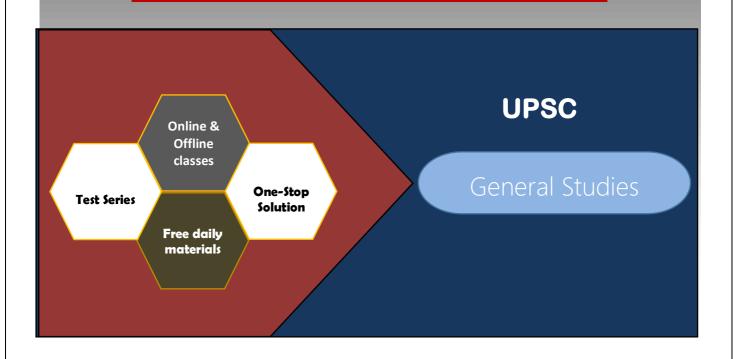**V | VISHNU I A S ★ ★**

JANUARY 2025

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GS 1 : Heritage, culture ,Geography of the World and Society

1. Contributions of the Indian Diaspora :18th Pravasi Bharatiya Divas

- Prime Minister has inaugurated the 18th Pravasi Bharatiya Divas convention. The theme for this year was the "Diaspora's contribution to a Viksit Bharat".

Pravasi Bharatiya Divas (PBD)

- Pravasi Bharatiya Divas is the **flagship event** organized by the **Ministry of External Affairs** to honor the achievements and contributions of Indians living abroad.
- This celebration is **held every two** years on **January 9**, marking the day in **1915** when **Mahatma Gandhi, regarded as the greatest Pravasi**, returned to India from South Africa to lead the country's freedom movement.
- **Since 2015**, the event has been held biennially, with **theme-based conferences** organized during the intervening years.
- The **location of the convention changes** to showcase the progress and diversity of different regions in India.

Contributions of the Indian Diaspora

- **Economic Contributions:** In 2024, India received **$129.1 billion in remittances**, accounting for **14.3% of global remittances**. This inflow has been a vital source of economic support.
- **Professional Contributions:** Over **73% of Indian-Americans** are employed in high-skill sectors such as STEMM, business, law, and academia. The diaspora acts as a **bridge** between India and global markets, facilitating skill transfer, trade, and foreign direct investment.
- **Cultural and Soft Power:** The Indian diaspora serves as **cultural ambassadors**, promoting traditions such as Bollywood, Yoga, and festivals like Diwali.
- **Global Presence:** The Indian diaspora is spread across the globe, with **31.3 million people** residing in countries such as the United States, UAE, Malaysia, and Saudi Arabia.

2. Government Initiatives to Improve the Sex Ratio

- The sex ratio at birth in Haryana, which reached a peak of 923 in 2019, declined to 910 in 2024, marking an eight-year low.

Present sex ratio in India

- As of January 2025, the sex ratio at birth in India is approximately 933 females per 1,000 males.

Why Historically has there been an Imbalance in the Sex Ratio in India?

- Historically, India has faced a skewed sex ratio primarily due to cultural preferences for male children, leading to practices such as female foeticide. The sex ratio was recorded at 943 females per 1,000 males during the 2011 Census. **Factors contributing to this imbalance include:**

- **Cultural Preference for Sons:** Societal norms often favour male children, viewing them as economic assets while daughters are seen as financial burdens due to dowry practices.
- **Female Foeticide:** The availability of prenatal sex determination technologies has led to sex-selective abortions, contributing to the skewed ratio.
- **Economic Factors:** Families may prefer fewer children and opt for sons to secure lineage and support in old age.

Government Initiatives to Improve the Sex Ratio

- The Indian government has implemented several initiatives aimed at improving the sex ratio:

- **Beti Bachao Beti Padhao Campaign:** Launched in 2015, this campaign focuses on preventing female foeticide and promoting the welfare of girls.
- **Pre-Conception and Pre-Natal Diagnostic Techniques Act (PNDT Act):** Enforced to curb sex-selective abortions and promote gender equality.
- **Financial Incentives:** Programs such as providing financial assistance at the birth of a girl child (e.g., Rs 21,000) encourage families to value daughters.
- **Education and Awareness Programs:** Efforts are made to improve female education and reduce dropout rates among girls, which are crucial for long-term improvements in gender equality.

Way forward:

- **Strengthen Law Enforcement and Monitoring:** Ensure strict implementation of the PCPNDT Act with increased vigilance and swift action against violations.
- **Address Cultural and Economic Barriers:** Launch targeted campaigns to challenge patriarchal norms, promote gender equality, and incentivise families to raise daughters.

3. Key benefits of Post-Retirement Benefit (PRB) Cell

- South Eastern Coalfields Limited (SECL), a Chhattisgarh-based **subsidiary of Coal India Limited (CIL)** has established a Post-Retirement Benefit (PRB) Cell.

Aims and objectives

- Provide a **centralized platform** for retired employees to access all post-retirement benefits and services under one roof.
- Simplify and expedite the resolution of issues related to **pensions, provident funds, medical benefits**, and other entitlements.
- Eliminate the need for retirees to coordinate with multiple departments, **minimizing delays and miscommunication.**
- Reinforce **Mission Sambandh**, SECL's initiative to build stronger connections and improve communication with stakeholders.

Key benefits of the PRB Cell

- Acts as a **one-stop solution** for all post-retirement benefit queries and services.
- Consolidates services like **pensions, medical benefits, and financial queries**, making it convenient for retirees.
- Dedicated personnel ensure **faster response times** and seamless service delivery.
- Officers from key departments, including **Personnel, Finance, and Medical**, are stationed at the PRB Cell to provide specialized support.

4. Significance of Makaravilakku Festival

- The Makaravilakku festival was celebrated at the hill shrine of Sabarimala Ayyappa temple.

Makaravilakku Festival

- Makaravilakku is a significant annual Hindu festival celebrated at the Sabarimala Temple in Kerala, dedicated to Lord Ayyappa.
- It marks the celestial event of the Sun entering the zodiac sign of **Capricorn** (Makaram Rashi) and coincides with **Makara Sankranti**.
- Celebrations are centred at the Sabarimala Temple, nestled in the **Periyar Tiger Reserve** in Kerala.
- The event draws millions of devotees who chant "**Swamiye Saranam Ayyappa**" in reference to Lord Ayyappa.
- The festival typically lasts for **seven days**, beginning on **Makara Sankranti**.
- **Key Rituals and Events:**
  - A symbolic lamp '**Makaravilakku'** is lit at Ponnambalamedu, a hill near Sabarimala, on the evening of Makara Sankranti.
  - A divine star **Makara Jyothi** is believed to appear in the sky, symbolizing the blessings of Lord Ayyappa.
  - Devotees undertake a **strict 41-day penance** (Vratham) before making the pilgrimage to the temple.

It's Significance:

- The festival signifies the **merging of celestial and spiritual energies**, celebrating devotion, purity, and self-discipline.The tradition emphasizes **equality**, with all devotees wearing **black or blue attire** and carrying the **"Irumudi Kettu"** (a sacred bundle).

5. Highlights of the McKinsey Report on Demographic Transition and Depopulation

- The report, **'Dependency and Depopulation? Confronting the Consequences of a New Demographic Reality'**, released by **McKinsey Global Institute**, provides a detailed comparative analysis of demographic dynamics in **developed (first wave)** and **developing (later wave)** countries.

Key Highlights of the McKinsey Report

- **Two-thirds of humanity** now live in countries with fertility rates below the replacement level of **2.1 children per family**.
- **Age structures** are shifting from **pyramids to obelisks**, with a growing elderly population and a shrinking youth demographic.
- **Populations** in some major economies are projected to **decline** by **20%-50% by 2100** (UN).
- The **global support ratio** (working-age individuals per senior aged 65 or older) is projected to decline from **6.5 today to 3.9 by 2050**.

- In India, the ratio will fall from **10 workers per senior in 1997** to **4.6 in 2050** and just **1.9 by 2100**, similar to Japan's current levels..
- **Consumption Patterns in India:**
  - **India's share in global consumption** is projected to rise from **9% today to 16% by 2050**, while shares of advanced economies are expected to remain flat or decline.
  - By 2050, the **share of consumption** by seniors aged **65** and older will rise from **8% to 15%**, reflecting changing consumer demographics.
  - The **percentage of hours** worked by seniors is **projected to increase** from **2.9% to 5.4%** by 2050 under current trends.

India's Diminishing Demographic Dividend

- India has **33 years** to fully capitalize on its demographic dividend before its support ratios align with those of advanced economies.
- From 1997 to 2023, India's favorable demographics added **0.7 percentage points per year** to its GDP per capita growth.
- This contribution is expected to shrink to **0.2 percentage points per year** through 2050 as the population ages.
- **India's support ratio** (working-age individuals per senior) is **projected to decline** significantly, creating greater dependency on fewer workers to support older populations.
- By 2050, there will be only **4.6 workers per senior**, down from **10 workers per senior in 1997**.
- India's **GDP per capita** is currently **18% of the World Bank's high-income threshold**, emphasizing the need for faster economic progress to "**get rich before it gets old.**"
- Increasing **labor force participation**, particularly among women, and improving worker productivity are **critical** to sustaining economic growth.
- Despite rapid progress, India's worker productivity remains at **$9 per hour**, significantly lower than the **$60 per hour average** in high-income countries.

6. UNICEF's 'Global Outlook 2025

- Recently, UNICEF's Global Outlook 2025 emphasizes the urgent need for resilient systems to protect children's rights amid crises like conflict, climate change, and economic instability, ensuring equitable access to essential services globally.

Primary challenges facing children in the current global landscape as per UNICEF's Global Outlook 2025

- **Conflict and Displacement:** Over 473 million children, or about 19% globally, live in conflict-affected areas—a figure that has nearly doubled since the 1990s. This exposes children to severe risks, including displacement, starvation, disease, and psychological trauma.
- **Economic Instability:** Nearly 400 million children live in countries in debt distress, where financial pressures are reducing investments in essential services such as education and healthcare, further deepening their vulnerabilities.
- **Climate Change:** Around 1 billion children are at extremely high risk from climate impacts. Disruptions from extreme weather events affect their access to education and healthcare, while only 2.4% of global climate finance is directed toward child-focused initiatives.
- **Digital Inequality:** The expansion of digital public infrastructure (DPI) offers opportunities to improve service delivery, but significant digital divides persist, disproportionately affecting children in low-income and marginalised communities.

Steps taken by the Indian Government

- **Beti Bachao Beti Padhao (BBBP):** Launched in 2015, this flagship scheme aims to address the declining child sex ratio and promote the education and empowerment of girls.
- **Sukanya Samriddhi Yojana (SSY):** This savings scheme encourages parents to save for their daughters' education and marriage by offering attractive interest rates and tax benefits.
- **Integrated Child Development Services (ICDS):** Established in 1975, ICDS focuses on improving the nutritional and health status of children under six years, pregnant women, and lactating mothers.
- **National Nutrition Mission (POSHAN Abhiyaan):** Launched in 2018, this mission aims to reduce malnutrition among children and women through a convergence of various schemes and community-based approaches.
- **Mission Vatsalya:** This initiative focuses on child protection services, ensuring that vulnerable children receive necessary support and care.
- **Child Protection Policies:** The government has enacted several laws, such as the Protection of Children from Sexual Offences (POCSO) Act and the Juvenile Justice (Care and Protection of Children) Act, to safeguard children's rights and ensure their welfare.
- **National Commission for Protection of Child Rights (NCPCR):** The NCPCR plays a crucial role in promoting and protecting children's rights in India. It has launched various initiatives such as the POCSO e-Box for reporting child sexual abuse and the Bal Panchayat Abhiyan to encourage child-led governance.

How can global governance and national systems be strengthened to support children's rights and well-being?

National systems:

- **Developing Child Rights Governance Systems:** Nations should establish comprehensive frameworks that integrate children's rights into laws and policies, aligning with the United Nations Convention on the Rights of the Child (UNCRC) to prioritize children's needs in governance.
- **Strengthening Civil Society Organizations (CSOs):** Enhancing the capacity of CSOs through training programs can improve their ability to advocate for and implement child rights initiatives while effectively engaging with government institutions.
- **Advancing Evidence-Based Advocacy:** Utilizing data-driven approaches to shape policy priorities can ensure child rights are central to resource allocation and budgeting at global, regional, and national levels.
- **Empowering Children's Participation:** Encouraging children to actively participate in decision-making processes helps create policies that address their needs and aspirations, fostering a more inclusive governance system.
- **Establishing Robust Monitoring Systems:** Implement mechanisms to regularly track and report on children's well-being indicators to ensure accountability and measure progress in achieving child rights standards.

Way forward:

- **Integrated Global-National Synergy:** Strengthen collaboration between international frameworks and national systems to prioritize children's rights in governance, focusing on accountability, digital safety, and climate resilience through coordinated policies and resource allocation.
- **Child-Centric Policy and Participation:** Develop evidence-based policies that directly address children's vulnerabilities while empowering them to participate in decision-making, ensuring sustainable and responsive governance structures.

7. Namdharis

- **Punjab CM paid tribute to the** Kuka martyrs **at a function held at the Namdhari Shaheed Smarak in Malerkotla. The day commemorates the** execution of 66 Namdhari Sikhs (Kukas) **on** January 17 and 18, 1872**, by British colonial authorities.**

Who are the 'Namdharis'?

- The **Namdharis**, also called **Kukas**, are a Sikh sect founded by **Satguru Ram Singh** on **April 12, 1857**, in **Ludhiana, Punjab**.
- The name **Kuka** derives from their distinctive high-pitched recitation of **Gurbani** (kook in Punjabi means "cry" or "scream").
- **Social Reforms:** Advocated against **alcohol consumption**, **meat eating**, and other social vices.Promoted **Swadeshi principles**, urging people to boycott **foreign goods**, **British services**, and **educational institutions**.
- The movement served as a precursor to nationwide **Non-Cooperation Movement**, emphasizing self-reliance and resistance against colonial rule.

About the Kuka Rebellion

- The **Kuka Rebellion** was one of the localized uprisings against British rule after the **Rebellion of 1857**.
- The Namdharis actively opposed British policies, particularly **cow slaughter**, which became a focal point of their resistance.
- **Key events leading to the rebellion:**
    - In **January 1872**, Namdharis, led by **Hira Singh** and **Lehna Singh**, clashed with British authorities after a **cow slaughter incident in Malerkotla**.
    - They attacked the **Malaudh Fort** in Ludhiana, loyal to the British, but the rebellion was crushed.
- **British Retaliation:**
    - The British responded brutally, executing **49 Namdharis on January 17, 1872**, and **17 more on January 18, 1872**.
    - The Kukas were **placed in front of cannons** and blown up in a public spectacle to intimidate others.

