia, adding about 10 days to the duration of the trip, according to the Dutch bank ING.
- ◆ With the prospect of lengthier shipping times, there could be a knock-on impact for turnaround times at ports in the UK and large European hubs such as **Rotterdam, Antwerp and Hamburg**.

4

URBAN FLOODS IN CHENNAI

Context: The recent Cyclone Michaung, that caused flooding in Chennai, has raised questions on what solutions can be taken to lessen the impact of such flash floods.

Why Chennai is prone to flood and other calamities?

- ◆ In Chennai and many other cities, the reason for the flooding is often cited as the encroachments to its wetlands and the massive construction in these ecologically important but sensitive sites.
- ◆ Chennai's natural ecosystem comprises three rivers – the **Kosathalaiyar, Cooum and Adyar** – and the manmade Buckingham Canal.

Historical floods

- Tamil Nadu is no stranger to flood situations and facing a lack of rain.
- In 2015, Chennai witnessed heavy rainfall that inundated large sections of the city.
- Deaths due to rain-related incidents have continued in subsequent years, with 2021 witnessing 18 casualties in Nilgiris districts.
- **Cyclone Nivar** in November 2020 and other instances have left low-lying areas marooned and resulted in fatalities.

- ◆ As the city expanded, its water bodies – ponds, lakes, canals and streams – were drained for construction.
- ◆ Simultaneously, construction expanded onto low-lying areas and wetlands. Land was cannibalised for luxury apartments and villas, sprawling IT parks, and factories.
- ◆ The city's four reservoirs – **Chembarambakkam, Red Hills, Cholavaram and Poondi** – are now being encroached upon. The floodplains of rivers were taken over for construction projects.

Government Response: Seeking Relief and Rehabilitation

- ◆ **Chief Minister's Plea:** Tamil Nadu State Government sought ₹5,060 crore as interim relief from the Prime Minister.
- ◆ **Coordination Efforts:** Relief operations were initiated, with the GCC setting up 162 relief centers and distributing food to over 3.7 million people.
- ◆ **Central Assistance:** The Union government released ₹450 crore to the State Disaster Relief Fund and an additional ₹500 crore for a Chennai flood mitigation project.

Important City Planning and Management Initiatives

- Heritage City Development and Augmentation Yojana (HRIDAY) programme
- Swachh Bharat Mission
- Smart Cities Mission
- Atal Mission for Rejuvenation and Urban Transformation (AMRUT)
- Pradhan Mantri Gram Sadak Yojana (PMGSY)



SHIVAJI'S NAVAL PROWESS, A BRIEF AT THE MARATHA NAVY

Context: On Navy Day December 4, PM paid tributes to Chhatrapati Shivaji Maharaj and unveiled a grand statue of the 17th century Maratha king at the coastal fort of Sindhugarh, Maharashtra.

Maratha Naval Power:

- ◆ The origin of naval power lay in Shivaji foresighted **strategic vision**. Shivaji's empire reached **the west coast** after **1656-57**, when his dominions touched Kalyan.
- ◆ In the same year, he decided to **establish a navy** in order to protect his territory. He realised the importance of having a **secure coastline** and **protecting the western Konkan** coastline from the attacks of Siddis' [Afro-Indians allied with Deccani Sultans] fleet.
- ◆ Secure ports would ensure **maritime trading**, which brought in revenue and customs duty,
- ◆ His vision for establishing a naval wing of his military was based on his belief in '**Jalameva yasya, balameva tasya**' i.e 'He who rules the seas is all powerful'.
- ◆ The **Maratha Naval Power** at its peak included **400-odd ships of various kinds and sizes**.
- ◆ Between 1653 and 1680, Shivaji ordered the construction of multiple naval forts, starting with the Vijaydurg in 1653, and followed by the likes of **Sindhudurg and Kolaba**.
- ◆ These forts, many of them unconquered, were used for **strategic purposes**, to keep a watch on enemies approaching via the seas.
- ◆ Even after **Shivaji's demise**, the **Maratha Navy** continued to be a **formidable force**, led by admirals such as **Angre**.

Maratha naval power- The valued heritage

- ◆ The Indian Navy has always acknowledged the sea-

farar prowess of the Marathas, under Shivaji and later.

- ◆ It has named its **training establishment** in Lonavla as **INS Shivaji**, and the shore-based logistics and administrative hub of the Western Naval Command, Mumbai, as **INS Angre** — after Kanhoji Angre (1669-1729), the celebrated Maratha naval commander.
- ◆ The use of the **octagonal design of the seal of Shivaji** on the new **Naval Ensign**. The Indian Navy's new Ensign (flag) based on the seal of Shivaji.

Sindhugarh Fort:

- A historical sea fort located in Arabian Sea near the Konkan region of Maharashtra in Western India. The fort, commissioned by Chhatrapati Shivaji, was constructed between 1664 and 1667.
- It was constructed using locally available **laterite stone**.
- The fort lies off the shore of Malvan taluka of the Sindhudurg District in the Konkan region of Maharashtra, 450 kilometres (280 mi) south of Mumbai. It is a protected monument under the Archaeological Survey of India.
- Main objective was to counter the rising influence of English, Dutch, French and Portuguese merchants in the Konkan coast, and to curb the rise of Siddhis of Janjira. The fort was built on a small island known as the Khurte Island.
- There are **three temples** on the fort namely **Jari Mari Temple, Shri Bhavani Temple and Shri Shiv Rajeshwar Temple**.



CHILD GROWTH STANDARDS IN INDIA

Context: The issue of child under nutrition persists in India, with multiple determinants such as food intake, dietary diversity, health, sanitation, and poverty.

- ◆ The measurement of **childhood under nutrition** relies on anthropometric standards, and India currently uses the **World Health Organization (WHO) Growth Standards**. However, there is an on-going debate regarding the **appropriateness of these standards** for the Indian context.

Background:

- ◆ The WHO standards are derived from the **Multicentre Growth Reference Study (MGRS)**, conducted in six countries between 1997 and 2003.

- ◆ Critics argue that the **MGRS sample, particularly in India, was drawn from privileged households in South Delhi**, potentially skewing the standards.

Need:

- ◆ Monitoring **child growth is essential for tracking progress**, but concerns have been raised about the suitability of the WHO standards in the Indian context.
- ◆ The **determinants of under nutrition** are multifaceted, and a nuanced approach is required.

Comparison of Two Standards:

- ◆ Critics contend that the WHO **standards overestimate under nutrition** in India.
- ◆ However, comparing these standards with other datasets is challenging due to **issues of inequality and sample representation**.
- ◆ The MGRS included **counselling, absent in national surveys**, influencing the comparability of results.

Analysis:

- ◆ Genetic growth potential and maternal height significantly influence **child growth**.
- ◆ Questions arise about the **adaptability of the standards to diverse genetic profiles** and whether improvement is achievable in one generation.
- ◆ **Regional variations** within India and the shifting gene pools with socio-economic development further complicate the analysis.

Issues/Challenges:

- ◆ Concerns exist regarding **the potential misdiagnosis of under nutrition**, leading to overfeeding and an increase in non-communicable diseases.
- ◆ However, **addressing dietary gaps, improving meal quality** in government programs, and enhancing overall healthcare access are crucial to effective nutritional interventions.

Possible Suggestions:

- ◆ **The Indian Council of Medical Research (ICMR)** has formed a committee to revisit growth references for India.
- ◆ The committee recommends a **thorough nationwide study to formulate national growth charts**, if necessary.
- ◆ While acquiring precise information is valuable, **maintaining comparability with international standards, as suggested by the WHO-MGRS**, remains essential.

Conclusion

- ◆ As India aspires for **comprehensive development by 2047**, the **focus on child growth standards gains significance**. Striking a **balance between aspirational goals and achievable standards** is crucial. The on-going discussions about revising growth references underscore the need for a nuanced approach that considers **regional variations, socio-economic factors, and international benchmarks** to ensure effective child nutrition strategies in India.

RE-CRIMINALISING ADULTERY AS A GENDER-NEUTRAL OFFENCE

Context: The Parliament Standing Committee on Home Affairs has suggested that the proposed Bharatiya Nyaya Sanhita Bill, 2023 be amended to make adultery a criminal offence again— but on gender-neutral terms.

What is Adultery?

- ◆ Adultery can be defined as **“An intended sexual contact between two people of opposite gender who are not married to each other under law”**.
- ◆ In other words Adultery is a physical relationship between a married man and a woman who is not his wife or between a married woman and a man who is not her spouse.

What is the Law of Adultery?

- ◆ Adultery law in India is **defined by the Indian Penal Code Section 497**.
- ◆ IPC Section 497 states, **“Whoever has sexual intercourse with a person who is and whom he knows or has reason to believe to be the wife of another man, without the consent or connivance of that man, such sexual intercourse not amounting to the offence of rape, is guilty of the offence of adultery.”**
- ◆ A man found guilty of adultery **“shall be punished with imprisonment of either description for a term which may extend to five years, or with fine, or with both.”**
- ◆ In cases of adultery, the wife shall not be punishable as an abettor. Similarly, an unmarried woman cannot be prosecuted for adultery. The **offence of adultery is, according to Section 497, committed by a man against a married man**.
- ◆ In the event of a man committing adultery by means of sexual intercourse with a married woman or an

unmarried woman, this law does not **confer any right on the man's wife prosecute the adulterous husband or the woman with whom the husband** has indulged in sexual intercourse with.

- ◆ The adultery law has been criticised for treating women as property owned by men. Only a man can be a victim or accused/**culprit under the existing reading of Section 497 of the IPC.**
- ◆ **The Marriage Laws (Amendment) Act** makes an act of adultery valid ground for divorce. Either spouse can seek divorce on the ground of adultery. It states that even a single act of voluntary sexual act by either party to the **marriage with any person other than his or her spouse constitutes a ground for divorce for the other spouse.**

Legislative History

- ◆ In the inception of the **Indian Penal Code, marriage among Hindus was deemed sacramental, dissuading penalties for adultery.**
- ◆ **Lord Macaulay**, a key drafter, **opposed criminalizing adultery**, advocating pecuniary compensation for marital issues.
- ◆ He acknowledged that given the sacramental **nature of marriage in India, the law was not the solution in dealing with marital infidelity.**
- ◆ **Distinguishing between a moral wrong and an offence** it was observed by him that "We cannot admit that a Penal code is by any means to be considered **as a body of ethics, that the legislature ought to punish acts merely because those acts are immoral, or** that because an act is not punished at all it follows that the legislature considers that act as innocent.
- ◆ The **Law Commission, in 1971, considered criminalization**, dissenting voices highlighting changing views on women's status.
- ◆ Despite recommendations for **gender-neutral provisions, procedural reforms, and acknowledging societal transformation, changes were slow.**
- ◆ The **2003 Malimath Committee suggested retaining adultery as an offense, emphasizing the preservation of marital sanctity.**

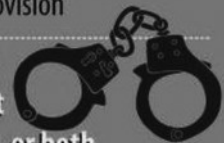
The Supreme Court declares as unconstitutional the Penal Provision on Adultery

Section 497 of the 158-year-old IPC says

Whoever has sexual intercourse with a person who is and whom he knows or has reason to believe to be the wife of another man, without the consent or connivance of that man, such sexual intercourse not amounting to the offence of rape, is guilty of the offence of adultery

A five-judge Constitution bench was unanimous in holding Section 497 of the Indian Penal Code as unconstitutional and struck down the penal provision

The offence entailed a maximum punishment of 5 years, or with fine, or both



It was manifestly arbitrary and dents the individuality of women. Sec 497 is clear violation of fundamental rights granted in the Constitution and there is no justification for continuation of the provision

Any provision treating women with inequality is not constitutional and it's time to say that husband is not the master of woman



PTI GRAPHICS

Supreme Court declaring Adultery Not a Crime

- ◆ **A five-judge Constitution Bench of the Supreme Court** in its judgment *Joseph Shine v. Union of India* (2018), held that adultery is not a crime and struck it off the IPC.
- ◆ It, however, clarified that adultery would continue to remain a civil wrong and a valid ground for divorce.

The inception of the proceedings

- ◆ **Dates back to 2017 when Joseph Shine**, a non-resident Indian, hailing from Kerala, filed PIL under Article 32 of the Constitution, challenging the **constitutional validity of the offence of adultery under Section 497 of the IPC read with Section 198(2) of the Cr.P.C.**
- ◆ The offence imposed culpability on a man who engaged in sexual intercourse with another man's wife and was punishable with a **maximum imprisonment of five years.** However, the wife who had consented to sexual intercourse with a man, who was not her husband, was exempted from prosecution.
- ◆ The provision was **also not applicable to a married man if he engaged in sexual intercourse with an unmarried woman or a widow.**

- ◆ **Notably, Section 198(2) of the CrPC empowered only the husband (of the adulterous wife) to file a complaint for the offence of adultery.**
- ◆ In July 2018, the Centre filed an **affidavit in the case arguing that diluting adultery in any form would weaken the institution of marriage and that the 'stability of a marriage is not an ideal to be scorned'. On September 27, 2018, the Bench pronounced** a unanimous ruling in the form of four concurring judgments.

According to the judgements

- ◆ Adultery is **not a crime if the cuckolded husband connives or consents to his wife's** extra-marital affair, thereby treating a married woman as her husband's 'chattel'.
- ◆ Underscoring that adultery is **"absolutely a matter of privacy at its pinnacle,"**
- ◆ **If it is treated as a crime, there would be immense intrusion into the extreme** privacy of the matrimonial sphere. It is better to be left as a ground for divorce.
- ◆ Section 497 made a husband the **'licensor' of his wife's sexual choices and that this archaic law does not square with today's constitutional morality.** The offence perpetuates the gender stereotype that the 'third-party male' has seduced the woman, and she is his victim.
- ◆ The criminalisation of adultery **subjugated the woman to a position where the law disregarded her sexuality. He reasoned, "Marriage does not mean ceding autonomy** of one to the other.
- ◆ The ability to make sexual **choices is essential to human liberty.** Even within private zones, an individual should be allowed her choice."
- ◆ The autonomy of **an individual to make his or her choices concerning his/her sexuality in the private sphere should be protected from criminal sanction.**
- ◆ Adultery although a moral wrong *qua* the spouse and the family, however, does not result in any wrong against the society at large in order to bring **it within the ambit of criminal law.**
- ◆ **Instead highlights that adultery should remain as a ground for divorce if one** believes in a conservative framework of marriage. "It is difficult for a woman to live with a man who is cheating on her. But that's between two private parties.

Parliamentary panel's recommendations

- ◆ In its report, the **Committee suggested that adultery be reinstated as a criminal offence, but be made gender-neutral,** thereby **making both men and women equally culpable** under the law. Highlighting the need to protect the institution of marriage, the report stipulates.
- ◆ The Committee is of the view that the institution of marriage is considered sacred in Indian society **and there is a need to safeguard its sanctity. For the sake of protecting the institution of marriage, this section should be retained in the Sanhita (Bharatiya Nyaya Sanhita)** by making it gender neutral.
- ◆ Pointed out that the revoked Section 497 of the IPC "only penalised the married man, and reduced the **married woman to be a property of her husband". The proposed change also seeks to address this deficiency.**
- ◆ The Committee reasoned that **adultery be criminalised in a gender-neutral manner on the ground that it is crucial to safeguard the sanctity of the institution of marriage.**



EMPOWERING DISABILITY INCLUSION IN INDIA

Context: From 'For' to 'By'- The idea of empowerment and inclusion regarding Disability needs an orientation shift to provide more fruitful.

'For' and 'By':

- ◆ **"For"** is often used when a person is receiving something and **"By"** is to "identify the agent performing an action".



- ◆ This difference is crucial when it comes to **disability inclusion**, as the approach is completely different if it is **“by” persons with disabilities being a part of the process and not “for” them**, without them in the process.

Why?

- ◆ Ensuring **inclusive opportunities and employment in rural areas** is imperative, considering the majority of persons with disabilities reside in these regions.

Disability as a Multifaceted Challenge:

- ◆ **Disability**, as a complex amalgamation of **social, economic, and gender vulnerabilities**, demands nuanced approaches for equitable solutions.
- ◆ Globally, 1.3 billion people grapple with disabilities, with **80% residing in developing countries and 70% in rural areas**.
- ◆ The existing **systems often perpetuate exclusion**, leading to heightened instances of poverty, limited educational access, and social and economic discrimination.

The Significance of 'By' in Disability Inclusion

- ◆ Understanding the linguistic nuances, the term **‘by’ in disability inclusion signifies the active participation** of persons with disabilities in the process, a departure from the passive ‘for’ them approach.
- ◆ This distinction is pivotal for **fostering genuine inclusion**.

The Economic Imperative of Inclusion

- ◆ The **International Labour Organization (ILO)** underscores that integrating persons with disabilities into the economy can contribute to a global GDP boost of 3% to 7%.
- ◆ Despite the ideal of equal opportunities, **the current employment landscape falls short**, reinforcing stereotypes and hindering access to the job market.
- ◆ The current employment scenario **is limited, providing fewer jobs for persons with disabilities** and perpetuating stereotypes that create further barriers for people with disabilities to access the labour market.
- ◆ It is also in direct **contravention of the United Nations Convention on the Rights of Persons with Disabilities**, which advocates changing attitudes and perceptions towards persons with disabilities and viewing inclusion from a social development dimension.

- ◆ **Disability inclusion** is rooted in **assuring the rights of persons with disabilities** and recognising the economic benefits of inclusion.

The SPARK Project

- ◆ The collaboration between **ILO, IFAD, and the Women’s Development Corporation in Maharashtra** manifests in the SPARK project.
- ◆ This initiative empowers persons with disabilities by training them as **Disability Inclusion Facilitators (DIFs)**, fostering awareness, and breaking down barriers.
- ◆ The **project has successfully instigated a positive shift** in attitudes at societal and administrative levels.



MODERNISATION OF INDIA-ASEAN FTA

Context: India and the 10-member ASEAN nations is going to conduct a review meeting of the existing free trade agreement (FTA) and discuss ways to make the pact more ‘modern’ and address needs of present times.

What is the need to review ASEAN India Trade in Goods Agreement (AITGA)?

- ◆ **Background:** The existing **Free Trade agreement** was signed in August 2009 and enforced from 2010.

Increasing Trade Deficit

- The ASEAN India Trade in Goods Agreement (AITGA) has led to a trade deficit heavily skewed against India.
- Over the years, this deficit has ballooned from \$7.5 billion per annum at the time of the pact’s implementation to a staggering \$43.57 billion.
- In the fiscal year 2022-23 alone, India’s exports to ASEAN countries were valued at \$44 billion, while imports from these nations stood at \$87.57 billion.

- ◆ Now the new areas such as labour, environment, SMEs and gender are likely to be kept out in the pact for modernisation.
- ◆ The first round of negotiations for reviewing the FTA, officially known as the **ASEAN India Trade in Goods Agreement (AITGA)**, will be on February 18-19 in New Delhi.
- ◆ **Objective:** To renegotiate the trade agreement following a significant increase in trade deficit with the 10 member bloc.

What can be expected from the upcoming review?

This will involve a comprehensive re-evaluation of the entire FTA with an emphasis on modernization. Key aspects under consideration include:

- ◆ **ROO Modification for Market Access:**
 - ▶ Modernizing the **ASEAN-India Trade in Goods Agreement (AITGA)** involves changes in Rules of Origin (ROO).
 - ▶ Introduction of **Preferential Specific Rules (PSRs)** in the ROO chapter aims to relax rules for select items, boosting India's exports.
 - ▶ PSRs can also prevent potential re-routing of Chinese goods through ASEAN nations, strengthening India's market position.
- ◆ **Chapter on Trade Remedies:**
 - ▶ The revamped AITGA will include a dedicated chapter on trade remedies.
 - ▶ This chapter aims to safeguard domestic industries by providing mechanisms to counteract unfair trading practices or unexpected surges in imported goods.
 - ▶ Trade remedies act as a safety net, ensuring protection for domestic industries against adverse impacts of global trade dynamics.
- ◆ **Exclusion of New Areas to Ensure Focus:**
 - ▶ The modernization effort will not introduce new areas like **environment, labour, MSMEs, or gender** into the AITGA.
 - ▶ The decision is driven by the goal of avoiding complexity and maintaining the pact's focus on enhancing efficiency.
 - ▶ Prioritizing the improvement of existing provisions reflects a strategic approach to streamline the free trade agreement without introducing additional complexities.
- ◆ **Efficiency Enhancement as Primary Goal:**
 - ▶ The overarching objective of AITGA revamping is to enhance the efficiency of the existing trade pact.
 - ▶ Instead of expanding into new areas, the focus is on **refining and optimizing** the current framework for a more effective trade relationship between ASEAN nations and India.
 - ▶ This strategic approach aligns with the goal of ensuring the AITGA remains a streamlined and impactful instrument for fostering economic cooperation.
- ◆ The review process is expected to be conducted on a quarterly basis, with the goal of completing the negotiations by 2025.

INDIA, OMAN IN TALKS FOR COMPREHENSIVE ECONOMIC PARTNERSHIP AGREEMENT

Context: Recently, Sultan Haitham bin Tarik, head of Oman, is on his first visit to India.

About:

- ◆ Talks at the Hyderabad House covered discussions on the Israel-Palestine situation, reflecting India's close monitoring of the Gaza conflict.
- ◆ **Agreements and Initiatives:**
 - ▶ Five documents were signed, including an anti-money laundering agreement between India's Financial Intelligence Unit and Oman's National Centre for Financial Information.
 - ▶ A proposal to recreate a maritime voyage from Mandvi, Gujarat, to Muscat in 2025-26 was embraced as a celebration of the historical ties between the two nations.

Key Highlights of the statement:

- ◆ The Prime Minister of India and Sultan Haitham bin Tarik strongly condemned terrorism, emphasizing their **commitment to combat** it in all forms.
- ◆ The Joint Statement highlighted the importance of universal values like peace, moderation, coexistence, and tolerance.
- ◆ **Vision Document:** The leaders endorsed a vision document titled '**A Joint Partnership for the Future**,' focusing on sectors such as digital connectivity, medical tourism, maritime security, hospitality, agriculture, and food security.
- ◆ **Economic Collaboration:** Appreciation was expressed for the third tranche of the **Oman-India Joint Investment Fund**, seen as a catalyst for investments from **Oman and the Gulf region** into India's rapidly growing sectors.
- ◆ **Maritime Security Monitoring:** India is closely monitoring the maritime situation near Oman and Yemen, particularly due to heightened threats to commercial shipping vessels arising.

India-Oman Relations:

Background:

- ◆ The two countries across the Arabian Sea are linked by geography, history and culture and enjoy warm and cordial relations, which are attributed to historical maritime trade linkages.

- ◆ The Sultanate of Oman is a strategic partner of India in the Gulf and an important interlocutor at the Gulf Cooperation Council (GCC), Arab League and Indian Ocean Rim Association (IORA) fora.
- ◆ Gandhi Peace Prize 2019 was conferred on Late HM Sultan Qaboos in recognition of his leadership in strengthening the ties between India & Oman and his efforts to promote peace in the Gulf region.

Military Exercises:

- ◆ Army exercise: Al Najah
- ◆ Air Force exercise: Eastern Bridge
- ◆ Naval Exercise: Naseem Al Bahr

Joint Military Cooperation Committee (JMCC): The JMCC is the highest forum of engagement between India and Oman in the field of defence.

Economic & Commercial Relations:

- ◆ For India, Oman is the third largest export destination among the Gulf Cooperation Council (GCC) countries.
- ◆ The bilateral trade was \$12.39 billion in 2022-23 as against \$5 billion in 2018-19. India's exports have increased from \$2.25 billion in 2018-19 to \$4.48 billion in 2022-23.
- ◆ Institutional mechanisms like Joint Commission Meeting (JCM) and Joint Business Council (JBC) oversee economic cooperation between India and Oman.
- ◆ India is among Oman's top trading partners.
- ◆ India is also the 4th largest market for Oman's non-oil exports for the year 2022 after UAE, US and Saudi Arabia and 2nd largest source of its import after UAE.
- ◆ Indian companies have invested in Oman in sectors like iron and steel, cement, fertilisers, textile etc.
- ◆ India-Oman Joint Investment Fund (OIJIF), a JV between State Bank of India and State General Reserve Fund (SGRF) of Oman, a special purpose vehicle to invest in India, has been operational.
- ◆ **Indian Community in Oman:** There are about 6.2 lakh Indians in Oman, of which about 4.8 lakh are workers and professionals. There are Indian families living in Oman for more than 150-200 years.

Significance of Oman for India:

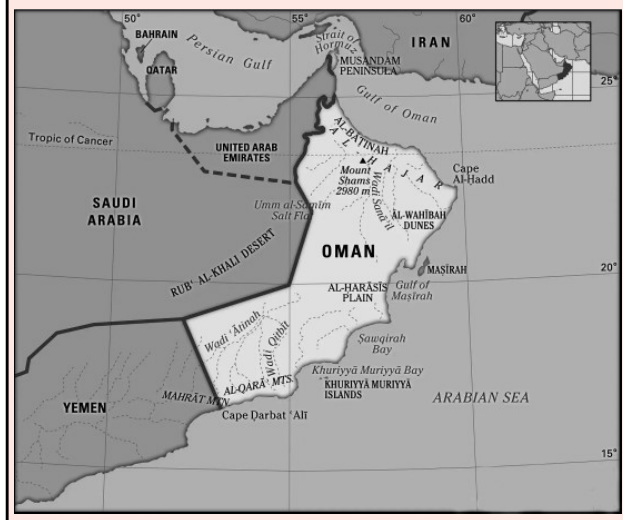
- ◆ **Geographical:** Oman is at the gateway of Strait of Hormuz through which India imports one-fifth of its oil imports.
- ◆ **Defence cooperation** has emerged as a key pillar for the robust India-Oman strategic partnership. Defence exchanges are guided by a Framework MOU which was recently renewed in 2021.

- ▶ Oman is the only country in the Gulf region with which all three services of the Indian armed forces conduct regular bilateral exercises and staff talks, enabling close cooperation and trust at the professional level.

- ◆ **Geopolitical Cooperation:** Oman also actively participates in the **Indian Ocean Naval Symposium (IONS)**.

Key Facts:

- **Border Countries:**
 - ▶ United Arab Emirates (UAE) to the northwest.
 - ▶ Saudi Arabia to the west and southwest.
 - ▶ Yemen to the southwest.
- **Deserts:** The largest desert in Oman is the Rub' al Khali or the "Empty Quarter," one of the largest continuous sand deserts in the world.



75 YEARS OF UNIVERSAL DECLARATION OF HUMAN RIGHTS

Context: The year 2023 marked the 75th anniversary of Universal Declaration of Human Rights.

Background

- ◆ Seventy-five years ago, the **UN General Assembly** approved the Universal Declaration of Human Rights, marking a pivotal moment in shaping the **Post-World War II international order**.
- ◆ While the declaration aimed to establish a common standard for all peoples and nations, its journey through the decades has been complex, reflecting the some historical moments of conflicts and crises.

Key Elements of the Universal Declaration

Content and Purpose:

- ◆ The declaration comprises a preamble and 30 articles outlining fundamental rights and freedoms.
 - ▶ **Article 1** emphasizes the inherent freedom and equality of all human beings.
 - ▶ **Article 2** underscores entitlement to rights and freedoms without discrimination.
- ◆ Various articles address the right to life, liberty, and security, freedom from slavery, torture, and equality before the law.
- ◆ It enshrines rights to freedom of religion, opinion, expression, peaceful assembly, and education.

Origins and Drafting:

- ◆ Born out of a “never again” sentiment post-World War II, the declaration aimed to guarantee individual rights globally.
- ◆ Eleanor Roosevelt chaired the drafting committee, reflecting diverse geographical representation.
- ◆ Over 50 United Nations (UN) member countries participated in the final drafting in 1948, culminating in unanimous approval by the General Assembly.

Legal Status and Impact:

- ◆ While not a treaty, the declaration’s principles influenced many countries’ laws and became the foundation for international human rights law.
- ◆ Recognized as inspiring over 70 human rights treaties globally, it influenced movements like decolonization and anti-apartheid.

Challenges:

- ◆ Despite its influence, the declaration faces challenges in its implementation.
- ◆ Noted its misuse and abuse for political gain, and some governments chip away at its principles.
- ◆ Non-binding and isn’t legally binding.
- ◆ Contemporary war landscape is the place for violation of human rights.

Relevance Today:

- ◆ Despite challenges, the declaration remains relevant, serving as a universal standard for human rights. IT places a public eye on errors and omissions.
- ◆ UN Human Rights Chief Volker Türk emphasizes its inspiration for various freedom movements worldwide.
- ◆ The declaration isn’t a treaty and isn’t legally binding in itself, but the principles it sets out have been

incorporated into many countries’ laws and it is viewed as the basis for international human rights law.

Current Human Rights Landscape

Conflict and Crises:

- ◆ The 75th anniversary coincides with challenges to human rights in conflicts like Israel-Hamas, Russia’s war in Ukraine, and internal issues in Myanmar and Sudan.

Conclusion

- ◆ As the world reflects on 75 years of the Universal Declaration of Human Rights, it stands as a testament to the possibility of a global vision for human rights. Despite challenges and misuse, its principles continue to guide the quest for a world where human rights are inherent and respected universally.



Context: Europe has reached a provisional deal on landmark European Union rules governing the use of Artificial intelligence.

Background:

- ◆ Data science and artificial intelligence legislation began with the **General Data Protection Regulation (GDPR)** in 2018.
 - ▶ GDPR act in the **European Union** is not only about AI, but it does have a clause that describes the **‘Right to explanation’** for the impact of artificial intelligence.
- ◆ **Later on, 2021’s AI Act** in Europe classifies AI systems into **three categories**:
 - ▶ Systems that create an unacceptable amount of risk must be banned
 - ▶ Systems that can be considered high-risk need to be regulated
 - ▶ Safe applications, which can be left unregulated
- ◆ **Other Similar regulations:** Canada enacted the **Artificial Intelligence and Data Act (AIDA)** in 2022 to regulate companies using AI with a modified risk-based approach.
 - ▶ Unlike the AI Act, AIDA does ban the use of AI even in critical decision-making functions. However, the developers must create risk mitigation strategies as a backup plan.

About the Deal:

- ◆ With the recent deal, the EU moves toward becoming the **First Developed Country** to enact laws governing AI.
- ◆ The deal was held between **EU countries and European Parliament members**.
- ◆ **The deal comprises of:**
 - ▶ Drawing up technical documentation,
 - ▶ Complying with EU copyright law and
 - ▶ Disseminating detailed summaries about the content used for training.
- ◆ **Procedure for High-impact foundation models with systemic risk** will have to;
 - ▶ Conduct model evaluations,
 - ▶ Assess and mitigate systemic risks,
 - ▶ Conduct adversarial testing,
 - ▶ Report to the **European Commission** on serious incidents,
 - ▶ Ensure cyber security and
 - ▶ Report on their energy efficiency.
- ◆ **For Government's Use:** Governments can only use real-time biometric surveillance in public spaces in cases of victims of certain **crimes, prevention of genuine, present, or foreseeable threats, such as terrorist attacks, and searches for people suspected of the most serious crimes.**
- ◆ **Prohibited Activities:**
 - ▶ The agreement bans **cognitive behavioural manipulation**
 - ▶ The untargeted scrapping of facial images from the internet or CCTV footage
 - ▶ Social scoring and biometric categorisation systems to infer political, religious, philosophical beliefs, sexual orientation and race

Need for such regulation:

- ◆ **Unlimited Access:** Easy access to such power is risky.
- ◆ **Job Loss:** AI, like generative AI, might mess up jobs.
- ◆ **Biased Results:** AI can be unfair. It learns from biased data and makes unfair choices.
- ◆ **Social Spying and Fakes:** It can copy voices and faces perfectly and leads to generate fake videos and photos.
- ◆ **AI in Wars:** Stopping the race for AI weapons is crucial for peace.

AI Regulation in India

- ◆ India has taken a slightly different approach to the growth and proliferation of AI.

- ◆ While the government is keen to regulate generative AI platforms like **ChatGPT and Bard**, there is no plan for a **codified law** to curb the growth of AI.

IT Minister Ashwini Vaishnaw recently stated that the **NITI Aayog**, the planning commission of India, issued some guiding documents on AI.

- These include the **National Strategy for Artificial Intelligence** and the Responsible AI for All report.

- ◆ While these documents list good practices and steer towards a vision for responsible AI, they are not legally binding.



INDIA'S 250 MILLION DOLLARS 'LINE OF CREDIT' TO KENYA

Context: India has declared a \$250 million line of credit to Kenya for the modernization of its agricultural sector. Need to look at outline of India Kenya relationship.

Line of Credit and diverse multi-dimensional cooperation

- ◆ A **\$250 million line of credit** to Kenya for **modernisation of its agricultural sector** during the visit Kenyan President William Samoei Ruto in New Delhi.
- ◆ Besides this there were talks on to **strengthen bilateral ties** in the field of **defence, trade, energy, digital public infrastructure and healthcare**.
- ◆ **Signing of five pacts** providing for cooperation in a **range of areas** including sports, education and digital solution, and unveiled a joint vision document to scale up maritime engagement in the Indian Ocean region.
- ◆ Kenyan side offered land for farming to Indian companies under a cooperative model besides showing interest in India's payment system, UPI (Unified Payments Interface).
- ◆ Both the nations agrees that **terrorism** is the **most serious challenge** facing humanity and both sides have decided to increase counter-terror cooperation.
- ◆ Both sides also **deliberated on defence cooperation** and emphasised on military exercises, capacity building as well as linking the defence industries of both the countries.

India-Kenya Bilateral Relations

- ◆ India and Kenya are **maritime neighbours** with robust and multi-faceted partnership, marked by **regular high-level visits, increasing trade and**

investment and extensive people to people contacts.

- ◆ India established the **office of Commissioner for British East Africa resident** in **Nairobi** in 1948.
- ◆ Following Kenyan independence in December **1963**, a **High Commission** was established.

Trade

- ◆ An **India-Kenya Trade Agreement** was signed in 1981, under which **both countries** accorded **Most Favoured Nation** status to each other.
- ◆ Main **Indian exports** to Kenya include **petroleum products, pharmaceuticals, steel products, machinery, yarn, vehicles and power transmission equipment**. Main **Kenyan exports** to India include **soda ash, vegetables, tea, leather and metal scrap**.
- ◆ According to the Kenya Investment Authority (KenInvest), **India** is the **second largest investor** in Kenya.

Development

- ◆ India offers **development assistance** to Kenya in the form of loans and credit. Recently India given **LOC of \$250 million**.
- ◆ India is the **third largest source** (other than neighbours) of **inbound tourists** to Kenya.

Indian Community and Diaspora in Kenya

- ◆ Indians were trading with the Swahili coast since early historical times as evidenced by ancient works. With the region coming under Omani rule particularly Mogadishu, Mombasa and Zanzibar, Indian presence remained part of Swahili kaleidoscope.
- ◆ With the advent of Portuguese and finally British, Indian involvement became deeper. Prominent figures of the Kenyan Indian community in Kenya's pre-independence period included the labour leader Makhan Singh. M. A. Desai and Pio Gama Pinto participated actively in Kenya's independence struggle.
- ◆ A vibrant community of persons of Indian origin presently numbered around 80,000 including an estimated 20,000 Indian citizens.

INDIA AND AI: TO AVOID THE MISTAKES FROM THE NUCLEAR ERA

Context: India while going for nuclear weapons, committed some missteps. The same should be avoided as India goes big on AI.

Background

- ◆ Reflecting on **India's historical missteps in nuclear weapons** development during the 1970s, it is evident that a **similar miscalculation in the realm of Artificial Intelligence (AI)** could prove detrimental to the nation.
- ◆ **Unlike the disarmament idealism** that influenced India's nuclear stance, **the challenges posed by AI demand a more nuanced and strategic approach**.

AI and Nuclear Parallels

- ◆ While **nuclear and AI** technologies differ significantly, parallels can be drawn in their **potential global impact**.
- ◆ The nuclear revolution, triggered by the atomic bombings of Hiroshima and Nagasaki, prompted **efforts to manage threats to humanity**.
- ◆ Similarly, **the AI revolution**, with its potential to **reshape economies, societies, and politics**, necessitates international collaboration to establish norms and institutions.

Current Geopolitical Landscape

- ◆ The **dynamics of AI governance** today **mirror challenges** faced in the **nuclear age**.
- ◆ The race for **AI dominance between major powers**, especially the U.S. and China, echoes the **Cold War competition** in nuclear capabilities.
- ◆ Efforts **to regulate military AI uses** and calls for **arms control agreements** are reminiscent of past attempts to manage nuclear weapons.