8. Fertility levels declining in India : Global Burden of Diseases Study (GBD)

- The Global Burden of Diseases Study (GBD) 2021 shows that India's fertility rate has dropped significantly, from 6.18 children per woman in the 1950s to 1.9 children per woman in 2021.

GBD Report shown about the total fertility rate in India

- **Declining Fertility Rates:** India's TFR has dramatically decreased from 6.18 in the 1950s to 1.9 in 2021, which is below the replacement level of 2.1 necessary for population stability.
- **Future Projections:** The report projects that India's TFR could further decline to 1.04 by 2100, indicating a potential average of less than one child per woman.

- **Socio-Economic Concerns:** This steep decline in fertility has raised alarms regarding political and socio-economic impacts, particularly in southern states, where there are fears of losing parliamentary representation due to demographic shifts post-delimitation in 2026.

Why are fertility levels declining in India?

- **Early Adoption of Family Planning Policies:** Southern states like Tamil Nadu and Andhra Pradesh rigorously implemented family planning policies introduced in the 1950s, leading to a significant decline in fertility rates. For example, Andhra Pradesh currently has a Total Fertility Rate (TFR) of 1.5, comparable to Nordic countries like Sweden.
- **Higher Female Literacy and Workforce Participation:** Increased educational attainment among women has empowered them to delay marriage and childbirth. This is evident in Kerala, where high literacy rates have contributed to the state achieving replacement-level fertility as early as 1988.
- **Changing Societal Norms:** Cultural shifts have led to late marriages and smaller families. For instance, women in southern states increasingly prioritize careers and financial independence over traditional roles, contributing to lower fertility rates.
- **Urbanization and Economic Pressures:** Urban lifestyles and rising costs of living discourage larger families. States like Tamil Nadu and Karnataka have seen fertility rates drop to 1.4 and 1.6 respectively due to urbanization and modern aspirations.

Why are the southern States worried?

- **Ageing Population:** Southern states like Kerala, Tamil Nadu, and Andhra Pradesh have fertility rates that have fallen below the replacement level of 2.1 children per woman. This decline leads to an increasing proportion of elderly individuals in the population, which is projected to rise significantly.
  - For instance, Kerala's population aged 60 and above is expected to increase from 13% in 2011 to 23% by 2036. This demographic shift results in a smaller working-age population, which can strain economic productivity and increase demands for pensions and healthcare services.
- **Political Representation:** The upcoming delimitation of parliamentary constituencies, based on population figures from the 2031 Census, raises fears that southern states may lose parliamentary seats due to their slower population growth. This potential reduction in representation could diminish their political influence at the national level, especially compared to more populous northern states like Uttar Pradesh and Bihar.

- **Economic Strain:** With a declining workforce contributing less to the economy through taxes and social security, southern states face challenges similar to those observed in countries with ageing populations, such as Japan and China.
- **Migration Issues:** As birth rates decline, southern states may increasingly rely on internal migration from northern states to fill labour shortages. However, this reliance could create further socio-economic disparities between regions.

Way forward:

- **Equitable Resource Distribution:** Implement policies ensuring equitable representation and resource allocation in parliamentary seats post-delimitation to address regional disparities without penalizing states with successful population control measures.
- **Support for Ageing Populations:** Develop robust social security systems, healthcare infrastructure, and incentives for elder care while promoting skill development and migration-friendly policies to mitigate workforce shortages in southern states.

9. Household Consumption Expenditure Survey (HCES) : Poverty being underestimated in India

- The government recently published a factsheet on the 2023-24 Household Consumption Expenditure Survey (HCES), highlighting a reduction in poverty levels across both urban and rural areas.

Key findings of the report

- **Average MPCE and Imputed Values**: In 2023-24, the average **Monthly Per Capita Expenditure (MPCE)** was Rs. 4,122 in rural areas and Rs. 6,996 in urban areas, excluding the value of free items provided through social welfare schemes.
- **Growth in MPCE and Urban-Rural Gap**: Compared to 2022-23, the MPCE in nominal terms grew by approximately 9% in rural areas and 8% in urban areas. The urban-rural MPCE gap narrowed from 84% in 2011-12 to 71% in 2022-23, further declining to 70% in 2023-24, indicating robust consumption growth in rural areas.
- **Consumption Trends by Population Segments**: The highest increase in MPCE in 2023-24, compared to 2022-23, was observed among the bottom 5-10% of India's population, for both rural and urban households.
- **Composition of Expenditure**: Non-food items accounted for 53% of rural MPCE and 60% of urban MPCE in 2023-24. Within the food basket,

beverages, refreshments, and processed foods dominated expenditure, while in the non-food category, conveyance, clothing, entertainment, and durable goods were significant contributors. Urban households also allocated about 7% of non-food expenditure to rent.

- **Decline in Consumption Inequality**: The rural Gini coefficient dropped from 0.266 in 2022-23 to 0.237 in 2023-24, and the urban coefficient fell from 0.314 to 0.284 during the same period.

Concerns related to the HCES data

- **Incomparability of Data Sets:** The methodology used in the 2022-23 HCES differs significantly from previous surveys, making it difficult to compare results over time. The introduction of a "modified mixed reference period" complicates direct comparisons with earlier data collected under different methodologies.
- **Sampling Bias:** There are concerns that the survey may not adequately represent extremely poor households, leading to an overestimation of average expenditures. This bias could arise from changes in sampling strategies that favor more affluent households.
- **Data Availability Issues:** The absence of recent and reliable consumption data prior to the 2022-23 survey has led to a reliance on outdated estimates, which may not accurately reflect current poverty levels. The last comprehensive survey before this was conducted in 2011-12.

Criticisms faced by the Multidimensional Poverty Index

- NITI Aayog, the policy think tank of the Government of India, adopted the Multidimensional Poverty Index (MPI) as a measure to evaluate poverty in India.
- **Methodological Concerns:** Critics argue that the MPI's reliance on equal weighting for health, education, and living standards may oversimplify the complexities of poverty. The selection of indicators can significantly influence outcomes, potentially leading to biased representations.
- **Dynamic Nature of Poverty:** The MPI may not adequately capture the fluidity and changing nature of poverty over time, as it relies on static indicators that do not reflect immediate economic conditions or shocks such as those experienced during the COVID-19 pandemic.
- **Political Implications:** Some economists suggest that using MPI as a primary measure for poverty could be politically motivated, aiming to present favourable statistics while ignoring deeper economic issues such as stagnant real wages and rising inequality.

Way forward:

- **Strengthen Data Collection**: Conduct regular and comprehensive Household Consumption Expenditure Surveys (HCES) to ensure updated and accurate poverty assessments. This will bridge data gaps and provide a more reliable basis for policy decisions.
- **Refine Poverty Metrics**: Combine the Multidimensional Poverty Index (MPI) with traditional consumption-based measures to capture a holistic and dynamic picture of poverty, accounting for region-specific and pandemic-induced challenges.

GS 2 : Polity, Governance, International Relations

1. Neutral Expert's decision on Indus Water Treaty

- A neutral expert appointed by the World Bank has supported India's stance on how to resolve disputes with Pakistan over the Kishanganga and Ratle hydroelectric projects.

Key features of the Indus Water Treaty

- The IWT was signed on September 19, 1960, by Indian Prime Minister Jawaharlal Nehru and Pakistani President Ayub Khan, with the aim of regulating the use of water from the Indus River and its tributaries between India and Pakistan after extensive negotiations facilitated by the World Bank.

- **Permanent Sharing of Water**: The IWT ensures a clear division of water resources, allowing peaceful coexistence of water usage.
- **Run-of-the-River Projects**: India is allowed to build hydroelectric power projects on the Western Rivers, provided they do not obstruct natural river flows.
- **Role of the World Bank**: As a mediator, the World Bank facilitates the appointment of experts or arbitral bodies in case of disputes.
- **Modification Provisions**: Article XII (3) allows amendments to the Treaty through mutual consent.

Disputes around the Indus Water Treaty

- **Run-of-the-River Projects:** India's construction of run-of-the-river hydroelectric projects, such as Kishanganga (a tributary of Jhelum) and Ratle (on the Chenab) has faced objections from Pakistan. Pakistan claims these projects could disrupt downstream water flow and utilisation, while India asserts they comply with the provisions of the Indus Waters Treaty (IWT).
- **Dispute Resolution Mechanism:** Pakistan sought arbitration at the Permanent Court of Arbitration (PCA), but India contested its jurisdiction

and emphasised using the Neutral Expert process as outlined in the treaty. India views this process as a treaty-compliant method for resolving technical differences:

- o Whether the pondage capacity of the two dams follows the limits set by the Indus Waters Treaty (IWT).
- o Whether the turbine intakes in the design comply with the rules of the IWT.
- o Whether the outlets below the dead storage level meet the IWT guidelines.
- o Whether the gated spillway designs of each plant align with the IWT provisions.

- **Trust Deficit:** The lack of trust and strained relations between India and Pakistan undermines effective cooperation under the IWT. This atmosphere of distrust restricts constructive dialogue and hinders the timely resolution of disputes, affecting the treaty's overall effectiveness.
- **Climate Change Impacts:** Changing precipitation patterns and altered runoff due to climate change challenge the treaty's assumption of fixed water availability. The IWT does not account for these uncertainties, increasing the risk to water-sharing agreements.

How does the present decision highlight favourable implications on the Indian part?

- **Vindication of India's Position**: The **Neutral Expert**, Michel Lino, upheld India's stand that the disputes over the **Kishenganga** and **Ratle HEPs** fall under his jurisdiction, as per **Annexure F, Part I** of the IWT. This challenges Pakistan's attempt to bypass the Neutral Expert process and proceed directly to the PCA.
- **Preservation of Treaty Provisions**: India's participation in the Neutral Expert proceedings demonstrates its adherence to **"Treaty-consistent mechanisms"** while boycotting PCA proceedings that it considers beyond the IWT framework.
- **Recognition of India's Hydroelectric Rights**: The ruling supports India's right to construct **run-of-the-river projects** within the provisions of the Treaty, boosting its ability to harness renewable energy from the Western Rivers.
- **Strengthening India's Diplomatic Stance**: The decision highlights Pakistan's lack of adherence to the Treaty's dispute resolution process, strengthening India's argument for Treaty modification.
- **Potential for Treaty Revision**: India's formal notices in **2023** and **2024** to review and modify the Treaty gain momentum, emphasising the need to address **demographic changes, clean energy goals, environmental concerns**, and the impact of **cross-border terrorism.**

Way forward:

- **Revise the Indus Waters Treaty Framework:** Advocate for Treaty modifications to address evolving needs like climate change impacts, rising industrial and agricultural demands, and demographic shifts, ensuring equitable and sustainable water-sharing mechanisms.
- **Strengthen Dispute Resolution Mechanisms:** Promote adherence to Treaty-sanctioned processes like the Neutral Expert mechanism, fostering trust, cooperation, and timely resolution of technical disagreements while upholding India's hydroelectric and clean energy rights.

2. Essential elements for the Right to Access to Justice

- **The Supreme Court fined Rs. 1 Lakh on a dishonest person who kept filing unnecessary and baseless cases. The Court said that while everyone has the right to go to court, it should be used responsibly.**

Other provisions related to the Right to Access to Justice

- **Article 14 (Equality before the law)**: This article guarantees that everyone is treated equally under the law, regardless of their background or status.
  - o A notable example is the **Maneka Gandhi v. Union of India** case (1978), where the Supreme Court held that the right to life and personal liberty under Article 21 also includes the right to fair procedure.
- **Article 21 (Right to life and personal liberty)**: This article protects the fundamental right to life, which has been interpreted by the Supreme Court to include the right to a fair and just legal process.
  - o In the **State of Maharashtra v. Chandrabhan** (1983) case, the Supreme Court ruled that access to justice is a key aspect of the right to life under Article 21, emphasizing the importance of protecting personal liberty.
- **Legal Services Authorities Act, 1987**: This Act ensures free legal aid for the poor and disadvantaged, promoting equality in accessing justice.
  - o A significant example is the **National Legal Services Authority v. Union of India** (2014) case, where the Supreme Court directed the implementation of effective legal aid programs for the marginalized, making access to justice easier for underprivileged groups.
- **Article 39A (Free legal aid)**: This article mandates the state to provide free legal assistance to ensure that no one is denied justice due to financial incapacity.
  - o An example is the **Laxmi v. Union of India** (2014) case, where the Supreme Court directed the government to ensure legal aid is available

for victims of acid attacks, recognizing that financial constraints should not prevent victims from seeking justice.

- **Judicial Precedents (Supreme Court Decisions)**: The Supreme Court has consistently expanded the concept of access to justice. In **Delhi Domestic Workers Forum v. Union of India** (2016), the Court recognized the need for legal protection for domestic workers, expanding access to justice for marginalized groups.
- **National Legal Services Authority (NALSA)**: NALSA has played a crucial role in ensuring legal aid for marginalized communities.
  - For instance, in the **NALSA v. Union of India** (2014) case, the Court ordered the government to set up legal aid camps and ensure access to justice for tribals and marginalized groups, further solidifying NALSA's role in promoting equality and fairness in the legal system.

Essential elements for the Right to Access to Justice

- **Availability of Legal Remedies:** Individuals must have access to effective legal remedies that can address their grievances.
- **Affordability:** Legal services should be financially accessible, with provisions for free legal aid where necessary.
- **Awareness and Information:** Citizens should be informed about their rights and the legal processes available to them.
- **Fair Procedures:** The judicial process must be transparent and fair, providing all parties an equal opportunity to present their case.
- **Physical and Legal Access:** This includes not only the ability to enter courts but also having the necessary support systems in place, such as legal representation and knowledge of the law.

Way forward:

- **Strengthening Legal Aid and Awareness Programs**: Expand the reach of legal aid services and increase awareness campaigns to ensure marginalized groups are informed about their rights and legal remedies.
- **Reforming Judicial Infrastructure**: Enhance the accessibility and efficiency of judicial systems by addressing delays, improving court infrastructure, and ensuring the availability of affordable legal representation for all citizens.

3. Key Highlights made by the 267th Law Commission Report

- **The** 267th Law Commission Report **that was recently released, recommended including "**hate speech" **within the** Indian Penal Code, **indicating a governmental acknowledgment of the need to address this pervasive issue.This has reignited conversations about the legal framework surrounding hate speech, particularly against women in politics.**

Key Highlights made by the 267th Law Commission Report:

- **Definition and Scope of Hate Speech:** The report begins by providing a comprehensive definition of hate speech, emphasizing its potential to incite violence, discrimination, and social discord. It **categorizes hate speech** as any communication that demeans or vilifies individuals based on attributes such as religion, caste, gender, or ethnicity.
- **Proposed Legal Provisions:** One of the report's central recommendations is the amendment of the **Indian Penal Code (IPC)** and also suggests penalties that reflect the severity of the offense, thereby reinforcing the message that hate speech will not be tolerated in a democratic society.
- **Protection of Minority Communities:** The commission advocates for legal safeguards that ensure minority communities are not disproportionately targeted within public discourse. By highlighting the vulnerabilities faced by minorities, the report calls for a proactive approach to uphold their rights and dignity in the face of societal prejudice.
- **Balancing Free Speech and Protection:** The commission emphasizes that while **free speech is a fundamental right**, it should not come at the expense of public order or individual safety. The proposed laws aim to delineate clear boundaries that prevent hate speech without infringing upon legitimate expressions of opinion or dissent.

- **Public Awareness Campaigns:** The report additionally recommends launching extensive public awareness campaigns aimed at educating citizens about the harmful consequences of hate speech.

What factors contribute to the normalization of hate speech against women in politics?

- **Cultural Attitudes:** Misogynistic remarks are often rooted in deep-seated cultural attitudes that devalue women, reflecting a broader societal acceptance of gender discrimination and objectification.
- **Political Discourse:** Political speeches frequently employ derogatory language towards women, which normalizes such behaviour and diminishes the seriousness of misogyny in public life.

- **Lack of Accountability:** Political parties often distance themselves from offensive remarks only after public backlash, leading to a culture where such comments are tolerated until they provoke outrage.

How does hate speech impact women's participation in politics?

- **Discouragement and Marginalization:** Hate speech creates an intimidating environment for women, discouraging them from participating in politics and undermining their credibility as leaders.
- **Social Isolation:** The prevalence of hostile commentary can isolate women politicians, making it difficult for them to connect with constituents and build supportive networks.
- **Psychological Effects:** Constant exposure to misogynistic remarks can lead to emotional distress, affecting women's confidence and willingness to engage in political activities.

How are Panchayats playing a good field in building awareness?

- **Women Representation:** Nearly 20 states have achieved 50% representation of women in Panchayati Raj institutions, fostering an environment where women's voices are amplified in local governance.
- **Empowerment Initiatives:** There has been an emergence of all-women panchayats like '**Manje Rai Panchayat'** in Ahmednagar district of **Maharashtra** and '**Kultikri Gram Panchayat'** under Jhargram sub-division in **West Bengal.** For example, the political women leaders like Mamta Devi exemplify effective governance by addressing infrastructure, and livelihood issues, and mobilizing women within their communities.

Way forward:

- **Strengthen Legal Frameworks**: Enact comprehensive hate speech laws that explicitly address gender-based discrimination and ensure accountability for misogynistic remarks in politics, alongside implementing the recommendations of the 267th Law Commission Report.
- **Promote Women-Centric Governance**: Encourage greater representation of women in all levels of governance, drawing inspiration from successful initiatives in Panchayati Raj institutions, while supporting leadership training and public awareness campaigns to combat societal biases.

4. Does 'blood money' have a legal standing?

- The death sentence given to Kerala nurse Nimisha Priya in Yemen for murdering her partner has sparked debates on her acquittal, repatriation, and the role of '**blood money**' compensation.

'Blood money' mean

- **'Blood money',** known as **'diya/diyah'** (in Arabic), refers to the financial compensation paid to the victim or their heirs in cases of murder, bodily harm, or property damage under Islamic law. It serves as an alternative to the principle of qisas, which allows for retribution.
- The concept aims to promote forgiveness and reconciliation while providing reparative justice to the victim's family, preventing cycles of vengeance that could lead to further conflict.

How does it figure in Islamic Sharia law?

- **Definition and Purpose:** In Islamic Sharia law, diyah (blood money) is the financial compensation paid to the victim or their heirs in cases of murder, bodily harm, or property damage caused unintentionally. It serves as an alternative to qisas (retaliation), allowing the victim's family to choose between seeking retribution or accepting compensation, thereby promoting forgiveness and reconciliation within the community.
- **Legal Framework:** The amount of diyah is typically determined through negotiation and varies based on factors such as the victim's gender and religion.
- In traditional Islamic law, homicide is treated as a civil matter between individuals rather than solely a state issue, with the victim or their heirs having significant authority in deciding the resolution.

India's stand on 'diya'

- The Indian legal system **does not incorporate 'diyah'** as a means of compensation for victims or their families. Instead, it emphasizes formal legal proceedings and criminal justice processes without the option for monetary compensation in cases of homicide or serious offenses.
- Introduced through the **Criminal Law (Amendment) Act, 2005**, plea bargaining allows for some level of negotiation between the accused and the prosecution, enabling victims to receive compensation under specific conditions. However, this process is limited to certain offenses and does not encompass the broader cultural and social implications associated with diyah in Islamic law.

Have there been other Indians who were pardoned with 'blood money'?

- Yes, there have been several instances involving Indian nationals who were pardoned through the payment of blood money.

- **Ten Indians in UAE (2017):** In this case, ten Indian nationals were forgiven by the victim's family after a blood money payment of 200,000 dirhams was made.

- **Seventeen Indians in UAE (2009):** These individuals were on death row for the murder of a Pakistani national but were pardoned after a blood money amounting to nearly ₹4 crore was paid. The Indian consulate actively participated by hiring a law firm to advocate for their case.

Way forward:

- **Strengthen Diplomatic Interventions**: The Indian government should establish dedicated legal aid and consular support mechanisms to negotiate and facilitate the resolution of cases involving citizens abroad, ensuring transparency in blood money arrangements.

- **Promote International Legal Awareness**: Educate Indian expatriates on local laws and the implications of blood money practices in host countries to prevent legal entanglements and ensure better compliance with local regulations.

5. Health benefits of including the HPV vaccine in the national immunization program

- The HPV vaccine works best if given before coming into contact with the virus. It is recommended for children aged 12 to 13 and for people who are more likely to get HPV.

What are the health benefits of including the HPV vaccine in the national immunization program?

- **Prevention of Cervical Cancer:** The HPV vaccine can prevent over 90% of cervical cancers caused by HPV, significantly reducing incidence rates and mortality associated with this disease.

- **Broader Cancer Protection:** Vaccination also protects against other HPV-related cancers, including those of the vagina, vulva, penis, anus, and oropharynx, promoting overall public health.

- **Cost-Effectiveness:** Early vaccination can lead to long-term savings in healthcare costs by reducing the need for cancer treatments and associated healthcare services.

- **Equity and Accessibility:** Making the HPV vaccine part of the national immunization program would enhance accessibility for all demographics, particularly in low- and middle-income regions where cervical cancer rates are disproportionately high.

Economic implications of integrating the HPV vaccine into the national immunization program

- **Healthcare Savings:** By preventing cervical cancer, the integration of the HPV vaccine into the national immunization program can lead to substantial reductions in treatment costs and hospitalizations related to advanced cancer stages.
- **Increased Productivity:** Healthier populations contribute to economic productivity as fewer individuals suffer from debilitating illnesses that impede work and social engagement.
- **Investment in Public Health:** Allocating resources for HPV vaccination can enhance public health infrastructure and create a more robust healthcare system capable of addressing other health issues.

Barriers to HPV vaccination

- **High Vaccine Costs:** The prohibitive cost of HPV vaccines like Gardasil and Cervarix limits their accessibility for many Indian families. Although the indigenous vaccine, CERVAVAC, offers a more affordable alternative, affordability remains a key barrier to widespread vaccination.
- **Low Awareness Levels:** A significant lack of awareness about HPV and its link to cervical cancer results in poor understanding of the vaccine's benefits, contributing to low acceptance and coverage rates.
- **Cultural and Social Stigma:** Cultural taboos around sexual health and reproductive issues discourage parents from vaccinating children, particularly girls, due to misconceptions about the vaccine's necessity or fears of promoting promiscuity.
- **Gender Bias in Vaccination Efforts:** The focus on HPV as a women-centric infection leads to insufficient promotion of vaccination among boys and young men, perpetuating gender disparities in healthcare and reducing overall campaign effectiveness.
- **Policy and Budgetary Constraints:** Despite recommendations for including the HPV vaccine in national immunization programs, delays caused by budgetary limitations and competing health priorities hinder its integration and accessibility.

(Way forward)

- **Awareness Campaigns:** Implementing educational initiatives to inform communities about the benefits and safety of the HPV vaccine can help dispel myths and cultural stigmas surrounding vaccination.
- **Subsidizing Costs:** Reducing the financial burden through government subsidies or integrating the vaccine into public health programs can improve accessibility for lower-income populations.
- **Engaging Healthcare Providers:** Training healthcare professionals to communicate the importance of HPV vaccination effectively can encourage more patients to get vaccinated, particularly among hesitant parents and young adults.

6. Strategic importance of India in a global alliance of democracies

- Europe and India need a stronger, more practical partnership and together with the United States, they can become an unbeatable force.

Why do all democratic countries need to come together?

- **Unified Front Against Authoritarianism**: Democracies can counter coercive tactics and aggression from authoritarian regimes like China and Russia by standing together to deter threats to vulnerable nations, and reinforcing global stability.
- **Advocating Democratic Principles**: A collective alliance provides a platform to promote democratic values such as human rights, the rule of law, and free markets fostering an international environment supportive of democracy.
- **Addressing Global Challenges Collaboratively**: Democracies can pool resources and expertise to tackle global issues like climate change, terrorism, and public health crises through joint strategies and initiatives.
- **Strengthening Economic Ties**: Enhanced economic cooperation within an alliance can promote free trade, reduce barriers, and create a resilient network to counter economic coercion from non-democratic states.
- **Bolstering Democratic Resilience**: By sharing best practices, democracies can strengthen their institutions, address internal polarisation, and enhance resilience against threats to their democratic systems.

Strategic importance of India in a global alliance of democracies

- **Geopolitical Counterbalance:** India serves as a crucial counterbalance to China in the Indo-Pacific region. As a democracy with significant economic growth potential, India's alignment with European democracies can help counter authoritarian influences, particularly from Russia and China, which pose threats to global democratic norms.
- **Economic Partnership:** The EU-India relationship is economically significant, with India projected to become the world's third-largest economy in the next

decade. Strengthening trade ties can enhance economic security for both parties and reduce dependency on China. The EU has recognised India as a 'Trusted Partner' in critical sectors such as technology and pharmaceuticals.

- **Shared Values:** Both Europe and India share foundational values of democracy, rule of law, and human rights. This commonality provides a strong basis for collaboration on global issues such as climate change, security, and sustainable development.

How can India contribute to the promotion and protection of democratic norms internationally?

- **Promoting Democratic Values:** India can advocate for democratic governance and human rights on international platforms, leveraging its status as the world's largest democracy to influence other nations positively.
- **Collaborative Initiatives:** Through partnerships like the Trade and Technology Council (TTC), India can collaborate with Europe on emerging technologies and critical industries.
  - Such cooperation can promote transparency and ethical standards in technology development.
- **Defense Cooperation:** India's existing defense collaborations with the U.S. and its role in multilateral security frameworks like the Quad can be expanded to include European partners, enhancing collective security against authoritarian regimes.

What challenges does India face in leading or participating in this alliance?

- **Balancing Relations with Russia and China:** India's historical ties with Russia complicate its position within a democratic alliance. While it seeks to maintain these relationships for strategic reasons, it must also navigate criticism from Western allies regarding its stance on Russia's invasion of Ukraine.
- **Internal Democratic Challenges:** India faces significant internal challenges related to its democratic processes, including concerns about political dissent and civil liberties.
  - Addressing these issues is essential for India to lead effectively within a global democratic alliance.
- **Trade Negotiation Stagnation:** Ongoing negotiations for a Free Trade Agreement (FTA) between the EU and India have faced hurdles due to disagreements over sustainability measures and human rights issues. Progress in these negotiations is crucial for realizing the full potential of their partnership.

Way forward:

- **Strengthening Internal Democracy and Rule of Law**: India should address domestic concerns related to political dissent, civil liberties, and democratic processes to enhance its credibility and leadership role within a global democratic alliance.
- **Expanding Strategic Partnerships**: India should accelerate negotiations on trade agreements, deepen collaboration in critical sectors like technology and defense, and align with democratic allies to counter authoritarian influences effectively.

7. Fast Track Immigration Trusted Traveller Program (FTI- TTP)

- The Fast Track Immigration – Trusted Traveller Program (FTI-TTP) is set to **expand to seven major Indian airports** starting January 16, 2025, ensuring seamless and expedited immigration processes for **Indian nationals** and **Overseas Citizen of India (OCI)** cardholders.

Fast Track Immigration Trusted Traveller Program (FTI- TTP)

- Launched under the **'Viksit Bharat @2047' vision**, it aims to establish **world-class immigration facilities** and enhance international mobility.
- The **Bureau of Immigration**, under the **Ministry of Home Affairs**, is the nodal agency responsible for implementing the programme.
- It was initially introduced on **June 22, 2024**, at **Delhi's Indira Gandhi International Airport (IGI)**.
- It is targeted at **Indian nationals** and **Overseas Citizen of India (OCI) cardholders** in its first phase and will eventually include **foreign travelers**.
- Phase-Wise Implementation:
  - **Phase 1:** Covers Indian citizens and OCI cardholders.
  - **Phase 2:** Will extend to foreign travelers.
- The program is **free of cost** during its initial implementation phase.
- By **2025**, the program will be **operational at 21 major airports** across India.

Features of the Program

- Operates through **e-gates** or **automated border gates** for faster processing.
- Travelers scan their **boarding pass** and **passport**, followed by **biometric authentication**, to complete the process.
- **Enrollment** is completed through an online portal (**https://ftittp.mha.gov.in**), where applicants upload their details and required documents.
- **Membership** is valid for a maximum of **5 years** or until the passport's validity, whichever comes first.
- Applicants must ensure their passport has a **minimum six-month validity** at the time of registration.

- **White-listed trusted travelers** undergo **faster clearance** while maintaining security standards.

Significance

- Reduces immigration clearance time, providing a **hassle-free travel experience** for international travelers.
- Biometric authentication ensures **identity verification**, reducing risks of fraudulent entries.
- Travelers can bypass regular queues, making the process more **convenient and seamless**.
- Comparable to the **Global Entry Program** in the United States, it aligns India's immigration services with international standards.

8. What did the ILO report state about International migrants?

- According to the International Labour Organisation's (ILO) Global Estimates on International Migrant Workers, released in Geneva, the global population of international migrants reached 284.5 million in 2022, with 255.7 million of them being of working age (15 and older).

Why are there more male International Migrants in the global labour force than women?