Lessons from India's Nuclear History

- ◆ Drawing from **India's nuclear journey**, three lessons emerge.
- ◆ Firstly, the era of **disarmament idealism** should be left behind.
- ◆ India's historical rhetoric on the **"time-bound elimination of nuclear weapons"** hindered pragmatic thinking.
- ◆ In the AI domain, **India cannot afford complacency** and must proactively engage in shaping its future.

Building Partnerships

- ◆ The importance of building on current **momentum in partnerships, particularly with the U.S.**, is underscored.
- ◆ **India's historical reluctance**, as seen in missed opportunities post the 2005 civil nuclear deal, should not be repeated.

- ◆ **Collaborations with the U.S. and the West** on critical technologies, including AI, must be prioritized for India's global positioning.

Avoiding Exceptionalism

- ◆ The temptation to pursue an **"Indian way"** in technological development should be resisted.
- ◆ Embracing **India's exceptionalism in AI may impede international cooperation.**
- ◆ **The private sector's role is pivotal**, as seen in the West's leadership in AI research and development.
- ◆ India's recent initiatives to **open up the science and technology sector are positive steps**, but urgent and extensive reforms are required.
- ◆ In conclusion, India stands at a **critical juncture** in shaping its AI trajectory. Learning from the mistakes of the past, especially in nuclear pursuits, is imperative. **Pragmatic policies, strategic partnerships, and a proactive role** for the private sector will be instrumental in ensuring India's success in the global AI landscape.



SRI LANKA REACHES AGREEMENT WITH INDIA, PARIS CLUB ON DEBT TREATMENT

Context: The consortium of lenders to Sri Lanka expresses an anticipation of transparency from "other bilateral creditors," with an implicit reference to China.

Sri Lanka's Debt Default and IMF Recovery Package

- ◆ In response to last year's economic crisis, Sri Lanka defaulted on its nearly \$51 billion foreign debt.
- ◆ A comprehensive debt restructuring plan became imperative to kickstart an economic recovery program backed by the International Monetary Fund (IMF).

Key Agreements with Official Creditors

- ◆ Sri Lanka has reached an "agreement in principle" with India, Japan, and the Paris Club group of creditors, setting the stage for a debt treatment plan.
- ◆ The Official Creditor Committee (OCC), co-chaired by India, Japan, and France, played a pivotal role in formulating the agreement.
- ◆ The OCC and Sri Lanka aligned the debt treatment parameters with those of the Extended Fund Facility (EFF) arrangement between Sri Lanka and the IMF.

Next Steps and Transparency Expectations

- ◆ The OCC anticipates formalizing the agreement in the coming weeks through a Memorandum of Understanding with Sri Lanka.
- ◆ Japan and India, major lenders, emphasize the importance of creditor parity and transparency, expecting other bilateral creditors to share necessary information transparently.
- ◆ Sri Lanka is urged to continue engagement with private creditors to secure favorable terms, aligning with the OCC's conditions.

IMF's Stance and Contingencies

- ◆ The IMF, after reaching a staff-level agreement with Sri Lanka, views securing an agreement with official creditors as the critical next step for the next tranche of the IMF package.
- ◆ China, Sri Lanka's largest bilateral creditor, has assured cooperation in the debt restructuring process, with specifics of the plan eagerly awaited.

Sri Lanka's Economic Crisis and Its Background –

Reasons for Balance of Payments crisis surfaced in Sri Lanka in 2022-

- ◆ Sri Lanka's economy and its foreign currency revenue to large extent depends on tourism, which has received a severe beating in the recent times.
- ◆ The 2019 serial blast in Sri Lanka had caused decline in the arrival of foreign tourist in the country.
- ◆ Global pandemic of Corona has further decimated the tourism industry.
- ◆ The pandemic also did not allow Sri Lankan labourer to travel outside the country where they are employed (mostly Gulf countries), thus impacting the foreign currency earned by Sri Lanka through the way of remittances.

What did the Government of Sri Lanka do to overcome the crisis-

- ◆ China had promised loan of **1 billion dollars** and a credit line of **1.5 billion dollars.**
- ◆ Sri Lanka succeeded in receiving line of credit worth **1 billion dollars** from the Indian Government.

Line of Credit: It is a credit facility extended by a bank or other financial institution or a government to another government, business or individual that enables it to draw on the facility and use the funds when needed.

- ◆ The **Central Bank of Sri Lanka** received aid from the **International Monetary Fund (IMF)** as its assistance with conditionality.

Sri Lanka and its Strategic significance:

- ◆ **Strategic Location:** Sri Lanka occupies a geo-strategically important position as about two-thirds of the world's oil and half of the world's container transportation passes through the south of Sri Lanka.
 - ▶ Therefore, Sri Lanka, which is strategically located, stands out in terms of the security of maritime communication and trade lines in the Indian Ocean.
- ◆ **Positioned as an Island Nation:** On the other hand, Sri Lanka is home to ports that have the potential to become important maritime hubs in the Indian Ocean.
- ◆ **Economic Crisis:** The crisis that is hampering Sri Lanka's economic and political stability could have serious repercussions on India.
 - ▶ Because Sri Lanka's economic and therefore political dependence on China has led to an increase in Chinese influence in the country.

India's stance with Sri Lanka:

- ◆ Sri Lanka has an important place in both India's '**Neighbourhood First**' policy and '**SAGAR**' vision.
- ◆ India wants to expand the scope of digital payments between both the countries, bringing the use of UPI and similar tools to the forefront.

'Neighbourhood First' policy:

- Neighbourhood First Policy of India is a core component of **India's foreign policy**.
- It focuses on peaceful relations and collaborative synergetic co-development with its South Asian neighbors of the Indian subcontinent.
- This policy creates new avenues as well as leverages existing regional cooperation initiatives, such as **SAARC, SASEC, BBIN, and BIMSTEC**.
- It compliments India's Look East policy focused on **Southeast Asia and Look West Policy** focused on Middle East.

'SAGAR' vision:

- SAGAR stands for "**Security and Growth for All in the Region**" is India's policy or doctrine of maritime cooperation in the Indian Ocean region.
- The policy was first announced by Prime Minister Narendra Modi in 2015.

SC APPROVAL FOR EXTENSION: DYNAMICS OF GOVERNMENTS RETAINING PREFERRED BUREAUCRATS

Context: The recent Supreme Court approval for the extension of the Chief Secretary of Delhi sparks a discussion on the trend of governments retaining bureaucrats beyond their usual tenures.

Why Governments Prefer Familiar Faces?

- ◆ Governments, **both at the central and state levels**, often opt for extending the services of known bureaucrats.
- ◆ The **comfort factor** associated with officials familiar with the government's priorities, capable of **troubleshooting without causing disruptions, and adept at maintaining the status quo**.

Legal Perspectives on Extensions:

- ◆ Formal setup of the All-India Services, where **extensions are not the norm** but exceptions are allowed.
- ◆ The Supreme Court's stance on the **six-month extension to the Chief Secretary of Delhi** is scrutinized, emphasizing that it doesn't violate any existing rules.

Exigencies of Work and Justifications:

- ◆ Extensions are envisioned for exigencies of work, providing a specific context for Delhi, where impending general elections and legal considerations surrounding the NCT Act play a role.
- ◆ The Lieutenant Governor's authority over services, pending the Supreme Court's verdict, is a pivotal factor.

New Argument: Functions of the Chief Secretary

- ◆ A new argument is **introduced by the Solicitor General of India**, suggesting that the **Chief Secretary of Delhi, in specific domains, reports only to the central government, justifying its authority to extend** the incumbent's services.

Challenges and Controversies:

- ◆ Challenges to the extension process, **especially when allegations of corruption surface**, as seen in the case of Naresh Kumar.

- ◆ The public scrutiny and legal petitions add complexity to what has traditionally been an administrative matter.

Recommendations:

Retirement Age and Performance Benchmarks:

- ◆ Revisiting the practice of extensions and reflects on the need to reconsider the retirement age, advocating for aligning it with global standards.
- ◆ Implementing provisions like FR 56(j) to assess performance and retire officials transparently based on clear benchmarks.

Recognizing Excellent Officers:

- ◆ The broader question of whether extensions are the sole means of recognizing exemplary service is raised, urging a more thoughtful approach and improved optics in acknowledging the contributions of outstanding officers.



Context: Recently, the Supreme Court (SC) has clarified that tribunals functioning under the strict parameters of their governing legislations cannot direct the government to make policy.

About the Judgment:

- ◆ The top court was deciding on whether the **Armed Forces Tribunal (AFT)** could have directed the government to make a policy to fill up the **post of Judge Advocate General (Air)**.
- ◆ AFT is vested with the powers of a civil court and the Tribunal did not have the powers of the **Supreme Court or the High Courts**.



What are Tribunals?

- ◆ A tribunal is a quasi-judicial institution that deals with the resolution of disputes pertaining to administration, taxation, environment, securities, etc.
- ◆ Tribunals in India are adjudicatory bodies that serve as an alternative to the traditional court system.
- ◆ Tribunals were established to provide **swift, cost-effective, and decentralized resolution** of disputes across various issues.
- ◆ It performs a number of functions like adjudicating disputes, determining rights between contesting parties, making an administrative decision, reviewing an existing administrative decision, and so forth.

Why they are formed?

Some of the salient features of tribunals in India are;

- ◆ **Principles of natural justice:** Tribunals in India follow the principle of natural justice, which requires that all parties to a legal proceeding be given a fair and impartial hearing and that no person should be a judge in their own cause.
- ◆ **Not bound by Civil Procedure Code (CPC):** Unlike traditional courts, they are not bound by the strict rules of procedure and evidence set out in the CPC.
- ◆ **Subject expertise:** A significant part of tribunals is comprised of members who have specialized expertise in the subject matter over which they have jurisdiction.
- ◆ **Quasi-judicial powers:** Tribunals can hear evidence, examine witnesses, make findings of fact, apply the law to the facts, and make binding decisions.
- ◆ **Appellate authority:** The decisions of tribunals can be appealed to a higher court. The decision of tribunals in the first instance can be appealed to the appellate authority and, later, to the High Courts and/or Supreme Court.
- ◆ **Time-bound resolution:** The adjudicatory process in tribunals is usually faster than the traditional court system, which helps resolve disputes more quickly and efficiently.

Constitutional and legal provisions pertaining to Tribunals in India:

- ◆ The original Constitution did not contain provisions with respect to tribunals. The **42nd Amendment Act of 1976** added a new **Part XIV-A** to the Constitution. This part is titled '**Tribunals**' and consists of only two Articles—
 - **Article 323A** dealing with administrative tribunals and
 - **Article 323B** dealing with tribunals for other matters.

PROVISION	DESCRIPTION
Article 323A	Empowers the Parliament to provide for the establishment of administrative tribunals for the adjudication of disputes relating to recruitment and conditions of service of persons appointed to public services of the Centre, the states, local bodies, public corporations, and other public authorities.
Article 323B	Empowers the Parliament and state legislatures to set up tribunals for various matters like Industrial and labour, Foreign exchange, import and export, Land reforms, Food, The ceiling on urban property, Elections to Parliament and state legislatures, Rent and tenancy rights, etc.
Administrative Tribunals Act, 1985	In relation to Article 323 A , The Parliament enacted the Administrative Tribunals Act in 1985, which empowers the Central government to establish the Central Administrative Tribunal and state-level administrative tribunals. This Act opened a new chapter in the sphere of providing speedy and inexpensive justice to the aggrieved public servants.

New rules for tribunals passed in 2020:

- ◆ **The 'Tribunal, Appellate Tribunal, and other Authorities (Qualifications, Experience and other Conditions of Service of Members) Rules, 2020'** were framed by the Ministry of Finance in exercising powers under Section 184 of the Finance Act 2017.
- ◆ These rules replace the 2017 Rules, which were struck down by the Supreme Court, which directed the government to re-formulate the rules in conformity with the principles delineated by the court.
- ◆ **Provisions of the New Rules:**
 - ▶ These apply to **19 Tribunals**, including **Central Administrative Tribunals, Income Tax Appellate Tribunal, Customs, Excise, Service Tax Appellate Tribunals, etc.**
 - ▶ **Foreigners Tribunals** are not covered.
 - ▶ **Appointment:** Appointments to the above Tribunals will be made by Central Government on the recommendations of the "**Search cum Selection Committee**" composed of
 - The Chief Justice of India (CJI) or a judge nominated by the CJI
 - President/chairperson of the concerned tribunal
 - Two government secretaries from the concerned ministry/department.
 - ▶ **Removal:** The search Cum Selection Committee has the power to recommend the removal of a member and also to conduct inquiries into allegations of misconduct by a member.
 - ▶ **Qualifications for tribunal members:** Only persons having judicial or legal experience are eligible for appointment.
 - ▶ **Term:** Rules also provide a fixed term of four years to the Tribunal members.
 - ▶ **Independence:** The condition in the 2017 Rules (which were set aside by Court) that the members will be eligible for re-appointment has also been dropped in the 2020 Rules.

What are the restrictions for Tribunals in India?

Jurisdiction of Tribunals:

- ◆ **Specialized Areas:** Tribunals typically have jurisdiction over specific areas of law, such as employment, tax, environment, or administrative law.
- ◆ **Statutory Grant:** Their authority is derived from statutes that establish them; outlining the types of cases they can hear and decide.
- ◆ **Limited Appellate Jurisdiction:** Some tribunals have limited appellate jurisdiction, reviewing decisions made by lower-level tribunals or administrative bodies.

Restrictions on Tribunals:

- ◆ **Limited Jurisdiction:** Tribunals have jurisdiction within their specified areas and cannot exceed their statutory authority.
- ◆ **Procedural Constraints:** They must adhere to procedural **rules and guidelines** outlined in the governing statute.
- ◆ **Appeal Mechanism:** Decisions of tribunals may be subject to appeal, ensuring a check on potential errors and maintaining fairness.



BANNING PARTY NAME ON RELIGIOUS CONNOTATIONS

Context: The Delhi High Court has mentioned that the issues raised in a petition seeking de-registration of political parties having names with caste, religious, ethnic or linguistic connotations and flags resembling the tricolour have to be decided by the Parliament as it is not in the domain of judiciary.

About the issue:

- It has referred to political parties such as Hindu Sena, All India Majlis-e-Ittehadul Muslimeen and Indian Union Muslim League as examples of names with religious connotations and said this was "against the spirit" of the **Representation of Peoples Act (RPA)** and the Model Code of Conduct.
- Also in addition, there are many political parties including the **Indian National Congress**, which use a flag similar to the national flag, which is also against the spirit of the RPA.
- In its reply filed in 2019, the **Election Commission** had said that in 2005 it took a policy decision not to register any political party having a name with religious connotations and thereafter, no such party has been registered.
- However, any such party registered **before 2005** will not lose its registration for having a name with a religious connotation.

What is an Election symbol?

- An electoral or election symbol is a standardized symbol allocated to a political party.
- They are used by the parties during their campaigning and are shown on Electronic Voting Machines (EVMs), where the voter chooses the symbol and votes for the associated party.
- They were introduced to facilitate voting by illiterate people, who can't read the name of the party while casting their votes.

Provisions under the Election Symbols (Reservation and Allotment) Order, 1968:

- In 1968, the **Election Commission (EC)** promulgated this order, which provided for **specification, reservation, choice and allotment of symbols at elections** in Parliamentary and State Assemblies' constituencies.

A reserved symbol is one that is **allocated to a political party** while a free symbol is available to be allocated to non-recognized parties and independent candidates.

- It also had provisions regarding the **registration and recognition** of political parties as state and national parties.
- The Election Symbols Order also provided for **resolution of disputes** in cases involving splits in recognized parties or merger of two or more political parties.
- Symbols are reserved for political parties and Paragraph 5 of the order distinguishes between a reserved and a free symbol.

- Also, political parties are divided into **regional or state and national parties**, or registered and unregistered parties.
- However, Paragraph 6 of this order states the conditions which a party has to fulfill to become a **national or a state party**.



TELECOMMUNICATIONS BILL, 2023 PASSED IN LOK SABHA

Context: The New telecommunications Bill 2023 has been introduced in parliament to overhaul Telecom sector in India w.r.t. changing global landscape: 6G, Internet revolution etc.

- In the **dynamic landscape** of global technology governance, the recent **Telecommunications Bill, 2023** in India stands as a pivotal moment.
- This comprehensive legislation not only marks a **significant departure from archaic laws** dating back to the colonial era but also addresses critical facets of the evolving **telecommunications sector**.

Background:

- The Telecommunications Bill, 2023 **replaces** the **antiquated Indian Telegraph Act, 1885**, along with the **Indian Wireless Telegraphy Act, 1933**, and the **Telegraph Wires (Unlawful Possession) Act, 1950**.
- It also brings about crucial amendments to the **Telecom Regulatory Authority of India (TRAI) Act, 1997**, ushering in a new era of regulatory frameworks and governance.

Structural Changes and Authorization:

- A **significant shift** lies in the move from a **licensing regime to an authorization system**.
- The **Bill streamlines the cumbersome licensing processes**, consolidating more than 100 types of licenses into a **single authorization for telecom operators** and service providers.
- This and foster a more efficient and transparent system. **structural change aims to simplify the regulatory landscape**

Spectrum Assignment and Allocation:

- The Bill introduces a preference for **spectrum assignment through auctions, emphasizing transparency and market-driven allocation**.
- However, **exceptions exist** for certain sectors such as **metro rails, community radio, defense, railways, and police, where administrative allocation will be employed**.

- ◆ The legislation also allows for the **repurposing of spectrum**, enabling its use for different technologies, promoting flexibility and optimal utilization.

Security and Interception Measures:

- ◆ In the context of national security and public safety, the **Bill grants the government the power of interception, monitoring, and blocking of messages on telecom networks**.
- ◆ It upholds the **"trusted sources"** regime, established after the 2020 Indo–Chinese border skirmishes, and introduces a voluntary undertaking system for telecom operators to self-report compliance lapses.
- ◆ The legislation maintains provisions for **lawful interception and surveillance of telecom communications**, further fortifying security measures.

Right of Way and User Protection:

- ◆ The Bill introduces provisions for telecom infrastructure providers to seek a **right of way over public or private property**, promoting the establishment of robust telecom networks.
- ◆ Additionally, it emphasizes user **protection measures, including biometric authentication for customers**, aimed at curbing spam calls and messages.
- ◆ The central government may **prescribe standards and assessments for telecom equipment, infrastructure, networks, and services**.

Satellite Spectrum Allotment and Global Harmonization:

- ◆ A notable aspect of the Bill is its **opening of doors for satellite spectrum allotments**, aligning with global norms.
- ◆ This move is expected **to benefit satellite internet providers**, including Bharti-backed OneWeb and SpaceX's Starlink.
- ◆ The decision to allocate **satellite spectrum through an administrative method** is seen as a **strategic choice** to foster international cooperation, innovation, and competitiveness.

Digital Bharat Nidhi and Universal Service Obligation Fund:

- ◆ The Bill introduces **the Digital Bharat Nidhi, formerly known as the Universal Service Obligation Fund**, reflecting a commitment to extending telecom services to underserved areas.
- ◆ This renaming aligns with the evolving **digital landscape and underscores the fund's expanded scope**, now including research and development activities.

Concerns and Future Directions:

- ◆ While the Telecommunications Bill, 2023 signifies a progressive leap in **telecom regulation, concerns linger regarding its potential impact on internet-based communication platforms**.
- ◆ The **broad definition** of telecommunication services has sparked debates about the inclusion of online platforms, necessitating further consultations for clarity.
- ◆ The enactment of the Telecommunications Bill, 2023 represents a landmark moment in India's journey toward a modernized regulatory framework for the telecommunications sector. **Striking a balance between innovation and regulation**, the legislation aims to propel the nation into a new era of digital connectivity, security, and global competitiveness. As the technological landscape continues to evolve, the implications of this comprehensive bill are poised to shape the future trajectory of telecommunications in India.

THE INTERSECTION OF EDUCATION, DIGITAL LITERACY, AND INDIA'S WORKFORCE DEVELOPMENT

Context: The linkage of Education, employment, quality of labour in the fast changing digital landscape, amidst India's push for literacy and skills make Digital literacy a pivot to realize development.

About:

- ◆ India, with its focus on **educational access and a growing digital landscape**, stands at the crossroads of the **"demographic dividend" and the emerging "digital dividend."**
- ◆ The quality of the labour force, crucial for the nation's developmental needs, hinges on empowering the youth to fulfill their aspirations and contribute meaningfully to the economy.

Educational Landscape and Transition Rates:

- ◆ The **Right to Free and Compulsory Education (2009)** has significantly improved elementary schooling, reducing the percentage of out-of-school children aged 6-14 to 2.8% by 2018.
- ◆ Despite **challenges in transitioning to secondary education**, the proportion of 15-16 year olds not enrolled decreased from 16.1% in 2010 to 13.1% in 2018.

Covid-19 Disruptions and Enrolment Patterns:

- ◆ The **extended closure** of schools due to the Covid-19 pandemic raised **concerns about learning loss and potential dropout rates**.
- ◆ **Contrary to fears**, enrolment data during the pandemic showed a **minor increase in out-of-school** numbers for the **6-10 age** group, likely due to **delayed recording**.
- ◆ However, the **proportion of 6-14 year olds not in school decreased to 1.6% in 2022**, showcasing resilience.
- ◆ Moreover, the **out-of-school proportion for 15-16 year olds dropped from 16.1% in 2010 to 7.5% in 2022**.

The Digital Transformation:

- ◆ The Covid-19 years witnessed a positive shift with the **penetration of smartphones** in rural India.
- ◆ While mobile coverage was nearly universal, **smartphone ownership in rural households increased from 36% in 2018 to 74.8% in 2022**.
- ◆ **Access to digital devices** became critical for education and livelihoods during the pandemic.

Digital Literacy's Crucial Role:

- ◆ The **World Development Report** emphasizes the **"digital dividend"** that can result from bridging the digital divide.
- ◆ As more youth **complete elementary education and transition** to the secondary stage, India is well-positioned to harness both the **demographic and digital dividends**.
- ◆ However, this requires a focus **on digital literacy**.

ASER 2022: Spotlight on Rural Youth:

- ◆ The **Annual Status of Education Report (ASER) 2022** focuses on rural youth aged 14 to 18.
- ◆ Understanding their **choices, educational pursuits, work aspirations, and digital engagement** provides insights for **targeted support and policymaking**.

EdTech and Digital Literacy:

- ◆ Given the recent emphasis on **EdTech in delivering educational resources**, understanding **youth's digital literacy is crucial**.
- ◆ Exploring the types of digital activities they engage in and assessing their **ability to perform digital tasks** is essential for effective implementation of digital education tools.

The Call for Support:

- ◆ To harness the full potential of India's youth, a **comprehensive approach is needed**.
- ◆ This includes addressing **educational needs, fostering digital literacy, and ensuring that the workforce is equipped** to navigate the evolving demands of the economy.
- ◆ The **confluence of education, digital literacy, and workforce development is pivotal** for India's sustainable growth.
- ◆ A well-supported and digitally literate youth population is the cornerstone for realizing both demographic and digital dividends in the years to come.
- ◆ In an era defined by **rapid technological advancements**, the concept of digital literacy has **transcended mere proficiency with digital devices. It has evolved into a cornerstone for socio-economic progress**, affecting various facets of our lives, particularly in the realms of employment, skills acquisition, labour dynamics, and overall developmental trajectories.

Digital Literacy as a Catalyst for Employment:

- ◆ Digital literacy is no longer a luxury but a **prerequisite for active participation in today's job market**.
- ◆ The burgeoning digital landscape demands a workforce equipped with the ability to **navigate digital tools, platforms, and data**.
- ◆ Employability, once primarily linked to academic qualifications, now hinges on an **individual's digital acumen**.
- ◆ From basic computer skills to more advanced capabilities like data analysis and programming, **digital literacy acts as a bridge**, connecting job seekers with a myriad of employment opportunities.

Skill Enhancement and the Digital Dividend:

- ◆ The evolving nature of work necessitates a **continuous cycle of skill development. Digital literacy serves as the linchpin in this process**, enabling individuals to adapt to emerging technologies and industry trends.
- ◆ As **industries embrace automation, artificial intelligence, and data analytics**, individuals with robust digital skills are better positioned to contribute meaningfully.
- ◆ The **"digital dividend" referenced in the World Development Report** becomes evident as societies empower their workforce with the skills needed for the digital age.

Labour Dynamics in the Digital Era:

- ◆ The digital revolution has **reshaped traditional notions of labour**.
- ◆ **Remote work, gig economies, and digital entrepreneurship** have become prominent features of the contemporary employment landscape.
- ◆ Digital literacy plays a pivotal role in **fostering the flexibility and adaptability** required for these evolving work structures.
- ◆ It **empowers individuals to participate** in the gig economy, up skill themselves independently, and engage in remote work opportunities, transcending geographical constraints.

Developmental Impact:

- ◆ A digitally literate populace is instrumental in **driving sustainable development**. Access to information, online education, e-governance, and digital healthcare are components of an inclusive developmental agenda.
- ◆ Digital literacy not only facilitates **participation** in these domains but also enhances the **efficiency and effectiveness of development initiatives**.
- ◆ **Bridging the digital divide** becomes a crucial step in ensuring that the benefits of technological progress are accessible to all, contributing to the overarching goal of sustainable and inclusive development.



Context: The Lok Sabha passed legislations to extend women's reservation (33% reservation) to the assemblies Of Jammu & Kashmir, Puducherry.

More on the News:

- ◆ **Government of Union Territories (Amendment) Bill 2023** seeks to introduce **women's reservation** in the legislative assembly of Puducherry; the Jammu and Kashmir Reorganisation (Second Amendment) Bill 2023 does the same with the assembly of J&K.
- ◆ Similar provisions for women quota in the legislative assembly of the Union Territory of Puducherry will be made by Parliament by amending the Government of Union Territories Act, 1963.
- ◆ The move is in line with parliament enacting the Constitution (One Hundred and Sixth Amendment) Act, 2023 to pave way for reservation of one-third of the total number of seats for women in the Legislative Assembly of every State; and National Capital Territory of Delhi.

- ◆ One-third reservation of seats for women will also apply for Schedule Castes and Scheduled Tribes quotas in the legislative assembly of the Union territory of Jammu and Kashmir.

**Commencement of Provisions:**

- ◆ Reservation of seats for women in the assembly, per the Bill, becomes effective post the delimitation exercise.
- ◆ Delimitation is contingent on the figures from the first census post the initiation of the Jammu and Kashmir Reorganisation (Second Amendment) Act, 2023.

Temporal Limitation:

- ◆ The provision for women's reservation ceases after fifteen years from the commencement of the Jammu and Kashmir Reorganisation (Second Amendment) Act, 2023.

Continuation and Determination:

- ◆ The reservation for women in the assembly persists until Parliament, through legislation, decides otherwise.

Rotation Mechanism:

- ◆ The rotation of assembly seats reserved for women is contingent upon subsequent delimitation exercises as determined by Parliament.

Legislative Action:

- ◆ The Constitutional amendment, known as the Constitution (One Hundred and Sixth Amendment) Act, 2023, was enacted after a special session of Parliament in September.
- ◆ The legislation was hailed as the "**Nari Shakti Vandan Adhiniyam**," emphasizing its significance.
- ◆ The law's implementation is subject to the completion of the next census and the subsequent delimitation exercise for the redrawing of Lok Sabha and assembly constituencies.

Future Decision-Making:

- ◆ Specific allotment of Lok Sabha and assembly seats for women will be determined by the government after the completion of the aforementioned census and delimitation processes.



GOVERNOR CANNOT REFER RE-ENACTED BILLS TO PRESIDENT: SC

Context: The Tamil Nadu government in the Supreme Court has criticised Governor R.N. Ravi for exhibiting “constitutional obstinacy” by referring ten key Bills re-enacted by the State Assembly to the President for consideration.

What's the issue?

- ◆ Recent instances of Governor who is an unelected Head of state or better called as agent of centre in states is withholding some bills in states like **Punjab and Tamil Nadu**.
- ◆ This action was opposed and dissented by respective state legislature. The main contention pertains to the Constitutionality of the action.
- ◆ The action also defeats the spirit of the constitution by holding assent indefinitely on a bill/law passed by duly elected State legislature.
- ◆ The action of governor contravenes the popular mandate and values of democracy.

Recent Supreme Court's Views:

- ◆ A three-judge Bench headed by Chief Justice of India said that the Governor, having withheld his assent to the Bills in the first instance and cannot now refer the Bills, re-passed by the Tamil Nadu legislature, to the President.
- ◆ As mentioned by SC, **Article 200 of the Constitution** gives the Governor **three choices** –
 - ▶ Grant assents to the Bills or withhold assent or reserve them for the consideration of the President.
 - ▶ In this case, the Governor withheld assent.
 - ▶ Once he has withheld assent, there is no question of him referring them to the President.
- ◆ The CJI has said that the Governor withholds assent, he **cannot stultify** the Bills.

What is the observation of Supreme Court?

- ◆ It Laid down the law that a Governor, in case he

withholds assent, should send back a Bill forwarded to him by a State Legislature “**as soon as possible**” with a message to reconsider the proposed law.

- ◆ The expression “as soon as possible” conveyed a “constitutional imperative of expedition”.
- ◆ In case, the State Assembly reiterates the Bill “with or without amendments”, the Governor has no choice or discretion, and has to give his assent to it.
- ◆ Message of the Governor does not bind the legislature is evident from the use of the expression ‘if the Bill is passed again ...with or without amendments.
- ◆ A Governor who chooses to withhold a Bill without doing anything further would be acting in contravention of the Constitution. Because such a course of action would be contrary to fundamental principles of a constitutional democracy based on a Parliamentary pattern of
- ◆ The verdict is also a significant boost to Tamil Nadu’s case. The Tamil Nadu Assembly had returned 10 crucial Bills to Governor R.N. Ravi without any amendments. The Governor had withheld assent to the Bills in the first instance.

The role of the Governor in legislature

- ◆ **Article 200 of the Constitution** lays down that when a Bill, passed by a State Legislature, is presented to the Governor for their assent, they have four alternatives:
- ◆ He may give assent to the Bill; may withhold assent to the Bill, that is, reject the Bill in which case the Bill fails to become law; may return the Bill (if it is not a Money Bill) for reconsideration of the State Legislature; or may reserve the Bill for the consideration of the President.
- ◆ As held by the Supreme Court in various cases including the **Shamsher Singh case (1974)**, the Governor does not exercise their discretionary powers while withholding assent or returning a Bill to the State Legislature.
- ◆ They are required to act as per the advice of the Council of Ministers. The situation of ‘withholding assent’ may arise in case of a **Private Members’ Bill (any Member of State Legislature other than a Minister)** passed by the State Legislature, which the council of ministers do not want to be enacted into a law. In such an instance, they would advise the Governor to ‘withhold assent’.
- ◆ However, this is an unlikely scenario as the council of ministers who enjoys a majority in the Legislative Assembly would not allow the passage of such a Bill.
- ◆ Secondly, if the incumbent government whose Bill has been passed by the legislature falls or resigns before it is assented to by the Governor, the new council may advise the Governor to ‘**withhold assent**’.

- ◆ The Governor must reserve certain Bills, like those which reduce the powers of the High Court, for the consideration of the President. They may also reserve Bills on concurrent list that are repugnant to a Union law based on ministerial advice.
- ◆ It is only under rare circumstances that the Governor may exercise their discretion, where they feel that the provisions of the Bill will contravene the provisions of the Constitution and therefore, should be reserved for the consideration of the President.
- ◆ It must however be noted that the Constitution does not lay down any time limit within which the Governor is required to make a decision.

GUIDELINES FOR PREVENTION AND REGULATION OF DARK PATTERNS

Context: Recently, the government has banned 13 “dark pattern” sites on e-commerce platforms under guidelines by CCPA.

About the Guidelines:

- ◆ These patterns **deceive or manipulate** customers.
- ◆ They include false urgency, basket sneaking, and forced action.
- ◆ The guidelines ensure clarity for **buyers, sellers, marketplace and regulators, defining what are unacceptable as unfair trading practices.**
- ◆ The guidelines are applicable to all platforms offering goods and services in India, and even advertisers and sellers.
- ◆ Resorting to dark patterns will amount to misleading advertisement or unfair trade practice or violation of consumer rights.

What do the guidelines say?

- ◆ The penalty will be imposed as per the provisions of the **Consumer Protection Act.**
- ◆ The ministry has defined **13 deceptive practices** that will be treated as ‘**dark patterns**’ and these include;
 - ▶ Creating **false urgency** by creating an artificial sense of scarcity,
 - ▶ **basket sneaking**, where the inclusion of additional items such that the total amount payable by the user is more than the amount payable for the product as well as subscription trap.
 - ▶ **Forced Action:** Manipulating users into sharing more personal information than intended.

What are dark patterns and its types?

- ◆ Dark patterns, also known as deceptive patterns,

refer to strategies employed by websites and apps to make users perform actions they did not intend to or discourage behaviors that are not advantageous for the companies.

- ◆ The term was coined by **Harry Brignull**, a user experience (UX) designer, in 2010.
- ◆ These patterns often exploit cognitive biases and employ tactics such as false urgency, forced actions, hidden costs etc.
- ◆ They can range from overtly noticeable tricks to more subtle methods that users may not immediately recognize.

Types of Dark Patterns:

The Consumer Affairs Ministry has identified nine types of dark patterns being used by e-commerce companies:

- ◆ **False Urgency:** Creates a sense of urgency or scarcity to pressure consumers into making a purchase or taking an action;
- ◆ **Basket Sneaking:** Dark patterns are used to add additional products or services to the shopping cart without the user’s consent;
- ◆ **Confirm Shaming:** Uses guilt to make consumers adhere; criticises or attacks consumers for not conforming to a particular belief or viewpoint;
- ◆ **Forced Action:** Pushes consumers into taking an action they may not want to take, such as signing up for a service in order to access content;
- ◆ **Nagging:** Persistent criticism, complaints, and requests for action;
- ◆ **Subscription traps:** Easy to sign up for a service but difficult to quit or cancel; option is hidden or requires multiple steps;
- ◆ **Bait & Switch:** Advertising a certain product/ service but delivering another, often of lower quality;
- ◆ **Hidden costs:** Hiding additional costs until consumers are already committed to making a purchase;
- ◆ **Disguised ads:** Designed to look like content, such as news articles or user-generated content.

OVERHAULING INDIA’S POSTAL SERVICES: POST OFFICE BILL 2023

Context: The Rajya Sabha recent passed Post Office Bill 2023. Opposition has raised concerns about privacy.

Background

- ◆ The Rajya Sabha recently approved **the Post Office Bill, 2023**, a significant legislative move to replace **the archaic Indian Post Office Act of 1898.**

- ◆ The new bill, introduced in August 2023, **aims to modernize and revamp the postal services** in India, shifting the focus **from a traditional mail delivery system to a comprehensive service delivery model**.

Provisions of the New Bill

- ◆ The **central theme** of the new legislation is to **transform post offices into multifunctional institutions, integrating services beyond mail delivery, including banking facilities**.
- ◆ Communications Minister Ashwini Vaishnaw emphasized the **remarkable transformation of postal services over the past nine-and-a-half years**.
- ◆ During this period, post offices evolved into **service delivery hubs**, with around 5,000 new offices opened between 2014 and 2023.

Controversy/Concerns

- ◆ **Clause 9 of the bill**, however, stirred controversy as it grants the central government the authority to appoint **officers to intercept, open, or detain items** in the interest of **national security, public order, emergency, or public safety**.
- ◆ This provision **sparked concerns** about potential **violations of privacy and increased surveillance**.
- ◆ Objections to Section 9: the **broad language and lack of specification** regarding the level of the officer could lead to misuse.
- ◆ The Opposition's primary concern revolved around **safeguarding the fundamental right to privacy**.
- ◆ The bill **lacked clear procedures** for intercepting or opening letters and packages.
- ◆ Potential infringement of **Articles 19 and 21**.
- ◆ Doubts about the legislative intent- concerns about the bill turning India into a highly **surveilled nation**.
- ◆ **Lack of clarity on materials prohibited** from postal transmission and **potential immunity shields for officers engaging in corrupt practices**.

Government's Clarifications

- ◆ That interception is essential for national security in a complex and diverse society.
- ◆ Emphasis on the government's right to monitor the transportation of illegal substances, such as narcotics, through postal networks.
- ◆ Govt. dismissed concerns about the privatization of post offices, stating that the bill aims to expand services, including banking and direct benefit transfers, within the public sector.

- ◆ However, the bill remains silent on defining materials prohibited from postal transmission, raising questions about potential ambiguities.
- ◆ The new bill introduces the appointment of a director general to regulate and define services through the post office, including the supply and sale of postage stamps and postal stationery.
- ◆ The director general holds the authority to establish charges and terms for these services.
- ◆ The Post Office Bill signifies a paradigm shift in India's postal services, but concerns linger regarding privacy, surveillance, and the need for clearer definitions and safeguards. The government's clarifications address some apprehensions, but the nuances of implementation and potential consequences will require vigilant monitoring.