- **Gender Roles and Norms:** Traditional gender roles and societal norms often restrict women's ability to migrate autonomously. Women are frequently expected to prioritize family responsibilities, which limits their opportunities for international migration and labor market participation.
- **Labour Market Segmentation:** Women are often concentrated in specific sectors such as domestic work, caregiving, and low-skilled service jobs, which are undervalued and less visible.
- Men, on the other hand, dominate higher-paying sectors like construction and agriculture, which are more open to international migrants.
- **Barriers to Employment:** As per ILO, Migrant women face higher unemployment rates (8.7%) compared to migrant men (6.2%), due to factors such as language barriers, unrecognised qualifications, limited childcare options, and gender-based discrimination in host countries.
- **Economic and Social Independence:** Women's migration decisions are influenced by their access to resources and social networks. A lack of autonomy or financial independence can hinder their ability to migrate for work.

- In some cases, women migrate as dependents or spouses of male workers, which limits their access to legal employment opportunities in the host country.

Which economic sectors attract IMs?

- **Construction:** The construction industry employs a significant number of male migrants, particularly in regions with rapid urbanisation and infrastructure projects. This sector, part of the 35.6% of male migrant employment in industry, plays a vital role in economic expansion.
- **Agriculture:** Globally, 7.1% of international migrants work in agriculture, with higher figures in regions like Africa, where 27.5% are employed in agriculture, forestry, and fishing. Migrants are crucial for meeting seasonal labour demands.
- **Manufacturing:** Manufacturing heavily relies on migrant workers in industrialized nations, with migrants filling manual labour and skill-specific roles. This sector highlights the alignment of migrant labour with economic development needs.
- **Services Sector:** Approximately 68.4% of international migrants are employed in the services sector, compared to 51.5% of non-migrants. This sector includes a wide range of occupations, but it is particularly noted for:
  - **Care Work:** A significant number of migrant women are employed in caregiving roles, which include healthcare and domestic services. About 28.8% of migrant women work in the care economy.
  - **Hospitality and Retail:** Many migrants find employment in hotels, restaurants, and retail stores, especially in high-demand tourist areas.

Which are the main host countries?

- Approximately 68.4% of international migrants are concentrated in high-income countries followed by 17.4% (29.2 million) in upper-middle-income countries.
- **Regional Distribution of Migrant Workers (2022)**: International migrants in the labour force were primarily concentrated in Europe and Central Asia (34.5%, 57.8 million), followed by the Americas (27.3%, 45.8 million), Asia and the Pacific (16.2%, 27.2 million), the Arab States (13.5%, 22.6 million), and Africa (8.5%, 14.3 million). The majority resided in Northern, Southern, and Western Europe (23.3%), Northern America (22.6%), and the Arab States (13.5%), collectively hosting 59.4% of all migrant workers.
- **Significant Proportions in Labor Forces**: Migrants formed more than one-third (37.2%) of the Arab States' labour force. Significant proportions were also observed in Europe and Central Asia (12.9%) and the Americas (9%), highlighting their vital role in these economies.

- **Conclusion:** Governments and international organizations should implement gender-responsive migration policies that address barriers faced by women. This includes creating support systems for childcare, recognizing foreign qualifications, and ensuring equal access to legal employment opportunities in host countries.

9. UGC's draft regulation has serious constitutional issues

- Non-BJP-led State governments oppose the UGC's draft regulation on vice chancellors' appointments, claiming it violates constitutional federal principles, and have called for its immediate withdrawal.

Aims and objectives behind the University Grants Commission Act, 1956

- The University Grants Commission (UGC) Act, 1956 was established to regulate and improve higher education in India. Its key aims and objectives are:

- **Coordination and Standardization:** Ensuring the coordination and determination of standards in universities to maintain quality education.
- **Promotion of University Education:** Taking steps to promote, develop, and coordinate university education across the country.
- **Allocation of Funds:** Allocating financial resources for the maintenance and development of universities.
- **Advisory Role:** Advising Union and State governments on grant allocation for general or specific purposes in higher education.
- **Information Collection:** Gathering and disseminating information on university education within India and abroad for institutional improvement.
- **Regulation of Fees:** Regulating fees to ensure accessibility and fairness in higher education.

What are the crucial point that needs to be considered?

- **Jurisdiction of UGC:** The UGC's authority to regulate the selection and appointment of vice-chancellors is questionable since the UGC Act does not explicitly include these provisions. The primary focus of the Act is on maintaining educational standards, not on administrative appointments.
- **Consistency with UGC Act:** Any regulation made by the UGC must align with the provisions of the UGC Act. If a regulation extends beyond the scope of the Act, it could be deemed ultra vires (beyond legal authority) and thus invalid.

- **Federal Principles:** The proposed regulations have raised concerns about violating federal principles enshrined in the Constitution of India, as they may interfere with state legislations that govern universities.
- **Legislative Authority:** Qualifications and selection criteria for vice chancellors are typically established by state legislatures, highlighting a potential overreach by the UGC in its regulatory role.
- **Impact on Educational Standards:** The selection and appointment of vice-chancellors should not be viewed as directly impacting educational standards, which is the primary mandate of the UGC.
- **Judicial Precedents:** Previous court rulings, including those from the Bombay High Court and the Supreme Court, have established important legal precedents regarding the relationship between UGC regulations and state laws, emphasizing that subordinate legislation cannot override state legislation.
- **Constitutional Questions:** There are ongoing constitutional debates regarding whether UGC regulations can override state laws and how such conflicts should be resolved under Article 254 of the Constitution, which addresses repugnancy between central and state laws.

What is the present ruling made by the judiciary?

The judiciary has provided significant rulings concerning the University Grants Commission (UGC) regulations, particularly regarding the selection and appointment of vice-chancellors.

- **Kalyani Mathivanan Case (2015):** The Supreme Court ruled that UGC regulations have a binding effect on universities. This ruling emphasized that subordinate legislation, such as UGC regulations, must be adhered to by the universities under its jurisdiction.
- **Bombay High Court Ruling (2011):** In the case of Suresh Patilkhede vs. The Chancellor Universities of Maharashtra, the court stated that UGC regulations cannot override state legislation. It highlighted that Regulation 7.3.0, being subordinate legislation, does not have the authority to supersede laws enacted by state legislatures.
- **Constitutional Context:** The rulings also touched upon Article 254 of the Constitution, which deals with repugnancy between central and state laws. It clarified that only a law passed by both Houses of Parliament and assented to by the President can override state legislation, not subordinate regulations like those issued by the UGC.

Way forward:

- **Collaborative Federal Framework**: Establish a consensus-driven approach between the UGC and State governments to ensure that regulations respect federal principles while upholding academic standards. This can involve creating joint committees for resolving conflicts and aligning policies.
- **Judicial Clarity and Legislative Reforms**: Seek a definitive constitutional interpretation of the UGC's regulatory scope through the judiciary, and, if needed, amend the UGC Act to explicitly define its role in administrative matters, ensuring consistency with the federal structure.

10. Doctrine of Merger

- The Supreme Court clarified the "doctrine of merger," stating that only one final decree or order can govern the same matter. When a higher court rules on a case, its decision overrides the lower court's decree, becoming the binding and operative order.

'Doctrine of Merger'

- The Doctrine of Merger is a legal principle that governs the relationship between decisions or decrees passed by different judicial forums in the hierarchy.
- It holds that **once a superior court disposes of a case**, the **decision or decree of the lower court merges** with that of the superior court.
- This doctrine ensures that **there is only one operative and binding decree** governing a subject matter at a given point in time.
- The doctrine **applies when** the order or decree of a lower court is **subjected to an appeal**, **revision, or review** before a higher court.
- It ensures that there is **no ambiguity** regarding which order is binding and enforceable.

- **Key Features of the Doctrine of Merger**

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    o **Single Operative Decree:** The doctrine ensures that once a higher court has passed its judgment, there cannot be multiple operative decrees for the same subject matter.
    o **Scope:** Applicable when a lower court's order is challenged before a superior court. The higher court's decision, whether confirming, modifying, or overturning the lower court's decree, becomes the final and binding authority.
    o **Effect of Merger:** The lower court's decree is no longer independently enforceable; it is subsumed within the superior court's order.

Legal Basis and Precedents:

- **Kunhayammed v. State of Kerala (2000):** The superior court's decree, whether it confirms, modifies, or sets aside the lower court's decree, replaces the lower court's decision.
- **Logic of the Doctrine:** "There cannot be more than one decree or operative order governing the same subject matter at a given point of time."
- **Jurisdictional Hierarchy:** This principle is applied in cases of appeals and revisions where the decision of the higher forum takes precedence over that of the lower forum.

11. Status of the Smart Cities Mission

- The Smart Cities Mission (SCM), a flagship initiative launched during the NDA-1 government, has lost prominence in this year's list of electoral promises and accomplishments.
- The Government of India defines smart cities as urban areas that provide core infrastructure, ensure a decent quality of life, promote a clean and sustainable environment, and utilize smart solutions for inclusive development.

Two major aspects of the Smart Cities Mission

- **Area-Based Development (ABD):** This includes three components:
    o Redevelopment: Transforming existing urban areas.
    o Retrofitting: Improving infrastructure in underdeveloped areas.
    o Greenfield Development: Creating new urban spaces with modern infrastructure.

- **Pan-City Solutions:** These involve applying smart solutions across the entire city, enhancing services through technology and improving overall urban management and governance.

Why did the implementation of smart cities bypass local government?

- **Special Purpose Vehicle (SPV) Model:** The SCM employed a governance structure that relied heavily on Special Purpose Vehicles (SPVs), which were set up as limited companies under the Companies Act.
- This model often sidelined local elected councils, as SPVs were typically led by bureaucrats or representatives from multinational corporations, limiting local government involvement in decision-making processes.
- **Top-Down Approach:** Critics argue that the SPV model was too top-down, lacking alignment with the 74th Constitutional Amendment, which emphasizes decentralized governance. This disconnect resulted in many cities

objecting to the governance structure, as it did not adequately reflect the needs and demands of local populations.

- **Competitive Selection Process:** The selection of cities was based on a competitive process that did not account for the diverse urban realities across India. This approach led to an exclusionary scheme where only small portions of cities were targeted for development, often ignoring broader community needs and existing urban dynamics.
- **Limited Local Engagement:** The mission's design did not prioritize citizen participation or local stakeholder engagement effectively, which is crucial for understanding and addressing unique urban challenges. This lack of engagement contributed to projects that did not resonate with the actual needs of residents.

Achievements of Smart City Mission

- **Project Completion:** As of December 2024, 91% of the total projects under the SCM have been completed, with 7,380 out of 8,075 projects finalized. This reflects significant progress in urban development initiatives across 100 selected cities.
- **Investment and Infrastructure:** The mission has seen an investment of approximately ₹1,47,704 crore. Key areas of focus include infrastructure development, governance improvements, and social services such as housing, transport, education, and healthcare.
- **Technological Integration:** All 100 smart cities have established Integrated Command and Control Centres (ICCCs), which utilize data analytics and emerging technologies like AI and IoT to manage urban services more effectively. These centres played crucial roles during the COVID-19 pandemic by functioning as operational hubs.
- **Public Safety Enhancements:** Over 84,000 CCTV cameras have been installed for enhanced surveillance, along with emergency call boxes and public address systems to improve public safety.
- **Solid Waste Management:** The mission has improved solid waste management practices in over 66 cities through technology integration, enhancing efficiency in waste collection and management.
- **Mobility Improvements:** The development of smart roads and cycle tracks has been a significant focus, with over 1,740 kilometres of roads constructed or improved under the mission.

What are the challenges related to Smart City Mission?

- **Disparity in Performance:** While some cities have exceeded their project targets significantly, others have struggled to meet even basic completion goals. Reports indicate that 66 out of the 100 cities have not met their physical

targets as of January 2023, highlighting a stark disparity in performance across regions.

- **Limited Impact on Quality of Life:** Critics argue that despite substantial investments, there has been little improvement in fundamental quality-of-life issues for citizens, such as access to clean water and affordable housing. The mission's focus on high-tech solutions has sometimes overshadowed pressing social needs.
- **Financial Constraints:** Many local governing bodies face challenges in raising funds for projects due to financial limitations and resistance from citizens regarding user charges for services provided under the mission. This has hindered project execution in several cities.**Implementation Delays:** A significant number of projects remain incomplete or are stuck at various stages due to bureaucratic hurdles and lack of coordination among stakeholders involved in the SCM.

Way forward:

- **Strengthen Decentralized Governance**: Empower local governments by aligning the SCM governance model with the 74th Constitutional Amendment. Involve elected councils and local stakeholders in planning, implementation, and decision-making to ensure projects reflect community needs and realities.
- **Enhance Financial and Technical Capacities**: Provide cities with access to sustainable funding mechanisms, including better public-private partnership models, while building technical expertise for efficient project execution and addressing socio-environmental challenges comprehensively.

12. India outlines 6-board principles to boost economic ties with EU

- Recently, Commerce and Industry Minister Piyush Goyal highlighted six key principles to strengthen the partnership between India and the European Union during a meeting with Maros Sefcovic, the EU Commissioner for Trade and Economic Security.

Six Broad Principles between the EU and India

- **Common Values:** Establish a partnership based on shared values of democracy, rule of law, and an independent judiciary.
- **Fair Trade Agenda:** Develop a commercially meaningful trade agenda that addresses tariff and non-tariff barriers, ensuring benefits for small and medium enterprises, farmers, and fishermen.

- **High-Quality Production:** Engage in the exchange of best practices and harmonization of standards to achieve "zero defect" and "zero effect" production capabilities.
- **Technological Collaboration:** Work together to develop cutting-edge technologies and secure critical raw material supply chains, enhancing resilience against non-market economies.
- **Sustainable Development:** Cooperate on trade and sustainable development while respecting differing levels of development among nations, adhering to the principle of common but differentiated responsibility.
- **Mutual Growth:** Leverage India's young talent pool to act as a bridge for mutual growth and development with the EU.

Significance of the EU for India

- **Largest Trading Partner:** The EU is India's largest regional trading partner, accounting for approximately 12.2% of India's total trade in goods as of 2023. This relationship facilitates substantial trade flows, with trade in goods reaching around €124 billion and trade in services amounting to €50.8 billion in 2023.
- **Major Source of Investment:** The EU is a leading source of foreign direct investment (FDI) in India, with an investment stock of approximately €108.3 billion in 2022. This investment supports job creation and economic development across various sectors in India.
- **Technology Transfer and Innovation:** The EU serves as a primary source of technology transfer to India, aiding in the development of critical sectors such as infrastructure, green technology, and digital solutions. This collaboration is vital for India's aspirations to modernize its economy and enhance its global competitiveness.
- **Strategic Partnership:** The EU-India relationship is built on shared values such as democracy and human rights. It has evolved into a strategic partnership that addresses global challenges, including climate change, security threats, and sustainable development. This partnership is crucial for both entities to enhance their roles in global governance.
- **Geopolitical Considerations:** With the rise of assertive powers like China and shifting U.S. policies, the EU recognizes the importance of a robust partnership with India as a counterbalance in the region. Strengthening ties with India aligns with the EU's goals of promoting multilateralism and addressing common security interests.