JAMMU AND KASHMIR REORGANISATION (AMENDMENT) BILL, 2023, AND THE JAMMU AND KASHMIR RESERVATION (AMENDMENT) BILL, 2023

Context: The Lok Sabha recently passed two significant bills related to Jammu and Kashmir, namely the Jammu and Kashmir Reorganisation (Amendment) Bill, 2023, and the Jammu and Kashmir Reservation (Amendment) Bill, 2023.

Aims

- ◆ These bills aim to reshape the political landscape of the region and address long-standing issues, including the representation of displaced communities in the legislative assembly.

Background

- ◆ In **August 2019**, the Special Status of Jammu and Kashmir under **Article 370 was revoked**, leading to the reorganisation of the state into **two Union Territories - Jammu and Kashmir, and Ladakh**.
- ◆ The recent bills build upon this transformation, further **amending the existing legislation for better governance and representation**.
- ◆ Earlier there were 37 seats in Jammu which have now become 43, earlier there were 46 seats in Kashmir which have now become 47, and 24 seats have been kept reserved for Pakistan-occupied Kashmir.
- ◆ The legislative assembly **initially had 100 members including 24 for PoK, up to 1988 when the seats were increased to 111**.

- ◆ The **24 seats** are however **not taken into consideration during the quorum** calculation, which is why the total contestable seats were 87 including four for Ladakh.
- ◆ **After delimitation in 2020, the total number of seats rose to 114, which included the seats for PoK.**
- ◆ Now there will be 114 seats, earlier there were two nominated members in the assembly, now there will be five

Provisions of the New Bills:

- ◆ **The Jammu and Kashmir Reorganisation (Amendment) Bill, 2023**, seeks to increase the total number of seats in the J&K Assembly **from 107 to 114.**
- ◆ This includes the **reservation of nine seats for Scheduled Tribes**, a historic move based on the **recommendations of the Delimitation Commission.**
- ◆ Additionally, the **Lieutenant-Governor is empowered** to nominate **three members** in the Assembly, representing **the Kashmiri migrant community, including one woman**, and individuals from PoK who sought refuge in India after wars with Pakistan.
- ◆ **The Jammu and Kashmir Reservation (Amendment) Bill, 2023**, amends the **J&K Reservation Act, 2004.**
- ◆ It replaces the term **"weak and underprivileged classes (social castes)"** with **"other backward classes"** as declared by the Union Territory.
- ◆ This change **aims to enhance reservation in appointments and admissions in professional institutions for Scheduled Caste, Scheduled Tribe, and other socially and educationally backward classes.**

Opposition's Concerns:

- ◆ During the parliamentary debate, concerns were raised by the Opposition regarding the **government's control from Delhi**, reservations for specific communities, and the **exclusion of certain groups.**
- ◆ Some members **criticized the emphasis on Pandits and the Pahadia community**, arguing that the criteria of population were not adequately considered during the delimitation exercise.
- ◆ The Opposition also questioned the **government's claims of bringing lasting peace to the region**, pointing to incidents of terrorism in the Jammu region.

- ◆ There were **objections to the nomination of members by the Governor**, raising apprehensions about a potential imbalance in the representation of the Muslim-majority Valley.

Government's Clarifications:

- ◆ The bills aim to provide justice to those deprived of their rights for the past 70 years.
- ◆ Highlighted the importance of reservation for displaced people, ensuring their voices are heard in the legislative process.
- ◆ Rejected the notion that the amendments were connected to the abrogation of Article 370 and clarified that the government's focus is on eliminating separatist ideology, leading to a decline in terrorism.
- ◆ Dismissed claims that the bills couldn't be amended due to a legal challenge, asserting that there is a "status quo" as the Supreme Court has not stayed the implementation of the principal Act.

ROLE OF PARLIAMENTARY INQUIRY COMMITTEES

Context: Trinamool Congress Member of Parliament (MP) Mahua Moitra is currently facing an inquiry by the ethics committee of the Lok Sabha.

Background: Investigation into TMC MP Mahua Moitra's Conduct

- ◆ The committee is reported to have recommended her **expulsion** from the Lok Sabha, citing reasons such as **"unethical conduct," "breach of privileges," and "contempt of the House."**
- ◆ The allegations stem from accusations that Moitra targeted a business house at the behest of a businessman in **exchange for monetary benefits** and shared her login credentials with the said businessman.

Ethics Committee's Mandate

- ◆ **Established in 2000**, the ethics committee of the Lok Sabha is tasked with **overseeing the moral and ethical conduct of its members.**
- ◆ The **committee examines cases of 'unethical conduct'**, which can be brought to its attention through complaints filed by members of the House, outsiders through a member, or those referred by the Speaker.
- ◆ The committee **conducts a preliminary inquiry** to determine if a complaint is valid and presents its findings to the Speaker for consideration.

- ◆ Notably, the term 'unethical' is not explicitly defined, leaving it to the committee's discretion.

Privileges Committees

- ◆ Another vital component of parliamentary oversight is the **privileges committee or special inquiry committee**, which addresses more severe accusations against a member.
- ◆ In cases where a member is found guilty of actions such as promoting personal business interests through parliamentary activities, these **committees recommend punitive measures**.
- ◆ For instance, a **special committee in 1951 found a member guilty of promoting business** interests by posing questions in exchange for financial benefits.
- ◆ Similarly, the 'cash for query' scam in 2005 led to the **recommendation of expulsion for 10 MPs** by a special committee.

Constitutionality of Expulsion

- ◆ While the Constitution **under Article 101** outlines grounds for the vacation of a seat by an MP, including resignation, disqualification, and prolonged absence, expulsion is not explicitly mentioned.
- ◆ The Supreme Court has presented conflicting judgments on the matter. **In Raja Ram Pal versus Hon'ble Speaker (2007), the Court upheld Parliament's power to expel** members for breaching privilege, interpreting Article 101 accordingly.
- ◆ However, **in Amarinder Singh versus Special committee, Punjab Vidhan Sabha (2010), the Court deemed expulsion by the State Assembly unconstitutional**, citing concerns about undermining parliamentary democracy.

Balancing House Privileges and Democratic Representation

- ◆ In cases like Mahua Moitra's, where serious allegations of 'cash for query' are at play, the question arises: **is expulsion a proportionate punishment?**
- ◆ The **delicate balance between upholding the dignity and privilege of the House and ensuring democratic representation** must be maintained.
- ◆ To address such concerns, the **establishment of fast-track courts** with a time-bound trial period could be considered.
- ◆ This approach would ensure a **fair and efficient resolution of cases within 60 days**, safeguarding the interests of both the House and democratic representation.
- ◆ **If convicted**, MPs could face disqualification under the **Representation of the People Act, 1951**, while maintaining continuous representation for the constituents in the absence of conviction.

ALL-INDIA CONSUMER PRICE INDEX NUMBERS FOR AGRICULTURAL AND RURAL LABOURERS

Context: The All-India Consumer Price Index Number for Agricultural Labourers and Rural Labourers (Base: 1986-87=100) for the month of November, 2023 has been released.

Who maintains Consumer Price Index in India?

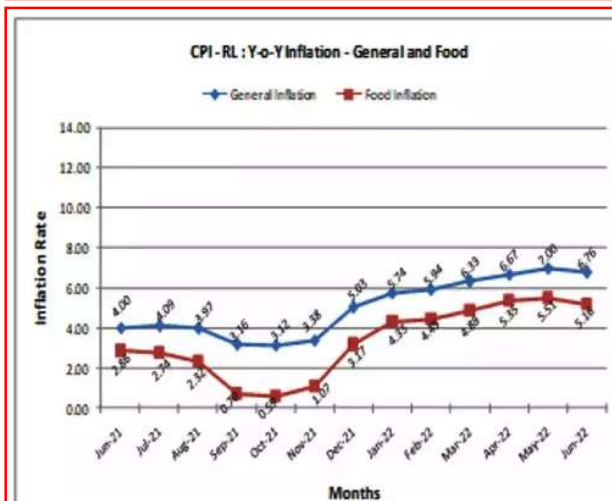
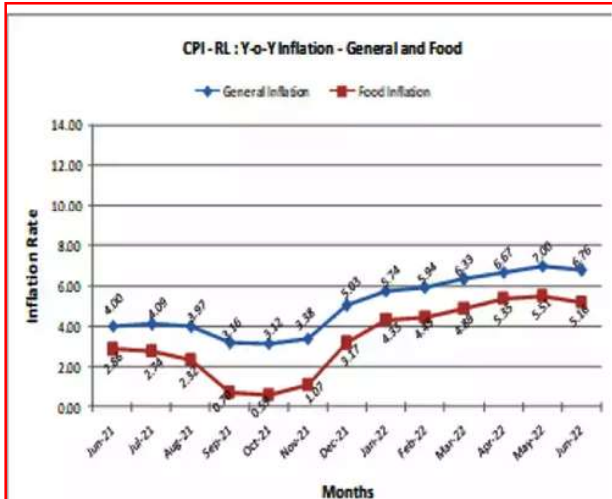
In India, there are **four consumer price index numbers**, which are calculated, and these are as follows:

- CPI for Industrial Workers (IW)
- CPI for Agricultural Labourers (AL)
- CPI for Rural Labourers (RL)
- CPI for Urban Non-Manual Employees (UNME)
- The **Ministry of Statistics and Program Implementation** collects **CPI (UNME)** data and compiles it.
- The remaining three (**CPI-IW, CPI-AL, CPI-RL**) are collected by the **Labour Bureau in the Ministry of Labour**.

Key Highlights –

- ◆ **Agricultural Labourers:** Increased by 12 points to reach 1253.
- ◆ **Rural Labourers:** Increased by 11 points to stand at 1262.
- ◆ **Contribution Factors:** Major contributor, accounting for 10.85 and 10.50 points in Agricultural and Rural Labourers' indices, driven by price hikes in **rice, wheat atta, pulses, onion, turmeric whole, garlic, mixed spices, etc.**
- ◆ **Regional Trends:** Upward trend observed in all states, except West Bengal (decreased indices for both CPI-AL and CPI-RL) and Himachal Pradesh (CPI-AL index decreased).
- ◆ **State-wise Breakdown (Agricultural Labourers):**
 - ▶ Increase of 1 to 10 points in 11 states.
 - ▶ Increase of 11 to 20 points in 4 states.
 - ▶ Increase of more than 20 points in 3 states.
 - ▶ Tamil Nadu tops with 1453 points, while Himachal Pradesh is at the bottom with 958 points.
- ◆ **State-wise Breakdown (Rural Labourers):**
 - ▶ Increase of 1 to 10 points in 11 states.
 - ▶ Increase of 11 to 20 points in 5 states.

- ▶ Increase of more than 20 points in 3 states.
- ▶ Andhra Pradesh and Tamil Nadu lead with 1439 points each; Himachal Pradesh is at the bottom with 1015 points.



- ◆ **Maximum State Increases:**
 - ▶ **CPI-AL:** Maharashtra experienced the highest increase of 27 points, driven by price hikes in jowar, rice, wheat atta, tapioca, arhar dal, onion, and sugar.
 - ▶ **CPI-RL:** Andhra Pradesh and Tamil Nadu saw the maximum increase of 24 points each, mainly due to rising prices of rice, jowar, ragi, fish fresh, onion, arhar dal, vegetables, and fruits.
- ◆ **Point-to-Point Inflation Rates (November 2023):**
 - ▶ **CPI-AL:** 7.37%, compared to 7.08% in October and 6.87% during the same month last year.
 - ▶ **CPI-RL:** 7.13%, compared to 6.92% in October and 6.99% during the same month last year.
- ◆ **Food Inflation Rates (November 2023):**
 - ▶ **9.38% for CPI-AL**, compared to **8.42% in October** and 6.19% during the same month last year.

- ▶ **9.14% for CPI-RL**, compared to **8.18% in October** and 6.05% during the same month last year.



INDIA SKILLS REPORT 2024

Context: Kerala has emerged the most preferred State to work in the India Skills Report 2024.

About the report-

- ◆ The report has been compiled by trade bodies, companies, educational institutions, and others.
 - ▶ These include CII, AICTE, AIU, Sunstone, Pearson, AWS and the Economic Times.
- ◆ The **11th edition of the India Skills Report (ISR)** has involved 3.88 lakh candidates who undertook the **Wheebox National Employability Test (WNET)** across India.
- ◆ The report draws insights from 152 corporations spanning over 15 diverse industries, all of whom participated in the Early Career Edition of the India Hiring Intent Survey for 2024.

Key Highlights-

- ◆ **Kerala** emerges as the **most preferred state to work in**, according to the India Skills Report 2024.
- ◆ **Kochi and Thiruvananthapuram** secure **second and fourth positions** among cities favored by both men and women, irrespective of age.
- ◆ **Employability Rankings:** Kerala secures the second position in overall employability among the 18-21 age group, highlighting its robust talent pool.
 - ▶ The state's balanced approach to education and emphasis on future skills contribute to its strong employability standing.
- ◆ **Government Initiatives Recognition:** The report acknowledges the Kerala government's robust initiatives in skill training and development.
 - ▶ ASAP Kerala's impact in imparting skills to over 2.5 lakh higher secondary students is lauded, along with the recognition of community skill parks and centers of excellence as exemplary models for training in advanced technologies nationwide.

Factors Contributing to Kerala's Top Position in India's Skill Report

- ◆ **Educational Approach:** Balanced Education: Kerala is credited for maintaining a balanced approach towards education, fostering a holistic learning environment.

- ◆ **Employability Metrics:** Overall Employability: Secures the second position in overall employability among the 18-21 age groups, showcasing a robust talent pool.
 - ▶ National Employability Test: The report, based on a National Employability Test, indicates that 51.25% of assessed youths in Kerala possess the required skills.
- ◆ **Skill Excellence:** Computer Skills: Thiruvananthapuram leads in nurturing computer skills, contributing to Kerala's third position overall among states for computer skills.
- ◆ **Diverse Skill Sets:** Versatile Talent Pool: Kerala's diverse skill sets enable it to perform well across different skills, meeting the multifaceted demands of an evolving job market.
- ◆ **Urban Employment Trends:** Non-Major Urban Centers: Cities like Thiruvananthapuram challenge the conventional notion that employability is confined to major urban centers, indicating a broader dispersion of talent.
- ◆ **Government Initiatives:**
 - ▶ **Skill Training Programs:** Robust initiatives by the Kerala government, including ASAP Kerala, impact skill training by reaching over 2.5 lakh higher secondary students.
 - ▶ **Exemplary Models:** Community skill parks and centers of excellence established in the state are recognized as exemplary models for training in advanced technologies nationally.
- ◆ **Community Impact:** Migration Trends: Growing pool of highly skilled individuals in various regions of Kerala migrating to cities like Thiruvananthapuram contributes to the state's overall talent dispersion.

HOW DOES GOVERNMENT POLICY IMPACT MICROECONOMICS?

Context: Government policy has microeconomic effects whenever its implementation alters the inputs and incentives for individual decisions.

What is microeconomics?

Microeconomics studies **individual economic behaviors**, focusing on how decisions by individuals, households, and businesses shape the allocation of resources.

Microeconomic Dynamics:

- ◆ Microeconomics scrutinizes the **interplay of supply and demand**, elucidating **how individuals respond to shifts in incentives, prices, resources, or production**.
- ◆ Subgroups **like buyers, sellers, and business owners** form the crux of microeconomics, steering supply and demand, money usage, and interest rate dynamics.

Government Intervention Examples

- ◆ Governments wield influence over **goods' quantity**, altering supply, and regulating funds directed toward goods, impacting demand.
- ◆ Policies may render **certain trades illegal**, reshaping economic behaviors on a micro scale.
- ◆ Macroeconomics, on a larger scale, contrasts with microeconomics, focusing on national or global economic analyses.

Policies Affecting Individuals and Firms

- ◆ **Subsidies to farmers** enhance profitability and stimulate farm production.
- ◆ A **sales tax on cigarettes or alcohol** can alter individual buying behaviors.
- ◆ **Fiscal policies**, through government spending and taxation, influence aggregate demand, rippling through wages and prices.
- ◆ **Monetary policies**, manipulating money supply and interest rates, affect individual loan rates.

Taxation's Microeconomic Impact

- ◆ **Non-voluntary government policies**, primarily financed by taxes, compel individuals and businesses to adjust spending or increase production to counteract tax impacts.

Macro Policies and Micro Outcomes

- ◆ **Positive macroeconomic policies** during economic turmoil may inadvertently hamper individual firms. For instance, **propping up wages** during the Great Depression made hiring extra employees unprofitable for individual firms.

Government Spending's Market Effects

- ◆ **Government spending can disrupt markets**, constituting a **wealth transfer** from taxpayers to entities receiving government funds. Subsidized businesses may operate on a cost curve not feasible without the subsidy, affecting other market participants.



INTERNATIONAL ENERGY AGENCY'S COAL 2023 REPORT

Context: The International Energy Agency's (IEA) annual coal market report predicts a significant shift in the trajectory of global coal demand, hinting at a structural decline by 2026.

This anticipated transformation is influenced by various factors, including the expansion of **renewable energy** and a rise in **nuclear generation** in key regions.

What are the Key Highlights of the Report?

◆ Global Coal Demand Trends:

- ▶ Global coal demand reached a record high in 2022 amid the global energy crisis, rising by **4% year-on-year to 8.42 billion tonnes (Bt)**.
- ▶ Asia remains the primary driver of coal demand growth in both power and non-power sectors.
- ◆ China experienced a demand rise of 4.6%, equivalent to 200 million tonnes (Mt) of coal.
 - ▶ India saw a substantial increase of 9%, amounting to 97 Mt.
 - ▶ Indonesia witnessed a remarkable surge of 32%, reaching 49 Mt, driven by nickel smelters.
 - The United States faced an 8% decline in coal demand, totalling 37 Mt, the most significant drop among major markets.
 - Europe, despite a 4.3% increase in consumption, exhibited more restrained growth than anticipated.
 - Subdued hydropower and nuclear electricity generation in certain European countries.
 - A weak economy and mild winter in Europe contributed to the restrained impact of natural gas price spikes.

◆ Future Projections and Uncertainties:

- ▶ Anticipated decline in coal demand in most advanced economies during 2023.
- ▶ Overall, global coal **consumption in 2026 is projected to be 2.3% lower than in 2023**.
- ◆ Despite the expected decline, global coal consumption is projected to remain **above 8 billion tonnes through 2026**, highlighting its continued role as a significant source of **carbon dioxide emissions**.
 - ▶ **China, India, and Indonesia, the three largest coal producers globally**, are expected to break output records in 2023, pushing global production to a new high in 2023. These three countries **now**

account for more than 70% of the world's coal production.

- ◆ In China and India, in particular, rising coal consumption is driven by robust growth in demand for electricity and low **hydropower** output.



◆ Factors Influencing Decline in Coal Demand:

- ◆ The decline in coal demand is attributed to a **global shift towards renewable energy sources**.
- ◆ The IEA links the expected decline to changes in global climate, with **El Nino conditions transitioning to La Nina**, potentially leading to **increased hydropower output**.
- ◆ The report highlights a significant upward trend in **low-cost solar photovoltaic deployment**, contributing to the growth of renewable power generation.
- ◆ **Nuclear generation** is expected to see moderate increases, particularly in China, India, and the European Union, further influencing coal-fired generation.
- ◆ **China's Dominance in Coal Markets:**
 - ▶ China's coal consumption is expected to fall in 2024 and remain steady through 2026.
 - Hydropower output is set to recover, while electricity generation from solar PV and wind is expected to increase significantly in China.
 - ▶ The pace of **economic growth in China and its coal use is uncertain**, as the country undergoes major structural changes.
 - ▶ India, Indonesia, and other emerging economies are expected to rely on coal for economic growth, despite commitments to deploy renewables.
- ◆ Efforts to reduce the use of **'unabated' coal**, in line with the **28th Conference of Parties (COP28)** are deemed essential for meeting international climate targets, aiming for a **nearly 95% reduction in coal emissions between 2020-2050**.

What is the International Energy Agency?

- **About:** The International Energy Agency (IEA), which has its headquarters in Paris, France was set up as an autonomous agency in 1974 by member countries of the Organisation for Economic Cooperation and Development (OECD) in response to the mid-1970s oil crisis.
- The IEA's main focus is on energy policies, which include economic development, energy security, and environmental protection.
- The IEA also plays a major role in providing information related to the international oil market and taking action against any physical disruptions in the supply of oil.

Members:

- The IEA family is made up of 31 member countries, 13 association countries including India, and 4 accession countries.
- A candidate country to the IEA must be a member country of the OECD.

Terms of Trade (ToT):

- Ratio of average prices of a country's **exports to imports**.
- Reflects the purchasing power of a country in international trade.
- Improvement: When export prices rise relative to import prices.
- **Impact:** Favorable ToT can enhance economic well-being, while unfavorable ToT may pose challenges for a nation's economy.
- **Calculation:** $ToT = (\text{Export Price Index} / \text{Import Price Index}) \times 100$.

What is Terms of Trade mean?

- ◆ ToT signifies the movement in prices of **farm commodities relative to non-farm goods**.

What are Deflators?

Deflators are economic indicators used to adjust nominal values, such as GDP or GVA (Gross Value Added), for the effects of inflation or changes in price levels. They help convert nominal values expressed in current prices into real values expressed in constant prices, allowing for a more accurate comparison of economic performance over time.

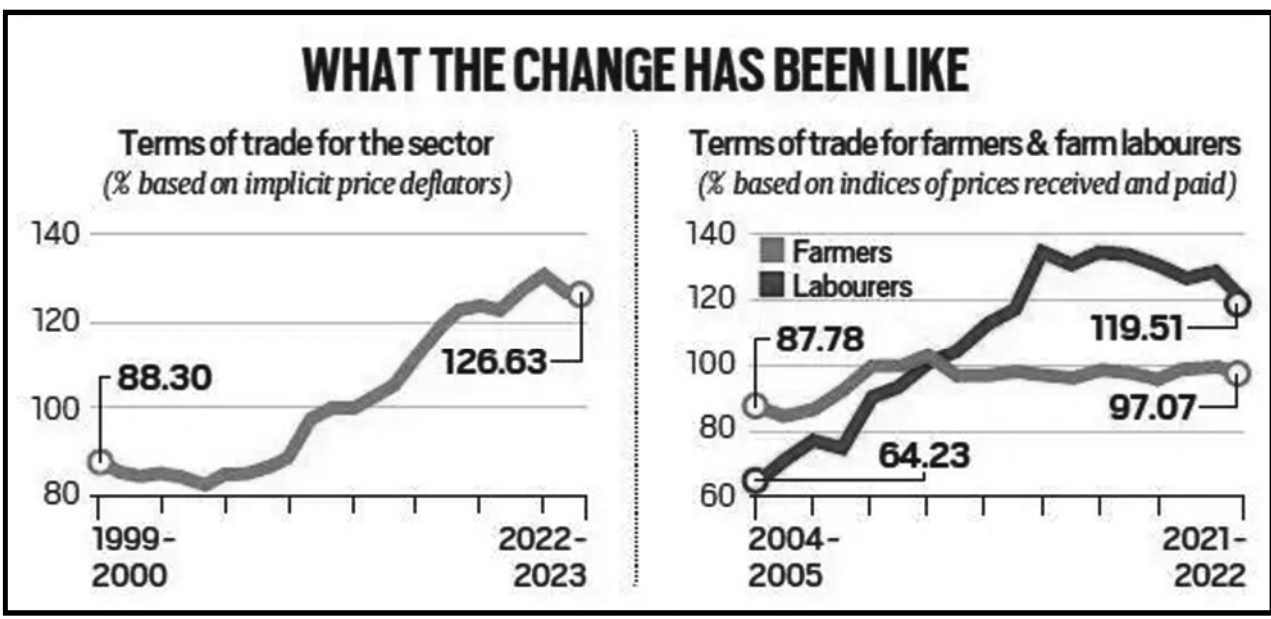
What is Implicit Price Deflator?

- Applied to specific components, such as GVA in agriculture, industry, or services.
- Helps gauge inflation or deflation in individual sectors.

- ◆ Chand and Singh's study reveals a significant improvement in ToT for Indian agriculture.

HOW TERMS OF TRADE HAVE MOVED FOR AGRICULTURE

Context: Terms of trade (ToT) for Indian agriculture — movement in prices of farm commodities relative to that of non-farm goods and services — have recorded significant improvement in the last decade and a half, going by data derived from national income statistics.



Decadal Shifts -

- ◆ From 1973-74 to mid-2000s, ToT for agriculture remained low, reaching 85 levels.
- ◆ Real recovery initiated in 2009-10, peaking at 130.2 in 2020-21.
- ◆ A dip to 126.6 in 2022-23 is noted.

Contributing Factors -

- ◆ Chand and Singh attribute India's agricultural growth (average of 3.7% p.a. from 2005-06 to 2021-22) to improve ToT.
- ◆ Factors include the global agri-commodity price boom and policy interventions like MSP hikes.

Analysis of Farmer and Labourer ToT-

- ◆ Farmer ToT saw a significant rise (17.3%) from 2004-05 to 2010-11, stagnating at 97-99 levels thereafter.
- ◆ Agricultural labourers experienced a more spectacular rise (109.2%) till 2016-17, followed by a decline to 119.5 in 2021-22.

Political Economy Implications-

- ◆ Accelerated non-agricultural employment growth impacted labour markets and real wages for agricultural labourers.
- ◆ Farmers faced increased costs without commensurate rises in produce prices, impacting their ToT.
- ◆ The stagnation in ToT for both farmers and labourers reflects the complex challenges in India's agrarian landscape.



Context: According to a study, India Inc. corporate performance as well as the boost to private capital formation has been quite uneven — almost in line with the K-shaped consumption recovery.

- ◆ So, let us understand the K-shaped recovery and details.

Key Highlights of the Study:

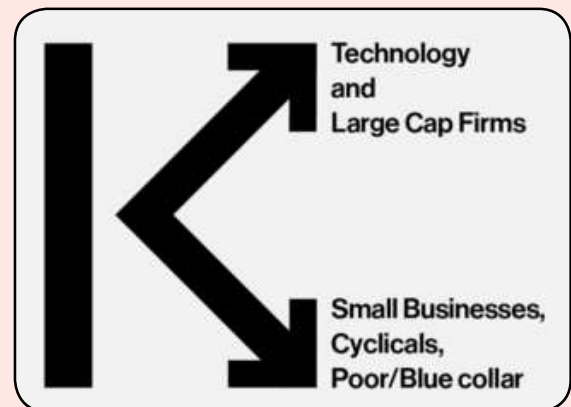
- ◆ **Surprising Growth in Q2:** Contrary to expectations, Q2 2023 witnessed a **robust 7.6% GDP** growth, primarily fuelled by a remarkable 14% expansion in the manufacturing sector.
- ◆ **Stock Market Rally and Political Wins:** The GDP

surge **coincided with BJP's electoral victories**, igniting a rally in Indian stock markets. **Foreign investors** showed **renewed interest** while retail investors reached historic highs.

- ◆ **Consumption Struggles Amid Urban-Rural Divide:** Despite positive economic indicators, data reveals a persistent struggle in **average Indian consumption levels**, with a noticeable urban-rural gap.
- ◆ **Unravelling the GDP Surge:** Analysts question the triggers behind the unexpected GDP growth, exploring whether it marks the **end of the economic slowdown** or **signals a new growth phase**.
- ◆ **K-Shaped Industrial and Consumption Recovery:**
 - ▶ India's recovery exhibits a K-shaped pattern, with disparities in consumption and industry performance. While some sectors thrive, others face challenges.
 - ▶ India's consumption recovery follows a K-shaped trajectory, accentuated by an urban-rural divide and a shift toward premium products.

What is K-shaped recovery?

- The "K-shaped" economic recovery is characterised by a stark split in the recovery pace of the economy— some sectors are bouncing back ahead of the rest at a much faster pace, while others are continuing a downward trajectory.
- K-shaped recovery occurs if different sectors recover at different rates.



- ◆ **Manufacturing Output Surge:** The surge in Q2's manufacturing output is dissected, revealing a 14% growth in gross value added (GVA). Company profits soar despite modest net sales growth.
- ◆ **Impact on Sensex and Stock Prices:** The rise in company profits resonates in stock markets, enticing investors. This, coupled with falling input prices, contributes to the surge in stock prices.
- ◆ **Investment Trends and Private Sector Participation:** Examining investment patterns,

some sectors benefit from the government's capital expenditure push, potentially signaling private sector resurgence.

- ◆ **Uneven Capacity Expansion:** While profits surge, the study indicates uneven growth in capacity utilization across sectors. Industries linked to premium consumption and government capex outperform.

Impact of India's Economic Recovery-

Stock Market Boost:

- ◆ The robust economic recovery reflected in GDP growth has energized stock markets, **attracting domestic and foreign investors.**
- ◆ **Increased market participation** could stimulate **capital inflow**, fostering economic stability and expansion.

Political Implications:

- ◆ The economic upturn **coinciding with political wins** may bolster the ruling party's image.
- ◆ Positive economic indicators may **enhance public perception**, potentially influencing political landscapes.

Urban-Rural Disparity:

- ◆ The K-shaped recovery **accentuates the gap between urban and rural consumption** levels.
- ◆ Addressing this divide becomes crucial to ensure inclusive growth and social stability.

Manufacturing Sector Surge:

- ◆ A significant **surge in manufacturing output** contributes to **overall GDP growth.**
- ◆ Strengthening the manufacturing sector can lead to **job creation and increased export** potential.

Uneven Investment Patterns:

- ◆ Sectors benefiting from government capex witness growth, while others lag.
- ◆ **Addressing imbalances** in private sector participation becomes essential for a more uniform and sustained recovery.

Capacity Utilization Dynamics:

- ◆ Varied capacity utilization levels across sectors indicate a **nuanced recovery.**
- ◆ **Tailoring policies** to support sectors with lower capacity utilization could **optimize overall economic performance.**

Private Sector Resurgence:

- ◆ Signs of private sector resurgence align with government objectives.

- ◆ Encouraging private investment can amplify the economic recovery, creating a more sustainable growth trajectory.



RBI TO OFFER CLOUD STORAGE SERVICES

Context: The Reserve Bank of India (RBI) is working on establishing a cloud facility for the financial sector in India as it looks to enhance the security, integrity and privacy of financial sector data.

Central Bank's New Venture

- ◆ The **Reserve Bank of India (RBI)** is set to enter the **domain of cloud services**, positioning itself in **direct competition** with global giants like **Amazon, Google, and Microsoft.**
- ◆ This ambitious move aims to **leverage the growing volume of data** held by banks and financial entities.

Cloud services refer to the **delivery of computing resources**, such as storage, processing power, and applications, over the internet. **Users can access and utilize these services remotely**, eliminating the need for physical infrastructure and on-site management.

Strategic Rationale

- ◆ The RBI's initiative aligns with the **government's strategy** of establishing '**digital public infrastructure**' (DPI).
- ◆ Following this approach, the **central bank subsidiary** will develop the underlying technology, subsequently outsourcing its application development to the private sector.
- ◆ This mirrors **successful implementations like Aadhaar and United Payments Interface (UPI).**

Enhancing Financial Data Security

- ◆ The proposed cloud facility for the financial sector seeks to address the escalating volume of data maintained by banks.
- ◆ The RBI emphasizes that this initiative will not only **enhance data security** but also **uphold integrity and privacy standards** crucial for the financial sector.

Application of Cloud Services in Financial World-

Cloud services find **extensive applicability** in the finance sector due to several advantages:

- ◆ **Cost Efficiency:** Cloud services allow financial institutions to **avoid heavy upfront investments** in IT infrastructure, **reducing capital expenses**. They can scale resources up or down based on demand, optimizing costs.
- ◆ **Flexibility and Scalability:** Financial organizations often experience fluctuating workloads. Cloud services provide the **flexibility to scale resources** dynamically, ensuring **optimal performance** during peak times and efficiency during lulls.
- ◆ **Data Security:** Reputable cloud service providers implement **robust security measures**, often surpassing what individual firms can achieve. This **enhances data protection**, crucial for sensitive financial information.
- ◆ **Collaboration and Remote Access:** Cloud services facilitate **seamless collaboration among teams**, enabling remote work capabilities. This is especially important in the financial sector, where accessibility and collaboration are paramount.
- ◆ **Innovation and Time-to-Market:** Cloud services **offer tools and platforms** for innovation, allowing financial institutions to quickly deploy **new services, products, and applications, reducing time-to-market**.
- ◆ **Disaster Recovery and Business Continuity:** Cloud providers typically have **redundant data centers** and **robust disaster recovery mechanisms**. This ensures that financial organizations can recover data swiftly and maintain operations even in the face of unexpected events.
- ◆ **Regulatory Compliance:** Many cloud service providers adhere to **stringent security and compliance standards**. Leveraging such services can assist financial institutions in meeting regulatory requirements effectively.
- ◆ **Analytics and Big Data:** Cloud services provide **powerful analytics tools and storage capabilities**, enabling financial organizations to process and analyze large volumes of data efficiently. This is crucial for **deriving valuable insights from financial data**.
- ◆ **Customer Experience:** Cloud-based applications contribute to a smoother customer experience by **ensuring accessibility and responsiveness**, enhancing customer satisfaction in the digital era.



GST RATE RATIONALISATION

Context: The ministerial group on GST rate rationalisation, dormant since the BJP's electoral setback in Karnataka in May, has been reinstated. The move suggests a renewed focus on simplifying the GST structure and revising its multiple rates.

Reconstituted Ministerial Group

- ◆ Former Karnataka CM Basavaraj Bommai led the original group, which had stalled post-election defeat.
- ◆ Karnataka's revenue minister Krishna Byre Gowda is included, with UP Finance Minister Suresh Kumar Khanna as the new convenor.



Complex GST Structure

- ◆ Despite four main slabs (5%, 12%, 18%, 28%), numerous rates exist, complicating compliance.
- ◆ Urgent need for simplification expressed by tax experts and industry leaders.

Revenue Stability and Policy Shift

- ◆ GST revenues at a robust ₹1.6 lakh crore.
- ◆ Resumption of rate rationalisation indicates a policy shift.
- ◆ Multiple rates lead to compliance issues, urging policymakers to simplify for industry, revenue department, and investor certainty.

Terms of Reference and Future Considerations:

- ◆ GoM to review tax slab rates, recommend changes for required resources.
- ◆ Consideration of GST Compensation Cess's future after March 2026.

Industry Calls for Reform:

- ◆ Industry leaders advocate a three-slab GST structure for business ease.
- ◆ GST Compensation Cess under review, as suggested by CII president R Dinesh.

Background

- In India, the idea of adopting GST was first suggested by the **Atal Bihari Vajpayee Government** in 2000.
- The state finance ministers formed an Empowered Committee (EC) to create a structure for GST, based on their experience in designing State VAT.
- In 2002, the Vajpayee government formed a task force under **Vijay Kelkar** to recommend tax reforms.
- In 2005, the Kelkar committee recommended rolling out GST as suggested by the 12th Finance Commission.

What is GST?

- GST was introduced through the 101st Constitution Amendment Act, 2016.
- It is one of the biggest indirect tax reforms in the country.
- It was introduced with the slogan of 'One Nation One Tax'.

Objectives:

- To mitigate the double taxation, cascading effect of taxes, multiplicity of taxes, classification issues etc., and has led to a common national market.
- The GST that a merchant pays to procure goods or services (i.e. on inputs) can be set off later against the tax applicable on supply of final goods and services.
- The set off tax is called input tax credit.
- The GST avoids the cascading effect or tax on tax which increases the tax burden on the end consumer.
- Levied on:
- The GST has subsumed indirect taxes like excise duty, Value Added Tax (VAT), service tax, luxury tax etc.
- It is essentially a consumption tax and is levied at the final consumption point.

Tax structure under GST:

- Central GST to cover Excise duty, Service tax etc.
- State GST to cover VAT, luxury tax etc.
- Integrated GST (IGST) to cover inter-state trade.
- IGST per se is not a tax but a system to coordinate state and union taxes.
- It has a 4-tier tax structure for all goods and services under the slabs- 5%, 12%, 18% and 28%.

What is the Significance of GST?

- **Create a Unified Common Market:** Help to create a unified common national market for India. It will also give a boost to foreign investment and "Make in India" campaign.
- **Streamline Taxation:** It will harmonize the laws, procedures and rates of tax between Centre and States and across States.
- **Increase Tax Compliance:** Provide improved environment for compliance as all returns are to be filed online, input credits to be verified online, encouraging more paper trail of transactions at each level of supply chain;

Role of GST Council

- The GST Council is a joint forum of the Centre and the states.
- It was set up by the President as per Article 279A (1) of the amended Constitution
- Members:
- The members of the Council include the Union Finance Minister (chairperson), the Union Minister of State (Finance) from the Centre.
- Each state can nominate a minister in-charge of finance or taxation or any other minister as a member.
- **Functions:**
 - ▶ The Council, is meant to "make recommendations to the Union and the states on important issues related to GST, like the goods and services that may be subjected or exempted from GST, model GST Laws".
 - ▶ It also decides on various rate slabs of GST.

- **Discourage Tax evasion:** Uniform SGST and IGST rates will reduce the incentive for evasion by eliminating rate arbitrage between neighbouring States and that between intra and inter-state sales.
-
- **Reduce Corruption:** Greater use of IT will reduce human interface between the taxpayer and the tax administration, which will go a long way in reducing corruption.
- **Boost Secondary Sector:** It will boost export and manufacturing activity, generate more employment and thus increase GDP (Gross Domestic Product) with gainful employment leading to substantive economic growth.
- What are the issues associated with GST?
- **Multiple Tax Rates:** Unlike many other economies which have implemented this tax regime, India has multiple tax rates. This hampers the progress of a single indirect tax rate for all the goods and services in the country.
- **New Cesses crop up:** While GST scrapped multiplicity of taxes and cesses, a new levy in the form of compensation cess was introduced for luxury and sin goods. This was later expanded to include automobiles.
- **Trust Deficit:** The Union government's authority to levy and appropriate cess revenues for it without sharing them with the states has lent credence to the wisdom of guaranteed compensation for states.
- It turned out to be prescient as GST failed to live up to its economic promises and states' revenues were protected through this guarantee.
- Economy outside GST purview: Nearly half the economy remains outside GST. E.g. petroleum, real estate, electricity duties remain outside GST purview.
- The complexity of tax filings: The GST legislation requires the filing of the GST annual returns by specified categories of taxpayers along with a GST audit. But, filing annual returns is a complex and confusing one for the taxpayers. Apart from that, the annual filing also includes many details that are waived in the monthly and quarterly filings.
- **Higher Tax Rates:** Though rates are rationalised, there is still 50 % of items are under the 18 % bracket.
- Apart from that, there are certain essential items to tackle the pandemic that was also taxed higher.
- For example, the 12% tax on oxygen concentrators, 5% on vaccines, and on relief supplies from abroad.

INDIA'S EVOLVING SPACE ECONOMY

Context: Space is becoming an important component of the India's economy with Space Startups attracting private investment amounting to more than Rs.1, 000 crore.

India's Space Sector

- ◆ India's space sector is globally recognized for cost-effective satellite building, and it advocates for peaceful and civilian use of outer space.
- ◆ ISRO has an exceptional success rate and is the 6th largest space agency globally.
- ◆ India has over 400 private space companies and ranks fifth globally in terms of the number of space companies.
- ◆ **Recent developments include;**
 - ▶ Setting up the Defence Space Agency (DSA).
 - ▶ Expanding satellite manufacturing capabilities, which are expected to reach USD 3.2 billion by 2025.
 - ▶ ISRO launched SAMVAD, a student outreach program to encourage space research among young minds.

Challenges:

However, the space sector faces major challenges as well including:

- ◆ lack of regulations on commercialisation which could lead to monopolisation
- ◆ rising space debris from increasing expeditions
- ◆ China's rapid growth in the space industry and potential weaponization
- ◆ Increasing global trust deficit creating an environment of suspicion and potential conflict

About Space sector and Economy:

- ◆ **Private Investment Soars:** Robust private interest is evident as space startups attract over Rs. 1,000 crore in FY.
- ◆ **Exponential Growth Projection:** India's current space economy at 8 billion dollars may reach 100 billion dollar by 2040, aligning with global projections.
- ◆ **Strategic Reforms and Startups:** PM Modi's reforms lead to a surge in Space startups from 1 to 190 in four years, transforming India's space landscape.
- ◆ **Cost-Effective Space Missions:** India's cost-effective approach with Chandrayaan-3 at Rs. 600 crore versus Russia's Rs. 16,000 crore underscores leveraging intellectual resources.

- ◆ **Global Recognition and Achievements:** India's space missions gain global acclaim, showcasing advancements and affirming competence in space technology.
- ◆ **Inclusive Approach:** PM Modi's inclusive space policies unlock the potential of India's youth, validating Dr. Vikram Sarabhai's vision.
- ◆ **Applications in Diverse Sectors:** Space technology integrates into sectors like agriculture, disaster management, and healthcare, demonstrating pervasive impact.
- ◆ **Women Leading Space Projects:** Women take the forefront in leading significant space projects, marking a paradigm shift in space exploration.
- ◆ **Upcoming Projects:** Gaganyaan's unmanned test with 'Vyommitra' anticipates human spaceflight capability, highlighting India's trajectory towards manned space missions. The Deep Sea Mission adds a unique dimension.
- ◆ **Strategic Shift in Space Leadership:** Recognition of India's evolving space leadership and economic contribution positions it strategically in the global space arena.

INDIAN SPACE POLICY, 2023:

- The Indian Space Policy 2023 is a comprehensive set of guidelines that outlines the roles and responsibilities of different entities in the Indian space sector.
- **Research & Development:** The policy aims to keep India at the cutting edge of space research and development. ISRO, the Indian Space Research Organisation, has been tasked with focusing on applied research, technology development, and human spaceflight capabilities.
- **Efficient collaboration between public and private sector:** The policy outlines a strong emphasis on sharing technologies, products, processes, and best practices with New Generation Entities (NGEs) and Government companies.
- **Privatising:** The policy permits non-government entities to undertake end-to-end activities in the space sector through the establishment and operation of space objects, ground based assets and related services such as communication, remote sensing and navigation.
- **Democratizing Data for All:** Data with a Ground Sample Distance (GSD) of 5 meters and higher will be made freely accessible on a timely basis.
- This initiative promises to empower researchers, industries, and the general public with valuable information for various applications. In contrast, data with a GSD of less than 5 meters will be available for free to Government entities and at fair pricing for NGEs.
- **Focus on human spaceflight capabilities:** ISRO will work on developing the necessary technologies, infrastructure, and ecosystem for sustained human presence in space. This ambitious goal promises to propel India into the ranks of spacefaring nations. Additionally, the policy emphasizes the development of a collaborative framework for scientific research in multidisciplinary domains related to human space activities.
- **Celestial Prospecting and In-situ Resource Utilization:** ISRO is set to undertake studies and missions focused on in-situ resource utilization, celestial prospecting, and other aspects of extra-terrestrial habitability. This forward-looking approach will help India pave the way for future space exploration and utilization of resources beyond Earth.
- **Applicability:** This policy is applicable to any space activity to or from Indian Territory or within the jurisdiction of India, including the area to the limit of its exclusive economic zone.

FSB'S CONCERNS ABOUT CRYPTO ASSET INTERMEDIARIES

Context: Financial Stability Board (FSB)'s latest report on crypto-asset intermediaries sought measures to enhance cross-border cooperation and information sharing among local authorities.

Key Highlights-

Revenue Sources:

- ◆ MCIs earn from transaction fees, blockchain infrastructure operations, proprietary trading, and diversified services.
- ◆ Limited publicly disclosed information makes assessing revenue sources challenging.

Transparency and Governance:

- ◆ MCIs lack transparency about their corporate structure and are privately held.

Multi-function crypto-asset intermediaries (MCIs)

- MCIs as firms providing various crypto services, such as trading, posing risks due to a lack of controls, transparency, and potential conflicts of interest.
- In traditional finance, separate entities handle these functions, preventing conflicts and promoting integrity.

◆ Poorly separated business lines and limited disclosure raise concerns about their vulnerabilities and governance.

Risk Management:

- ◆ The report notes that poor risk management may facilitate insider misconduct and inflate prices of self-issued crypto assets.
- ◆ Lack of transparency hides risks until negative shocks materialize.

Concentration Risk:

- ◆ Market dominance by one or more MCIs may distort crypto-asset prices and facilitate anti-competitive behaviour.
- ◆ Concentration risk raises barriers, increases costs for users, and amplifies vulnerabilities.

Spill over to the Financial System:

- ◆ The threat to global financial stability from MCI failure is presently limited but recent events highlight vulnerabilities.
- ◆ The failure of crypto-friendly banks post-FTX collapse led to significant losses and shook confidence in crypto markets.

Conclusion:

- ◆ The FSB report underscores the need for improved regulation and transparency in the crypto space, emphasizing the potential risks associated with MCIs. It points to the challenges in assessing their revenue, managing concentration risks, and the spillover effects on the broader financial system.

**THE UNITED STATES' AND CLIMATE RESPONSE**

Context: United States has been one of the biggest laggards on climate action. Not only has it not cut down on its emissions so far, it has done little to meet its financial and technological obligations.

About:**The United States' Lacklustre Climate Commitments: A Closer Look at COP28**◆ **Loss and Damage Fund Contributions:**

- ▶ UAE: \$100 million
- ▶ Germany: \$100 million
- ▶ France: Approximately \$110 million
- ▶ Italy: Approximately \$110 million
- ▶ United Kingdom: \$60 million
- ▶ United States: \$17.3 million

◆ **Historical Emissions Responsibility:**

- ▶ **United States Share:** The United States holds the largest share of historical emissions, over 20% of global carbon dioxide emissions since 1850.
- ▶ **Historical Emissions:** Despite China emitting more in the last 15 years, the U.S. still maintains a significant historical emissions burden.

COUNTRY	SHARE OF HISTORICAL EMISSIONS (1850-2021) IN %
US	20.9
European Union	11.8
China	11.5
Brazil	4.6
India	3.3
Source: Study published in <i>Nature</i> , 2023	

Kyoto Protocol and Emission Reductions:

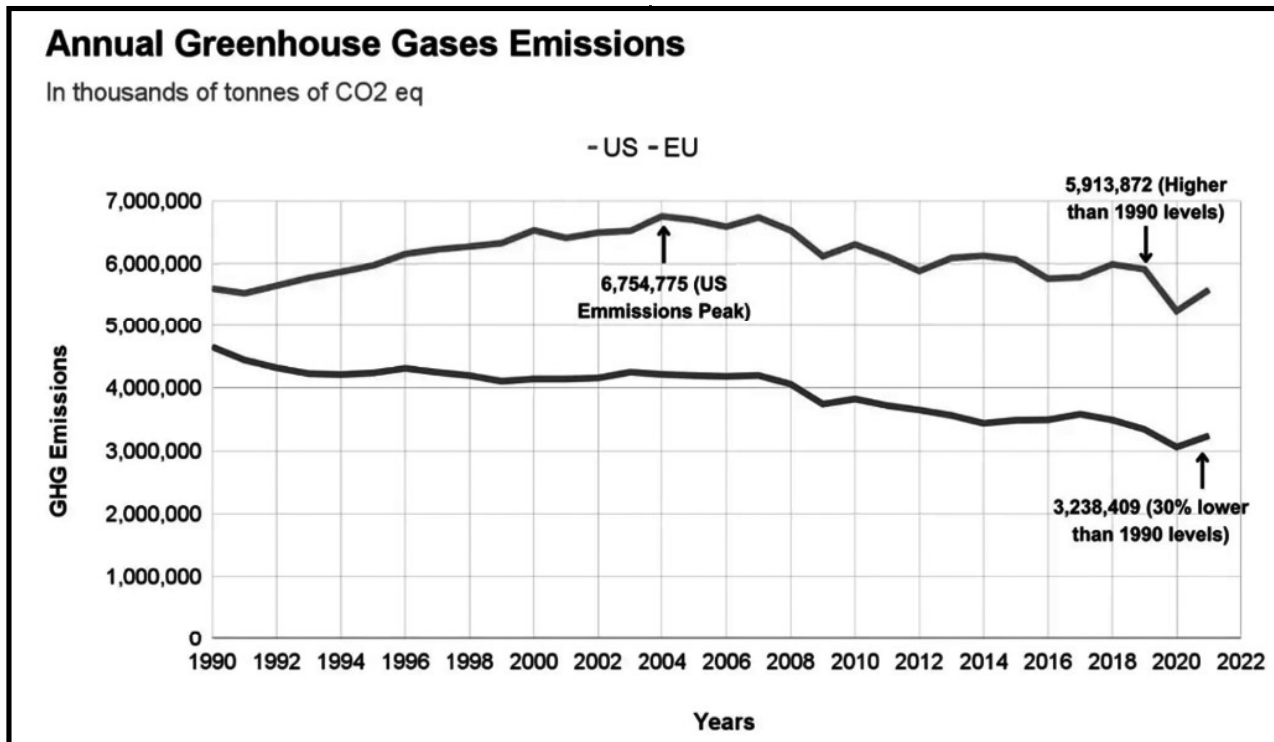
- ◆ **Non ratification of Kyoto Protocol:** The U.S. never ratified the Kyoto Protocol, failing to abide by assigned emissions reduction targets.
- ◆ **The U.S. collective contribution:** By 2020, Annex-I countries collectively reduced net greenhouse gas emissions by about 25%, with the U.S. contributing only 0.4%.

2020 Emission Targets:

- ◆ The U.S. claims to have met its 2020 emission targets (**17% reduction from 2005 baseline**). The U.S. used a 2005 baseline, unlike most Annex-I countries using a **1990 baseline**.

Future Emission Reduction Targets:

- ◆ **The U.S. promise:** The U.S. promises a 50-52% reduction by 2030 from 2005 levels.
- ◆ **IPCC recommendations:** IPCC recommends a global emissions drop of at least 43% by 2030 from 2019 levels to achieve the 1.5-degree Celsius target.



Current Policies and Projections:

- ◆ **UNFCCC assessment** suggests the U.S. may achieve only about a 20% reduction from 2005 baseline by 2030.
- ◆ **Inflation Reduction Act:** The **Inflation Reduction Act** is crucial for the U.S. to meet the 50-52% reduction target.

Fossil Fuel Dependency:

- ◆ **Largest Emitter:** The U.S. remains the largest producer of fossil fuels, with over 80% of its energy needs met by oil, natural gas, and coal.
- ◆ **Biased Criticism:** Despite being a significant fossil fuel guzzler, the U.S. faces less criticism compared to countries like India.

Climate Finance Contributions:

- ◆ **Green Climate Fund (GCF):** The U.S. commits \$3 billion to the **Green Climate Fund (GCF)** for the next four years, the largest sum from any single country.
- ◆ **Climate actions:** GCF handles a small fraction of the funds required for **climate actions**, estimated to be trillions of dollars annually.

Global Climate Finance Target:

- ◆ **100 billion Dollar target:** In 2009, the U.S. proposed a 100 billion Dollar per year target for climate finance by developed countries from 2020 onwards.
- ◆ **Issues with target:** Despite claims of reaching this target in 2022, concerns exist about double-counting, repurposing, and green washing.

Adaptation Funding Challenges:

- ◆ **Adaptation Gap Report:** The **Adaptation Gap Report** reveals a decline in funds for adaptation activities, contrary to the decision to double financial flows to adaptation in Glasgow.
- ◆ **Global Goal on Adaptation:** The United States played a role in excluding separate financial provisions for adaptation in the **Global Goal on Adaptation** decision at COP28.

Way Forward:

- ◆ The United States' contributions to emission reductions, climate finance, and adaptation efforts are deemed insufficient, raising concerns about its commitment to addressing the global climate crisis.



ARCTIC REPORT CARD 2023

Context: As per a recent study, Alaska Indigenous cultures have an important influence of fishing and related activities and thus needs attention for conservation due to climate change.

About the recent updates from Arctic:

- ◆ **Warmest summer:** The year 2023 has etched its mark in history as the Arctic experienced its **warmest summer** on record, leaving a profound impact on ecosystems and communities across the region.

◆ **Ice Melting:** From raging wildfires in Canada to unprecedented melting in Greenland, the signs of climate change are undeniable.

Highlights of the study:

- ◆ **2023 Arctic Report Card:** The **2023 Arctic Report Card** delves into the underexplored realm of subsea permafrost, a hidden danger escalating due to warmer ocean temperatures.
- ◆ **Subsea permafrost thawing:** With vast expanses of **subsea permafrost thawing**, the **release of methane and carbon dioxide poses a serious threat to global warming and ocean acidification.**
- ◆ **Need for research:** The report highlights the urgent **need for research** to gauge the extent and intensity of the potential consequences.

What are reasons behind the condition?

◆ **Rising temperatures:** Canada faced a summer of turmoil as **wildfires forced evacuations**, fueled by a combination of **rising air temperatures and dry conditions.**

◆ **Early snowmelt:** The Northwest Territories bore witness to **early snowmelt**, exposing vast areas to intense heat, contributing to a record-low North American snowpack.

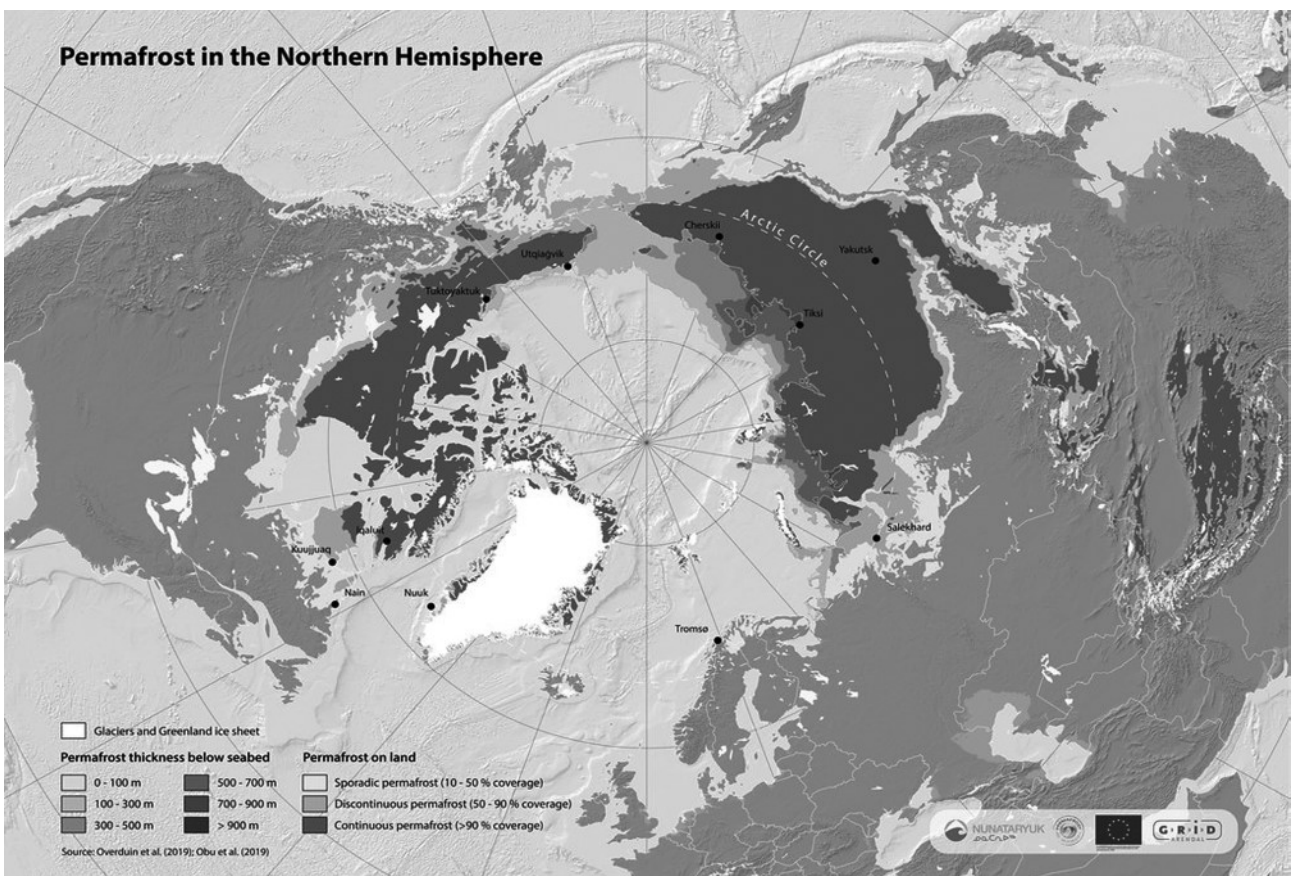
◆ **Cascading effects:** By November 2023, a staggering 70,000 square miles had succumbed to wildfires, emphasizing the **cascading effects** of climate change.

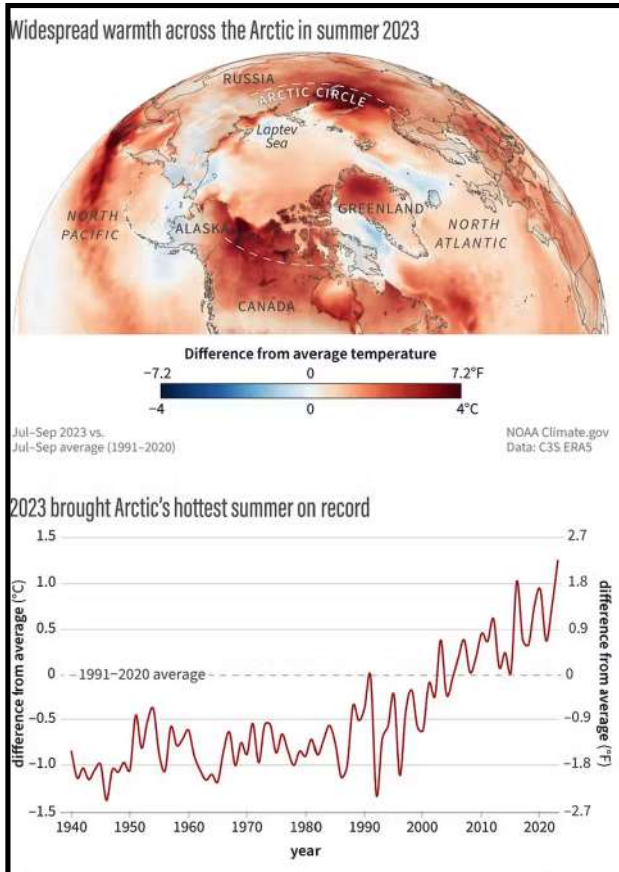
Other Factors contributing:

◆ **Mackenzie River and warm water:** The mighty **Mackenzie River** played a pivotal role in the warming trend, carrying warm water into the Beaufort Sea, accelerating sea ice melting and impacting Alaska’s coastline.

◆ **Decline of sea ice in Siberia:** Similar patterns were observed in western Siberia, amplifying the **decline of sea ice in the Kara and Laptev seas north of Russia.**

◆ **Rising fall temperatures:** The Arctic’s diminishing sea ice emerges as a significant contributor to **rising fall temperatures**, perpetuating a cycle of heat absorption and release.





Impacts on Indigenous Communities: Disrupted Lives and Livelihoods

- ◆ **Indigenous communities:** Arctic inhabitants, particularly **indigenous communities**, are grappling with tangible effects of climate change.
- ◆ **Shifts in sea ice patterns:** Shifts in sea ice patterns, unreliable river ice for travel, and the **sinking of infrastructure due to thawing permafrost** are disrupting traditional ways of life.
- ◆ **Western Alaska:** The article sheds light on the struggles of Indigenous communities in **Western Alaska**, where the **decline of Chinook salmon** jeopardizes cultural practices and food security, underscoring the human dimension of climate change.

Adaptation and Healing: Initiatives in the Face of Change

- ◆ **Adaptation of Communities:** Amid challenges, communities are adapting and initiating efforts to heal their landscapes.
- ◆ **Sámi reindeer herders and conservationists:** In **Finland**, collaboration between **Sámi reindeer herders and conservationists** aims to restore degraded reindeer habitat, simultaneously preserving cultural practices and mitigating climate change.

Way Forward:

- ◆ As **temperatures in the Arctic soar at a rate three times faster than the global average**, the 2023 Arctic Report Card serves as a stark reminder of the risks associated with climate change.
- ◆ Beyond statistics, it illuminates **the lives and cultures already disrupted by environmental shifts**.
- ◆ The urgency for **collective action** to address climate change and **protect the Arctic ecosystem** has never been more apparent.



COP AND FOSSIL FUEL ELIMINATION STRATEGY

Context: While India has consistently stepped up renewable capacity addition, policymakers have realised that the country simply cannot keep adding more green capacity unless it has viable energy storage options.

About:

- ◆ The recently concluded 2023 **United Nations Climate Change Conference, COP28**, witnessed heated debates, with the most contentious issue being the **phase-out of fossil fuels**.
- ◆ The final agreement emphasized a **"transition away from fossil fuels,"** omitting the explicit mention of "phase-out" due to strong opposition, particularly from countries like India, China, and South Africa.

India's Coal Pivot:

- ◆ Just days before COP28, India's Union Power Ministry surprised many by announcing plans to **increase coal-powered generation capacity**. The decision marked a policy reversal, deviating from the earlier emphasis on renewable energy.
- ◆ **India aims to add at least 80 gigawatts (GW)** of coal capacity by 2031-32, indicating a shift in focus towards coal for base load capacity.
- ◆ India has significantly **increased renewable capacity** over the past decade, becoming the **world's third-largest producer of renewable energy**.
- ◆ However, the **operational challenges of integrating renewables** into the grid, particularly the issue of intermittency, have prompted policymakers to reconsider the rapid expansion of green capacity without viable energy storage options.

Challenges:

- ◆ **Storage Alternatives:** Energy storage is deemed

crucial to counter the **variability in renewable generation**.

- ◆ While **lithium-ion storage batteries are considered unviable**, the government is exploring alternatives such as **hydrogen and hybrid generation models blended with off-stream pumped storage**. These measures aim to balance the intermittent nature of renewable sources.
- ◆ **Renewables Cost Challenges:** The **concept of renewables achieving grid-parity is questioned**, with the acknowledgment that the cost of standby **thermal power makes renewable power almost twice as expensive on paper**.
- ◆ The **renewables challenge is further compounded by rigid power purchase agreements (PPAs)** and the expensive nature of current storage options.

New marine amphipod species found in Chillika Lake, Odisha

Shrimp-like crustacea named *Demaorchestia alanensis*

- The specimens were deposited in the Zoological Survey of India's Estuarine Biology Regional Centre, Gopalpur-on-Sea, Odisha for further research, said Lipika Tarafdar, another researcher and the third co-author.

About *Demaorchestia alanensis*

- The study has revealed that the new species is white in colour and less than 15 millimetres in length.
- It has 13 pairs of legs.
- While three pairs are used for swimming in the water, eight pairs are used for walking on land. The other two pairs are used for capturing prey and feeding, Patro said.

About Amphipods

- Amphipods are a significant group in the marine ecosystem and play a vital role in the marine food chain. They also serve as indicators for studying the impact of climate change and health of coastal ecosystems, he said. Further research will delve deeper into understanding the specific ecological roles of amphipods in coastal and marine environments

About family Talitridae

- The family Talitridae was considered **one of the oldest groups of amphipods**, and it was believed to have been on the planet **since the Jurassic age**.
- It is divided into four **subfamilies**: Talitrinae, Floresorchestiinae, Pseudorchestoideinae and Platorchestiinae.

NITI AAYOG REPORT ON 'A GREEN AND SUSTAINABLE GROWTH AGENDA FOR THE GLOBAL ECONOMY'

Context: The report will add to the body of knowledge on the subject and will also provide valuable inputs for Brazil as it takes over the G20 presidency from India”

- ◆ The report launch was a significant effort of NITI Aayog in Partnership with IDRC and GDN paving the way for green and sustainable growth.

Highlights of the Report:

I. G20 Report Launch:

- ◆ **Participants:** Ministry of Environment, Forest & Climate Change, NITI Aayog, Sherpa, G20 India, and other dignitaries.
- ◆ **Organizers:** NITI Aayog in collaboration with the International Development Research Centre (IDRC) and the Global Development Network (GDN).

II. Collaborative Effort and Global Experts' Involvement:

- ◆ **Expert Involvement:** 40 leading experts from 14 countries contributed to the report.

V. Minister's Address and India's Climate Stance:

- ◆ Praises NITI Aayog for the report release.
- ◆ India's resolve for collaborative climate action.
- ◆ Emphasis on a swift, just, and equitable transition to renewable energy.
- ◆ Climate finance and technology crucial for sustainable growth.
- ◆ Developed countries' responsibility to help combat climate change.

VI. G20 New Delhi Leaders' Declaration and Finance Needs:

- ◆ **Declaration Highlights:**
 - ▶ Urgency and importance of accelerating global growth.
 - ▶ Free trade critical for lifting populations above the poverty line.
 - ▶ Revitalization of the World Trade Organisation advocated.
- ◆ **Finance Needs:** Trillion-dollar requirement by 2030 as per G20 New Delhi Leaders' Declaration.

VII. G20 Sherpa's Views and WTO Revitalization:

◆ NITI Aayog Views:

- ▶ Complements NITI Aayog for the conference and report.
- ▶ Inputs from the conference incorporated into the New Delhi Leaders' Declaration.
- ▶ Emphasizes the critical role of free trade and the need to revitalize the World Trade Organisation.

X. Just Transition and Economic Impact:

- ◆ **Theme:** Just transition as a critical pathway to mitigating climate change.
- ◆ **Economic Impact:** Positive economic outcomes for developed and emerging economies discussed.

XI. Way Forward: Collective Commitment to Sustainability:

- ◆ **Commitments:** Participants committed to shaping a more sustainable and equitable world.
- ◆ **Event Significance:** Underscores the importance of collective efforts in addressing global challenges.



HOW REFRIGERATORS AND ACS CONTRIBUTE TO GLOBAL WARMING

Context: Recently, Sixty-three countries, including the US, Canada, and Kenya, signed up to the world's first-ever pledge to drastically cut cooling emissions at the on-going COP28 climate summit.

The Urgency of Cooling Emission Reduction:

- ◆ As climate change intensifies, the world faces a **new challenge in the form of cooling emissions**.
- ◆ The recently signed **Global Cooling Pledge**, with **63 participating countries** including the US, Canada, and Kenya, marks a historic commitment to **reduce cooling emissions by at least 68% by 2050**.

Cooling Emissions and Their Origins:

1. Refrigerants and Greenhouse Gases

- ◆ **Refrigerants in appliances:** Cooling emissions primarily arise from **refrigerants used in appliances** like air conditioners and refrigerators.
- ◆ **CFCs:** Historically, **chlorofluorocarbons (CFCs)** were widely used but were phased out due to their harmful impact on the ozone layer.
- ◆ **HFCs and HCFCs:** Hydrofluorocarbons (HFCs) and

hydrochlorofluorocarbons (HCFCs) replaced CFCs but pose a new problem as potent greenhouse gases.

- ▶ **HFC-134a**, commonly used in fridges, has a **global warming potential 3,400 times that of CO₂**.

2. Leakage and Improper Disposal

- ◆ HFCs and HCFCs are released from **damaged appliances** or car air conditioning systems.
- ◆ Ninety percent of refrigerant emissions occur at the **end of the equipment's life**, often due to improper disposal.
- ◆ **Electricity used to power cooling appliances**, largely sourced from fossil fuels, also contributes to cooling emissions.

The Impact of Cooling Emissions on Global Warming

1. Escalating Demand and Vicious Cycle

- ◆ Cooling emissions currently account for **7% of global greenhouse gas emissions**.
- ◆ **Expected to triple by 2050** due to rising global temperatures leading to increased demand for cooling appliances.
- ◆ A **destructive feedback loop**: as global warming worsens, the demand for cooling rises, further contributing to warming.

2. Alarming Consumption Trends

- ◆ **Energy consumption for space cooling has tripled since 1990**.
- ◆ Consumption increased by over 5% from 2021 to last year.
- ◆ **Consumption rates set to skyrocket**, especially in **developing countries reliant on fossil fuels**.

Solutions: Addressing Cooling Emissions and Phasing Out HFCs

1. The Kigali Amendment

- ◆ Over 150 countries signed the **Kigali Amendment to the Montreal Protocol in 2016**.
- ◆ A commitment to **reducing HFC consumption by 80% by 2047**, potentially **avoiding 0.4 degrees Celsius of global warming by 2100**.

2. Phasing Out HFCs

- ◆ **Promotion of climate-friendly chemicals**, known as natural refrigerants, such as ammonia, hydrocarbons, and CO₂.
- ◆ These **alternatives have lower or zero global warming potential**.

3. Proper Management and Disposal

- ◆ Critical need for **proper disposal of appliances at the end of their life.**
- ◆ The **management and reuse of refrigerant gases** could significantly reduce global CO2 emissions.

4. Beyond Air Conditioning: Sustainable Cooling Solutions

- ◆ Emphasis on **cooling buildings without relying solely on air conditioners.**
- ◆ **Improved insulation materials** and **better ventilation in building** designs to reduce the need for energy-intensive cooling.



Context: Climate change driving multiple species towards extinction at all stages of its lifecycle, assessment noted.

Climate Change and Biodiversity Loss:

- ◆ **IUCN Assessment:** Climate change is emerging as a significant driver of **biodiversity loss**, according to the latest update from the **International Union for Conservation of Nature (IUCN) Red List.**
- ◆ **Freshwater Ecosystem:** The assessment reveals **alarming trends**, especially in **freshwater ecosystems**, and highlights the interconnectedness of climate change, habitat degradation, and other anthropogenic factors affecting diverse species.



Freshwater Fish Under Threat:

- ◆ **Statistics:** About 25% of the world's freshwater fish species face extinction risks due to climate change.
- ◆ **Factors:** Decreasing water levels, shifting seasons,

and rising sea levels impact 17% of threatened freshwater fish species.

- ◆ **Compound Threats:** Climate change compounds threats from pollution (57%), dams and water extraction (45%), overfishing (25%), disease, and invasive species (33%).

Species-Specific Impacts:

- ◆ **Lake Turkana Robber:** Large-toothed Lake Turkana robber (*Brycinus ferox*) in Kenya moves from least concern to vulnerable due to overfishing, habitat degradation, and dams.
- ◆ **Atlantic Salmon:** Global population drops by 23%, moving the species from least concern to near threatened due to multiple threats during migration, climate influence, and invasive species.

Green Turtle Populations Decline:

- ◆ **Threats:** Central South Pacific and East Pacific green turtle populations move from endangered and vulnerable to extinction.
- ◆ **Climate Influences:** High temperatures affect hatching success, rising sea levels threaten nests, and warming oceans impact seagrass growth, a crucial part of the turtle's diet.
- ◆ **Human Impact:** Industrial and artisanal fishing contribute to incidental bycatch, while harvesting for consumption and trade further depletes numbers.

Commercial Timber Tree Facing Extinction:

- ◆ **Big Leaf Mahogany:** The commercially popular big leaf mahogany (*Swietenia macrophylla*) moves from vulnerable to endangered.
- ◆ **Reasons:** Unsustainable harvesting, urban encroachment, and agriculture lead to a 60% reduction in numbers over the past 180 years.
- ◆ **Ongoing Threats:** Despite legal protection, illegal logging and trade persist, compounded by climate change impacts on habitat.

Positive Conservation Outcomes:

- ◆ **Scimitar-Horned Oryx:** Upgraded from extinct in the wild to endangered due to successful reintroduction efforts in Chad.
- ◆ **Saiga Antelope:** Moved from critically endangered to near threatened, with population increase in Kazakhstan attributed to anti-poaching measures.

IUCN Red List Updated:

- ◆ The IUCN Red List update underscores the **vulnerability of global biodiversity** to the **complex interplay of climate change** and various anthropogenic pressures.

- ◆ **Freshwater ecosystems**, in particular, **face compounded threats**, with a quarter of freshwater fish species at **risk of extinction**.
- ◆ The report sheds light on how **decreasing water levels**, shifting seasons, and **rising sea levels** intensify risks, affecting not only fish but entire ecosystems.

Impact on specific species:

- ◆ **Lake Turkana robber and Atlantic salmon:** Notable case studies highlight the **impact on specific species**, such as the **Lake Turkana robber and Atlantic salmon**, where overfishing, habitat degradation, and changing climates contribute to their vulnerability.
- ◆ **Green turtle:** The **decline of green turtle populations** exemplifies the intricate relationship between climate factors, human activities, and the survival of iconic species.

Commercial Sector Impact:

- ◆ **Big leaf mahogany:** The assessment also points to the commercial sector, with the **big leaf mahogany facing extinction due to unsustainable practices** and climate-induced habitat threats.
- ◆ **Illegal logging persists:** Despite legal safeguards, **illegal logging persists**, underscoring the challenges in enforcing conservation measures.

Positive conservation efforts:

- ◆ **Scimitar-horned oryx:** On a positive note, **successful conservation efforts** are evident in the case of the **scimitar-horned oryx**, showcasing the potential for species recovery through strategic initiatives.
- ◆ **Saiga antelope's:** The **Saiga antelope's** shift from critically endangered to near threatened reflects the positive impact of anti-poaching measures, although ongoing threats persist.