Challenges between India and the EU

- **Trade Barriers and Market Access:** Indian companies face increasing non-tariff barriers when trying to access EU markets, including stringent technical

regulations, phytosanitary measures, and compliance standards. These barriers hinder the export of Indian goods and services, complicating efforts to establish a comprehensive Free Trade Agreement (FTA) between India and the EU.

- o Also, India is cautious about reducing high tariffs on sensitive sectors like automobiles and agricultural products, which the EU seeks to liberalize.
- **Mobility of Professionals and Services Liberalization:** The lack of a common working visa system in the EU restricts the free movement of Indian professionals across member states. India seeks greater access for its skilled workers in the EU, while the EU demands liberalization of India's professional services sector, particularly in accountancy and legal services.

Way forward:

- **Balanced Trade Agreement**: Prioritize resolving key differences in tariff reductions and non-tariff barriers, especially in sensitive sectors like automobiles, agriculture, and professional services, while ensuring fair market access for both sides to boost mutual economic growth.
- **Enhanced Mobility and Collaboration**: Establish frameworks for the free movement of professionals and expand cooperation in technology transfer, sustainable development, and resilient supply chains, leveraging India's skilled workforce and the EU's technological advancements.

13. GARBH-Ini-DRISHTI: India's First Ferret Research Facility

- India's first Ferret Research Facility, GARBH-Ini-DRISHTI, was **inaugurated at Translational Health Science and Technology Institute (THSTI) in Faridabad** to boost vaccine development and infectious disease research.

GARBH-INi-DRISHTI

- **GARBH-INi-DRISHTI** is a **data repository and information-sharing hub** designed to provide comprehensive clinical and biological insights into **maternal and child health**.
- Developed under the **GARBH-INi program**, it is one of **South Asia's largest pregnancy cohort datasets**, offering access to **clinical data, medical images, and bio-specimens**.
- The platform includes data from **over 12,000 pregnant women, newborns, and postpartum mothers**, enabling extensive research into **maternal and neonatal health outcomes**.
- It is a **collaborative initiative**, involving India's top research institutions and hospitals, ensuring **scientific synergy** in maternal healthcare.

- **Aims:**
  - To **enhance maternal and neonatal healthcare research** through **large-scale data accessibility**.
  - To **support global researchers** in conducting **transformative studies** that can **improve birth outcomes**.
  - To **provide early insights** into pregnancy-related complications, fostering **better diagnostic and preventive measures**.
  - To **develop predictive tools** for conditions like **preterm birth**, ensuring **better maternal health interventions**.
- **Features:**
  - **Comprehensive Data Repository**: Houses clinical, imaging, and bio-specimen data from thousands of pregnant women and newborns.
  - **Advanced Data Access**: Researchers can explore detailed datasets to study pregnancy outcomes, foetal health, and postnatal development.
  - **Secure and Controlled Access:** Provides clear guidance on data usage and approvals, ensuring ethical research practices.
  - **Global Research Platform**: Enables nationwide and international collaboration, allowing researchers to work on common healthcare challenges.
  - **Supports Policy and Decision-Making:** The data can be leveraged to shape maternal health policies, improve diagnostic protocols, and design effective interventions.

14. Foundational values, the journey of the Indian state

- As we mark 75 years since the Constitution of India came into effect, it's important to look back and assess how the country has followed its core values before deciding the way forward.

Foundational values that define the Indian state

- **Sovereignty, Democracy, and Republic**: The Constitution of India guarantees the sovereignty of the nation and democratic governance by the people through elected representatives.
- **Liberty, Equality, and Fraternity**: These values are enshrined in the Preamble and reflect the commitment to social democracy.
- **Justice**: Social, economic, and political justice is emphasized to create an inclusive society.
- **Federalism**: Though not explicitly mentioned, federalism underpins the constitutional framework, balancing powers between the Union and States.
- **Secularism**: Ensures the separation of religion and state, guaranteeing religious freedom and equality.

- **Rule of Law**: Establishes the supremacy of the Constitution and equality before the law.

Unity in Diversity: Encourages harmony and fraternity among diverse cultural, linguistic, and regional groups.

How have recent legislative and political changes impacted India's commitment to these values?

- **Secularism:** India's constitutional commitment to secularism has been challenged by the laws related to religious identity.
  - The **Citizenship Amendment Act (CAA), 2019**, which provides citizenship to persecuted religious minorities from neighboring countries but excludes Muslims, has raised concerns about violating **Article 14 (Right to Equality)** and the secular ethos of the Constitution.
- **Social Justice:** The push for affirmative action through reservations continues, but new measures have sparked debates about inclusivity.
  - The introduction of the **Economically Weaker Sections (EWS) reservation** (103rd Constitutional Amendment) raised debates over its exclusion of marginalized communities already under the SC/ST/OBC reservation framework, potentially diluting the focus on caste-based historical injustices.
- **Federalism:** Legislative changes have altered the balance between the Union and states, raising concerns about cooperative federalism.
  - The abrogation of **Article 370** in Jammu and Kashmir and its reorganization into Union Territories in 2019 was criticized for bypassing the state legislature, raising questions about federalism under Article 1 and Article 370.
- **Freedom of Speech and Expression:** Political changes have led to an environment where dissent and criticism of the government are often met with punitive action.
  - The use of sedition laws under Section 124A of the IPC and the **Unlawful Activities (Prevention) Act (UAPA)** against journalists and activists has raised concerns about stifling democratic dissent.

(Way forward)

- **Strengthening Judicial Oversight and Constitutional Safeguards**: To reinforce India's foundational values, it is essential to strengthen the role of the judiciary in safeguarding constitutional rights to ensure that laws and policies align with the principles of equality, secularism, and justice.

- **Inclusive and Transparent Policy Making**: Policies should be designed to foster inclusive development, ensuring that marginalized communities are not left behind.
- **Strengthening Inclusive Governance and Social Justice**: Ensure that affirmative action policies, including reservations, are consistently aligned with the principle of social justice, addressing the historical and contemporary needs of marginalized communities.
- **Promoting Secularism and Protecting Fundamental Rights**: Strengthen and uphold the secular fabric of the nation by ensuring that laws and policies respect religious diversity and equality, in line with the Constitution's guarantees.

15. Should Governors be Chancellors of State Universities?

- The Governor's role as Chancellor of State universities has been a topic of significant debate. It is frequently misinterpreted as a post-independence mechanism designed to protect universities from political interference.

Implications of having the Governor serve as Chancellor for university autonomy

- **Reduced Autonomy:** The role of the Governor as chancellor has historically restricted the autonomy of universities, as this model was inherited from colonial rule. The powers granted to Governors include appointing Vice-Chancellors and presiding over university bodies, which can lead to political interference rather than safeguarding academic independence.
- **Political Interference:** Instead of insulating universities from politics, the involvement of Governors often exacerbates political influence, particularly when Governors act in alignment with the Central government's agenda, compromising the universities' operational independence and academic freedom.
- **Dual Authority System:** The existence of both the Governor and State governments creates a dual authority that can lead to conflicting directives and administrative paralysis, particularly in Opposition-ruled states where disagreements may delay critical decisions such as Vice-Chancellor appointments.

How does the role of Governors as Chancellors align with or contradict the principles of federalism?

- **Concurrent Legislative Powers in Education (Entry 25, List III, Seventh Schedule):** Since education falls under the Concurrent List, the Governor's role as Chancellor facilitates coordination between state and national education policies, promoting synergy.

- **Governor Acting Beyond State Government's Advice (Article 163):** When Governors act in their discretionary capacity as Chancellors bypassing the elected state government undermines democratic accountability and state autonomy.
- **State Authority over Universities (Entry 32, List II, Seventh Schedule):** Control over universities is a state subject, and direct interference by Governors in university administration contradicts the federal principle of centralising authority.

What is the role of the President vs Governors as Chancellors?

- **President:** As the constitutional head, the functions are based on the aid and advice of the Council of Ministers at the Union level under **Article 74** of the Constitution. The President does not directly act as a Chancellor for any educational institution.
- **Governor:** The Governor, appointed by the President under **Article 155**, acts as the constitutional head of the state and also serves as the Chancellor of State universities as per state laws, often with discretionary powers. This dual role blurs the line between their constitutional duties and state governance.

What alternative models for university governance could be considered?

- **Governor as Ceremonial Chancellor:** This model would limit the Governor's powers, requiring them to act on the advice of the State Council of Ministers in university matters. States like Gujarat, Karnataka, and Maharashtra have implemented variations of this approach.
- **Chief Minister as Chancellor:** This model proposes that the Chief Minister take on a ceremonial role. While West Bengal and Punjab have passed bills for this system, they await Presidential assent.
- **State-Appointed Chancellor:** Implemented in Telangana, this model allows state governments to appoint a ceremonial Chancellor who is an eminent academic or public figure, thus ensuring greater alignment with local governance and accountability.
- **Chancellor Elected by University Bodies:** Similar to models in prestigious institutions like Oxford and Cambridge, this approach empowers university bodies and alumni to elect their Chancellor, promoting institutional self-governance and reducing political influence.
- **Chancellor Appointed by University's Executive Council:** This model involves universities appointing their Chancellors through transparent selection processes within their governing bodies, fostering independence from external political pressures.

Way forward:

- **Decentralize University Governance:** Empower universities to elect or appoint Chancellors through their governing bodies, fostering institutional autonomy, and transparency to reduce external political interference.
- **Restrict the Governor's Role to Ceremonial Functions:** Limit the Governor's powers in university matters to a ceremonial capacity, ensuring that academic decisions align with the principles of state autonomy and federalism.

16. Enrollment in schools as per UDISE + has declined

- For the first time in many years, enrolment of students in schools, as per a UDISE+ report, has declined by over a crore in 2022-23 and 2023-24 compared to an average of about 26 crore every year over the previous four years.
- For the first time, enrolment figures fell to 25.17 crore in 2022-23 and further declined to 24.8 crore in 2023-24. This represents a drop of about 1.55 crore students (nearly 6 per cent) from the 2018-19 to 2021-22 period, when enrolment averaged 26.36 crore.

About UDISE +

- The Unified District Information System for Education (UDISE) Plus is a data aggregation platform maintained by the education ministry to collate school education data from across the country.
- UDISE+ has a mandate of collecting information from all recognized schools imparting formal education from Pre-primary to XII.
- The Schools which get onboarded successfully on the platform are provided a UDISE Code, which acts as a national level unique identifier. UDISE+ has the school as the unit of data collection and district as the unit of data distribution.
- UDISE+, collects information through an online Data Collection Form (DCF) on parameters ranging from school, Infrastructure, teachers, enrolments, examination results etc. spread across 11 sections.
- UDISE serves as a crucial tool for monitoring and evaluating the quality of education.

Drop in numbers

- Ministry officials acknowledged the drop in enrolment but said it stemmed from revised data collection methods implemented in 2022-23.
- Under the new system, schools must now provide student-specific information rather than just school-level numbers. This requires detailed records for each student, including their name, parent's name, address, and Aadhaar number, instead of simply reporting total class numbers.

17. Annual ground water quality report 2024

- The Annual Groundwater Quality Report 2024 by Central Ground Water Board (CGWB) has pointed out concerns regarding ground water in various parts of the country arising from nitrates, arsenic, fluoride and uranium among others.
- While it is a good sign that India now has a robust, scientific system of assessment to monitor the health of groundwater blocks annually, efforts are lacking in getting States to act on these findings

Key takeaways

- The number of districts with excessive nitrate in their groundwater has risen from 359 in 2017 to 440 in 2023. This translates to a little more than half of India's 779 districts having excessive nitrate, or more than 45 mg/L (milligram per litre).
- There are two major concerns with excess nitrate content: first, methemoglobinemia, or a reduced ability of red blood cells to carry oxygen. This sometimes causes 'Blue Baby Syndrome,' in infants.
- The bigger problem is environmental: once nitrates in groundwater rise to the surface and become part of lakes and ponds, algal blooms throttle the health of aquatic ecosystems.
- High nitrate levels in groundwater can be a result of excessive irrigation which can push nitrates from fertilizers deep into the soil, the report said.
- Poor management of animal waste in livestock farming adds to the problem, as it releases nitrates into the soil. Urbanisation and population growth increase wastewater and sewage, which often contain high nitrate levels, while leaking septic systems and poor sewage disposal worsen contamination.
- Rajasthan, Madhya Pradesh and Gujarat have a perennial nitrate problem, primarily from geological factors, with relative levels fairly constant since 2017, the report says.
- The report further said fluoride concentrations exceeding the permissible limit are a major concern in Rajasthan, Haryana, Karnataka, Andhra Pradesh, and Telangana.
- Elevated arsenic levels (more than 10 parts per billion) were found in several states, particularly in the floodplains of the Ganga and Brahmaputra rivers.
- Long-term exposure to fluoride and arsenic contaminants can have severe health consequences, including fluorosis (from fluoride) and cancer or skin lesions (from arsenic).
- Another major concern is the elevated levels of uranium in several regions. Forty-two per cent of samples with uranium concentrations exceeding 100

ppb (parts per billion) came from Rajasthan, and 30 per cent from Punjab, indicating regional hotspots of uranium contamination, the report said.

- Chronic exposure to uranium can lead to kidney damage.
- The report said that groundwater samples with uranium concentrations above 30 ppb were clustered in areas identified as over-exploited, critical and semi-critical groundwater stress zones, such as Rajasthan, Gujarat, Haryana, Punjab, Tamil Nadu, Andhra Pradesh and Karnataka.

18. SC Judgement on Right to Property

- The right to property is a human right and a constitutional right and no person can be deprived of his or her property without being paid adequate compensation, the Supreme Court ruled recently while also holding that in exceptional circumstances of inordinate delay in disbursement of compensation, the date of fixing the valuation can be shifted to a more recent one
- Supreme Court in the judgment directed that compensation to people who lost their land for the over 20,000-acre Bengaluru-Mysore Infrastructure Corridor (BMIC) project over two decades ago, must be paid according to the market value prevailing in 2019.

Key takeaways from the judgement

- Right to Property ceased to be a Fundamental Right by the Constitution (Forty-Fourth Amendment) Act, 1978, however, it continues to be a human right in a welfare State, and a constitutional right under Article 300-A of the Constitution, SC ruled.
- Article 300-A of the Constitution provides that no person shall be deprived of his property save by authority of law. The State cannot dispossess a citizen of his property except in accordance with the procedure established by law, SC said.