WHAT'S HAPPENING WITH ETHANOL BLENDING SCHEME

Context: **Low stocks of sugar and uncertainties over production this year has forced the government to go slow on its successful ethanol blending programme.**

Background:

- ◆ In a significant policy shift, the Indian government has taken a series of measures aimed at **bolstering domestic sugar availability**.
- ◆ After **banning sugar exports** earlier, the Ministry of Consumer Affairs, Food and Public Distribution, on December 7 2023, directed mills and distilleries

to **cease using sugarcane juice/syrup for ethanol production** "with immediate effect."

- ◆ This move marks a crucial step in the government's strategy to **address concerns over diminishing sugar stocks and prioritize consumer needs** over fuel production.

Ethanol Blending Program Success:

- ◆ **Ethanol Blended Petrol (EBP):** Under the leadership of Prime Minister Narendra Modi, the **Ethanol Blended Petrol (EBP)** program has achieved remarkable success.
- ◆ **Blending Surge:** The average **blending of ethanol with petrol has surged from 1.6% in 2013-14** to an impressive **11.8% in 2022-23**.
- ◆ **Key to this success:** **Key to this success** has been the diversification of feedstocks, with ethanol production extending beyond traditional C-heavy molasses.

Feedstock Diversification and Pricing Policy:

- ◆ **Alternative feedstocks:** Ethanol production has shifted towards **alternative feedstocks**, including **B-heavy molasses, sugarcane juice/syrup, surplus rice** from the Food Corporation of India's stocks, broken/damaged foodgrains, and maize.
- ◆ **Differential pricing policy:** The government's **differential pricing policy** has played a pivotal role in incentivizing mills to produce ethanol from feedstocks other than C-heavy molasses.
- ◆ **Higher ex-distillery prices:** The policy has resulted in **higher ex-distillery prices** for ethanol produced from various sources, providing a significant boost to the EBP program.

Setback for Industry:

- ◆ **Restrict use of sugarcane juice/syrup:** However, the recent directive to **restrict the use of sugarcane juice/syrup** for ethanol production is a setback for companies that have invested in capacities to produce ethanol directly from cane juice/syrup.
- ◆ This move, affecting companies like Balrampur Chini Mills, Shree Renuka Sugars, Ugar Sugar Works, and Nirani Sugars, could impact the bulk of ethanol supplies and lead to stranded capacities.

Impact on Ethanol Supply and Sugar Production:

- ◆ **Concerns over sugar supply:** The order comes as the government faces **concerns over sugar supply**, with stocks at a six-year low and uncertainties over production for the current year.

- ◆ **Decline in sugar output:** Estimates suggest a **decline in sugar output** for the 2023-24 year, with Maharashtra and Karnataka expected to record sharp declines due to subpar rains and low reservoir water levels.
 - ▶ The directive could result in approximately 15 lakh tonnes of additional sugar entering the market, addressing supply concerns and potentially stabilizing prices.

ECOLOGICAL IMPACT OF BIOFORTIFIED SEEDS

About:

- ◆ **Agricultural innovation:** India has made remarkable progress in **agricultural innovation**, with the development of 142 biofortified varieties since 2014.
- ◆ **Indian Council of Agricultural Research (ICAR):** Spearheaded by the **Indian Council of Agricultural Research (ICAR)**, these varieties are designed to enhance the nutritional content of crops without adverse effects on the environment.

Scope of Biofortification: Varied Crops and Categorized Impact

- ◆ **Diverse Crop Portfolio:** The biofortification initiative covers 124 field crops and 18 horticultural crops, ranging from staple grains like rice, wheat, and maize to nutrient-rich vegetables and fruits.
- ◆ **Biofortified Crop Breakdown:**
 - ▶ Field Crops: Rice (10), Wheat (43), Maize (20), Pearl Millet (11), Small Millets (13), and more.
 - ▶ Horticultural Crops: Sweet Potato (5), Amaranthus (3), Greater Yam (2), and more.

Environmental Impact: Sustainably Engineered Varieties

- ◆ **Ecological Neutrality:** Biofortified varieties exhibit no discernible impact on soil and water conditions. These varieties are developed through traditional breeding methods, minimizing concerns about environmental repercussions.
- ◆ **Equivalent Nutrient and Water Requirements:** Biofortified crops share similar water and nutrient requirements with traditional varieties, ensuring sustainable cultivation practices.

Yield and Affordability: The Economic Landscape

- ◆ **Yield Parity:** All biofortified varieties match or

surpass the yield of conventional counterparts. This ensures that farmers don't face a productivity penalty when opting for these nutritionally enhanced crops.

- ◆ **Affordable Production:** Despite their enhanced nutritional value, biofortified crops are not more expensive than existing varieties in the market. The cultivation costs remain comparable, making them economically viable for farmers.

Seed Production and Distribution: Scaling Impact

- ◆ **Breeder Seed Production:** A substantial 37,425.7 quintals of breeder seed for biofortified varieties have been produced since 2019-20.
- ◆ **Multiplication and Supply Chain:** Public and private seed production agencies receive breeder seeds for downstream multiplication, ultimately leading to the distribution of certified seeds to farmers.
- ◆ **Coverage and Impact:** Over 10 million hectares of agricultural land, spanning wheat, rice, pearl millet, mustard, and lentils, have been cultivated with biofortified varieties in the past six years.

National Food Security Mission (NFSM): A Catalyst

- ◆ **NFSM Interventions:** The National Food Security Mission plays a pivotal role by supporting interventions like cluster demonstrations, cropping system enhancements, and distribution of High Yielding Varieties (HYVs)/ hybrids.
- ◆ **Technology Transfer:** ICAR, State Agricultural Universities, and Krishi Vigyan Kendras receive support for technology transfer, ensuring that advancements reach farmers through demonstrations and frontline initiatives.
- ◆ **Encouraging Biofortification:** NFSM actively promotes the production and distribution of biofortified seeds, aligning with its goal of enhancing food security and nutritional outcomes.

Way Forward: Nourishing the Nation, Sustainably

- ◆ India's journey in **biofortification** stands as a beacon of progress in agricultural research and development.
- ◆ By prioritizing **nutritional enhancement** without compromising on yield and affordability, the nation is paving the way for a sustainable and resilient future in agriculture.
- ◆ The **biofortification revolution** is not only transforming crops but also nourishing the lives of millions across the country.



THE LIMITATIONS OF CCS AND CDR AND THEIR GRIP ON OUR FUTURE CLIMATE

Context: While their technical details are clear, scientists have questions about the scale at which CCS and CDR are expected to succeed.

Unraveling the Complexities of Carbon Abatement Technologies at COP28

◆ **New Technologies:** The ongoing COP28 climate talks in Dubai have brought to the forefront the discussions around **carbon capture and storage (CCS)** and **carbon-dioxide removal (CDR) technologies**, with a particular emphasis on the contentious term “abatement.”

Understanding CCS and CDR Technologies

- ◆ **Deciphering CCS:** CCS, or carbon capture and storage, encompasses technologies designed to **capture carbon dioxide (CO₂) emissions at their source, preventing their release into the atmosphere.**
- ◆ **Unveiling the Forms of CDR:** CDR, or carbon-dioxide removal, takes various forms, ranging from **natural methods such as afforestation and reforestation to advanced technologies** like direct air capture.
 - ▶ **Enhanced rock weathering and bioenergy** with **carbon capture and storage (BECCS)** are among the more **intricate CDR technologies**, each playing a unique role in mitigating carbon emissions.

Unraveling the Controversy of “Unabated Fossil Fuels” at COP28

- ◆ **Unabated fossil fuels:** The term “**unabated fossil fuels**” has become a contentious point of discussion at COP28, specifically in the context of combustion without utilizing CCS technologies to capture emissions.
 - ▶ **Phase out:** Draft decisions at the conference emphasize the need to “**phase out**” such unabated fossil fuels, revealing the complexities of aligning diverse perspectives.

The Scale and Challenges of CCS and CDR

- ◆ **Technical details of CCS and CDR:** While the **technical details of CCS and CDR are clear**, questions arise regarding their scalability and effectiveness.

- ◆ The **Sixth Assessment Report (AR6)** by the IPCC **underscores the reliance on CDR** for achieving the **goal of limiting global temperature rise to 1.5 degrees Celsius**. However, concerns about the **scale of implementation and the necessity of these technologies** persist.

Navigating the IPCC's Emission Scenarios

- ◆ The IPCC's emission scenarios for limiting warming to 1.5 degrees Celsius highlight the need to **sequester 5 billion tonnes of CO₂ by 2040**.
 - ▶ This **ambitious goal** raises questions about the **feasibility and implementation challenges**, especially considering it surpasses the annual emissions of a major emitter like India.

The Crucial Role of CDR in Mitigation Strategies

- ◆ **CDR in mitigating climate change:** Scientists emphasize the indispensable role of **CDR in mitigating climate change**, particularly in scenarios where direct mitigation through renewable energy sources may prove insufficient.
- ◆ The **strategic use of CDR** becomes crucial to counterbalance hard-to-abate residual emissions, as outlined in the IPCC AR6 report.

Analyzing the Effectiveness of CCS

- ◆ **Challenges of CCS:** Despite being recognized as a key technology, **CCS faces challenges** related to its effectiveness, feasibility at a large scale, high costs, and potential environmental impact.
- ◆ **Highly effective CCS:** The distinction between “**abated**” and “**unabated**” fossil fuels hinges on the application of **highly effective CCS**, emphasizing the need for a **capture rate of 90-95% or more**.

Scrutinizing CDR Technologies

- ◆ **Limitations:** While CDR technologies like afforestation, reforestation, and BECCS offer potential solutions, they are not without limitations.
- ◆ **Land Issues:** Concerns about land use, equity issues, and potential conflicts with other land-dependent activities, such as agriculture, underscore the complexities of deploying large-scale CDR methods.

Pitfalls and Dilemmas of CCS and CDR

- ◆ **Creating more emissions:** The deployment of CCS and CDR raises concerns about **creating more room for emissions, potentially offsetting their intended benefits**.

- ◆ **Increased Emissions:** The paper explores the **pitfalls of these technologies**, including their potential use to extract more oil, the role of land in CDR methods, and the overarching question of **who will bear the financial burden of implementing CDR at scale**.

Way Forward:

- ◆ The article concludes by highlighting the pivotal role of the **next decade in determining the viability and scalability of CDR methods**.
- ◆ It underscores the need for addressing questions related to land use, equity, and financial responsibilities, while also recognizing the **broader global perspectives on climate adaptation versus extensive investment** in CDR technologies.



Context: Recently, Japan's first-ever moon landing in 2024 has sent pictures of moon's craters which are seen as a significant milestone for the mission.

The SLIM Mission:

- ◆ **Development by JAXA:** Developed by the **Japan Aerospace Exploration Agency (JAXA)**, SLIM represents an experimental mission with the primary goal of demonstrating precise and accurate lunar landings. The spacecraft, often referred to as the "**moon sniper**," comes with a price tag of an estimated **18 billion yen (120 million Dollars)**.
- ◆ **Mission Objectives:** SLIM aims to touch down with unparalleled precision, within a mere 100 meters of its target point inside **Shioli, a small crater on the moon's near side**.
- ◆ **Innovative Path to the Moon:** SLIM's journey to the moon was unconventional, employing a fuel-efficient trajectory.
 - ▶ After its launch on September 6, 2023, the spacecraft utilized a lunar flyby and a deep space loop before returning to the moon's vicinity.
 - ▶ This innovative path not only conserved fuel but also contributed to reducing overall mission costs.

Upon entering its elliptical lunar orbit, SLIM initiated preparations for its upcoming landing attempt. The spacecraft's **optical navigation system**, complemented by maps from **Japan's Kaguya orbiter**, is designed to guide SLIM with unprecedented accuracy to the designated landing site.

- ◆ **Unique Landing Legs:** SLIM's design includes crushable, **3D-printed aluminium lattice landing legs**. These legs serve a crucial role in absorbing the impact of touchdown and ensuring proper orientation on the crater slope, enhancing the overall success of the mission.
- ◆ **Scientific Payloads:**
 - ▶ **Multi-Band Camera:** Beyond its precision landing objectives, SLIM carries scientific payloads that contribute to lunar exploration.
 - The **Multi-Band Camera** on board is tasked with analysing the **composition of lunar minerals**, providing valuable insights into the **moon's geological makeup**.
 - ▶ **Lunar Rovers:** SLIM also hosts **two small rovers** designed to traverse the lunar surface and conduct experiments.
 - These rovers not only expand our understanding of **lunar terrain** but also showcase Japan's commitment to technological innovation in space exploration.

Implications for Future Missions:

- ◆ **Revolutionizing Lunar and Planetary Missions:** The success of SLIM's technology could revolutionize future lunar and planetary missions. The capability for targeted landings at scientifically significant sites opens new possibilities for exploration and scientific discovery.



- ◆ **Optical Navigation System:**

- ◆ **Cost-Effective Space Exploration:** SLIM's innovative trajectory and precise landing technology contribute to the broader goal of making space exploration more cost-effective. This achievement positions Japan as a key player in the endeavour to explore the moon and beyond efficiently.

Way Forward:

- ◆ Japan's SLIM mission represents a significant **leap forward in space exploration**, showcasing not only **technological prowess** but also a commitment to **precision and innovation**.
- ◆ As SLIM prepares for its **historic moon landing attempt**, the world watches with anticipation, recognizing the **potential impact on the future of lunar and planetary exploration**.
- ◆ The success of SLIM may well be a catalyst for more ambitious and cost-effective missions, heralding a new era in space exploration.



THE FUTURE OF HEALTHCARE IS IN OUR GENES

Context: Gene and cell therapy are the cutting-edge medical advancements poised to revolutionise our approach to and treatment of various health conditions, from sickle cell disease and dengue to cancer and HIV/AIDS.

India's Health Sector:

- ◆ **Gene and cell therapy:** India's healthcare landscape is undergoing a **paradigm shift**, with **gene and cell therapy** emerging as imperative tools for addressing diverse health challenges.
- ◆ **Transformative therapies:** From genetic disorders to cancer and infectious diseases, these **transformative therapies** offer the promise of not just treatment but cures, ushering in a new era of precision and personalized medicine.

Genetic Disorders:

- ◆ **Burden of genetic disorders:** India grapples with a substantial **burden of genetic disorders**, notably Thalassemia and Sickle Cell Anaemia, affecting over 40 million individuals.
- ◆ **Rewriting the genetic code:** Gene therapy, by **rewriting the genetic code**, provides a beacon of hope by addressing the root cause.

Cancer Treatment:

- ◆ **New cancer cases:** With over 1.16 million **new**

cancer cases reported annually, gene and cell therapy become crucial in combating this formidable adversary.

- ◆ **Precision medicine:** It, exemplified by **CAR-T therapy**, tailors treatments to an individual's unique genetic makeup, potentially enhancing effectiveness and reducing side effects. India's genetic diversity adds complexity to cancer treatment, making gene/cell therapy a customizable solution.

Infectious Diseases:

- ◆ **Infectious Disease Challenges:** Infectious diseases, from viral pathogens to pandemics like Covid-19, pose significant challenges to public health in India.
- ◆ **mRNA vaccines:** Groundbreaking **mRNA vaccines** and gene therapies like CAR-T cell therapy offer hope in treating conditions such as Severe Combined Immunodeficiency and combating various viral threats.
- ◆ **Gene and cell therapy:** **Gene and cell therapy** become powerful weapons in the fight against infectious diseases.

Future Vision for Healthcare:

- ◆ **New health challenges:** As demographic and lifestyle changes present **new health challenges**, gene and cell therapies offer a vision for the future of healthcare in India.
- ◆ **Precise and personalized treatments:** Beyond treatment, these therapies anticipate a future where **precise and personalized treatments** become the norm, reducing economic burdens associated with chronic genetic conditions.

Challenges and Opportunities:

- ◆ **Infrastructure limitations and ethical considerations:** Integration of gene and cell therapy into mainstream healthcare in India faces challenges such as **infrastructure limitations and ethical considerations**.
- ◆ **Collaborative efforts:** However, these challenges present opportunities for **collaborative efforts** involving scientific communities, industries, policymakers, and healthcare providers.
- ◆ **Research and Development:** **Investment** in research, regulatory frameworks, and awareness among healthcare professionals and the public are crucial for successful integration.

Way Forward: The Health Revolution

- ◆ **Revolutionizing healthcare:** Gene and cell therapy hold the promise of **revolutionizing healthcare** in India by offering cures for genetic disorders,

precision cancer treatments, and innovative solutions for infectious diseases.

- ◆ **Opportunities for India:** India has the opportunity to position itself at the **forefront of medical innovation**, paving the way for a healthier and more resilient nation.
- ◆ The revolution is underway, and **gene and cell therapy** are leading the way.

WEB BROWSERS

Context: Web browsers translate code into the dynamic web pages that form the backbone of our online experiences.

Web Browsers and Internet:

- ◆ Web browsers, **our digital gateways to the internet**, appear deceptively simple. Yet, beneath their user-friendly interfaces lies a complex world of processes that shape our online experiences.



1. Understanding Web Browsers:

- ◆ **Definition:** A browser is an application facilitating internet communication, fetching information in various formats and displaying it on devices.
- ◆ **Functionality:** It sends and receives messages, translates user input, and interacts with servers across the internet.

2. Evolution of Web Browsers:

- ◆ **Birth of Web Browsing:** Tim Berners-Lee introduced the World Wide Web in 1990, leading to the creation of the first web browser, 'WorldWideWeb.'
- ◆ **Visual Revolution:** Mosaic (1993) introduced image display, and Netscape Navigator (1994) popularized bookmarks and a user-friendly URL bar during the 'Browser Wars.'
- ◆ **Firefox and Chrome:** Mozilla Firefox (2004) brought tabbed browsing and add-ons, and Google Chrome (2008) emphasized speed and minimalist design, reshaping the browser landscape.

3. Components of a Web Browser:

- ◆ **Request and Response:** Initiates digital communication between the browser and servers to fetch web page data.
- ◆ **Deconstructing the Response:** Involves decoding HTML, CSS, and JavaScript files to construct the visual layout of a webpage.
- ◆ **Rendering:** Assembles and presents the final webpage by interpreting HTML, applying CSS for styling, and executing JavaScript for interactivity.
- ◆ **Data Management:** Implements tools like cookies and cache to enhance user experience and manage digital footprints.
- ◆ **Security Measures:** Uses encryption protocols like HTTPS and warning systems to ensure data security during transmission and storage.

4. Technological Advancements:

- ◆ **WebAssembly:** Enables near-native performance within browsers.
- ◆ **VR and AR Support:** Embracing virtual reality (VR) and augmented reality (AR) for immersive online experiences.
- ◆ **Privacy Features:** Strengthening privacy measures to provide users greater control over their digital footprint.

THE TRANSFORMATIVE BENEFITS OF POPULATION-LEVEL GENOME SEQUENCING

Context: The UK has announced the completion of half a million whole-genome sequences, almost 0.7% of its population.

Background:

- ◆ **Revolutionary transformation:** Over the last decade, genomics has experienced a **revolutionary transformation**, marked by **technological advancements** that have enhanced throughput and reduced the **cost of whole-genome sequencing**.
- ◆ **Population-scale genome-sequencing:** This breakthrough has led to the **emergence of population-scale genome-sequencing programs**, providing unprecedented insights into human diversity.
- ◆ **Whole-genome sequencing in UK:** Recently, the UK celebrated the completion of **half a million whole-genome sequences**, a monumental achievement representing approximately 0.7% of its population.

DeCODE Initiative and the Pioneering Role of Iceland

Genesis of Large-Scale Population Genetic Studies:

- ◆ **deCODE initiative:** The deCODE initiative, launched in Iceland in 1996, was an early and influential effort in large-scale population genetic studies.
- ◆ **Genetic studies in Iceland:** Over a decade, a significant portion of the Icelandic population enrolled for genetic studies, setting the stage for leveraging genomic data for precision medicine and public health.
- ◆ **Understanding genetic diseases:** This initiative not only improved our understanding of genetic diseases but also played a crucial role in shaping global discussions on bioethics and standards for handling large-scale genomic data.

Infrastructure Development and Integration:

- ◆ **Integration:** The deCODE's success laid the foundation for integrating medical records and genealogies, leading to the development of new drugs and therapeutics.
- ◆ **Contribution:** It significantly contributed to advancing methods, infrastructure, and standards for handling large-scale genomic data.

Global Expansion of Population-Scale Genomic Initiatives

Evolution from Hundreds to Lakhs of Genomes:

- ◆ **Numerous population-scale genome initiatives:** Inspired by deCODE's success and the democratization of sequencing technologies, numerous population-scale genome initiatives have emerged worldwide.
 - ▶ Initially involving hundreds to thousands of genomes, recent endeavors have leaped to lakhs of genomes.
- ◆ **Genome Sequencing:** Countries like the UK, the U.S., and the European Union have launched ambitious programs aiming to sequence millions of genomes.

Diverse Objectives of Population-Scale Efforts:

- ◆ **Diverse objectives:** These initiatives have diverse objectives, ranging from understanding disease prevalence and biomarkers for diseases to informing the discovery of novel therapeutic targets.
- ◆ **Public-health initiatives:** Some programs focus on building scalable public-health initiatives where genomic data guides decision-making and medical care.

Challenges and Considerations in Population-Scale Genomics

Ethical Considerations and Regulatory Frameworks:

- ◆ **Ethical challenges:** While population-scale genomic programs open new doors for scientific discovery, they also present ethical challenges.
- ◆ **Ethical Issues:** Issues related to equitable representation, access, and potential misuse of genetic data require careful consideration.
- ◆ **Regulatory frameworks:** Countries like the U.S. have proactively established regulatory frameworks to prevent discrimination based on genetic information.

Genomes from India: Contribution to Population-Level Sequencing

GenomeAsia and GenomeIndia Initiatives:

- ◆ **GenomeAsia initiative:** Asia, including India, is actively participating in population-level sequencing. The GenomeAsia project, involving multiple partners across the continent, plans to sequence a lakh whole genomes.
- ◆ **GenomeIndia initiative:** The GenomeIndia initiative is set to sequence 10,000 whole genomes from diverse population groups in the country.

IndiGen Pilot Program and Early Insights:

- ◆ **IndiGen pilot program:** India's IndiGen pilot program provided an early glimpse into the genomic landscape of cosmopolitan areas, offering insights into treatable genetic diseases, drug efficacy, and the prevalence of rare disorders.

Long-Term Impact and Future Prospects of Population-Scale Genomics

- ◆ **Beyond Individual Health: Population-scale genomics:** Population-scale genomics extends beyond individual health, contributing to our understanding of human evolution, migration patterns, and adaptation to diverse environments.
- ◆ **Genomic Revolution: Shaping Healthcare and Evolutionary Understanding:** In essence, population-scale genomics stands at the forefront of a genomic revolution. It has the potential to revolutionize healthcare, illuminate our evolutionary history, and usher in a future where precise, personalized approaches influence medical and biological understanding.

Towards a Genomic Future

Access to Genomic Information:

- ◆ **Own genome sequence:** As large-scale sequencing

projects progress, the day when **individuals can access and understand their own genome sequence** is on the horizon.

- ◆ **Paradigm shift:** This marks a **paradigm shift** towards **empowering individuals** with insights into their genetic makeup.



MRNA, THE NEXT FRONTIER FOR PERSONALIZED MEDICINE

Context: The mRNA (messenger RNA) technology has emerged as a groundbreaking platform in the realm of personalized medicine, showcasing the ability to be easily customized for effective and tailored therapies with minimal side effects.

Understanding the Basics of mRNA:

- ◆ At its core, **mRNA is a scalable and versatile molecule** that plays a vital role in cellular functions.
- ◆ Unlike traditional drugs, **mRNA is inherently present within the human body**, with cells naturally creating mRNAs to serve as instructions for protein synthesis.
- ◆ When cells need to **produce specific proteins essential for various functions, they rely on mRNA** as the messenger carrying the genetic code or recipe for protein creation.

Why mRNA Makes Excellent Medicine?

- ◆ The **unique qualities of mRNA** make it an ideal candidate for therapeutic applications.
- ◆ Scientists can **manipulate mRNA to create powerful medicines** that address diverse cellular issues.
- ◆ Since the **language of mRNA consists of four nucleotides**, scientists can easily decipher the codes and understand the instructions for protein synthesis.
- ◆ **Mutations in the DNA can disrupt these instructions**, leading to diseases, and **mRNA medicines** offer a way to **correct or replace these faulty instructions**.
- ◆ The production of mRNA treatments is not only **scalable but also consistent**.
- ◆ Unlike traditional drugs that require distinct manufacturing methods for each compound, the **process of creating mRNA remains the same for all types**.
- ◆ This **uniformity simplifies the production process**, making it akin to mastering a basic recipe and allowing for endless variations.

- ◆ Moreover, the **transient nature of mRNA within cells allows for easy dosage adjustments** based on changing patient needs.
- ◆ As cells naturally destroy mRNA when it is no longer required, the **flexibility** in altering doses ensures that treatments can be fine-tuned to accommodate dynamic health conditions.

mRNA Vaccines and Beyond:

- ◆ The **mRNA technology gained significant recognition** with the development of **COVID-19 vaccines** by Moderna and Pfizer-BioNTech, marking the first FDA-approved mRNA-based medicines.
- ◆ These vaccines demonstrated the **adaptability of mRNA-based therapies**, enabling quick adjustments to target new viral variants.
- ◆ Beyond COVID-19, ongoing clinical trials explore mRNA-based vaccines for diseases such as **seasonal flu, herpes, respiratory syncytial virus, and more**.

mRNA in Disease Treatment:

- ◆ Expanding beyond vaccines, **mRNA holds promise in treating diseases like cancer**.
- ◆ Some mRNA cancer treatments operate as vaccines, **training the immune system** to specifically target cancer cells.
- ◆ By leveraging the **mutational landscape of cancer cells, mRNA cancer vaccines** can be personalized to match individual patients' specific cancer mutations.
- ◆ Clinical trials employing personalized mRNA approaches for cancers **like pancreatic cancer** are currently underway.
- ◆ The potential applications of mRNA-based medicine extend to **various diseases where correcting protein synthesis** holds the key to effective treatment.
- ◆ Ongoing research explores the use of mRNA in **heart disease, neurodegenerative disorders, bone loss**, and other conditions, offering hope for future protein replacement therapies.

The Future Landscape of mRNA-Based Medicine:

- ◆ The future **holds promise for treating diseases** arising from incorrect protein synthesis.
- ◆ Early studies show encouraging signs in areas such as wound healing for **diabetic patients** and addressing rare genetic disorders like **propionic acidaemia**.
- ◆ The ability to **easily customize and produce mRNA positions it as a transformative force** in personalized medicine.

◆ With ongoing advancements and a deeper understanding of mRNA's capabilities, this technology stands poised to **revolutionize medical treatments**, offering effective and tailored therapies with fewer side effects.

Key points about mRNA (messenger RNA) technology:

- ◆ **Biological Molecule:** mRNA, or messenger RNA, is a type of biological molecule found in cells.
- ◆ **Information Carrier:** It carries genetic information from DNA to the cellular machinery responsible for protein synthesis.
- ◆ **Protein Synthesis:** mRNA provides the instructions for the cell to make specific proteins, crucial for various cellular functions.
- ◆ **Scalability:** The ability to easily customize and produce mRNA in the laboratory makes it scalable for various applications.
- ◆ **Medicinal Potential:** Scientists can create artificial mRNA to serve as a basis for developing new medicines and therapies.
- ◆ **Personalized Medicine:** mRNA's customizable nature allows for the development of personalized and targeted therapies, minimizing side effects.
- ◆ **Flexibility in Recipe:** The language of mRNA consists of nucleotides, and scientists can manipulate the mRNA "recipe" to create different proteins or address specific cellular issues.
- ◆ **Temporary Nature:** mRNA is not permanent within cells; it is naturally destroyed after its purpose is fulfilled. This characteristic allows for easy adjustments to medication doses.
- ◆ **Vaccine Development:** mRNA technology has been successfully used in the development of vaccines, such as the COVID-19 vaccines from Moderna and Pfizer-BioNTech.
- ◆ **Future Applications:** Beyond vaccines, on-going research explores the potential of mRNA in treating various diseases, including cancer, heart disease, neurodegenerative disorders, and more.

ISRO'S CHANDRAYAN MISSION GAINS MOMENTUM WITH SUCCESSFUL TESTING OF PROPULSION MODULE IN EARTH ORBIT

Context: ISRO achieves a crucial milestone as the Chandrayan propulsion module demonstrates stellar performance during testing in Earth's orbit.

◆ **Exceptional Performance in Earth's Orbit Testing:** In a groundbreaking development, the Indian Space Research Organisation (ISRO) achieves a significant milestone in its Chandrayaan mission.

◆ **Dedication and Expertise on Display:** The propulsion module, a critical component, demonstrates exceptional performance, showcasing the dedication and expertise of ISRO's scientists and engineers.

◆ **Reliability and Functionality Proven:** Rigorous testing in Earth's orbit confirms the propulsion module's reliability and functionality, marking a crucial step in India's lunar exploration journey.

◆ **Global Attention on Chandrayaan Mission:** The ambitious Chandrayaan mission, focused on lunar surface exploration and scientific experiments, garners global attention for India's space endeavors.

◆ **Promising Indicator of Overall Mission Success:** The flawless performance of the propulsion module becomes a promising indicator of the Chandrayaan mission's overall success, emphasizing ISRO's meticulous planning and technological capabilities.

◆ **India's Prowess in Lunar Exploration:** ISRO's achievement positions India as a frontrunner in lunar exploration, enhancing the country's standing in the global space community.

◆ **Key Milestone for Chandrayaan's Progress:** The successful testing of the propulsion module is a key milestone propelling the Chandrayaan mission forward, unraveling the mysteries of the Moon.

◆ **Contribution to Global Scientific Knowledge:** ISRO's achievements contribute valuable insights to the global scientific community, showcasing India's commitment to advancing scientific knowledge in space exploration.

◆ **Boost to ISRO's Reputation:** The successful testing enhances ISRO's reputation for delivering precise and reliable space missions, showcasing the agency's ability to navigate the complexities of space exploration.

◆ **Anticipation Grows as Chandrayaan Progresses:** As Chandrayaan progresses, anticipation and excitement surrounding the mission continue to grow, reinforcing India's role in the international space arena.

◆ **Commitment to Advancing Scientific Knowledge:** ISRO's dedication to pushing the boundaries of space exploration is evident, emphasizing India's commitment to advancing scientific knowledge on a global scale.

◆ **Propulsion Module's Success Sets the Stage:** The propulsion module's success in Earth's orbit sets the stage for the next chapters in lunar exploration, promising a future filled with scientific discoveries and technological milestones.



THE STATUS OF THE UN TREATY TO END PLASTIC POLLUTION

Context: Members of a committee met in Nairobi in November to develop an international treaty to end plastic pollution.

International Efforts and the Role of INC:

- ◆ The **Intergovernmental Negotiating Committee (INC)**, operating under the **United Nations Environment Programme**, convened in **Nairobi** from November 13-19 2023 for its third round of negotiations aimed at crafting a global treaty to eradicate plastic pollution by 2025.

Key Milestone:

- ◆ Under **UNEA Resolution 5/14**, INC's mandate is pivotal in formulating a binding international instrument to combat the pervasive issue of plastic pollution globally.
- ◆ The recent INC-3 gathering was crucial, marking a turning point in the negotiations.

Evaluation of the 'Zero Draft':

- ◆ The '**zero draft**,' meticulously prepared by the Committee's Secretariat, initially presented robust options for a binding treaty.
- ◆ However, during negotiations, significant dilutions occurred, particularly in core obligations related to **primary polymer production, chemicals of concern, and problematic plastics**.

Contentious Issues and Divergent Perspectives:

- ◆ Contentions emerged over the **treaty's objective and scope**, with a group of nations, including **Saudi Arabia, Russia, China, Iran, and some members of the Gulf Cooperation Council**, advocating for **economic considerations** by appending a clause on sustainable development.

Industry Influence and Opposition to Production Reduction:

- ◆ Industry influence was evident, with a **notable 36% increase in lobbyists** from the **fossil fuels and chemicals sector**. Resistance to discussing a reduction in plastic production **underscored the challenge of aligning economic interests with environmental goals**.

Financial Mechanism Debate:

- ◆ The zero draft proposed **financial mechanisms**, such as a **plastic-pollution fee**, contested by nations **advocating for their deletion**.
- ◆ The implications of these provisions **extend to potential shifts in fossil-fuel subsidies** and investments in environmentally adverse technologies.

Trade Restrictions and Misinterpretation of WTO Rules:

- ◆ **A bloc of countries opposed trade restrictions** on polymers, chemicals, and plastics, citing sovereignty concerns.
- ◆ However, analysis by the Centre for International Environmental Law revealed a **misinterpretation of WTO rules**, suggesting ample scope for such restrictions when vital for health and environmental protection.

INC-3 Outcomes and Stalling Tactics:

- ◆ INC-3 faced challenges in **adopting a mandate** for developing the first draft of the treaty.
- ◆ Stalling tactics, primarily by like-minded countries, led to a **lack of consensus on key provisions**, hindering progress.

Implications for Future Negotiations:

- ◆ The inability to reach a consensus on inter-sessional work before INC-4 is a setback, impeding the **refinement of definitions, targets, and timelines**.
- ◆ The influence of industry and the resistance of certain member states to a robust, binding treaty were laid bare during INC-3.



WHO'S RESPONSIBLE FOR THE ENVIRONMENTAL IMPACT OF WHAT WE EAT?

Context: What is more fair: accounting for the impact at the point of production or where it is eventually consumed?

The Global Agricultural Trade Dilemma:

- ◆ The relentless **demand for agricultural products** is causing **far-reaching social and environmental consequences** worldwide, with international trade exacerbating the impact.
- ◆ India, as a **global agricultural anchor**, plays a pivotal role in this intricate web of trade and its associated challenges.

Measuring Impacts and Allocating Responsibility

- ◆ The conventional method relies on **production-based accounting, measuring impacts** at the **place of origin**.
- ◆ However, **concerns arise regarding its limitations**, accountability issues, and the need for equity among producers and consumers.

Defining Consumption-Based Accounting

- ◆ Consumption-based accounting attributes **all social and environmental impacts** during production and trade to the final products and consumers.
- ◆ This approach urges consumers, whether individuals or nations, to **acknowledge responsibility for the embodied impacts of the products** they consume.

Linking Consumption to Consequences

- ◆ From a **demand perspective**, the approach asserts that developed economies, as major consumers, bear responsibility for the pressure on natural and human resources.
- ◆ This aligns with **arguments of equity**, acknowledging the historical responsibility of developed nations in global emissions.

Incentivizing Cleaner Production

- ◆ Proponents argue that **consumption-based accounting** can drive cleaner production practices by encouraging producer countries to lower the environmental footprint of their exports.
- ◆ It addresses **'leaks' in production systems**, promoting adherence to higher production standards.

Policy Initiatives and Environmental Action

- ◆ Recent initiatives, such as the **European Commission's steps to prevent deforestation-linked products**, showcase the potential of consumption-based accounting in policymaking.
- ◆ This approach can significantly **reduce carbon emissions and biodiversity loss** tied to global trade.



India's Dual Role

- ◆ India finds itself uniquely positioned, **contributing to the environmental footprint** of major developed economies through agricultural exports.
- ◆ Simultaneously, its own **deforestation footprint** abroad is increasing, necessitating a nuanced approach to shared responsibility.

Facilitating Global Environmental Action

- ◆ **Consumption-based accounting** holds the potential to foster a fair agreement on global environmental action, with both producers and consumers sharing responsibilities.
- ◆ It provides a basis for **addressing historical roles** in climate, pollution, and biodiversity loss crises.

Challenges and Opportunities: Implementing Consumption-Based Accounting

- ◆ While **implementation poses challenges** related to liability, monitoring, and compliance, consumption-based accounting serves as a valuable tool for diagnosing impact-intensive consumption patterns.
- ◆ It also **encourages individual and collective changes** in consumption behavior.

Way Forward: A Path to Sustainable Agricultural Trade

- ◆ In navigating the **complexities of global agricultural trade**, consumption-based accounting emerges as a crucial tool for promoting sustainability.
- ◆ As the world grapples with the **environmental implications** of its consumption patterns, a shift toward shared responsibility may pave the way for a more equitable and sustainable future.



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Section B

[CONTEMPORARY ISSUES BASED ESSAY]

Topic

☞ **Good Governance: Rule of Law and, not Rule by Law**

GOOD GOVERNANCE: RULE OF LAW AND, NOT RULE BY LAW

In the quest for a just and equitable society, the principles of good governance serve as the bedrock upon which the edifice of democracy is constructed. Among these principles, the concept of the "Rule of Law" stands tall, asserting itself as a safeguard against arbitrary power and a guarantor of individual liberties. However, a nuanced understanding of this concept necessitates a recognition of the crucial distinction between the "Rule of Law" and its less desirable counterpart, "Rule by Law." While the former embodies the ideals of justice, fairness, and equality, the latter risks degenerating into a tool of oppression and subjugation. This essay delves into the dynamics of good governance, emphasizing the importance of upholding the Rule of Law over a mere adherence to legal formalities.

The Rule of Law is a foundational principle that asserts that every individual, regardless of their status or position, is subject to the law. It embodies the idea that law should govern a nation, rather than the arbitrary decisions of individuals. The Rule of Law implies that laws should be clear, predictable, and applied uniformly, without discrimination. It establishes a framework in which the legal system operates independently, free from undue influence or interference.

Contrastingly, the concept of "Rule by Law" suggests a scenario where legal provisions exist but are wielded as instruments of control rather than justice. In such a system, laws may be selectively applied to suppress dissent, target specific groups, or consolidate power. The semblance of legality masks an erosion of the principles of justice and fairness, leading to a situation where the legal apparatus becomes a mere tool for those in power.

For good governance to flourish, it is imperative to distinguish between these two paradigms. The Rule of Law envisions a society where justice is blind, where the law serves as an impartial arbiter, and where individuals are treated equally before it. This principle demands that legal institutions be robust, transparent, and accountable. In contrast, Rule by Law may manifest in a situation where the legal system is subverted to serve the interests of a select few, leading to a

breakdown of trust in institutions and a corrosion of the social fabric.

A critical aspect of the Rule of Law is the notion of legal certainty. Citizens must have a reasonable expectation of the legal consequences of their actions. This requires laws to be clear, accessible, and consistently applied. Legal certainty ensures that individuals can plan their lives with confidence, knowing that their rights and obligations are defined by a stable and predictable legal framework. In a society governed by the Rule of Law, legal certainty acts as a bulwark against arbitrary actions and fosters an environment conducive to social and economic development.

Conversely, Rule by Law may involve the selective application of laws, creating an environment of uncertainty and fear. When laws are wielded as weapons rather than shields, citizens live under the constant threat of legal repercussions, not because of their actions' inherent legality, but due to the political expediency of those in power. In such a scenario, legal uncertainty becomes a potent tool for manipulating public opinion and stifling dissent.

One of the key indicators of the Rule of Law is the independence of the judiciary. An impartial and independent judiciary acts as the guardian of justice, ensuring that the legal system operates without bias or favor. Judicial independence is not merely a procedural formality; it is the cornerstone of a just society. Judges must be free from external pressures and influences, allowing them to adjudicate matters solely based on the merits of the case and the applicable law.



Contrarily, in a system characterized by Rule by Law, the judiciary may be subjugated to the interests of the ruling elite. Judicial appointments, promotions, and decisions may be influenced by political considerations rather than legal merit. The erosion of judicial independence compromises the very essence of justice, transforming the legal system into a mere extension of executive authority.

Equally important is the idea that the law should be applied equally to all, without discrimination. The Rule of Law rejects the notion that individuals can be arbitrarily targeted based on their race, religion, gender, or socio-economic status. It demands that legal protections be universal, ensuring that every citizen enjoys the same rights and privileges under the law.

In contrast, Rule by Law may involve the selective application of legal provisions to target specific groups or individuals. Discriminatory laws or their biased implementation can perpetuate social inequalities and undermine the fabric of a just society. History is replete with instances where legal frameworks were manipulated to marginalize certain communities, reinforcing the need for a steadfast commitment to the Rule of Law.

Transparency and accountability are two pillars upon which the Rule of Law rests. A transparent legal system ensures that the laws and their application are open to public scrutiny. Citizens have the right to know the basis on which decisions are made and the principles that guide legal proceedings. Accountability complements transparency by holding individuals, including those in positions of authority, responsible for their actions. When those entrusted with upholding the law are answerable for their decisions, it fosters a culture of responsibility and deters abuse of power.

Conversely, Rule by Law may manifest when legal proceedings are shrouded in secrecy, and those in power evade accountability. In such a system, the opacity of legal processes allows for manipulation and abuse, eroding public trust in institutions. Without

transparency and accountability, the Rule of Law remains elusive, and the legal system becomes a tool for advancing hidden agendas rather than upholding justice.

A crucial aspect of good governance is the protection of human rights. The Rule of Law ensures that fundamental rights are enshrined in the legal framework and protected without exception. It serves as a bulwark against the violation of individual liberties and guarantees that even the most vulnerable members of society are shielded from arbitrary actions.

On the contrary, in a system characterized by Rule by Law, human rights may be disregarded or selectively applied. Legal provisions can be weaponized to curtail freedom of expression, assembly, or association, creating a chilling effect on dissent. The erosion of human rights undermines the very essence of democracy and paves the way for authoritarianism.

While the Rule of Law is essential for fostering good governance, its realization requires a collective commitment from all stakeholders – citizens, policymakers, and institutions. Citizens must be vigilant in demanding accountability and transparency from those in power. Policymakers bear the responsibility of enacting laws that are just, equitable, and in line with democratic values. Institutions, particularly the judiciary, must uphold their independence and act as guardians of justice.

In conclusion, the principles of good governance, anchored in the Rule of Law, are indispensable for the sustenance of a just and democratic society. Upholding the Rule of Law ensures that legal frameworks are not mere instruments of power but serve as guardians of justice, equality, and human rights. The distinction between the Rule of Law and Rule by Law is not merely semantic; it is a reflection of the values that underpin a nation's legal system. As societies strive for progress and inclusivity, a steadfast commitment to the Rule of Law becomes paramount, steering the course towards a future where justice is not just an ideal but a lived reality for all.



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Section C [PRELIMS]

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- ☞ Veer Baal Diwas
- ☞ Santiniketan
- ☞ Kerala's Alangad jaggery
- ☞ RBI, Bank of England sign MoU for cooperation in CCIL issue
- ☞ European Union's Artificial Intelligence Act
- ☞ Competition Commission of India (Determination of Turnover or Income) Regulations, 2023
- ☞ Chief Election Commissioner and Other Election Commissioners (Appointment, Conditions of Service and Term of Office) Bill, 2023 passed in Lok Sabha
- ☞ Lok Sabha passes Press and Registration of Periodicals Bill
- ☞ 78 MPs Suspended
- ☞ Exclusion of Blood Disorders from Job Reservations
- ☞ Supreme Court Rulings on Enforcement Directorate's Arrest Powers
- ☞ Three sub-schemes under the RAMP programme launched
- ☞ GIAN scheme
- ☞ Central Tribal varsity in Telangana
- ☞ Advocates Amendment Bill 2023 passed
- ☞ PM-JANMAN for PVTGs
- ☞ The Broadcasting Services (Regulation) Bill- Issues and Concerns
- ☞ World Bank's move on Multilateral Development Banks (MDBs)
- ☞ RBI to bring digital loan aggregators under regulation
- ☞ India's Winter Arctic Research
- ☞ Climate Change Performance Index 2024
- ☞ Centre allows use of sugarcane juice, B-molasses to make ethanol
- ☞ Global River Cities Alliance (GCRA) launched
- ☞ ALTERRA: UAE Commits \$30bn to Climate-Focused Investment Vehicle
- ☞ Milli-second burst detected by AstroSat
- ☞ AI summit adopts 'New Delhi declaration'
- ☞ First Gene Therapies to Treat Patients with Sickle Cell Disease
- ☞ 'Noma': The latest addition to WHO's list of neglected tropical diseases
- ☞ COVID sub-variant JN.1
- ☞ World Malaria Report



VEER BAAL DIWAS

Context: Prime Minister has participated in the programme marking 'Veer Baal Diwas' on 26th December, 2023 in New Delhi.

- ◆ 'Veer Bal Diwas' is celebrated in tribute to the martyrdom of Sri Guru Gobind Singh's sons, **Sahibzadas Baba Zorawar Singh Ji and Baba Fateh Singh Ji**.

About Guru Gobind Singh:

- ◆ Guru Gobind Singh, the tenth sixth guru, a spiritual leader, warrior, poet and philosopher.
- ◆ He formally became the leader and protector of the Sikhs at the age of nine after his father, Guru Tegh Bahadur, the ninth Sikh Guru, was killed by Aurangzeb for refusing to convert to Islam.
- ◆ He founded the sixth warrior community called Khalsa in 1699.
- ◆ The community was created especially for the defence of Sikhism and Hinduism against the Mughals.
- ◆ Guru Gobind Singh fought 14 battles against the Mughals and won most of the battles.
- ◆ Guru Gobind Singh Ji declared Guru Granth Sahib as Sikhism's Holy Scripture in 1708, before his death.
- ◆ He left his bodily form on October 7 in 1708.



SANTINIKETAN

Context: A Centre-approved board/plaque identifying Santiniketan as UNESCO-approved world heritage site has been erected by Visva-Bharati at the location.

About Santiniketan:

- ◆ Founded by **Debendranath Tagore** and home to **Visva-Bharati**, the university set up by his son Rabindranath - was accorded **world heritage status by UNESCO**.
- ◆ Established in **rural West Bengal in 1901** by poet and philosopher Rabindranath Tagore, it was a residential school and centre for art based on ancient Indian traditions and a vision of the unity of humanity transcending religious and cultural boundaries.
- ◆ A 'world university' was established at Santiniketan in 1921, recognizing the unity of humanity or "Visva Bharati".
- ◆ Distinct from the prevailing British colonial architectural orientations of the early 20th century

and of European modernism, Santiniketan represents approaches toward a pan-Asian modernity, drawing on ancient, medieval and folk traditions from across the region.



Debendranath Tagore:

- ◆ **Maharishi Debendranath Tagore** was a scholar and a social reformer. He joined the **Brahmo Samaj** in **1842**, which was founded by Raja Rammohan Roy in **1828**.
- ◆ Earlier, he headed the **Tattvabodhini Sabha**, which was founded in **1839**. The sabha started a monthly theological journal named **Tattvabodhini Patrika** in Bengali.
- ◆ Tattvabodhini Sabha and Tattvabodhini Patrika, both focused on the systematic study of India's past with a rational outlook and propagated the ideas of Raja Rammohan Roy.
- ◆ In later years, **Tattvabodhini Sabha** was incorporated into the **Bahmo Samaj**.
- ◆ Debendranath Tagore's Samaj came to be known as the **Adi Brahmo Samaj**.

Rabindranath Tagore:

- ◆ Born in Kolkata on May 7, 1861, emerged as a globally acclaimed poet, author, philosopher, and the first Nobel laureate from Asia.
- ◆ Revolutionized Bengali literature by introducing innovative prose and verse forms, liberating it from classical Sanskrit conventions. He was highly influential in bridging Indian and Western cultures.
- ◆ Composed around 2230 songs known as Rabindra Sangeet and painted 3000 artworks. Notably, he penned India's national anthem, **Jana Gana Mana**, and **Amar Sonar Bangla**, the national anthem for Bangladesh, leaving an indelible mark on Sri Lanka's anthem as well.

- ◆ Received a knighthood in 1915, he renounced it in 1919 as a protest against the **Amritsar (Jallianwalla Bagh) Massacre**.
- ◆ Founded Visva Bharti University, initially named Shantiniketan.
- ◆ Among his major literary contributions, **Gitanjali: Song Offerings**, which earned him the Nobel Prize, stands out. Other notable poetic works include **Sonar Tari and Manasi**.
- ◆ Tagore delved into novels, plays, and short stories in both Bengali and English, with outstanding pieces like *Chitra* and *The Post Office*.
- ◆ Credited with pioneering the Bengali short story, his exceptional narratives are collected in **The Hungry Stones** and **Other Stories** and **The Glimpses of Bengal Life**.



KERALA'S ALANGAD JAGGERY

Context: After an absence of four decades, the renowned Alangad jaggery is poised to make a comeback in the market.

About Alangad Jaggery:

- ◆ Alangad jaggery, once famed for its unique taste, enjoyed historical significance, with mentions in Kerala's trading history.
- ◆ It was even reputed to have been **exported to China** in the distant past.
- ◆ Alangad Jaggery's fame was attributed to its **distinct taste**, with a process that **excluded the use of salt**. The **composition of the fields' soil** imparted a unique flavor to the product.
- ◆ **The Alangad Jaggery Resurgence:** After a four-decade hiatus, the iconic Alangad jaggery is set to make a triumphant return to the market.
 - ▶ The first batch, named after its place of origin, Alangad in Ernakulam, is expected to hit the shelves by the end of January 2024.
 - ▶ The revival is part of the '**Krishikkoppam Kalamassery**' initiative, a concerted effort to bring back traditional crops once cultivated in the region.
 - ▶ Farmers actively involved in sugarcane cultivation are being supplied all the machinery and equipment required for jaggery production have been procured by the KVK.
 - ▶ The initiative is currently in its initial phase, with **sugarcane cultivation taking place on six acres of land at Neerikode, Kongorpilly, and Thiruvallur in Alangad panchayat**.



- ▶ The **Ernakulam Krishi Vigyan Kendra (KVK)**, Alangad Cooperative Bank, Alangad grama panchayat, Krishi Bhavan, agriculture department, Atma, and Alangad block panchayat are providing comprehensive support for the cultivation.



RBI, BANK OF ENGLAND SIGN MOU FOR COOPERATION IN CCIL ISSUE

Context: Memorandum of understanding on cooperation and exchange of information related to Clearing Corporation of India Ltd (CCIL) has been signed

Background-

- ◆ The **Reserve Bank of India (RBI)** and the **Bank of England (BoE)** recently inked a memorandum of understanding (MoU) centered on **cooperation and information exchange** concerning the **Clearing Corporation of India Ltd (CCIL)**.

CCIL's Role:

- CCIL is a **central counterparty (CCP)**, is crucial for clearing and settlement in transactions related to government securities, foreign exchange, and money markets in India.
- The **regulatory oversight** for CCIL falls under the purview of the **RBI**.

Framework for Cooperation

- ◆ The signed MoU establishes a framework wherein the **BoE relies on the RBI's regulatory and supervisory activities** while ensuring the stability of the UK's financial system.
- ◆ The agreement underscores the **importance of cross-border collaboration** for international clearing activities.
- ◆ **CCIL's Recognition Process:**
 - ▶ In January, CCIL applied to the Bank of England for recognition as a third-country Central Counterparty (TC-CCP).
 - ▶ The MoU facilitates the BoE's assessment of CCIL's application, a prerequisite for UK-based banks to engage in transactions through CCIL.

Implications for UK-Based Lenders:

- ◆ The agreement **brings relief to UK-based lenders**, including Barclays and Standard Chartered, allowing them to continue providing clearing and settlement services to clients in India.



EUROPEAN UNION'S ARTIFICIAL INTELLIGENCE ACT

Context: The objectives of the EU AI Act, the world's first legislation on AI, are to create a regulatory framework for AI technologies, mitigate risks associated with AI systems, and establish clear guidelines for developers, users, and regulators.

Background:

- ◆ In June 2023, the **European Parliament** passed its version of the Artificial Intelligence Act (the "Act").
- ◆ The Act is now under review by negotiators from the **European Union's ("EU") three bodies** – the European Commission, Council, and Parliament to reconcile different versions of the Act and finalize implementing language.
- ◆ Recently, it has been passed by EU legislators.
- ◆ The Act is the most comprehensive regulations affecting artificial intelligence ("AI") systems to date.

About the Act:

- ◆ The Act passed by the European Parliament would restrict what the EU believes to be AI's riskiest uses, such as facial recognition software and Chatbots like **ChatGPT**.
- ◆ The EU's stated goal is to ensure better conditions for the development and use of innovative technologies.
- ◆ The EU recognizes AI's benefits in the **healthcare, transportation, manufacturing, and energy sectors** but hopes to promulgate regulations that curb potential excesses and violations of EU fundamental rights.
- ◆ The Act is expansive and would govern any entity providing a service that uses AI.
- ◆ This includes services that produce **content, predictions, recommendations, or decisions**.

Key Provisions of the Act:

- ◆ **Risk-Based Regulation:** The AI Act proposes a risk-based system to regulate AI, dividing systems into unacceptable risk, high risk, and low or minimal risk categories.
- ◆ **Unacceptable Risk:** AI systems posing a threat to people, such as cognitive manipulation and real-time biometric identification, fall under unacceptable risk and are banned.
- ◆ **High Risk:** Systems operating critical infrastructure or impacting fundamental rights are labeled high

risk, with compliance requirements and obligations for providers outlined in the Act.

- ◆ **Risk Management for High Risk:** The Act outlines risk management efforts for high-risk systems, including documentation, transparency, human oversight, and obligations for providers to ensure compliance.
- ◆ **Low or Minimal Risk:** Low or minimal risk AI systems must comply with minimal transparency requirements, allowing users to make informed decisions, but they are largely unregulated compared to high-risk systems.
- ◆ Generative AI software such as ChatGPT will be required to comply with several transparency requirements including:
 - ▶ Disclosing that the content was generated by an AI system;
 - ▶ Designing the model to prevent it from generating illegal content; and
 - ▶ Publishing summaries of copyrighted data used for the system's training.



COMPETITION COMMISSION OF INDIA (DETERMINATION OF TURNOVER OR INCOME) REGULATIONS, 2023

Context: CCI seeks comments on draft of Competition Commission of India (Determination of Turnover or Income) Regulations, 2023.

Key Highlights:

- ◆ The **Competition Commission of India (CCI)** is soliciting feedback on the draft Competition Commission of India (Determination of Turnover or Income) Regulations, 2023.

Competition Commission of India (CCI):

- The Competition Commission of India (CCI) is a statutory body of the Government of India responsible for enforcing the Competition Act, of 2002; it was duly constituted in March 2009.
- The Monopolies and Restrictive Trade Practices Act, 1969 (MRTP Act) was repealed and replaced by the **Competition Act, 2002**, on the recommendations of the **Raghavan committee**.
- **Composition:** The Commission consists of **one Chairperson and six Members** who shall be appointed by the Central Government.

- ◆ The **Competition (Amendment) Act, 2023**, introduced changes to **Sections 27, 48, and Section**

64, necessitating the formulation of regulations to determine turnover or income under specific clauses.

- ◆ To comply with the amended sections, the CCI has proposed the draft **CCI (Determination of Turnover or Income) Regulations, 2023**.
- ◆ These regulations outline the methodology for determining turnover or income concerning **Section 27(b) and Section 48 of the Act**.

CHIEF ELECTION COMMISSIONER AND OTHER ELECTION COMMISSIONERS (APPOINTMENT, CONDITIONS OF SERVICE AND TERM OF OFFICE) BILL, 2023 PASSED IN LOK SABHA

Context: The Lok Sabha has passed the bill to regulate the appointment of the chief election commissioner and other election commissioners.

About the Bill:

- ◆ **Background:** The Bill replaces the **Election Commission (Conditions of Service of Election Commissioners and Transaction of Business) Act, 1991**.
- ◆ **Aim:** The bill provides details related to the **appointment, qualifications, search committee, selection committee, term of office, salary, resignation and removal, leave, and pension** of the chief election commissioner and other election commissioners.
- ◆ **Provisions of the Bill:**
 - ▶ As per the provisions of the bill, the CEC and ECs will be appointed by the **President of India** on the recommendation of a selection committee.
 - ▶ However, the panel will consist of **three members – the prime minister, the Union cabinet minister, and the leader of the opposition**.
 - ▶ Recommendations of the Selection Committee will be valid even when there is a vacancy in this Committee.
 - ▶ A **Search Committee** headed by the Cabinet Secretary will propose a panel of names to the Selection Committee.
 - ▶ **Eligibility for the posts** includes holding (or having held) a post equivalent to the Secretary to the central government.
 - ▶ The **salary and conditions** of service of the CEC and ECs will be equivalent to that of **Cabinet**

Secretary. Under the 1991 Act, it was equivalent to the salary of a **Supreme Court Judge**.

- ▶ **Eligibility criteria:** The CEC and ECs must:
 - be persons of integrity,
 - have knowledge and experience in the management and conduct of elections, and
 - be or have been Secretary (or equivalent) to the government.
- ▶ **Term and reappointment:** Members of the Election Commission will hold office for six years, or until they attain the age of **65 years**, whichever is earlier.
 - Members of the Commission cannot be re-appointed. If an EC is appointed as a CEC, the overall period of the term may not be more than six years.

Key Issues and Analysis

- ◆ The selection process of the Election Commission may be dominated by the government, which has implications for its independence.
- ◆ Accepting the Selection Committee's recommendations in spite of a vacancy in its constitution may effectively lead to a monopoly of government members in selecting candidates.
- ◆ Making the CEC and EC's salary equivalent to the Cabinet Secretary may lead to government influence as it is fixed by the government. This is unlike the salary of a Supreme Court judge which is fixed through an Act of Parliament.
- ◆ CECs and ECs also perform quasi-judicial functions. Limiting these posts to senior bureaucrats may exclude other suitable candidates.

LOK SABHA PASSES PRESS AND REGISTRATION OF PERIODICALS BILL

Context: In a historic decision, the Lok Sabha has passed the **Press and Registration of Periodicals Bill, 2023**, repealing the colonial era law of the **Press and Registration of Books Act, 1867**.

- ◆ The Bill has already been passed by Rajya Sabha in the Monsoon Session.

Highlights of the Bill:

- ◆ **Grant of title allotment and Certificate of Registration Periodicals:** The Bill provides for a simple online mechanism to apply for title verification

and grant of certificate of registration by the Press Registrar General to a periodical as a simultaneous process.

- ▶ There is no requirement of furnishing any declaration before the local authority or its authentication by the local authority.
 - ▶ A person who has been convicted by any court for an offence involving terrorist act or unlawful activity, or having done anything against the security of the State shall not be permitted to bring out a periodical.
 - ▶ Facsimile edition of a foreign periodical can be printed in India with prior approval of the Central Government and its registration with the Press Registrar General.
- ◆ **Printing Presses:** A printer of a periodical to furnish an online intimation to the **Press Registrar General** and the local authority.
- ▶ No requirement by the Printer to file any declaration before the local authority or obtain authentication from the authority.
- ◆ **Role of District magistrate/local authority:**
- ▶ The Bill envisages minimalistic role of the District Magistrate/local authority with regard to grant of Certificate of Registration and title allotment.
 - ▶ On receipt of an application,
 - The District Magistrate is expected to provide its comments/NOC to the **Press Registrar General within 60 days;**
 - Thereafter the Press Registrar General can proceed to take a decision for grant of registration even where the comments/NOC is not received from the **DM/local authority after 60 days.**
 - ▶ No requirement for a publisher to file any declaration before the District Magistrate.



78 MPS SUSPENDED

Context: 78 MPs in Lok Sabha belong to the opposition's "INDI" Alliance were suspended by the Speaker, marking the highest number of suspensions ever recorded in the history of Indian Parliament.

About the case:

- ◆ The suspensions occurred due to the **disruption of Parliamentary proceedings** as a protest against the security breach that transpired last week. The total number of suspensions during the Winter Session now stands at 141, with 92 MPs suspended so far.

What are the rules under which the Speaker acts?

- ◆ **Rule Number 373** of the Rules of Procedure and Conduct of Business says: "The Speaker, if is of the opinion that the conduct of any Member is grossly disorderly, may direct such Member to withdraw immediately from the House, and any Member so ordered to withdraw shall do so forthwith and shall remain absent during the remainder of the day's sitting."
- ◆ To deal with more recalcitrant Members, the Speaker may take recourse to Rules 374 and 374A. **Rule 374 says:**
- ◆ The Speaker may, if deems it necessary, name a Member who disregards the authority of the Chair or abuses the rules of the House by persistently and wilfully obstructing the business thereof.
- ◆ If a Member is so named by the Speaker, the Speaker shall, on a motion being made forthwith put the question that the Member (naming such Member) be suspended from the service of the House for a period not exceeding the remainder of the session: Provided that the House may, at any time, on a motion being made, resolve that such suspension be terminated.
- ◆ A member suspended under this rule shall forthwith withdraw from the precincts of the House."

What is the procedure for revocation of a Member's suspension?

- ◆ While the Speaker is empowered to place a Member under suspension, the authority for revocation of this order is not vested in her.
- ◆ It is for the House, if it so desires, to resolve on a motion to revoke the suspension.

The case of Rajya Sabha:

- ◆ Like the Speaker in Lok Sabha, the Chairman of the Rajya Sabha is empowered under Rule Number 255 of its Rule Book to "direct any Member whose conduct is in his opinion grossly disorderly to withdraw immediately" from the House.
- ◆ Any Member so ordered to withdraw shall do so forthwith and shall absent himself during the remainder of the day's meeting."
- ◆ The Chairman may "name a Member who disregards the authority of the Chair or abuses the rules of the Council by persistently and wilfully obstructing" business.
- ◆ In such a situation, the House may adopt a motion suspending the Member from the service of the House for a period not exceeding the remainder of the session.

- ◆ The House may, however, by another motion, terminate the suspension.
- ◆ Unlike the Speaker, however, the **Rajya Sabha Chairman does not have the power** to suspend a Member.

EXCLUSION OF BLOOD DISORDERS FROM JOB RESERVATIONS

Context: The Centre's decision to exclude individuals with thalassemia, sickle cell disease, and haemophilia, from government job reservations, despite their recognition as disabilities in the **Right to Persons with Disabilities (RPWD) Act of 2016**, prompts concerns.

About:

- ◆ The **government provides 4% reservation in government jobs for specific disabilities**, including total loss of vision and low vision, complete loss of hearing and low hearing, locomotor disability, etc.
 - ▶ Government cites Section 34 of RPWD Act, 2016, stating that persons with blood disorders, including thalassemia, are **not eligible for job reservation in government establishments**.
- ◆ Activists express dissatisfaction, asserting that excluding disabilities recognized in the Act from job reservations defeats the Act's purpose.

SUPREME COURT RULINGS ON ENFORCEMENT DIRECTORATE'S ARREST POWERS

Context: In two cases of arrest by the Enforcement Directorate (ED), the **accused weren't supplied with written grounds for arrest when they were taken into custody**.

- ◆ While one SC Bench deemed this an '**arbitrary exercise of power**', the other upheld it. These divergent views by SC have given rise to debate on the powers of arrest by ED.

Background of ED's Arrest Powers:

- ◆ The **Prevention of Money Laundering Act (PMLA)** grants the ED the authority to arrest individuals based on credible evidence.

- ◆ **Section 19** of the PMLA emphasizes the need for informing the arrested person of the grounds for arrest at the earliest.



Supreme Court Decisions:

Two Supreme Court Benches presented conflicting perspectives on the procedure for informing the accused about the grounds of arrest.

- ◆ **Pankaj Bansal vs. UOI:** Recently, a two-judge Bench mandated the ED to provide written grounds of arrest to the accused at the time of arrest. This decision was considered a crucial safeguard to prevent arbitrary exercise of power.
- ◆ **Vijay Madanlal Choudhary vs. UOI:** Contrarily, another three-judge Bench ruled that orally informing the accused of the grounds of arrest is sufficient. This decision, in effect, diluted the other ruling, creating a divergence in the interpretation of Section 19 of the PMLA.
- ◆ **Ram Kishor Arora's Case:**
 - ▶ The **recent case** of Supertech Limited's founder, Ram Kishor Arora, brought this **legal divergence** to the forefront.
 - ▶ **Arora challenged his arrest**, arguing that oral intimation of grounds violated his rights **under Section 19(1) of the PMLA** and other fundamental rights.

Supreme Court's Decision in Arora's Case:

- ◆ In its ruling, the Supreme Court stated that the **Pankaj Bansal ruling** couldn't be applied retrospectively to Arora's case, as his arrest predates it by approximately three months.
- ◆ The Court, relying on its decision in **Vijay Madanlal's case**, emphasized that oral communication suffices to meet the legal requirements.

Legal Conundrum:

- ◆ **The crux of the matter lies in the interpretation of the phrase "as soon as maybe" in Section 19** of the PMLA.

- ◆ The Bench of Justices Bela Trivedi and Satish Chandra Sharma insisted that this **phrase denotes an early, reasonably convenient, or requisite period.**

THREE SUB-SCHEMES UNDER THE RAMP PROGRAMME LAUNCHED

Context: The Union Minister for MSME has launched three sub-schemes under the aegis of the RAMP programme namely, MSME Green Investment and Financing for Transformation Scheme (MSE GIFT Scheme), MSE Scheme for Promotion and Investment in Circular Economy (MSE SPICE Scheme) MSE Scheme on Online Dispute Resolution for Delayed Payments.

About the Schemes:

- ◆ **The MSME Green Investment and Financing for Transformation Scheme (MSME GIFT Scheme):** It intends to help MSMEs adopt green technology with interest subvention and credit guarantee support.
- ◆ **The MSE Scheme for Promotion and Investment in Circular Economy (MSE SPICE Scheme):** It is the first ever scheme in the Government to support circular economy projects which will be done through credit subsidy and will lead to realising the dream of MSME sector towards zero emissions by 2070.
 - ▶ The Support for Commercialisation of IP Programme (MSME – SCIP Programme) will enable the innovators in the **MSME sector to commercialize their IPR.**
- ◆ **The MSE Scheme on Online Dispute Resolution for Delayed Payments:** It is a first of its kind scheme to synergise legal support with modern IT tools and Artificial Intelligence to address the incidences of delayed payments for Micro and Small Enterprises.
- ◆ The **National MSME Council** has been set up by the Ministry to work as an administrative and functional body of the World Bank supported **RAMP Programme to oversee inter-Central Ministerial/Departmental co-ordination**, Centre State synergies and advise / monitor progress on the reforms mandated in the MSME sector.

RAMP programme:

- It is a World Bank assisted **Central Sector Scheme**, supporting various CoronaVirus Disease 2019 (Covid) Resilience and Recovery Interventions of the **Ministry of Micro, Small and Medium Enterprises (MoMSME).**

Aimed at:

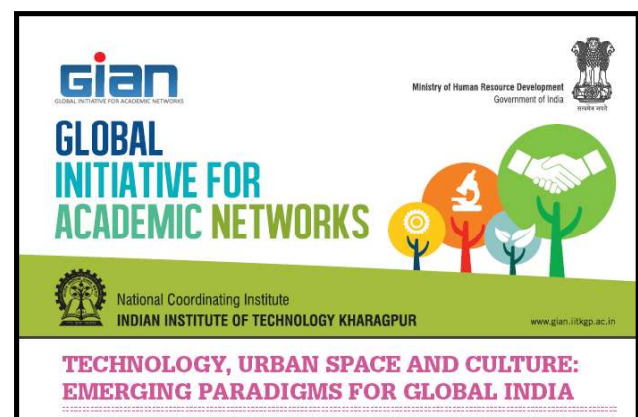
- ▶ Improving access to market and credit
- ▶ Strengthening institutions and governance at the Centre and State
- ▶ Improving Centre-State linkages and partnerships
- ▶ Addressing issues of delayed payments and greening of MSMEs

GIAN SCHEME

Context: After brief discontinuation during the COVID period, the Ministry of Education to restart the fourth phase of the Global Initiative of Academic Networks (GIAN)-to rope in eminent scholars from across the world to teach at Indian universities.

Global Initiative for Academic Networks (GIAN):

- ◆ The GIAN initiative aimed at tapping the talent pool of scientists and entrepreneurs internationally to encourage their engagement with the institutes of Higher Education in India.
- ◆ To augment the country's existing academic resources, accelerate the pace of quality reform, and elevate India's scientific and technological capacity to global excellence.



Objectives:

- ◆ To enhance the presence of esteemed international faculty in Indian academic institutions. Offer opportunities for our faculty to acquire and exchange knowledge and advanced teaching skills.
- ◆ Enable our students to access expertise and insights from distinguished international faculty.

- ◆ Establish pathways for potential collaborative research ventures with international scholars. Create top-notch course materials in specialized domains, available in both video and print formats, for broader use by students and educators.
 - ▶ Document and cultivate innovative pedagogical approaches in emerging subjects of national and global significance.



CENTRAL TRIBAL VARSITY IN TELANGANA

Context: Recently, the Bill for central Tribal varsity in Telangana has been passed in the Lok Sabha.

About the update:

- ◆ The Central Universities (Amendment) Bill, 2023-amends the Central Universities Act, 2009 to set up the Sammakka Sarakka Central Tribal University in Telangana's Mulugu district. It was previously cleared by the Union Cabinet.
- ◆ Establishing a Central Tribal University in Telangana was obligatory under the Andhra Pradesh Reorganisation Act, 2014, which carved out Telangana from the erstwhile Andhra Pradesh state.

SAMMAKKA-SARAKKA-THE LEGEND

Sammakka-Sarakka, a mother-daughter duo, holds a special place in the local tribal folklore.

- **Sammakka**, married to **Pagididda Raju**, a **Kakatiya dynasty** chief, played a pivotal role in protesting against oppressive taxes imposed by local rulers.
- **Sarakka**, one of her daughters, lost her life in the battle, and **Sammakka** disappeared into the hills, believed to have transformed into a **vermillion casket**.
- A biennial festival called the **Sammakka Saralamma Jatara**, one of the largest gatherings of tribal people globally.
- The event commemorates the bravery of the 13th-century mother-daughter duo in their struggle against tax imposition on the **Koya people**.
- The Jatara begins at **Medaram** and involves rituals conducted by Koya priests.

Benefits:

- ◆ University will cater to the regional aspirations for years to come and promote higher education and research among tribal communities, including in subjects such as tribal art, culture and customs, and technology.
- ◆ Will strive to remove regional imbalances.



ADVOCATES AMENDMENT BILL 2023 PASSED

Context: The Advocates Amendment Bill, 2023, was recently approved by the Lok Sabha during the Winter Session of Parliament.

- ◆ **Aims of the Bill:** This legislative move aims to eradicate the presence of **'touts'** in the legal system. The Bill involves the **repeal of the colonial-era Legal Practitioners Act, 1879, and amendments to the Advocates Act, 1961.**
- ◆ **Repeal of Outdated Legislation:** The Bill marks the **end of the Legal Practitioners Act, 1879**, a colonial-era law deemed obsolete. The repeal is part of the government's **broader strategy to eliminate outdated laws** and streamline the legal framework.
- ◆ **Reduction of Superfluous Enactments:** The **primary objective** of the Advocates Amendment Bill is to **reduce the number of redundant laws** in the statute book.
 - ▶ By amending the Advocates Act, 1961, the government aims to create a more **contemporary and efficient legal framework.**

Repealed 1879 Act:

- ◆ **Definition of 'Tout':** The now-repealed **Legal Practitioners Act, 1879, defined a 'tout'** as someone who, in exchange for remuneration, procures the employment of a legal practitioner in any legal business. This definition included individuals frequenting legal institutions for such purposes.

Advocates Act of 1961:

- ◆ The Advocates Act of 1961 was enacted post-independence to **regulate the legal profession effectively. While repealing a majority of the 1879 Act**, certain provisions related to the **extent, definitions, and powers to frame lists of 'touts' were retained.**

Advocates Amendment Bill, 2023

- ◆ **Introduction of Section 45A:** The Bill introduces a new provision, **Section 45A, in the Advocates Act, 1961.** This section **empowers High Courts and district judges to frame and publish lists of 'touts'** after providing them with an opportunity to contest their inclusion.
- ◆ **Legal Safeguards:** The new provision ensures that **no individual's name is included in the 'touts' list without** affording them an opportunity to **present**

their case. Authorities can send suspected 'touts' to subordinate courts for inquiry, and only proven cases will be included in the published list.

- ◆ **Penalties for Acting as a Tout: Section 45A** imposes penalties, including imprisonment and fines, for individuals acting as 'touts' while their names are on the published list. This provision mirrors **Section 36 of the now-repealed 1879 Act**.



PM-JANMAN FOR PVTGS

Context: The Tribal Affairs Ministry mentioned to the Rajya Sabha that the population of Particularly Vulnerable Tribal Groups (PVTGs) was not in decline, citing information provided by the Office of the Registrar General and Census Commissioner of India (ORGI).

- ◆ This has questioned the scheme being launched for PVTGs named as 'PM-JANMAN' and its implementation.

About PVTGs in India:

- The PVTGs are defined by the government as **tribal communities** that show either a declining or stagnant population, use of pre-agrarian technology, economic backwardness, low literacy etc.
- There are **75 such communities** which are spread over **18 States** and Union Territories, according to government figures.
- **State-Wise data:**
 - ▶ **Major distribution:** The highest number of PVTGs are found in Odisha (15), followed by Andhra Pradesh (12), Bihar and Jharkhand (9), Madhya Pradesh and Chhattisgarh (7), Tamil Nadu (6) and Kerala and Gujarat (5 each).
 - ▶ Some of PVTGs are also exists in **Maharashtra and West Bengal (3 each), Karnataka and Uttarakhand (2 each), and one each in Rajasthan, Tripura and Manipur.**
 - ▶ All the four tribal groups in the **Andaman, and one in Nicobar Islands**, are recognised as PVTGs.