The case details

- The petitioners, who purchased residential plots in Karnataka's Gottigere village between 1995 and 1997, had their lands acquired in 2003 under the Karnataka Industrial Areas Development Act, 1966, for BMIC project.
- Despite taking possession of the land, state authorities did not finalise compensation for over two decades, forcing the landowners to repeatedly approach courts.

- Referring to the principle of eminent domain, the court observed that the State's power to acquire land against the owner's wishes comes with an obligation to ensure prompt and fair compensation.
- Recognising this injustice, the Supreme Court invoked its powers under Article 142 of the Constitution to shift the valuation date of the land to 2019

19. Enhancing Governance the digital way

- In recent years, India has embarked on an ambitious journey toward digital governance. Despite the strides made, more needs to be done to fully realise the potential of digital governance.
- At its core, governance is a complex web of decision-making processes that involves stakeholders, from government bodies and non-governmental organisations to local community leaders and influential citizens.

Key takeaways

- India's transition to digital governance aims to improve citizen services and enhance government workforce capabilities.
- Digital governance represents a paradigm shift in how government employees and associated service providers or intermediaries such as contractors should engage with their work.
- The adoption of technology in governance facilitates more effective communication, informed decision-making, and streamlined workflows.

Capacity Building in Digital Governance

- The pressing need for government employees to become adept at navigating digital platforms is paramount in a world that is increasingly technology-driven.
- Initiatives such as the iGOT Karmayogi platform have taken centre-stage. The online training portal aims to equip officials with essential skills in data analytics, public administration, and digital technologies.
- Equally transformative is the e-Office initiative, which digitises government workflows, drastically reducing reliance on paperwork and enhancing operational efficiency. By automating file management, workflows, and grievance redress, the initiative promotes real-time communication and transparency.
- Another initiative is the transition of procurement processes to the online sphere, with platforms like the Government e-Marketplace (GeM) playing a crucial role.

Challenges in Digital Governance

- Resistance to Change: Government workforce segments exhibit varying levels of readiness and enthusiasm for adopting new technologies.
- Lack of Incentives: The lack of incentives raises concerns that initiatives such as the iGOT Karmayogi platform could become merely attendance trackers. It is worth considering whether trainings lead to meaningful outcomes — such as opportunities to apply new skills through relevant job postings.
- Digital Divide: Limited access to high-speed Internet and digital tools, especially in rural areas.
- Cybersecurity Concerns: Increased risks of data breaches and cyberattacks with online operations.
- Continuous Learning Needs: Rapid technological evolution demands ongoing training and upskilling opportunities for government employees.

The Way Forward for Digital Governance

- Robust Infrastructure: Address the digital divide through improved connectivity and access to tools in rural areas.
- Targeted Training: Ensure training programs are outcome-driven and adaptable to emerging technologies.
- Cybersecurity Frameworks: Develop and implement strong cybersecurity protocols.
- Incentives for Innovation: Recognise and reward employees who excel in adopting and applying digital tools.
- Inclusivity: Equip every employee, regardless of rank, background, or location, with skills to thrive in the digital age.

20. SEBI proposes sachetization of mutual funds to boost financial inclusion

- **SEBI is collaborating with the mutual fund industry** to find ways to make monthly SIPs of just Rs 250 possible, aiming to encourage more people from lower-income groups to invest in mutual funds.

Sachetisation

- Sachetisation refers to **offering products in small, affordable units,** making them accessible to a broader consumer base, especially those in price-sensitive segments.
- The term originated from the **FMCG (Fast Moving Consumer Goods) sector,** where products like shampoos were made available in small sachets at low prices to cater to low-income consumers.

- SEBI is now proposing a similar approach for mutual funds, allowing small-ticket investments through **SIPs (Systematic Investment Plans) with low monthly amounts (such as Rs 250).**

Significances of Sachetisation

- **Affordable Financial Products:** Just as small sachets of consumer goods made them accessible to lower-income groups, small-ticket SIPs in mutual funds can make investment opportunities available to a larger section of the population, particularly those who may not have the financial capacity to invest larger amounts.
- **Promoting Financial Empowerment:** By lowering the entry barrier for mutual fund investments, sachetisation can help empower underserved communities and individuals by enabling them to participate in the growing financial markets and benefit from the potential returns.
- **Expanding Reach:** This approach would encourage mutual fund companies to expand their reach to remote locations, helping them penetrate rural and low-income markets, and promote a wider culture of saving and investing.
- **Financial Inclusion for the Bottom of the Pyramid:** The primary target of sachetisation in mutual funds is low-income groups that have limited access to traditional investment products. By offering small, regular investments, SEBI aims to promote financial inclusion at the grassroots level.

How does it work?

- SEBI has proposed introducing **small ticket SIPs at Rs 250 per month,** which would allow new investors from **low-income groups** to participate in mutual funds without the burden of higher minimum investment requirements. This contrasts with existing schemes that often require a **minimum SIP of Rs 500 or more.**
- Investors can commit to a small ticket SIP for a **duration of five years (60 installments),** although they have the flexibility to withdraw or stop their investments without restrictions if needed. This structure encourages consistent investment while providing an exit option for investors.
- To facilitate the success of small ticket SIPs, SEBI plans to implement **discounted rates for intermediaries and reimburse** certain costs from the Investor Education and Awareness Fund. This will help **asset management companies (AMCs)** break even more quickly on their investments in these small ticket offerings.
- The sachetised SIPs will be available under **specific mutual fund schemes,** excluding high-risk options like small-cap and mid-cap equity schemes, which are deemed unsuitable for new investors from **lower-income**

backgrounds. This targeted approach aims to safeguard these investors while still encouraging their entry into the market.

- To further promote financial inclusion, SEBI proposes incentives for distributors who successfully **guide investors through 24 instalments of the small ticket SIP**, thereby enhancing participation and support for new investors in mutual funds.

Conclusion: The strategy could result in a significant increase in domestic investor participation, contributing to the resilience of India's equity market and fostering long-term financial stability.

GS 3 : Economy, Science and Technology, Environment

1. National River Traffic and Navigation System (NRT&NS) is launched

- The **Inland Waterways Authority of India (IWAI)** under the Ministry of Ports, Shipping & Waterways (MoPSW), has introduced the National River Traffic and Navigation System (NRT&NS), a landmark initiative aimed at ensuring safe, efficient, and sustainable navigation along India's inland waterways.

National River Traffic and Navigation System (NRT&NS)

- The NRT&NS aims to **modernize** and enhance the **safety, efficiency, and sustainability** of inland water transport.
- It leverages **real-time data** and **technology** to optimize navigation on India's National Waterways, supporting eco-friendly and cost-effective transport for goods and passengers.
- **Key Features:**
  - Real-time monitoring using GPS and GIS for safe vessel navigation.
  - Centralized traffic control centers for efficient operations.
  - Digital platforms for route planning, cargo tracking, and alerts.
  - Integrated infrastructure to streamline operations and reduce delays.
  - Focus on sustainability, economic growth, and capacity building in the inland water transport sector.
- The system is being deployed across India's National Waterways, including:
  - **NW 1 (River Ganga):** Key cargo routes from Haldia to Varanasi.
  - **NW 2 (River Brahmaputra):** Major transport corridor in the Northeast.

- o **NW 3 (West Coast Canal, Champakara Canal, and Udyogmandal Canal), NW 4 (Krishna and Godavari), and NW 5 (Mahanadi rivers and its tributaries)**: Supporting regional trade and tourism.

Status of Inland Waterways in India

- India has a vast network of **14,500 km** of navigable waterways, including **111 declared National Waterways (NWs)** under the **National Waterways Act, 2016**.
- **Key Highlights:**
  - o **Increase in Operational Waterways:** The number of operational NWs has increased by **767% since 2014**.
  - o **Cargo Traffic Growth:** Cargo traffic rose from **18 million tonnes in 2013-14** to **133 million tonnes in 2023-24**, achieving a **CAGR of over 22%**.
  - o **Infrastructure Investments:** Investments in NW development increased by **233%** post-2014, supported by projects like:
    - ▪ **Jal Marg Vikas Project (JMVP):** Focused on NW 1 (Ganga).
    - ▪ **Arth Ganga:** Empowering local communities through economic activities along NW 1.
  - o **Tourism Growth:** River cruise tourism expanded significantly, with **25 cruise vessels operational in 2023-24**, up from **3 in 2013-14**.
  - o **Challenges:** Despite this, the share of IWT in India's overall transport mix remains relatively low compared to global standards.

2. Key achievements of the Genome India Project

- India has created a database of 10,000 human genomes, covering 83 population groups, which is about 2% of the country's 4,600 population groups.

Key achievements of the Genome India Project

- **Completion of Genome Sequencing:** The project successfully sequenced 10,000 human genomes from 83 population groups, representing approximately 2% of India's 4,600 population groups. This data is now housed at the Indian Biological Data Centre (IBDC) in Faridabad, Haryana.
- **Identification of Genetic Variants:** Initial analyses revealed around 27 million genetic variants, with 7 million being low-frequency variants not found in other global databases. This highlights India's unique genetic diversity and the potential for targeted research.

- **Global Accessibility:** The genome data is accessible to researchers worldwide, fostering international collaboration in genomics research and precision medicine.

What are the impact on Biotechnology and Healthcare?

- **Advancement of Precision Medicine:** The database is expected to facilitate advancements in precision medicine by enabling researchers to study disease risks and drug responses specific to the Indian population. This could lead to more effective treatments tailored to genetic variations.
- **Potential for Drug Development:** With a focus on understanding genetic predispositions to diseases, the project can support the development of new medications and therapeutic interventions, particularly for genetic and infectious diseases.
- **Strengthening India's Biotech Economy:** The initiative is seen as a cornerstone for bolstering India's biotechnology sector, enhancing its capacity for genomic research and manufacturing.

Challenges

- **Data Privacy and Security:** India currently lacks a comprehensive Data Privacy Bill, which raises concerns about the protection of sensitive genetic information. The absence of robust legal frameworks increases the risk of misuse or unauthorized access to genetic data, potentially compromising individual privacy.
- **Ethical Concerns:** The use of genomic data for purposes such as gene editing could lead to ethical dilemmas, including issues related to "designer babies" and unintended consequences of genetic modifications.
- **Public Trust and Acceptance:** Gaining public trust is crucial for the success of the project. There may be apprehensions among individuals regarding how their genetic data will be used, especially if it involves sharing with commercial entities or if there are fears about potential discrimination based on genetic information.
- **Integrity of Data Collection:** Ensuring the integrity and accuracy of data collection, storage, and usage is essential.
  - Without stringent protocols, there is a risk that the data may be misinterpreted or misused, leading to flawed conclusions about genetic predispositions and health risks.

(Way forward)

- **Expanding the Database:** Experts suggest increasing the number of sequenced genomes to up to 1 million to better capture India's vast genetic

diversity. This expansion would provide deeper insights into genetic variations across different ethnic groups.

- **Funding and Collaboration:** Securing additional funding and forming partnerships with leading research institutions can help overcome financial limitations and enhance data enrichment efforts.
- **Ethical Data Management:** Ensuring robust data sharing protocols and privacy measures will be crucial for maintaining public trust and facilitating research access while protecting individual identities.

3. Miyawaki Technique

- Ahead of the **Mahakumbh Mela** in Uttar Pradesh, the Prayagraj Municipal Corporation has employed the Japanese Miyawaki technique to create dense "oxygen bank" forests, ensuring cleaner air and ecological balance for millions of devotees.

Miyawaki Technique

- The Miyawaki technique is a pioneering method for creating **dense forests in limited spaces**, developed by Japanese botanist **Akira Miyawaki** in the 1970s.
- Known as the **'pot plantation method'**, this technique mimics natural forest ecosystems by using native species planted closely together, promoting rapid growth and biodiversity.
- It was developed **to restore degraded ecosystems** and barren lands by replicating the processes found in natural forests.
- It is widely used for **urban afforestation projects** globally.

Significant Features:

- **Dense Planting:** Trees and shrubs are planted close together, enabling rapid growth—up to 10 times faster than traditional methods.
- **Native Species:** Focuses on local plant varieties to replicate the natural ecosystem.
- **Improved Biodiversity:** Enhances species richness, supporting more flora and fauna.
- **Carbon Absorption:** Trees absorb more carbon, helping combat urban pollution.

4. WEF released Future of Jobs Report, 2025

- According to the **World Economic Forum's (WEF) Future of Jobs Report 2025**, global macro trends, including technological advancements,

demographic shifts, and the green transition, will create **170 million new jobs** by 2030.

Future of Jobs Report, 2025

- It is based on insights gathered from over **1,000 leading global companies**, collectively representing **14 million workers** across **22 industry sectors** and **55 economies** worldwide.
- It provides critical insights into **emerging and declining job roles**, **skills trends**, and the overall impact of global changes on the labour market.

Key findings of the report

- The report projects **170 million new jobs** globally by 2030, with a net increase of **78 million jobs** after accounting for **92 million displaced roles**.
- Fast-growing roles include **AI and machine learning specialists**, **big data experts**, **FinTech engineers**, and **farmworkers**, driven by **technological advancements** and the **green transition**.
- Clerical jobs like **data entry clerks** and **cashiers** are declining due to **automation**.
- Employers anticipate **39% of skills** will change by 2030, with growing demand for **AI proficiency, creative thinking, and resilience**.
- Businesses are focusing on **reskilling**, with **85% investing in upskilling programs**.
- Collaboration among governments, academia, and industries is vital to bridge the **skills gap** and align with future job demands.

World Economic Forum (WEF):

- The WEF is an **international NGO** for Public-Private Cooperation.
- It was **established in January 1971** by German engineer and economist **Klaus Schwab**.**Important reports published by WEF include**: Global Competitiveness Report, Global Risks Report, Global Gender Gap Report, Global Social Mobility Report, Energy Transition Index, and Travel & Tourism Competitiveness Report, among others.

5. Tirupati stampede: Why stampedes take place, how to mitigate risks

- Recently six people lost their lives in a stampede in Tirupati while waiting to collect tokens for Lord Venkateswara's darshan.

Why do stampedes take place?

- Stampedes are chaotic and uncontrolled movements of large crowds, often triggered by panic or an urgent rush to move in a confined or crowded space.
- Venues that exceed their safe capacity can lead to dangerously crowded conditions. When too many people gather in a confined space, the risk of a stampede increases significantly.
- Inadequate planning and lack of effective crowd control measures, such as clear exits and designated waiting areas, can exacerbate the situation. Poor organisation often leads to confusion and panic among attendees.
- Narrow pathways, obstacles, and poorly designed event spaces can create bottlenecks during emergencies. These barriers make it difficult for people to move freely and can trap crowds, increasing the risk of crush injuries.