About PM-JANMAN:

- ◆ The Cabinet recently approved the Rs. 24,000 crore **Pradhan Mantri-Janjati Adivasi Nyaya Maha Abhiyan**.
- ◆ The scheme is in line with the Prime Minister's **Particularly Vulnerable Tribal Groups Development Mission** that would take basic facilities likes **roads, power, homes, mobile connectivity, etc.** to the

most backward among the Scheduled Tribes, the PVTGs.

◆ Key Points of the scheme:

- ▶ **Objective:** The scheme aims to provide crucial interventions such as permanent housing, road connectivity, piped water supply, mobile medical units, hostel construction, 'Anganwadi' facilities, skill development centres,
- ▶ The Government was planning a Rs.15, 000 crore expenditure, to be spent over a period of **three years** under the scheme.
- ▶ The implementation of the programme will be done through **nine ministries**, which will ensure that existing schemes are taken to these **PVTG-inhabited villages**.
- ▶ The government has set to build;
 - **4.9 lakh pucca homes,**
 - Lay 8,000 km of connecting roads,
 - Link all households with piped water,
 - Set up 1,000 mobile medical units,
 - Construct **2,500 anganwadi centres**, 1,000 multipurpose centres and 500 hostels,
 - Install mobile towers in 3,000 villages.
- ▶ The plan also intends to set up **vocational and skill training centres** in 60 aspirational PVTG blocks and build **500 Van Dhan Vikas Kendras** to help people trade in forest produce.
- ▶ In addition to connecting **1 lakh** of these households to an **off-grid solar power system** and bringing in solar street lights.
- ▶ **Fund allocation:** The money for will go into the **Scheduled Tribe Component (STC)** of the respective ministries from where it will be allocated for the development of these groups.



THE BROADCASTING SERVICES (REGULATION) BILL- ISSUES AND CONCERNS

Context: There are numerous apprehensions that arise from the Broadcasting Bill's manifest scope as well as its noteworthy silences. Issues and concerns regarding protect press freedom and diversity.

The Evolving Landscape of Broadcasting Regulation in India:

- ◆ The **Ministry of Information and Broadcasting (MIB)** recently unveiled the **Broadcasting Services**

(Regulation) Bill, marking another significant attempt to **regulate broadcasting comprehensively**.

- ◆ This move follows a series of initiatives dating back to the 1997 Broadcasting Bill, with the latest iteration spurred by a pre-consultation paper on **'National Broadcasting Policy'** from the **Telecom Regulatory Authority of India (TRAI)**.
- ◆ The last initiative to take on this ambitious task was back in 2007, in the form of the **Broadcasting Services Regulation Bill**.
- ◆ When cable and satellite broadcasting was in its infancy, the **Broadcasting Bill of 1997 scripted the first effort** to visualise an integrated regulatory framework for this sector.

Key Propositions and Concerns

- ◆ **Recording Subscriber Data and Audience Measurement**
 - ▶ The current Bill proposes three noteworthy measures.
 - ▶ Firstly, it mandates broadcasting operators to maintain subscriber data records, aligning with international norms.
 - ▶ Secondly, it aims to establish a methodology for audience measurement and the sale of ratings data to enhance transparency.
 - ▶ However, concerns arise regarding the lack of privacy safeguards for subscribers.
 - ▶ Thirdly, the provision allowing private actors in terrestrial broadcasting may foster competition, but potential impacts on supplier diversity need careful consideration.
- ◆ **Inclusion of OTT Content Suppliers:** A major concern stems from the Bill's **inclusion of Over-the-Top (OTT) content suppliers** in the **definition of broadcasting services**. It creates **jurisdictional conflicts** with the **Ministry of Electronics and Information Technology (MEITY)** discussions on OTT player licensing.
- ◆ **Self-Regulation Challenges:** The Bill introduces a **'Content Evaluation Committee'** for self-certification of news programming, raising questions about feasibility, cost, and desirability. It may **impact smaller news outlets, limiting their ability to continue professional pursuits**.

Silences in the Bill

- ◆ **Ownership Issues:** Crucially, the Bill remains silent on issues of ownership, failing to address cross-media and vertical ownership concerns that can impact supplier diversity and viewpoints in the news marketplace.

- ◆ **Lack of Independent Broadcast Regulator:** While TRAI's paper hinted at the need for an independent broadcast regulator, the Bill proposes a **'Broadcast Advisory Council'**. It raises concerns about **its capacity, autonomy, and the government's ultimate decision-making** power.
- ◆ **Government Empowerment and Lack of Definitions:** The Bill grants the government **considerable powers**, including unannounced inspections, equipment impoundment, and the ability to curtail broadcasting in **"public interest," a term left undefined**, raising concerns about external pressure on news suppliers.



WORLD BANK'S MOVE ON MULTILATERAL DEVELOPMENT BANKS (MDBS)

Context: Recently, the World Bank has set up a task force to study the recommendations for strengthening multilateral development banks (MDBs), laid out by an independent experts' group formed during India's G20 presidency.

What Is a Multilateral Development Bank (MDB)?

- ◆ A multilateral development bank (MDB) is an **international financial institution** chartered by two or more countries for the purpose of encouraging economic development in poorer nations.
- ◆ MDBs provide loans and grants to member nations to fund projects that support social and economic development, such as the building of new roads or providing clean water to communities.

How a Multilateral Development Bank (MDB) Works?

- ◆ Multilateral development banks are subject to **international law**.
- ◆ They and other international financial institutions, such as the **International Monetary Fund (IMF)**.
- ◆ The **World Bank**, which has been semi-officially dominated by the U.S. since its founding, is one of these institutions.
- ◆ Unlike commercial banks, MDBs do not seek to maximize profits for their shareholders.
- ◆ Instead, they prioritize development goals, such as ending extreme poverty and reducing economic inequality.

- ◆ They often lend at low or no interest or provide grants to fund projects in infrastructure, energy, education, environmental sustainability, and other areas that promote development.

Major Multilateral Development Banks:

The following is a list of the major multilateral development banks, ranked by **total assets** are;

- European Investment Bank: €555.8 billion (\$606.5 billion)
- International Bank for Reconstruction and Development, World Bank Group: \$283 billion
- Asian Development Bank: \$191.9 billion
- International Development Association, World Bank Group: \$188.5 billion
- Inter-American Development Bank: \$129.5 billion
- European Bank for Reconstruction and Development: €61.9 billion (\$67.7 billion)
- African Development Bank: 33.8 billion UA
- Asian Infrastructure Investment Bank: \$19.6 billion
- Islamic Development Bank: 22 billion Islamic dinars (\$18.5 billion)
- Central American Bank for Economic Integration: \$10.9 billion
- New Development Bank: \$10.4 billion

RBI TO BRING DIGITAL LOAN AGGREGATORS UNDER REGULATION

Context: The Reserve Bank of India (RBI) has decided to bring digital loan aggregators under a comprehensive regulatory framework to increase transparency in their operations.

Who are Web Aggregators?

Web aggregators bring together loan offers from multiple lenders on an electronic platform; borrowers can then pick and choose the best available loan option.

Need for Regulation-

- ◆ Digital lenders have been accused of charging high interest rates and using illegal recovery measures.
- ◆ There are hundreds of unauthorised digital lenders which are outside the RBI's purview.

Comprehensive Regulatory Framework –

◆ Present Classification-

- ▶ The digital lending universe is classified into three groups: Entities regulated by the RBI and permitted to carry out lending business; entities authorised to carry out lending as per other statutory/regulatory provisions but not regulated by RBI; and entities lending outside the purview of any statutory/ regulatory provision.
- ◆ The central bank's regulatory framework is focused on the digital lending ecosystem of RBI's regulated entities and the lending service providers engaged by them to extend various permissible credit facilitation services.
- ◆ Entities falling in the second category, the respective regulator or controlling authority may consider formulating or enacting appropriate rules and regulations on digital lending based on the recommendations of WGDL (working group on digital lending).
- ◆ For the entities in the third category, the WGDL has suggested specific legislative and institutional interventions for consideration by the Central Government to curb the illegitimate lending activity being carried out by such entities.

INDIA'S WINTER ARCTIC RESEARCH

Context: Recently, the Union Minister of Earth Sciences flagged off India's first winter scientific expedition to Himadri, the nation's Arctic Research Station situated in Ny-Ålesund within the Norwegian archipelago of Svalbard in the Arctic.

About the Research:

- ◆ The first batch of the maiden Arctic winter expedition comprises researchers from the host **National Centre for Polar and Ocean Research (NCPOR), Indian Institute of Technology (IIT) Mandi, Indian Institute of Tropical Meteorology (IITM) and Raman Research Institute.**

The Winter Arctic Scientific Expedition:

- ◆ Indian scientific expeditions to the Arctic during the winter will allow researchers to conduct unique scientific observations during polar nights, where there is no sunlight for nearly **24 hours** and **sub-zero temperatures.**
- ◆ It opens more avenues for India to expand our scientific capabilities in Earth's poles.



- ◆ This will aid in expanding understanding of the Arctic, especially **Climate change, space weather, sea-ice and ocean circulation dynamics, ecosystem adaptations, etc.** which affect weather and climate in the tropics, including monsoons.
- ◆ India has operated a research base in the Arctic named **Himadri** since 2008, which has been mostly hosting scientists during the **summer (April to October)**.
- ◆ Priority research areas include atmospheric, biological, marine, and space sciences, environmental chemistry, and studies on **cryosphere, terrestrial ecosystems, and astrophysics**.
- ◆ India will join a small group of countries that operate their Arctic research bases through the winter.
- ◆ In recent years, climate change and global warming research has been attracting scientists to the Arctic region.

Note:

- Dakshin Gangotri in Antarctica was set up much earlier in **1983**.
- Dakshin Gangotri is now submerged under ice, but India's two other stations, **Maitri and Bharti**, are in use.
- Indian scientific expeditions to the Earth's poles (the Arctic and the Antarctic) are facilitated under the **PACER (Polar and Cryosphere) scheme** of the MoES, solely through the aegis of the **National Centre for Polar and Ocean Research (NCPOR)**, Goa, an autonomous institution of the MoES.


CLIMATE CHANGE PERFORMANCE INDEX 2024

Context: India's secured 7th position in recently released **Climate Change Performance Index (CCPI) 2024** underscoring its notable role and contribution in the ongoing global efforts aimed at mitigating climate change.

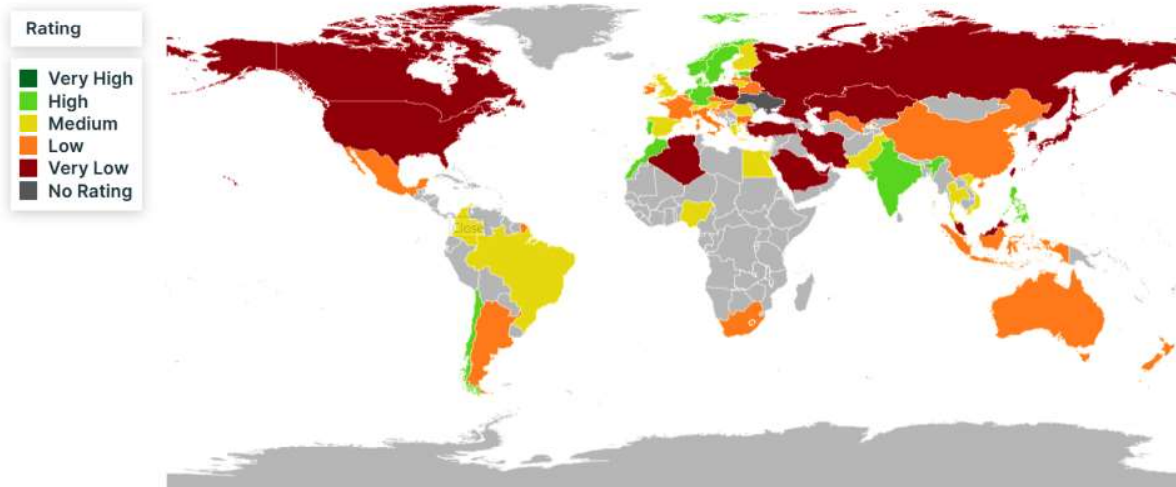
What are the Major Takeaways from CCPI 2024?

- ◆ **About: CCPI, published annually since 2005**, is an independent monitoring tool for tracking countries' climate protection performance. It increases **transparency in national and international climate policy** and enables comparison of individual countries' climate protection efforts and progress.
 - ▶ It is published by **Germanwatch, the NewClimate Institute, and Climate Action Network International**.
- ◆ It indicates the **climate mitigation efforts of 63 countries and the EU**, which collectively account for over **90% of global greenhouse gas (GHG) emissions**.
- ◆ **Performance Metrics:** The CCPI evaluates countries across four key categories: **Greenhouse Gas (GHG) Emissions (40%), Renewable Energy (20%), Energy Use (20%), and Climate Policy (20%)**.
- ◆ **CCPI 2024:** No country performed well enough in all index categories to achieve an overall very high rating. The **first three overall positions therefore remain empty**.
 - ▶ **Denmark** claimed the 4th spot, **Estonia** followed in 5th place, and the **Philippines** secured the 6th position among the top ranks.
 - ▶ **India's Ranking in CCPI 2024:** India secured the **7th position** in the **CCPI 2024**, exhibiting a stride forward from **8th spot in CCPI 2023**. Interestingly, due to the **absence of countries in the first three spots**, India effectively stands 4th in global climate performance.

India's Score and Rankings in Key Categories:

- ◆ **GHG Emissions & Energy Use:** India ranked **9th in GHG Emissions** and **10th in Energy Use** among assessed countries, largely attributed to its lower per capita energy use, a factor bolstering its climate standing.
 - ▶ Also, in the per capita GHG category, the country is on track to meet a benchmark of well below 2°C.
- ◆ **Climate Policy:** India secured the **10th spot in Climate Policy**, showcasing moderate progress compared to its performance in previous assessments.
- ◆ **Renewable Energy:** India's performance showed a more moderate rank, standing at 37th, barely remaining within the 'high' performance category.
 - ▶ This position marks a decline from the **24th spot in CCPI 2023**.

Top 3 remain empty as countries must speed up implementation



CENTRE ALLOWS USE OF SUGARCANE JUICE, B-MOLASSES TO MAKE ETHANOL

Context: The government's recent decision to ban the use of sugarcane juice and sugar syrup for ethanol production comes after the industry requested a reversal of the decision.

Key Highlights -

- ◆ **Policy Reversal:** The government has **reversed its decision** to ban the use of sugarcane juice for ethanol production, allowing its **utilization along with B-heavy molasses**. However, **sugar diversion** for ethanol is **capped at 17 lakh tonnes**.
- ◆ **Temporary Capping:** The cap on sugar diversion will be **applicable for the 2023-24 supply year**, ending in October next year. The decision follows a week of industry protests against the initial ban on cane juice and sugar syrup for ethanol.
- ◆ **Flexibility for Sugar Mills:** Sugar mills are now **granted flexibility** in using **both sugarcane juice and B-heavy molasses** within the 17 lakh tonnes cap for ethanol production in the ongoing supply year.
- ◆ **Modalities Under Consideration:** Officials are working on determining the proportion of cane juice and molasses for ethanol production. Some ethanol has already been produced using cane juice in the current supply year.
- ◆ **Industry Representation:** The reversal comes after representations from the sugar industry to review

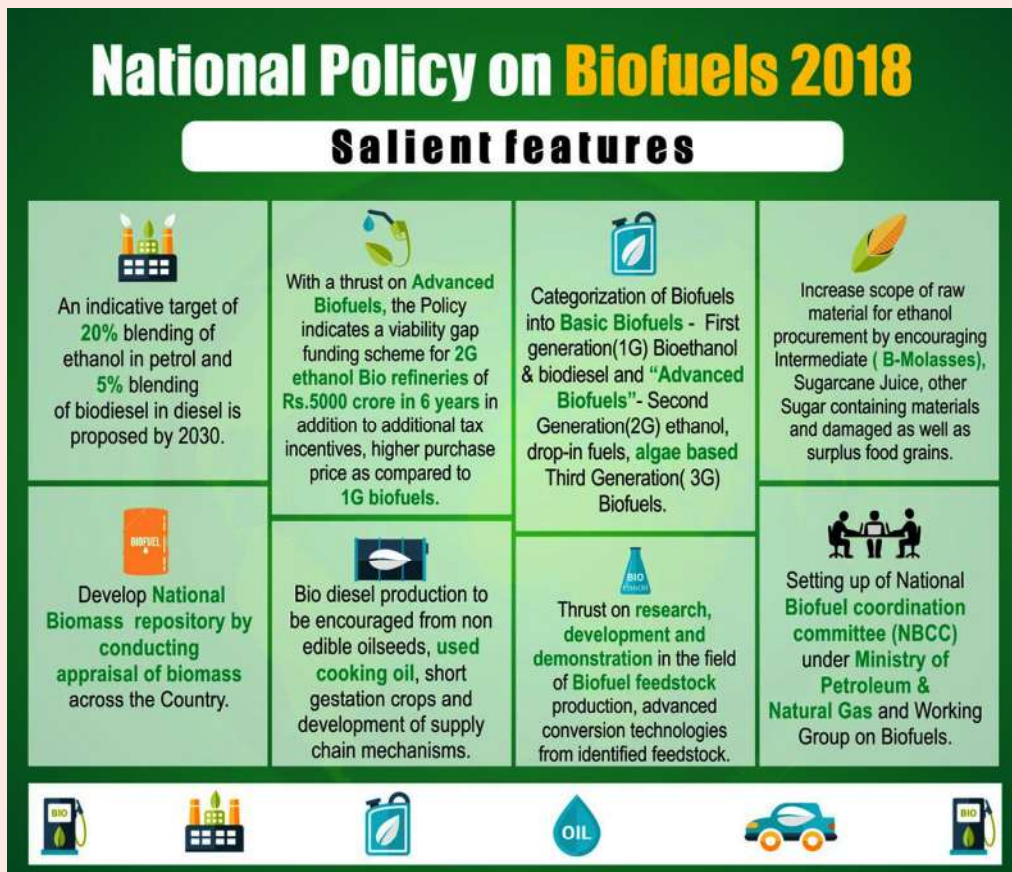
the earlier ban, emphasizing its impact on ethanol production and financial strain on mills.



- ◆ **Concerns and Challenges:** The government's decision is **prompted by concerns over low cane production**, exacerbated by recent drought conditions in Maharashtra and Karnataka.
- ◆ **Ethanol Blending Target:** Despite challenges, officials express confidence in achieving the 15% ethanol blending target with petrol in the 2023-24 supply year.
- ◆ **Review of Sugarcane Juice Ban:** Acknowledging industry distress, officials assure a review of the ban on sugarcane juice, emphasizing its temporary nature and the need for national interest.
- ◆ **Industry's Financial Strain:** The Indian Sugar Mills Association urges the government to revise ethanol prices from B-heavy and C-heavy molasses to support millers financially.
- ◆ **Price Revision Demands:** Industry demands include raising ethanol prices from B-heavy molasses to ₹64 per litre and from C-heavy molasses to ₹58-59 per litre.

National Biofuel Policy:

- The policy is aimed at taking forward the **indicative target** of achieving **20% blending of biofuels** with fossil-based fuels by **2030**.
- The policy intends to ensure the adequate and sustained **availability of domestic feedstock for biofuel production, increasing farmers' income, import reduction, employment generation and waste to wealth creation**.
- This policy clearly exhibits the **Centre's push towards strengthening the energy infrastructure** of the country while promoting the agenda of sustainability.



GLOBAL RIVER CITIES ALLIANCE (GCRA) LAUNCHED

Context: The GRCA was launched at the United Nations Climate Change Conference COP28 in Dubai.

Expanding Reach of River Cities Alliance:

- ◆ **River Cities Alliance:** The GRCA builds upon the existing **River Cities Alliance** formed by NMCG in collaboration with the National Institute of Urban Affairs (NIUA), which includes 142 Indian River cities as members.
- ◆ **Inclusion of river cities:** The global expansion of this alliance saw the **inclusion of river cities** such as **Den Haag from the Netherlands, Adelaide from Australia, and Szolnok from Hungary**.

International Collaboration:

- ◆ **Memorandum of Common Purpose (MoCP):** In a groundbreaking move, the River Cities Alliance (RCA) had previously signed a **Memorandum of Common Purpose (MoCP)** with 124 member cities of the **Mississippi River Towns and Cities Initiative** in the United States.
 - This collaboration marks the first-of-its-kind alliance in the world, underlining the shared commitment to global river conservation.

Global River Cities Alliance's Role:

- ◆ **Global commitment:** The launch of GRCA signifies a **global commitment** to coordinate efforts for the conservation and sustainable management of rivers.
- ◆ **Crucial Roles:** As an alliance with international representation, it will play a crucial role in developing

strategies, sharing best practices, and fostering collaboration among cities facing similar challenges related to river ecosystems.

First-of-its-Kind Initiative:

- ◆ **Varied Continents:** The **inclusion of cities from different continents** in the GRCA, coupled with the **MoCP signed with the Mississippi River Towns and Cities Initiative**, underscores the uniqueness of this initiative.
- ◆ **Bringing together cities across the globe:** By **bringing together cities across the globe**, the GRCA aims to create a platform for collective action and knowledge exchange in the pursuit of common goals related to river conservation.

4Other missions

- ◆ **National Mission for Clean Ganga (NMCG):** It is responsible for implementing India's Namami Gange program, has taken a significant stride in river conservation and sustainable water management.
- ◆ **Global River Cities Alliance (GRCA):** This was achieved through the launch of the **Global River Cities Alliance (GRCA)** at the United Nations Climate Change Conference COP28 in Dubai.



Context: The UAE announced a US\$30 billion commitment to the newly launched catalytic climate vehicle, ALTÉRRRA.

About ALTÉRRRA:

- ◆ With this US\$30 billion commitment, **ALTÉRRRA** becomes the **world's largest private investment vehicle** for climate change action and will **aim to mobilize US\$250 billion globally by 2030**.
- ◆ It aims **to steer private markets** towards **climate investments** and focus on transforming emerging markets and developing economies, where traditional investment has been lacking due to the higher perceived risks across those geographies.
- ◆ ALTÉRRRA has been **established by Lunate**, an **independent global investment manager**, and is domiciled in the Abu Dhabi Global Market.

Need of ALTÉRRRA:

- ◆ By 2030, emerging markets and developing economies will **require US\$2.4 trillion every year to address climate change**.
- ◆ That is why **COP28** made **fixing climate finance**

a **key pillar of its Action Agenda** and has worked to deliver ambitious solutions, including mobilising private markets at scale.

Structure of ALTÉRRRA:

- ◆ ALTÉRRRA will have an **innovative two-part structure** to spur
 - ▶ new ideas, incentivize policy and regulatory frameworks
 - ▶ Identify solutions to rapidly deploy capital across the entire value chain of the new climate economy.
- ◆ It has a dedicated investment focus on supporting four key priorities that underpin COP28's Action Agenda, namely:
 - ▶ Energy Transition
 - ▶ Industrial Decarbonization
 - ▶ Sustainable Living
 - ▶ Climate Technologies.

ALTÉRRRA and India:

- ◆ From the vehicle's initial commitment, immediate capital investment has been earmarked for the development of **over 6.0 GW of new clean energy capacity in India**.
- ◆ This includes the **construction of 1,200 MW of wind and solar projects** that will begin producing clean power by 2025.



Context: AstroSat, India's first multi-wavelength space-based observatory, has made a groundbreaking discovery, detecting bright sub-second X-ray bursts from a novel neutron star with an ultrahigh magnetic field, known as a Magnetar.

What are Magnetars?

- Magnetars are neutron stars characterized by **ultrahigh magnetic fields**, surpassing Earth's magnetic field by over one quadrillion times. These extreme astrophysical objects emit high-energy electromagnetic radiation due to the decay of their magnetic fields.

Key Characteristics:

- ◆ Strong temporal variability, including slow rotation and rapid spin-down.

- ◆ Display of bright but short bursts, extending to months-long outbursts.

SGR J1830-0645 - A Unique Magnetar

Discovery and Background:

- SGR J1830-0645 was discovered in October 2020 by NASA's Swift spacecraft.
- Relatively young, around 24,000 years old.
- Isolated neutron star.
- **Motivation for Study:** Scientists from the **Raman Research Institute (RRI)** and the University of Delhi aimed to study and explore the **characteristics of SGR J1830-0645 using AstroSat's instruments.**

AI SUMMIT ADOPTS 'NEW DELHI DECLARATION'

Context: During Global Partnership on Artificial Intelligence Summit hosted by India, the New Delhi Declaration has been signed by 29 nation countries including the European Union.

The New Delhi Declaration:

- ◆ The Delhi declaration commits countries to work on mitigating concerns around **misinformation and disinformation, unemployment, lack of transparency and fairness, protection of intellectual property and personal data, and threats to human rights and democratic values.**
- ◆ The GPAI member countries further affirmed their commitment to continue to work within their respective jurisdictions to advance **safe, secure, and trustworthy AI**, including, as appropriate, through the development of relevant **regulations, policies, standards, and other initiatives.**
- ◆ The declaration places emphasis on collaborative efforts towards cultivating necessary **knowledge, skills, infrastructure, policies, risk management frameworks, and governance mechanisms.**
- ◆ This collective approach seeks to harness the potential of AI advancements, ensuring their responsible and effective utilisation, especially among low and middle-income countries.

GPAI is a grouping of countries in **North and South America, Europe, and East Asia**, that strives to work towards "trustworthy development, deployment, and use of AI."

FIRST GENE THERAPIES TO TREAT PATIENTS WITH SICKLE CELL DISEASE

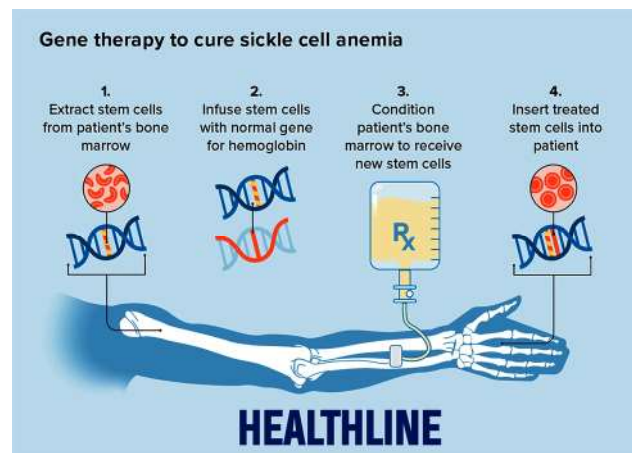
Context: Recently, the U.S. Food and Drug Administration approved two treatments namely, **Casgevy** and **Lyfgenia**, for the treatment of sickle cell disease (SCD) in patients.

About the information:

- ◆ These are the **First Gene therapies** approved for the treatment of sickle cell.
- ◆ The cell-based gene therapies were approved for the treatment of sickle cell disease (SCD) in patients **12 years and older.**
- ◆ Additionally, one of these therapies, **Casgevy**, is the first FDA-approved treatment to utilize a type of novel genome editing technology, signaling an innovative advancement in the field of gene therapy.

How these treatments work?

- ◆ **Casgevy, a cell-based gene therapy**, is approved for the treatment of sickle cell disease in patients 12 years of age and older with recurrent vaso-occlusive crises.



- ▶ Casgevy is the first FDA-approved therapy utilizing **CRISPR/Cas9**, a type of genome editing technology.
- ▶ **Patients' hematopoietic (blood) stem cells** are modified by genome editing using CRISPR/Cas9 technology.
- ▶ **CRISPR/Cas9** can be directed to cut DNA in targeted areas, enabling the ability to accurately edit (remove, add, or replace) DNA where it was cut.

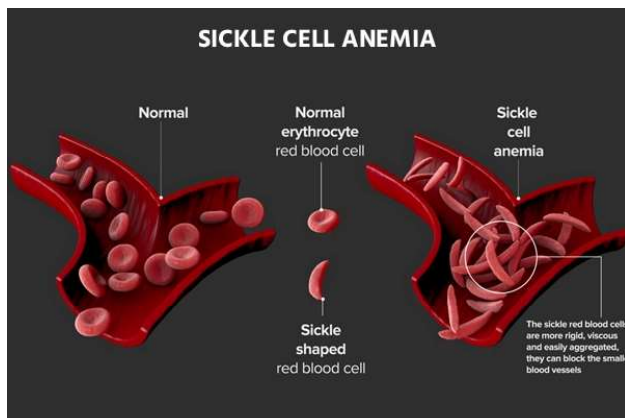
- ▶ The modified blood stem cells are transplanted back into the patient where they engraft (attach and multiply) within the bone marrow and increase the production of fetal hemoglobin (HbF), a type of hemoglobin that facilitates oxygen delivery. In patients with sickle cell disease, increased levels of **HbF prevent the sickling of red blood cells.**

Lyfgenia is a cell-based gene therapy:

- ◆ Lyfgenia uses a lentiviral vector (gene delivery vehicle) for genetic modification and is approved for the treatment of patients 12 years of age and older with sickle cell disease and a history of vaso-occlusive events.
- ◆ With Lyfgenia, the patient's blood stem cells are genetically modified to produce **HbAT87Q**, a gene-therapy derived hemoglobin that functions similarly to hemoglobin A, which is the normal adult hemoglobin produced in persons not affected by sickle cell disease.
- ◆ Red blood cells containing HbAT87Q have a lower risk of sickling and occluding blood flow. These modified stem cells are then delivered to the patient.

Sickle Cell Disease:

- ◆ Sickle cell disease is a group of **inherited blood disorders** affecting approximately 100,000 people in the U.S.
- ◆ It is most common in **African Americans** and, while less prevalent, also affects Hispanic Americans.



- ◆ The primary problem in sickle cell disease is a mutation in hemoglobin, a protein found in red blood cells that deliver oxygen to the body's tissues.
- ◆ This mutation causes red blood cells to develop a crescent or "**sickle**" shape.
- ◆ These sickled red blood cells restrict the flow in blood vessels and limit oxygen delivery to the body's tissues, leading to severe pain and organ damage called **vaso-occlusive events (VOEs) or vaso-occlusive crises (VOCs).**

- ◆ The recurrence of these events or crises can lead to **life-threatening disabilities** and/or early death.

The US Food and Drug Administration (FDA): The FDA, an agency within the **U.S. Department of Health and Human Services**, protects the public health by assuring the safety, effectiveness, and security of human and veterinary drugs, vaccines and other biological products for human use, and medical devices.



'NOMA': THE LATEST ADDITION TO WHO'S LIST OF NEGLECTED TROPICAL DISEASES

Context: The severe gangrenous disease of mouth and face has **90% mortality rate and is associated with extreme poverty, malnutrition**

WHO and Noma:

- ◆ The World Health Organization (WHO) took a significant step on December 15, 2023, by **officially adding noma**, a severe gangrenous disease affecting the mouth and face, to its list of **neglected tropical diseases (NTD)**.
- ◆ Commonly known as **cancrum oris**, noma poses a significant health threat, especially to marginalized children living in extreme poverty.
- ◆ **High Mortality Rate:** Noma, with a **mortality rate of approximately 90%**, is associated with **extreme poverty, malnutrition, poor sanitation, and limited access to oral hygiene.**
- ◆ **Primary Target:** It primarily targets **children aged 2-6 years** and is prevalent in impoverished communities.

Neglected Tropical Diseases (NTDs):

- NTDs are a group of infections that are very common amongst marginalized communities in the developing regions of Africa, Asia and the Americas.
- They are caused by a variety of pathogens such as viruses, bacteria, protozoa and parasitic worms.
- NTDs are common in tropical areas where people do not have access to clean water and sanitation.
- These NTD diseases receive less funding for research and treatment than malaises like tuberculosis, HIV-AIDS and malaria.
- Examples of NTDs are: snakebite envenomation, scabies, yaws, trachoma, Leishmaniasis and Chagas disease etc.



COVID SUB-VARIANT JN.1

Context: Recently, the Union Health Ministry has announced an alert on the Indian variant of COVID-19, namely JN.1, which was included in the list of 'variant of Interest' by World Health Organisation (WHO).

About:

Understanding JN.1 Variant:

- The Indian SARS-CoV-2 Genomics Consortium (INSACOG) is a network of Genomic Laboratories that has been monitoring coronavirus in the country from a genomic perspective. The Indian Council of Medical Research (ICMR) is a part of this consortium.

- ◆ **Variant Lineage:** JN.1 is a sub-variant of BA.2.86, also known as Pirola, first detected in the United States.
- ◆ **Mutation Characteristics:** While JN.1 has only one additional mutation on the spike protein compared to Pirola, its high number of spike protein mutations has drawn attention of researchers.



WORLD MALARIA REPORT

Context: The recently released World Malaria Report shows that the number of cases and deaths due to the mosquito-borne infection India have continued to decline.

Key Highlights of the Report:

Malaria is a potentially life-threatening disease caused by parasites (**Plasmodium vivax, Plasmodium falciparum, Plasmodium malariae and Plasmodium ovale**) that are transmitted through the bite of infected female Anopheles mosquitoes.

◆ **Data shown:** India saw a **30% decline** in malaria cases and **34% decline** in deaths in 2022 as compared to the previous year.

- ▶ Globally there were **5 million** additional malaria cases in 2022 as compared to the previous year, totalling to 249 million.
- ▶ Of the **5 million** additional cases, the highest **2.1 million** was from Pakistan that had a flood in 2022.
- ▶ India accounted for **1.4% of total malaria cases** in the world.

◆ **Factors responsible to increase Malaria:** Climate Change Boosts Malaria Risks and Extreme Weather Impacts:

◆ **Challenges for India:**

- ▶ **Vivax Malaria Predicament:** Vivax malaria, constituting over **40% of cases in India**, poses a challenge due to its recurring nature hiding in the liver.
- ▶ **Incomplete Treatment Issue:** Treating vivax malaria requires a **14-day therapy**, but many stop medication once symptoms alleviate, hindering complete recovery.

The Statistical data (India-specific):

- With an estimated **33.8 lakh cases** and **5,511 deaths**, India saw a decline of **30 per cent** in malaria incidence and **34 per cent** in mortality in 2022, compared to the previous year.
- The number of malaria cases had dropped from **243 million to 233 million** globally between **2000 and 2019**. However, there was an increase of **11 million cases** in 2020.
- They remained stable in 2021, before seeing another increase of 5 million in 2022 to **249 million**.
- The number of **malaria deaths** also remained higher than the pre-pandemic levels. There were **608,000** deaths reported in 2022 as compared to **576,000 cases in 2019**.



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Section D [QUICK BYTE]

- ☞ Reservation norms for Jute Packaging Materials
- ☞ Technology Development Fund (TDF)
- ☞ The first Indian Art, Architecture & Design Biennale
- ☞ India-Korea Electronic Origin Data Exchange System (EODES)
- ☞ Green Rising initiative
- ☞ Earth System Model (ESM)
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- ☞ Mahaparinirvan Diwas
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- ☞ 'Bhashini', an AI-led language translation system
- ☞ "Contact binary" satellite – 'Selam'
- ☞ 'Sovereign AI' in India
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- ☞ Physical Training Instructor (PTI) designated as a 'Teacher'
- ☞ China bans export of rare earth processing technologies
- ☞ 106th Indian Economic Association (IEA) Conference
- ☞ Gelephu Smartcity Project
- ☞ Indira Gandhi Prize for Peace

[SPECIES IN NEWS]

- ☞ Wisent (*European Wild Bison*)
- ☞ Black Pelicans (*Pelecanus niger*)
- ☞ Santjordia pagesi, a new jelly fish discovered
- ☞ Dodo (*Raphus cucullatus*)
- ☞ Black Tiger
- ☞ Red giant flying squirrel (*Petaurista petaurista*)
- ☞ Indian Bison (*Bos gaurus*)

[LOCATION IN NEWS]

- ☞ Volcano Fagradalsfjall
- ☞ Ogasawara Island chain
- ☞ Golden Triangle of Opium
- ☞ Red Sea

Reservation norms for Jute Packaging Materials



Cabinet Committee on Economic Affairs approves reservation norms for **Jute Packaging Materials** for **Jute Year 2023-24** under **JPM Act, 1987**.

About:

- The Mandatory packaging norms approved for Jute Year 2023-24 provide for **100% reservation of the foodgrains and 20% of sugar** to be compulsorily packed in jute bags.
- Reservation for packaging in jute packaging material consumed around 65% of the raw jute produced in the country (in 2022-23).
- By bringing into effect the provision of JPM Act, the Government will provide relief to **4 lakh workers employed in jute mills** and ancillary units as well as support the livelihood of around **40 lakh farm families**.
- Besides, it will help protect environment because jute is **natural, bio- degradable, renewable and reusable fibre** and hence fulfils all sustainability parameters.

Jute Packaging Materials (JPM) Act:

- JPM Act, 1987 protects interest of Jute farmers, workers and persons engaged in jute goods' production.
- 75% of the total production of the Jute Industry is Jute Sacking Bags of which 85% is supplied to the Food Corporation of India (FCI) and State Procurement Agencies (SPAs) and remaining is exported/sold directly.

The Jute industry occupies an important place in the national economy of India in general and Eastern Region in particular i.e. **West Bengal, Bihar, Odisha, Assam, Tripura, Meghalaya, Andhra Pradesh and Telangana**. It is one of the major industries in the eastern region, particularly in West Bengal.

Technology Development Fund (TDF)



The Technology Development Fund (TDF) is a flagship programme of **Ministry of Defence** executed by DRDO under **'Make in India' initiative**.

The main objectives of:

- Grant in Aid to Indian industries, including MSMEs and Start-ups, as well as academic and scientific institutions for the development of Defence and dual use technologies that are currently not available with the Indian defence Industry.
- Engage with the private industries especially MSMEs and Start-ups to bring in the culture of Design & Development.
- Research, Design & Development of Niche technologies for defence and armed forces.
- Create a bridge amongst the Armed Forces, research organizations, academia and qualifying/certifying agencies with private sector entities.
- Creation of an ecosystem of R&D where industry and Academia work together.
- Building of Defence manufacturing ecosystem in country thereby Achieving 'Aatmanirbharta' in defence technology.



Prime Minister inaugurated the first **Indian Art, Architecture & Design Biennale (IAADB) 2023** being held at Red Fort.

About:

- Organised with the Vision to develop and institutionalise a flagship Global Cultural Initiative in the country like the International Biennales at **Venice, Sao Paulo, Singapore, Sydney and Sharjah**.
- In line with this vision, a nationwide campaign to reinvent, rebrand, renovate and re-house museums was launched.
- Further, development of cultural spaces in five cities of India namely Kolkata, Delhi, Mumbai, Ahmedabad & Varanasi was also announced. Indian Art, Architecture & Design Biennale (IAADB) will serve as an introduction to the Cultural Space at Delhi.
- Vision of '**Vocal for Local**', '**Aatmanirbhar Bharat Centre for Design**' at Red Fort is being set up. It will showcase the unique and indigenous crafts of India and provide a collaborative space between the *karigars* and the designers (sustainable cultural economy).

India-Korea Electronic Origin Data Exchange System (EODES)



EODES will facilitate implementation of **India-Korea Comprehensive Economic Partnership Agreement (CEPA)** by electronic exchange of origin information between the two customs administrations for goods traded under the CEPA

About the Electronic Origin Data Exchange System (EODES)-

- The Electronic Origin Data Exchange System is aimed at **facilitating** the smooth **implementation** of the **India-Korea Comprehensive Economic Partnership Agreement (CEPA)**.
 - By way of electronic exchange of origin information between the two customs administrations in respect of the goods traded under the CEPA.
- The data fields in a **Certificate of Origin (CoO)** shall be electronically shared by the exporting customs administration with the importing customs, as soon as the certificate is issued.
- This would facilitate **faster clearance of imported goods**.

Green Rising initiative

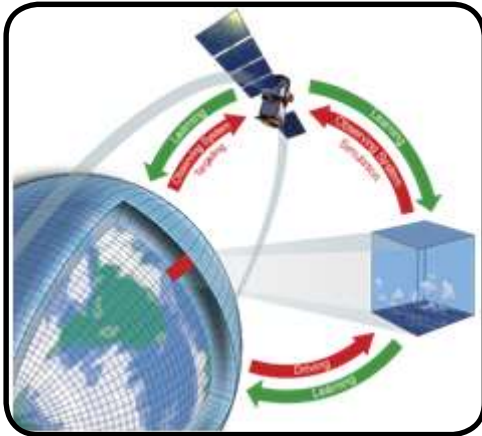


At the **ReWired Summit** at COP28 Dubai, the official launch of **Green Rising** took place, which is a platform aiming to empower youth-led climate actions and solutions.

About the platform:

- The global "Green Rising" initiative and the "**Green Rising India Alliance**" involve UNICEF, Generation Unlimited, and a diverse network of public, private, and youth partners.
- It aims to cultivate a proficient workforce within the environment and forest sectors. The recently launched **Green Credits Initiative** by Prime Minister of India at COP28 was highlighted, encouraging global collaboration for pro-planet actions.
- The minister urged businesses to join in **championing sustainable lifestyles**.

Earth System Model (ESM)



A state-of-the-art **Earth System Model (ESM)** known as the IITM-ESM has been indigenously developed at Centre for Climate Change Research (CCCR), Indian Institute of Tropical Meteorology (IITM) under the Ministry of Earth Sciences.

About:

- This is the first **Earth System Model** from India and the climate change assessment carried out using IITM-ESM, was used in the latest **Sixth Assessment Report prepared by the Intergovernmental Panel on Climate Change (IPCC)**.
- The National Climate Change Assessment report documenting the regional climate change projections has been released to benefit students, researchers, and policymakers.

How the system model works?

- **Earth system models (ESM)** seek to simulate all relevant aspects of the Earth system
- They include physical, chemical and biological processes, therefore reaching far beyond their predecessors, the **global climate models (GCM)**, which just represented the physical atmospheric and oceanic processes.

Google Gemini



Google took its next leap in **Artificial intelligence** with the launch of project Gemini, an AI model trained to behave in human-like ways.

What is Google Gemini?

- Gemini's biggest advances will not come until early 2024 when its Ultra model will be used to launch "**Bard Advanced**".
- The AI, at first, will only work in English throughout the world, although Google executives assured reporters during a briefing that the technology will have no problem eventually diversifying into other languages.
- The rollout will unfold in phases, with less sophisticated versions of Gemini called "**Nano**" and "**Pro**" being immediately incorporated into Google's AI-powered chatbot Bard and its Pixel 8 Pro smartphone.
- The technology's problem-solving skills are being touted by Google as being especially adept in Maths and physics, fuelling hopes among AI optimists that it may lead to scientific breakthroughs that improve life for humans.

Garba of Gujarat in UNESCO Intangible Cultural Heritage list

Gujarat's traditional dance form 'Garba' was on December 6 included in the list of Intangible Cultural Heritage by the United Nations Educational, Scientific and Cultural Organization (UNESCO)

About –

- The popular **dance form is the 15th cultural item from India** to make it to the UNESCO list.

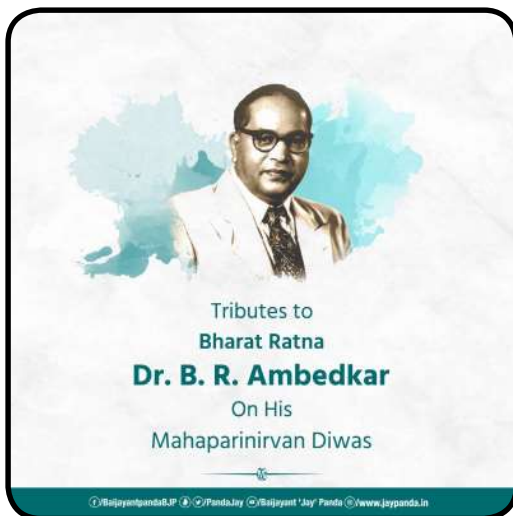


- The inclusion made under the provisions of the **2003 Convention for the Safeguarding of Intangible Cultural Heritage**.
- Garba is **celebrated for nine days during the festival of Navaratri**.
- **Described the 'Garba' as a ritualistic and devotional dance** performed throughout the State of Gujarat and across India.

The list for the Safeguarding of the Intangible Cultural Heritage

- Currently, it has some **704 elements** corresponding to **5 regions and 143 countries**.
- **Apart from 'Garba of Gujarat,'** some of the new inscriptions include
 - ▶ **Rickshaws and Rickshaw painting in Dhaka** from Bangladesh,
 - ▶ **Songkran in Thailand**
 - ▶ traditional Thai New Year festival from Thailand
 - ▶ **Hiragasy, a performing art of the Central Highlands of Madagascar**
 - ▶ **Junkanoo from the Bahamas**
 - ▶ **Procession and celebrations of Prophet Mohammed's birthday in Sudan**

Mahaparinirvan Diwas



India along with **10 ASEAN Member States (AMS)** was represented by 200 participants, at the **4th edition of the annual ASEAN India Grassroots Innovation Forum (AIGIF)** that was launched in Langkawi, Malaysia on 28th November 2023.

About:

- The AIGIF is an annual programme focused on fostering a strengthened relationship between India and AMS on the premise of cooperation in **Science, Technology and Innovation (STI)**.
- While on one side it aims to give exposure to social innovations in different countries, it also strengthens governance in the grassroots innovation ecosystem.
- The annual program is a collaboration between the **ASEAN Committee on Science, Technology, and Innovation (COSTI)**; Department of Science & Technology (DST), Government of India; National Innovation Foundation (NIF) – India and the Science and Technology Ministry of the host nation, Malaysia's Ministry of Science, Technology and Innovation (MOSTI) in the year 2023.
- **YayasanInovasi Malaysia (YIM)** is an agency under MOSTI which is executing the AIGIF this year.

Kisan e-Mitra

PM KISAN AI-Chatbot (Kisan e-Mitra) has been launched recently.

About:

- Currently, the Chatbot is available in English, Hindi, Bengali, Odia, and Tamil.
- In a short period, it will be available in all 22 languages of the country.
- The AI Chatbot acts as a comprehensive guide for the beneficiaries, providing them with timely and accurate responses to their queries related to the scheme.
- This is the first AI Chatbot integrated with a major flagship scheme of the Union government.
- It has been developed and improved with the support of the EKstep Foundation and Bhashini.

Seed Cooperative Society

Ministry of Cooperation has set up **Bhartiya Beej Sahkari Samiti Limited** under the **Multi- State Cooperative Societies (MSCS) Act, 2002.**

About

- The BBSSL will undertake production, procurement & distribution of quality seeds under single brand through cooperative network to improve crop yield and develop a system for preservation and promotion of indigenous natural seeds.
- The following shall be eligible to become ordinary member of the BBSSL:-
 - ▶ Any multi-State co-operative society or any co-operative society;
 - ▶ The National Co-operative Development Corporation (NCDC) established under the National Co-operative Development Corporation Act, 1962 (26 of 1962);
 - ▶ Any other corporation owned or controlled by the Government;
- **Such class or classes of persons or associations of persons as may be permitted by the Central Registrar having regard to the nature and activities of the Society.**

International Methane Emissions Observatory 2023 Report**Context:**

Recently, a report named **"An Eye on Methane"**, on Methane emission has been released by the International Methane Emissions Observatory.

About the Report:

- The International Methane Emissions Observatory's third annual report provides decision makers a framework of action to track and monitor methane emissions to plan targeted and ambitious action for their mitigation.
- Key Highlights:
 - ▶ 20 IMEO-funded and coordinated peer-reviewed studies have been published and 7 studies submitted or under review.

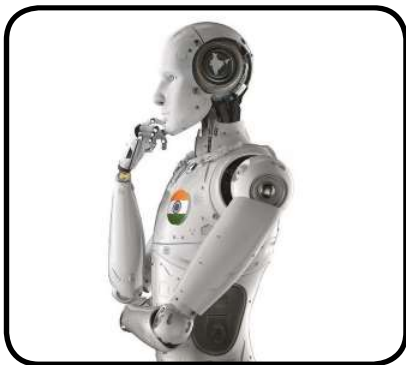
	<ul style="list-style-type: none"> ▶ 114 oil and gas companies – covering 37% of production – joined UNEP’s measurement, reporting and verification programme OGMP 2.0 September 2023 cut-off. ▶ Methane Alert and Response System (MARS), launched at COP27, has issued alerts on 127 plumes to the responsible authorities. ▶ Methane data platform is under design. • Funding is secured for baseline studies that will provide an empirical and actionable assessment of emissions across methane-emitting sectors for selected countries.
<p>‘Bhashini’ ,an AI-led language translation system</p>	<p>Villagers in the Southwestern Indian state of Karnataka read out dozens of sentences in their native Kannada language into an app as part of a project to build the country’s first AI-based chatbot for Tuberculosis.</p> <p>About:</p> <ul style="list-style-type: none"> • The Indian government, which aims to deliver more services digitally, is also building language datasets through Bhashini, an AI-led language translation system that is creating open source datasets in local languages for creating AI tools. • The platform includes a crowdsourcing initiative for people to contribute sentences in various languages, validate audio or text transcribed by others, translate texts and label images. • Similar efforts: • Google-funded Project Vaani, or voice, is collecting speech data of about 1 million Indians and open-sourcing it for use in automatic speech recognition and speech-to-speech translation. • Bengaluru-based EkStep Foundation’s AI-based translation tools are used at the Supreme Court in India and Bangladesh. • While the government-backed AI4Bharat centre has launched Jugalbandi, an AI-based chatbot that can answer questions on welfare schemes in several Indian languages.
	<p>The first asteroid target of NASA’s Lucy mission hosts an unexpected “contact binary” satellite. Scientists have named it “Selam.”</p> <p>About:</p> <ul style="list-style-type: none"> • This first asteroid encounter for the Lucy mission really surprised everyone. • Not only was there the surprise of the previously hidden contact binary, but the surprisingly high-resolution images revealed boulder-strewn surface on both small worlds. • Up close, 790 meter-wide Dinkinesh looks a lot like 101955 Benu, visited by OSIRIS-REx.
<p>“Contact binary” satellite – ‘Selam’</p>	



- NASA says that we can expect to see more images of the flyby with additional processing soon, saying that the team has completed downlinking the data from Lucy's first asteroid encounter and is continuing to process it.

The **fossil Selam** was discovered in 2000 in Dikika, Ethiopia, and belonged to a 3-year-old girl of the same species as Lucy.

'Sovereign AI' in India



Since the country believes that AI can bring about big changes in its digital economy, India is also going towards making laws governing the technology that are introduced going forward.

Background:

- The idea of harnessing economic benefits from aggregated non-personal datasets was first proposed by a MeitY-appointed committee chaired by **Infosys co-founder Kris Gopalakrishnan**.
- In a draft report of January 2021, the committee recommended the identification of certain "**high value datasets**" which could be shared for the purpose of encouraging innovation and ensuring national security.
- India datasets program aims to establish a unified platform for data sharing and exchange among various stakeholders.

Exercise Milan



On the occasion of **Navy Day** (December 4), Indian navy is also gearing up to host Exercise MILAN, early next year.

Exercise MILAN

- Exercise Milan is a biennial multilateral naval exercise which began in 1995, and has since significantly expanded in scope and scale to become the largest exercise held by India.
- Starting with the participation of only four countries, viz **Indonesia, Singapore, Sri Lanka and Thailand**, in the 1995 edition, the exercise has since transitioned leaps and bounds.
- **Participation increased from six regional countries to 18 countries in 2014** which included IOR littorals.
- Originally conceived in **consonance with India's 'Look East Policy'**, MILAN expanded in ensuing years with the GOI's 'Act East policy' and **Security And Growth for All in the Region (SAGAR) initiative**, to include participation from **island nations in the Western IOR** as also IOR littorals.
- The last edition of Milan, was held off Visakhapatnam as participation from 40 nations.

Tejas jets and Prachand helicopters



Defence Acquisition Council (DAC) gave approval to defence acquisition projects that included procurement of 97 Tejas light combat aircraft and 156 Prachand combat helicopters.

Tejas:

- Tejas is an **Indian-made single-engine fighter jet**, which was developed by the **Light Combat Aircraft (LCA) programme**, which commenced in the 1980s.
- Features:
 - ▶ It is a delta wing and light multirole fighter.
 - ▶ Tejas is a supersonic combat aircraft which is the smallest and lightest of its kind, being the crown jewel of the Indian Air Force.
 - ▶ It is designed **to carry a range of air-to-air, air-to-surface**, precision-guided weapons.
 - ▶ **Air-to-air refuelling capability**, carefree handling, enhanced manoeuvrability, multi-mode airborne radar, and self-protection suite.
 - ▶ **Maximum speed:** Mach 1.8.
 - ▶ **Range:** 3,000 km.

Prachand helicopters:

- It is an **Indian multi-role light attack helicopter** designed and manufactured by the **Hindustan Aeronautics Limited (HAL)** under **Project LCH**.
- It has been ordered by the Indian Air Force and the Indian Army.
- Its flight ceiling is the highest among all attack helicopters in the world.

Emphasis on domestic procurement: 98 per cent of the total procurement worth **Rs.2.23 lakh crore** will be sourced from domestic industries and that the move will give a substantial boost to the Indian defence industry in achieving the goal of '**Aatmanirbharta**' (**self-reliance**) in defence industry.

Solar-electric boat Barracuda launched



Taking ahead the cause of eco-friendly maritime transportation, '**Barracuda**', mentioned to be **India's fastest solar-electric boat**, was launched at the yard of **Navalt Solar and Electric Boats**, located off Aroor in Alappuzha.

About:

- Named after the swift, long fish, Barracuda was designed by Navalt and can be deployed even in the rough seas as a workboat to ferry up to **12 passengers and cargo**.
- The **14-metre-long, 4.4-metre-wide vessel** can attain a top speed of **12.5 knots (23 kmph)** and has a range of seven hours on a single charge.
- It has twin **50 kW electric motors**, a marine-grade LFP battery, and **6 kW solar powers**, epitomising efficient and clean energy usage.
- It is engineered to navigate through waves as tall as **four metres** and operates without noise, vibration and air pollution.

Mahalakshmi Scheme



- It won the **world's best start-up** award in the mobility and transportation category at the Berlin **Start-up Energy Transition Awards 2023**.
- The firm that operates from Kochi has also received various prestigious awards, including the **Gustave Trouve Awards** twice.

In Telangana, around 450,000 autos operate, with 200,000 in Hyderabad and Secunderabad. Approximately 600,000 individuals depend on autorickshaws for their livelihood, both directly and indirectly.

About:

- Under **Mahalakshmi Scheme**, **women** can show any identity proof of local domicile and **avail of free rides** in around 7,292 bus services run by TSRTC. According to TSRTC estimates, around 40 lakh passengers ply on buses daily, out of which at least 30% are women.
- **Auto drivers** are **protesting** across Telangana demanding that the government **provide an alternate livelihood** for them.

Tax Inspectors without Borders (TIWB)



India will help **Saint Lucia** in strengthening its tax administration by transferring technical knowledge and skills to its tax administration, and sharing best practices under the '**Tax Inspectors Without Borders (TIWB) programme**'.

About TIWB

- **Tax Inspectors without Borders (TIWB)** is a joint initiative of the **United Nations Development Programme (UNDP)** and the **Organisation for Economic Cooperation and Development (OECD)**.
- The objective of the TIWB Initiative is to enable sharing of tax audit knowledge and skills with tax administrations in developing countries through a targeted, real time "learning by doing" approach

Indian Ocean Naval Symposium (IONS)



The **8th edition of Indian Ocean Naval Symposium (IONS) Conclave of Chiefs (CoC)** was conducted by **Royal Thai Navy** at Bangkok.

About:

- During the Conclave of Chiefs, Thailand assumed the **duties of Chair of IONS** and Work Plan for next two years was finalized.
- As a first, **Flag designed by India** was selected as the IONS Flag.
- India also took over as the co-Chair of **IONS Working Groups on Maritime Security and HADR** for the forthcoming cycle.
- Republic of Korea Navy was welcomed by the Conclave as the latest 'Observer', raising the collective strength of IONS to **34 members**.

India is also scheduled to take over as the Chair of IONS (2025-27) during 9th CoC planned to be conducted in India in end 2025.

Physical Training Instructor (PTI) designated as a 'Teacher'



The Supreme Court (SC) has held that **Physical training instructors (PTIs)** come within the definition of "teachers" though they may not necessarily take classes within the four walls of a building.

About SC's views:

- Physical training instructors impart to students the skills and rules of various sports and games.
- In this view, it is inherent in the duties of a **physical director** that he imparts to the students various skills and techniques of these games and sports.
- There are a large number of **indoor and outdoor games** in which the students have to be trained.
- Therefore, he/she has to teach them several skills and techniques of these games apart from the rules applicable to these games.

China bans export of rare earth processing technologies



Recently, China, the **world's top processor of rare earths**, has banned the export of technology to **extract and separate the strategic metals**, as it overhauled a list of technologies deemed key to national security.

About the information:

- It also banned the **export of production technology** for rare earth metals and alloy materials as well as **technology to prepare some rare earth magnets**.
- The move comes as Europe and the United States scramble to wean themselves off rare earths from China, which accounts for **90% of global refined output**.
- China has mastered the **solvent extraction process** to refine the strategic minerals, which Western rare earth companies have struggled to deploy due to technical complexities and pollution concerns.

Solvent extraction process:

- **Solvent extraction** is the process of removal of a solute component from a solid using a liquid solvent and is one of the modern extraction processes.
- It is also called **leaching or solid-liquid extraction**.
- In solvent extraction, **two immiscible liquids** are shaken together.
- The more polar solutes dissolve preferentially in the more polar solvent, and the less polar solutes in the less polar solvent. In this experiment, the **non-polar halogens** preferentially dissolve in the non-polar mineral oil.

106th Indian Economic Association (IEA) Conference

106th Indian Economic Association (IEA) Conference began at the **Giri Institute of Development Studies (GIDS) in Lucknow**.

Key Highlights-

Call to the working economists to step up their game and devise a workable roadmap to increase the per capita income of the households.



About IEA-

- The IEA was established in 1917 with the primary objective of promoting the study and application of economics in India.
- It provides a forum for economists to engage in academic discussions, research, and policy-related activities.
- The IEA publishes the "**Indian Economic Journal**," which features articles, research papers, and reviews on various economic issues.
- The IEA organizes **conferences, seminars, and workshops** to facilitate the exchange of ideas among economists and scholars.

Gelephu Smartcity Project



Bhutan King **Jigme Khesar Namgyel Wangchuck** speaks during the **National Day celebration** about the upcoming mega project a '**Point of inflection**' and 'transformation' for **Bhutan and South Asia**.

About the Project:

- Bhutan plans to build a massive "**international city**" in an area of over 1,000 sq. km. on its border with Assam under the project as an "**economic corridor** connecting **South Asia with Southeast Asia** via India's northeastern States".
- Also, the first India-Bhutan **railway line to Gelephu**, which would also connect with roadways and border trading and crossing points into Assam and West Bengal, and over time which will give Bhutan access to **Myanmar, Thailand, Cambodia, and Singapore**.

The Location:

- Gelephu, **India- Bhutan** crossing at Gelephu is important tourist place.
- Roughly 41 km from Kajalgaon, the headquarter of Chirang, 50 km from Bongaigaon, and 340 km from Siliguri.

Indira Gandhi Prize for Peace



Music conductor Daniel Barenboim and peace activist Ali Abu Awwad were jointly awarded the Indira Gandhi Prize for Peace, Disarmament and Development 2023 for promoting amity among the Israeli and Palestinian people.

About the Award:

- The Indira Gandhi Peace Prize is an annual prestigious award.
- It has been named after former Prime Minister Smt. Indira Gandhi.
- It is being conferred every year since 1986 by Indira Gandhi Memorial Trust.
- It consists of a monetary award of **`25 lakh** along with a citation.

SPECIES IN NEWS

Wisent (*European Wild Bison*)

The Ukraine war may impede efforts to save Europe's last megafauna, caution researchers in a new study.

About the Species:

- The wisent roamed across Europe in large herds at the end of the last ice age.
- By 1927, almost a decade after **World War I**, it became extinct in the wild, with only about 60 individuals remaining in captivity.
- Rapid environmental change and hunting by humans were the main drivers of the wisent's extirpation across Europe.
- The European bison is a priority species for conservation because it serves an important role as an ecosystem engineer, restoring grassland habitat.

Geography:

- The **European Wisent**, also known as the **European Bison**, primarily inhabits forested areas in Eastern Europe, including countries like **Poland, Belarus, Russia, Lithuania, and Ukraine**.
- They may also be found in controlled environments in various parts of Europe as part of conservation and reintroduction efforts.

Black Pelicans (*Pelecanus niger*)

National Green Tribunal (NGT) seeks biodiversity loss report, State roping-in national institutes like **National Centre for Coastal Research (NCCR)** and **National Institute of Oceanography (NIO)** for intermediate and long-term remedial.

About the Species:

- The **Black Pelican, Pelecanus niger** is an aquatic bird that belongs to the Pelecaniformes order. It is one of many birds located in Devonshire.
- The Black Pelican is a large water bird that is known for its characteristic dark plumage - a departure from the common lighter coloured plumage of most other Pelican species.
- Despite its name, the Pelican's feathers appear to be more of a dark purple to dark indigo colour tone.

Found In:

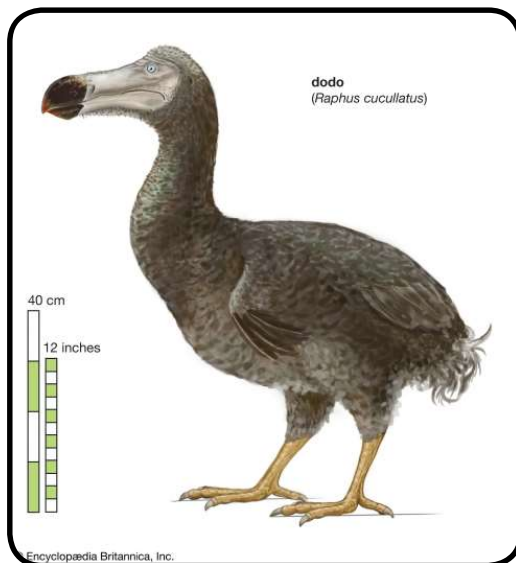
- In India, pelicans breed in **Nelapattu, Koonthankulam and Kokka Bellur**.
- Kolleru Bird Sanctuary is located in the state of Andhra Pradesh between Krishna and Godavari deltas.
- The lake is one of the largest freshwater lakes in India and listed under the **Ramsar Convention wetland of international importance**.

***Santjordia pagesi*, a new jelly fish discovered**

In 2002, scientists aboard a research vessel discovered a **peculiar jellyfish** near a volcanic crater off Japan. Spotting the same creature again in 2020, scientists have now confirmed that it is a new species named ***Santjordia pagesi***.

About the Species:

- The species noted at 4 inches wide and 3 inches tall, boasts a circular body with around 240 tentacles.
- Its most distinctive feature is a bright red, cross-shaped stomach. Photos show its transparent body, resembling a cushion, with a thick white ring and vein-like structures.
- The jellyfish, found at depths of 2,700 to 2,800 feet in the Sumisu Caldera near the **Ogasawara Islands**, has been observed pulsing its body, propelling it forward by opening and contracting the outer white ring.
- DNA analysis revealed enough genetic distinction to classify it into a new subfamily, bring to the fore its rarity and significance in marine biology.

Dodo (*Raphus cucullatus*)

Recently, under an ambitious new project — collaboration between **genetic engineering company Colossal Biosciences and the Mauritian Wildlife Foundation** — have targeted to bring back the dodo and also re-introduce it in its **once-native habitat** in Mauritius.

About:

- They are **extinct flightless bird of Mauritius** (extinct by 1681).
- They are one of the three species that constituted the family Raphidae, usually placed with pigeons in the order Columbiformes but sometimes separated as an order (Raphiformes).
- The birds were first seen by Portuguese sailors **about 1507** and were exterminated by humans and their introduced animals.
- Features of the Species:
 - ▶ The dodo, bigger than a turkey, weighed about **23 kg (about 50 pounds)**.
- It had blue-gray plumage, a big head, a **23-cm (9-inch)** blackish bill with reddish sheath forming the hooked tip, small useless wings, stout yellow legs, and a tuft of curly feathers high on its rear end.

Black Tiger

As per the 2022 cycle of the **All India Tiger Estimation**, 16 individuals were recorded at **Similipal Tiger Reserve**, out of which **10 were melanistic**.

About the Species:

- Black Tigers are a rare colour variant of the **Bengal tiger** and are not a distinct species or geographic subspecies.
- The coat colouration and patterning that make the wild cats appears dark boil down to a single mutation in the **Transmembrane Aminopeptidase Q (Taapep) gene**.
- **Pseudo Melanistic:**
 - ▶ The abnormally dark or black coat in such tigers is termed pseudo melanistic or false coloured.



- ▶ Melanistic refers to having very dark skin/hair due to **higher-than-normal level of the pigment (substance that gives pigmentation to skin/hair is called melanin)**.
- ▶ There is a high probability (about 60%) that the tiger will have the **mutant gene**, if randomly selected from Similipal.

Similipal Tiger Reserve:

- It was formally designated a tiger reserve in 1956 and brought under **Project Tiger in the year 1973**.
- It was declared a biosphere reserve by the Government of India in June, 1994.
- It has been part of the **UNESCO World Network of Biosphere Reserve since 2009**.

Red giant flying squirrel (*Petaurista petaurista*)



A nocturnal flying squirrel has resurfaced in **Arunachal Pradesh** after going missing for 42 years.

- About the Species:**
- **Geographic Range:** It ranges from the eastern border regions of Afghanistan to Java and from **Kashmir, Taiwan, and southern China** to Sri Lanka.
 - Its greatest numbers are found in the **forest regions of Pakistan**.
 - **Physical Features:**
 - ▶ The giant flying squirrel has a distinctive, thickly haired flying membrane that extends from its wrists to its hind legs and is further expanded by a skin fold between the **tail root and the hind legs**.
 - ▶ This membrane is composed of **sheets of muscles** that can be tensed or relaxed at will, thus controlling the direction of glide.
 - ▶ ***Petaurista petaurista*** is characterized by its large eyes and mahogany-red coloring, though coloration varies with environment.
 - Relative to other squirrels, this species is very large; its head and body length average **398mm** and its tail adds an additional **422mm**.
 - The lifespan of these squirrels can be up to **16 years** in captivity.
 - They **do not hibernate**, but they may migrate to areas where food is more abundant.

Indian Bison (*Bos gaurus*)

The **Koya tribe** inhabiting the Papikonda hill range along the rivers Godavari and Sabari in Andhra Pradesh has decided to do away with millennia-old traditions in an attempt to conserve **the Indian Bison (*Bos gaurus*)**.

- About the Species:**
- The Indian Bison or **Gaur (*Bos gaurus*)** is the tallest species of **wild cattle** found in **India** and **largest extant bovine**.



- There are about **13,000 to 30,000 gaurs** in the world with approximately **85% of the population present in India**.
- The first-ever population estimation exercise of the Indian gaur carried out in the Nilgiris Forest Division in February 2020 estimated around 2,000 Indian gaurs to be inhabiting the division.

Geography:

- It is native to **South and Southeast Asia**.
- In India, they are very much prevalent in the **Western Ghats**.
- They are primarily found in **Nagarhole National Park, Bandipur National Park, Masinagudi National Park and Biligirirangana Hills (BR Hills)**.
- It is also found in **Burma and Thailand**.

Habitat:

- They prefer **evergreen forests and moist deciduous forests**.
- However, they can survive in **dry deciduous forests** also.
- They are not found in the Himalayas with an altitude greater **than 6,000 ft**.
- They generally stick to the foothills only.

LOCATION IN NEWS

Volcano Fagradalsfjall



Recently, the Government of Iceland has confirmed that the volcanic eruption near the **capital Reykjanes** poses no threat to human life.

About:

- Iceland is located on the **Mid-Atlantic Ridge**, technically the longest mountain range in the world, but on the floor of the **Atlantic Ocean**.
- The eruption began between **Sylingarfell** and **Hagafell**, just north of the fishing town of **Grindavik** which is located on the **Reykjanes Peninsula**.

Iceland: The land of Fire

- Iceland is home to **33 active volcanoes**, the **highest in Europe**. This unique landscape has given Iceland the epithet, '**Land of Fire and Ice**'.
- ▶ **Eyjafjallajökull**, one of **Iceland's most famous volcanoes**, erupted in **2010**, causing a widespread **ash cloud**.
- ▶ Other notable volcanoes include **Hekla, Grímsvötn, Hóluhraun**, and **Litli-Hrútur**, part of the Fagradalsfjall system.

Japan has recently witnessed the **birth of another island** in its archipelago.

- This phenomenon occurred due to a series of volcanic eruptions near **Iwoto Island** in the **Ogasawara island chain**, showcasing the dynamic nature of the country's geography.



About:

- Iwoto Island, part of the **Ogasawara island chain**, is approximately **1,200km (745 miles) south of Tokyo**.
- Ogasawara Island chain, also known as **Bonin Islands**, is a volcanic arc comprising more than **30 islands and islets**. Some of them are still active.
- Formation of the new island is a rare phenomenon with the last record of such volcanic activity in 2013.
- Japan has the most active volcanoes in the **world at 111**.

Golden Triangle of Opium



The **United Nations Office on Drugs and Crime (UNODC)** has reported that Bangkok (Thailand) – **Opium cultivation** in the **Golden Triangle** continued to expand over the past year, with a significant increase in **Myanmar**.

What is Golden Triangle of Opium?

- Northeastern Myanmar is part of the infamous “**Golden Triangle**”, where the borders of **Myanmar, Laos and Thailand** meet.
- **Myanmar, Thailand, Laos** coordinated as “the Golden Triangle” which has been one of the largest opium-producing areas of the world since the 1950s.
- Most of the world’s heroin came from the **Golden Triangle** until the early 21st century when opium production in Afghanistan increased.

Why named so?

- The golden triangle is uniquely identified as the only triangle to have its three angles in the **ratio 1 : 2 : 2 (36°, 72°, 72°)**.
- Hence, the location of these countries lies in this ratio; **I.e 20°21'20"N 100°04'53"E**.

Red Sea

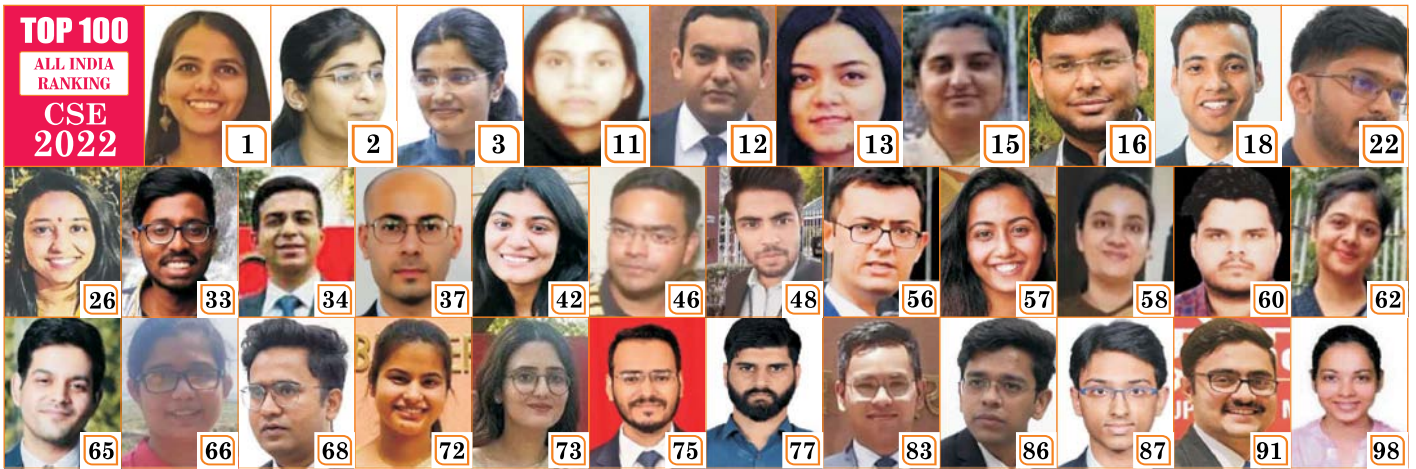


The United States spearheads a multinational effort to protect maritime trade in the **Red Sea**, responding to heightened threats from Yemen’s Iran-aligned Houthis, who have conducted missile and drone attacks.

About:

- The Red Sea is a **semi-enclosed, inlet** (or extension) of the **Indian Ocean** between the continents of **Africa from Asia**.
- It is connected to the **Arabian Sea** and the **Indian Ocean** to the south through the **Gulf of Aden** and the **narrow strait of Bab el Mandeb**.
- **Bordering Countries:** Egypt, Saudi Arabia, Yemen, Sudan, Eritrea and Djibouti.
- In the north are the **Sinai Peninsula**, the **Gulf of Aqaba**, and the **Gulf of Suez** (leading to the Suez Canal).
- Occupies a part of **Great Rift Valley** (Afro-Arabian Rift Valley).





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