How does human psychology lead to stampedes?

- **Panic Response:** Panic can spread rapidly through crowds, causing individuals to act irrationally. When one person begins to push forward out of fear or urgency, it creates a domino effect where others follow without understanding the situation.
- **External Triggers:** Events such as loud noises, sudden movements, or perceived threats (like a fire or an emergency) can trigger panic responses in crowds, leading to stampedes.
- **Psychological Factors:** Theories of collective behaviour suggest that in large groups, individuals may act against their own interests when panic sets in. For instance, the desire to escape a perceived danger can override cooperative behaviour, leading to chaotic pushing and shoving.

How does the physical organisation of spaces contribute to stampedes?

- **Narrow Exits and Blocked Pathways:** Limited exits and narrow pathways can create bottlenecks during emergencies, making it difficult for individuals to evacuate quickly. When a crowd is forced to funnel through a small area which leads to panic and chaos, increasing the likelihood of a stampede as people rush to escape.
- **Poorly Designed Crowd Flow:** Spaces that do not effectively manage crowd flow can exacerbate congestion.
- Suppose different groups of people converge at the same point without clear guidance or separation that can lead to confusion and a surge of movement, triggering stampede conditions. Effective crowd management strategies are essential to ensure smooth movement.
- **Inadequate Lighting and Visibility:** Insufficient lighting can disorient attendees and hinder their ability to navigate the space safely. In low-light conditions, individuals may struggle to see exits or understand the crowd

dynamics, leading to increased panic and disorder during critical moments, which can precipitate a stampede.

(Way forward)

- **Effective Crowd Management:** Limit crowd size through pre-registration, schedule staggered entries, and organise queues with barriers and clear signage. Use real-time monitoring tools like CCTV and AI-based systems to manage crowd density.
- **Improved Infrastructure and Emergency Readiness:** Design venues with wide pathways, multiple exits, and clear evacuation routes. Provide on-site medical facilities and train staff in crowd control, first aid, and emergency response.
- **Public Awareness and Technology Use:** Educate attendees on safety protocols, and use digital tools like online ticketing and mobile alerts to prevent physical queues and guide the crowd calmly during emergencies.

6. India's journey so far on the AI military bandwagon

- India has started leveraging AI to bolster its defence ecosystem, but significant challenges remain.

Strategic implications of AI integration in India's defence

- **Enhanced Military Capabilities:** The integration of AI is expected to revolutionize military operations through improved predictive analytics, autonomous decision-making systems, and advanced operational efficiency.
- **Modernization Focus:** With a defence budget of ₹6.21 lakh crore ($75 billion) for 2023-24, India is prioritizing modernization efforts, including the development of innovative products like the Indrajaal autonomous drone security system.
- **Global Competitiveness:** To keep pace with countries like Israel and China that have rapidly advanced their military AI capabilities, India recognises the need for a clear vision and strategy for AI deployment in defence.

How does India plan to overcome challenges in implementing AI in military operations?

- **Funding and Infrastructure:** A significant barrier to effective AI integration is the high cost of data centres and the infrastructure necessary for running advanced AI systems. The military's focus on replacing outdated legacy systems adds to financial pressures.

- **Fragmented Policies:** India's current policies regarding AI deployment are often fragmented, lacking comprehensive guidelines specifically tailored for military applications. Existing frameworks do not adequately address accountability and transparency in military AI use.
- **Inter-Service Silos:** The historically siloed nature of the Indian Armed Forces—where the Army, Navy, and Air Force operate independently—hinders interoperability and complicates joint operations.

What role does collaboration between the public and private sectors play in advancing AI in defence?

- **Public-Private Partnerships (PPPs):** To enhance technological advancements in defence, India needs to foster collaboration between public sector units (PSUs) and private entities. This approach can leverage the innovation capabilities of startups and private companies.
- **Knowledge Sharing:** Collaborations with foreign tech giants like Microsoft, which has committed approximately $3 billion to develop data centres in India, can facilitate knowledge transfer and resource sharing essential for building a robust AI ecosystem.
- **Accelerating Innovation:** Engaging private sector expertise can lead to faster development cycles and more effective deployment of AI technologies within the military framework.

Way forward:

- **Strengthen Policy Frameworks and Coordination:** Develop cohesive and actionable policies for AI deployment in defence, focusing on inter-service interoperability, accountability, and transparency while operationalizing bodies like DAIC and DAIPA effectively.
- **Promote Public-Private Collaboration:** Enhance public-private partnerships (PPPs) to leverage private innovation and attract foreign investments, ensuring resource optimization and accelerated AI adoption in military operations.

7. Is groundwater contamination high in India?

- The Central Ground Water Board (CGWB) found that many states in India are facing a serious problem with high nitrate levels in groundwater.

Contaminants

- The assessment of India's groundwater quality has identified several significant contaminants, primarily driven by agricultural practices,

industrial activities, and natural geological factors. The key contaminants include:

- **Nitrates:** Excessive use of nitrogen-based fertilizers in agriculture leads to high levels of nitrates in groundwater. This is the most prevalent contaminant, with over 56% of India's districts reporting nitrate levels exceeding the safe limit of 45 mg/l.
- **Fluoride:** Fluoride contamination is a major concern, particularly in states like Rajasthan, Haryana, and Karnataka. Approximately 9.04% of tested groundwater samples had fluoride levels above the permissible limit of 1.5 mg/l.
- **Arsenic:** Naturally occurring arsenic in certain geological formations poses serious health risks, particularly in alluvial plains where industrial activities may exacerbate contamination.
- **Uranium:** Elevated uranium levels have been detected in several regions, with about 6.60% of samples exceeding the safe limit of 30 ppb (parts per billion). States like Rajasthan and Punjab report significant uranium contamination.
- **Iron:** High concentrations of iron affect groundwater quality and can lead to aesthetic issues and potential health risks when consumed in large amounts.

Other Heavy Metals: Contaminants such as lead, cadmium, mercury, and chromium are also present due to industrial discharges and improper waste management.

What was the state of groundwater in 2024?

- **Overall Extraction Rate:** The degree of groundwater extraction across the country was reported at approximately 60.4%, indicating that this level has remained relatively stable compared to previous years. This figure reflects the percentage of groundwater resources being utilized versus what is available for extraction.
- **Safe Blocks:** About 73% of groundwater blocks were categorized as 'safe,' meaning they are adequately replenished to meet extraction demands. This represents a slight increase from previous assessments.
- **Recharge and Availability:** Total annual groundwater recharge was noted to have decreased marginally from 449 BCM (Billion Cubic Meters) in 2023 to 446.90 BCM in 2024.
  - The annual extractable groundwater resources slightly declined from 407.21 BCM to 406.19 BCM.
- **Contamination Issues:** Despite improvements in some areas, challenges remain, particularly with nitrate contamination, where 440 districts were identified as having excessive nitrate levels in their groundwater.

What happens if nitrate presence is high in groundwater?

- **Health Risks:** Elevated nitrate levels can cause methemoglobinemia, also known as "blue baby syndrome," particularly in infants under six months old. This condition reduces the blood's ability to carry oxygen, resulting in a bluish tint to the skin and potentially severe health complications if untreated.
- **Environmental Concerns:** Excessive nitrates contribute to algal blooms in surface water bodies, which can deplete oxygen levels, harm aquatic ecosystems, and disrupt the balance of marine life.

Way forward:

- **Sustainable Agricultural Practices**: Promote the use of organic fertilizers, precision farming techniques, and regulated use of nitrogen-based fertilizers to minimize nitrate leaching into groundwater.
- **Strengthened Monitoring and Remediation**: Expand digital groundwater monitoring networks, enforce strict industrial discharge regulations, and implement remediation techniques like bioremediation and constructed wetlands to mitigate contamination.

8. Bharat Cleantech Manufacturing Platform

- Union Minister of Commerce & Industry has unveiled the Bharat Cleantech Manufacturing Platform at the Bharat Climate Forum 2025 in New Delhi.

Bharat Cleantech Manufacturing Platform

- It is an initiative aimed at strengthening **cleantech value chains** in sectors such as **solar, wind, hydrogen**, and **battery storage**.
- It aims to position India as a **global leader in sustainability and cleantech manufacturing**, creating a compelling business case for international investors.
- **Key features include:**Provides a **platform for manufacturing** scale-up and knowledge sharing.Aims to **make India a compelling business destination** for cleantech investors.Supports India's **target of 500 GW of clean energy** capacity **by 2030**.

Bharat Climate Forum 2025

- The Forum was organized in New Delhi as a platform for policymakers, industry leaders, and stakeholders to discuss **climate action and clean energy solutions**.

- The forum aims to align India's clean energy initiatives with global climate goals, particularly under the **United Nations Framework Convention on Climate Change (UNFCCC)** and the Paris Agreement.
- A key focus of the forum was the launch of the **Bharat Cleantech Manufacturing Platform**, designed to promote sustainable development and clean energy adoption in India.
- Discussions emphasized India's commitment to achieving **500 GW of clean energy capacity** by 2030 and highlighted the progress India has made in meeting its **Nationally Determined Contributions (NDCs)**.
- The forum celebrated India's early achievement of its **2022 renewable energy targets**, with renewable energy capacity reaching 200 GW eight years ahead of schedule.The event focused on the **3S principles—Speed, Scale, and Skill**—as cornerstones of India's renewable energy program, ensuring swift implementation, large-scale adoption, and skill development.

9. India's Initiatives for Sovereign AI:

- **Denmark** has become the latest country to actively pursue **sovereign AI**, in a bid to boost domestic research and competitiveness. Following this example and leveraging the momentum of **Digital India**, India's leadership will be instrumental in driving the nation's Sovereign AI ambition.

Sovereign AI

- **Sovereign AI** refers to a nation's autonomous ability to develop, deploy, and regulate **Artificial Intelligence (AI)** technologies that align with its unique **data, values, and governance priorities**.
- It ensures national control over AI systems, protecting economic and national security interests while fostering innovation.
- **Key Features of Sovereign AI include:**
  - **Self-reliance:** Develops AI systems tailored to national requirements, ensuring minimal dependency on external technologies.
  - **National Security:** Protects critical data and infrastructure from external threats or misuse.
  - **Cultural Alignment:** Embeds a nation's values, language, and societal norms into AI frameworks.
  - **Global Competitiveness:** Enhances economic growth and innovation through domestic AI capabilities.

Proposed AI Strategy for India (GovAI + Private AI = Sovereign AI):

- India's proposed AI strategy focuses on leveraging **Digital Public Infrastructure (DPI)** like Aadhaar and UPI to develop **GovAI (Government AI)** for efficient and predictive public services.
- It emphasizes **data sovereignty**, transforming anonymized DPI data into AI training material while ensuring national control.
- The strategy promotes **public-private collaboration** to build domain-specific Small Language Models (SLMs) that evolve into advanced Large Language Models (LLMs).
- **Skill development** through Regional Centres of Excellence (RCoE) aims to create a robust AI talent pool.
- This strategy aligns with India's vision of becoming a global leader in **trusted and inclusive AI**, enhancing economic growth and national security.

India's Initiatives for Sovereign AI:

- India's initiative for **Sovereign AI** builds on its **Digital India** framework, leveraging platforms like Aadhaar, UPI, and DigiLocker to create **GovAI (Government AI)** for efficient public services.
- It utilizes DPI platforms such as Aadhaar, UPI, DigiLocker, and CoWIN.
- Domain-Specific AI Models that India seeks to build: Builds **Small Language Models (SLMs)** for specific public service areas like education, healthcare, agriculture, and social welfare.SLMs evolve into **Large Language Models (LLMs)** for advanced, intersectional governance insights.
- The **India Datasets Programme** transforms anonymized data into resources for AI training while ensuring **data sovereignty**.

10 . VP calls for authentic, practical research

- Vice President Jagdeep Dhankhar stressed the need for genuine research and innovation that can bring real change. He called for indigenisation beyond basic levels and highlighted the role of patents and technology in making India a global leader.
- Authentic and practical research is genuine, cutting-edge, and impactful, addressing real-world challenges, driving innovation, and creating lasting change by advancing knowledge and delivering meaningful, applicable solutions to societal needs.

India's status in patents and technology

- **Global Position:** India has secured the **sixth position** globally in patent filings, as reported by the **World Intellectual Property Organization (WIPO)** in the World Intellectual Property Indicators (WIPI) 2024 report. This marks a notable achievement as India enters the top ten for the first time across all

three major intellectual property rights: patents, trademarks, and industrial designs.

- **Growth Rate:** In 2023, India recorded a 15.7% increase in patent applications, totaling 64,480 filings. This growth is part of a broader trend, marking the fifth consecutive year of double-digit growth in patent applications.

"Authentic and practical research"

- **Authenticity**: The Vice President stressed that research must be genuine and not merely superficial. Authentic research should correlate with real-world changes and have lasting significance rather than being momentarily relevant before gathering dust on shelves.
- **Cutting-edge Nature**: He called for research that is at the forefront of innovation, pushing boundaries rather than just covering existing knowledge.
- **Practical Impact**: The Vice President emphasized that research should aim to change ground realities, making it essential for it to be applicable and impactful in society.

How can India improve its research and development (R&D) landscape?

- **Focus on Patents**: The Vice President pointed out that India's contribution to global patents is lacking. He urged a shift towards more consequential fields of research that can enhance India's standing in the global community.
- **Nurturing Startups**: He called for supporting domestic startups and indigenous component development, suggesting that established companies like BEL should help these startups thrive by providing guidance and resources.
- **Educational Reform**: Emphasizing the need to instill a spirit of innovation in students, he noted that educational institutions should foster creativity and practical skills rather than merely focusing on degrees.

What are the initiatives to improve the Research Ecosystem in India?

- **Encouraging Corporate Involvement**: The Vice President highlighted the necessity for corporates to take initiative in R&D, suggesting that they converge on a platform to significantly boost research efforts.
- **Leading in Semiconductors**: He urged BEL to lead the semiconductor revolution from design to manufacture, indicating a strategic direction for enhancing technological capabilities in India.

Barriers to effective research in India

- **Superficial Research Output**: The tendency to produce research that lacks depth and practical application is a significant barrier. The Vice President

criticized research papers that are presented but quickly forgotten, calling for more substantial contributions.

- **Limited Global Recognition**: He noted that much of India's research does not achieve recognition at an international level, which undermines its potential impact.
- **Awareness of Opportunities**: Many young individuals remain unaware of the diverse opportunities available beyond traditional government jobs, limiting their engagement with innovation and entrepreneurship.

Way forward:

- **Strengthening Industry-Academia Collaboration**: Foster partnerships between academic institutions and industries to ensure research is aligned with practical needs, enhancing innovation and commercialisation opportunities.
- **Incentivizing High-Impact Research**: Establish grants, rewards, and global recognition programs for researchers focusing on cutting-edge and transformative fields, driving significant contributions to India's R&D landscape.

11. Production Linked Incentive (PLI) Scheme 1.1

- Union Minister for Steel and Heavy Industries has inaugurated the **second round** of the Production Linked Incentive (PLI) Scheme for **Specialty Steel**, termed **PLI Scheme 1.1.**

PLI Scheme 1.1

- It is built upon the earlier round of the PLI scheme to enhance **domestic manufacturing of high-value steel**, reduce imports, and boost India's global steel market position.
- **5 specialty steel categories** are considered:
    1. Coated/Plated Steel Products for appliances, construction, and automotive sectors.
    2. High Strength/Wear-Resistant Steel for infrastructure, mining, and heavy machinery.
    3. Specialty Rails for railways and metros.
    4. Alloy Steel Products and Steel Wires for industrial uses.
    5. Electrical Steel (CRGO and others): **Cold-Rolled Grain-Oriented Steel**, essential for power transformers and electrical applications.
- It covers production from **FY 2025-26 to FY 2029-30** and operates within the original **budget of ₹6,322 crore**.
- **Changes introduced in PLI Scheme 1.1**:

- o **Investment and capacity thresholds reduced**: **For CRGO Steel:** Investment threshold lowered to ₹3,000 crore; capacity threshold to 50,000 tonnes.**Encourages CRGO production** as a strategic priority under Atmanirbharta.
  - o **Carry-forward provision**: Excess production in one year can offset shortfalls in another, ensuring optimal incentive distribution.
  - o Companies investing in **capacity augmentation** can participate; thresholds reduced to 50% of original requirements.
  - o **Simplified guidelines**: Revised to improve accessibility and encourage industry participation.

PLI Scheme 1.0

- **Launched in March 2020**, it aimed to boost domestic manufacturing, reduce imports, and create jobs in key sectors.
- Initially focused on **three industries** (mobile manufacturing, electrical components, and medical devices) but later **expanded to 14 sectors**, including electronics, pharmaceuticals, and textiles.
- Provided **1%–4% incentives** on incremental sales over the base year, with a **₹7,350 crore** outlay for IT hardware.
- Had an **estimated investment** target of **₹2,500 crore** (IT hardware) but did **not specify** details on job creation.
- Served as a **cornerstone for Atmanirbhar Bharat**, promoting self-reliance and innovation in India's manufacturing ecosystem.

PLI Scheme 2.0

- **Launched in May 2023**, it specifically focuses on **IT hardware** (laptops, tablets, servers, PCs) to enhance global competitiveness.
- Comes with a **higher budget** of **₹17,000 crore** (for IT hardware) over a **6-year** duration.
- Incentivizes local manufacturing with ~**5% incentives** on incremental sales, alongside **additional benefits** for components like memory modules and SSDs.
- Targets **₹2,430 crore** in investment, **₹3.35 lakh crore** in production, and **$12–17 billion** in exports by 2025–26.
- Seeks to create **75,000 direct jobs** and up to **2 lakh** indirect jobs, offering different incentive caps for global, hybrid, and domestic companies.

12. Key Achievements of 9Years of Startup India

- On **January 16 (National Startup Day), 2025,** India marks 9 successful years of Startup India, a flagship initiative that has revolutionized the entrepreneurial ecosystem in the country.

Startup India Initiative

- **Startup India** is a flagship initiative launched by the Government of India on **January 16, 2016**, to create a robust ecosystem for nurturing startups and innovation.
- It aims to **drive economic growth** and **generate large-scale employment opportunities**, with a focus on empowering entrepreneurs through innovation and regulatory support.
- The PM first announced the initiative on **August 15, 2015**, during his Independence Day address at Red Fort, New Delhi.
- The program aims to establish **75+ startup hubs** across India and encourages entrepreneurship in **Tier-2 and Tier-3 cities**. A related scheme, **Stand-Up India**, was launched on **April 5, 2016**, to facilitate loans between ₹10 lakh to ₹1 crore for **SCs, STs and women entrepreneurs** to establish **Greenfield enterprises**.
- The program emphasizes the **3 Cs—Capital, Courage, and Connections**, which Prime Minister Modi identifies as essential for entrepreneurial success.
- It seeks to **eliminate restrictive policies**, including those related to License Raj, foreign investment proposals, and land permissions, ensuring ease of doing business.

Key Achievements of Startup India

- India is the **third-largest startup hub globally**, following the United States and China.
- **DPIIT-recognized startups** grew from **500 in 2016** to **1,59,157 by January 2025**.
- **Women-led startups** accounted for **73,151 entities as of October 2024**, with 48% of startups having at least one woman director by December 2023.
- Startups have generated **16.6 lakh direct jobs** from 2016 to October 2024.
- Over **50% of startups** originated from **Tier-2 and Tier-3 cities**, including emerging hubs like Indore, Jaipur, and Ahmedabad.

Key Government Initiatives for Startups:

- **Startup India Seed Fund Scheme (SISFS), 2021:** Provides financial assistance to early-stage startups for proof of concept, prototype development, product trials, market entry, and commercialization.

- o Total allocated amount: **₹945 crore** for startups over a four-year period.
- **Credit Guarantee Scheme for Startups (CGSS), 2022:** Offers collateral-free loans to startups through Scheduled Commercial Banks, NBFCs, and SEBI-registered AIFs.
  - o Covers **loans up to ₹10 crore** for eligible startups.
- **Fund of Funds for Startups (FFS), 2016:** Established with a **₹10,000 crore corpus** to provide funding support to startups through SEBI-registered Venture Capital Funds.
  - o By 2024, **₹7,980 crore** was committed to **99 Alternative Investment Funds (AIFs)**, benefiting over **800 startups**.
- **BHASKAR (Bharat Startup Knowledge Access Registry), 2024:** A centralized platform aimed at streamlining interactions within India's entrepreneurial ecosystem.
  - o Fosters innovation, collaboration, and startup growth through knowledge-sharing and networking.
- **Startup Village Entrepreneurship Program (SVEP):** A sub-component of the National Rural Livelihood Mission (NRLM), implemented by the Ministry of Rural Development.
  - o Supported **3,02,825 enterprises** as of 2024, creating **6,26,848 jobs**.
- **TIDE 2.0 (Technology Incubation and Development of Entrepreneurs):** Focuses on supporting startups in emerging technologies like **AI, IoT, and Blockchain**.
  - o Established **51 incubators** and supported **1,235 startups**.
- **GENESIS (Gen-Next Support for Innovative Startups), 2024:** Aims to boost startups in **Tier-II and Tier-III cities**.
  - o Total outlay: **₹490 crore** over five years, targeting over **1,500 startups**.
- **Atal Innovation Mission (AIM):** Operates under NITI Aayog to foster innovation and entrepreneurship through the establishment of **Atal Incubation Centers (AICs)**.
  - o Provides physical infrastructure and mentorship for startups to scale effectively.
- **Startup Mahakumbh:** A flagship event organized to bring together startups, unicorns, investors, and industry leaders.
  - o First edition in 2019 saw over **500 participants**; the fifth edition is scheduled for **March 7-8, 2025**, in New Delhi.

13. India successfully tests Indian Army's first 'Bhargavastra' counter-drone micro missiles

- India has achieved a significant milestone in defense technology by successfully testing its first domestically developed **Bhargavastra micro-missile system**, designed to counter **swarm drone threats**.

Bhargavastra

- **Bhargavastra** is India's **first micro-missile-based counter-drone system**, developed to address the increasing threat posed by **swarm drones**.
- It is capable of detecting and neutralizing **small aerial vehicles** at ranges exceeding **6 km**.
- Developed by **Economic Explosives Ltd**, the system is designed for the **Indian Army**, with interest also expressed by the **Indian Air Force**.
- The system is tailored to provide a **cost-effective solution** for countering drone threats while preserving advanced air defense systems for larger challenges.

Features of the Bhargavastra Missile System

- **Detection Range:** Can detect **small aerial vehicles** at distances greater than **6 km**.
- **Neutralization Capability:** Employs **guided micro munitions** to engage and destroy drone targets.
- **Simultaneous Launches:** Capable of launching over **64 micro missiles simultaneously**, enabling effective countermeasures against **swarm formations**.
- **Mobile Platform:** Mounted on a **mobile platform** for rapid deployment in diverse terrains, including **high-altitude regions**.
- **Versatile Design:** Engineered to operate across varied terrains, meeting the specific requirements of the Indian military.

14. Central Suspect Registry?

- In just three months since its launch, the **Central Suspect Registry (CSR)** has successfully declined over **6 lakh fraudulent transactions**, saving **₹1,800 crore**, according to the Ministry of Home Affairs (MHA).

Central Suspect Registry (CSR)

- The CSR aims to strengthen **fraud risk management** by maintaining a comprehensive registry of cybercrime suspects.
- It contains data on **1.4 million cybercriminals** linked to financial fraud and other cybercrimes.
- The registry was created by the **Indian Cyber Crime Coordination Centre (I4C)** under the Ministry of Home Affairs.
- The registry is accessible to **states, Union Territories, central investigation agencies, intelligence agencies**, and **financial institutions**.

- Developed with **inputs from banks and financial institutions**, the CSR serves as a central database consolidating cybercrime-related data.

Significance of the CSR:

- **Integration with NCRP:** Uses data from the **National Cybercrime Reporting Portal** to identify potential cybercriminals.
- **Fraud Detection and Prevention:** Helps financial institutions and law enforcement agencies identify and block fraudulent activities.
- **Support from Financial Entities:** The **RBI** has directed all banks to integrate the registry into their systems for fraud prevention.
- **Impact:**
  - Over **6.10 lakh fraudulent transactions** blocked, saving **₹1,800 crore** as of December 1, 2024.
  - **8.67 lakh mule accounts** frozen by banks and financial intermediaries.
  - **7 lakh SIM cards** and **1.4 lakh mobile devices** blocked.
  - Financial fraud transactions amounting to **₹3,850 crore** saved since 2021 through the **Citizen Financial Cyber Frauds Reporting and Management System**.
  - **1,03,151 suspicious online content items** blocked under the powers conferred by the **Information Technology Act, 2000**.

15. Can Bhopal waste be safely disposed of

- The Madhya Pradesh High Court gave authorities four weeks to dispose of the waste, nearly 40 years after the gas disaster that killed over 4,000 people and left thousands more injured or disabled.

Plans for the hazardous gas leak waste

- **Waste Transportation:** The Madhya Pradesh government has successfully transported 358 tonnes of hazardous waste from the Union Carbide facility in Bhopal to the Treatment, Storage, and Disposal Facility (TSDF) in Pithampur, Dhar district, following a court order.
- **Incineration Process:** The waste will be incinerated at the Pithampur facility, with an initial timeline of three to nine months for complete disposal, depending on emissions and safety assessments during the process.
- **Emission Controls:** To mitigate air pollution, the incinerator will utilize four-layer special filters to ensure that the smoke emitted does not contaminate the surrounding environment.
- **Post-Incineration Measures:** After incineration, the resulting ash will be covered with a two-layer membrane and buried in a landfill to prevent any contact with soil and water sources.

- **Expert Supervision:** The entire disposal process will be overseen by officials from the Central Pollution Control Board and State Pollution Control Board, ensuring compliance with safety regulations and environmental standards.

How much has been allocated to incinerate the waste and deposit the residue at a landfill in Pithampur?

- The Central government has allocated ₹126 crore (approximately $15 million) to facilitate the incineration of this waste and ensure that any resulting residue is safely deposited in a landfill at the Pithampur facility.

Why have there been protests?

- **Health and Environmental Fears:** Residents are worried that the incineration of toxic waste will pose significant health risks and environmental hazards to the local population and surrounding areas, with claims that it could lead to harmful emissions affecting air quality.
- **Historical Context:** The protests are fueled by the legacy of the 1984 Bhopal gas tragedy, which resulted in thousands of deaths and long-term health issues. This history has heightened sensitivity to any activities involving hazardous materials in the region.
- **Community Mobilization:** Local organizations, such as the **'Pithampur Bachao Samiti'**, have organized bandhs (shutdowns) and demonstrations, leading to widespread participation from residents who are calling for the waste to be returned to Bhopal instead of being incinerated locally.

Way forward:

- **Strengthen Public Engagement and Transparency**: Conduct comprehensive awareness campaigns involving scientific experts to address community concerns, ensuring transparent communication about safety measures, emission controls, and environmental safeguards during the incineration process.
- **Enhance Monitoring and Compliance**: Implement stringent real-time monitoring of emissions and groundwater quality during and after waste disposal, supervised by independent experts and regulatory bodies, to uphold environmental and public health standards.

16. What is Dark Oxygen?

- Deep-sea researchers have initiated a groundbreaking project to explore **dark oxygen**, a form of oxygen produced in complete darkness on the ocean floor.

Dark Oxygen

- Dark oxygen refers to **oxygen produced at extreme ocean depths** without the involvement of **photosynthesis**.
- This process occurs in **total darkness** on the ocean floor, challenging the traditional understanding that sunlight is necessary for oxygen generation.
- It was first discovered in **2024** by researchers studying deep-sea environments.
- The strange **nodules** found at a depth of **13,000 feet** act like **natural batteries**, splitting water molecules into oxygen and hydrogen using **electrical charges**.
- These nodules **function in areas where light does not penetrate**, under extreme pressure and low-temperature conditions.
- **Occurrence:** Found in specific **deep-sea zones**, particularly in regions characterized by **unique electrochemical activity**. **Occurs in places** previously considered **incapable of supporting oxygen production**.

Features and Significance of Dark Oxygen:

- Unlike traditional oxygen production, dark oxygen does not rely on **photosynthesis** or **sunlight**.
- It is driven by **electrochemical reactions** occurring naturally in the ocean floor.
- Strange **nodules** on the ocean floor possess an **electric charge**, enabling them to split water molecules into oxygen and hydrogen.
- The process releases **hydrogen**, which could potentially serve as an **energy source** for microbial life in these regions.

17. ISRO's 100th launch: why this is significant?

- In its first launch of 2025, the Indian Space Research Organisation achieved the milestone of 100 launches.

100th launch signify for India's space capabilities

- The 100th launch underscores ISRO's growth since its establishment in 1969, showcasing its evolution into a reliable launch partner for both domestic and international satellites.

- **Technological Advancement:** This launch utilized an indigenous cryogenic engine, highlighting India's advancements in rocket technology. The GSLV series has been instrumental in increasing payload capacity and efficiency during satellite launches, contributing to ISRO's reputation as a formidable player in the global space arena.
- **Contribution to Navigation Systems:** The NVS-02 satellite is part of India's Navigation with Indian Constellation (NavIC) system, which enhances India's capabilities in terrestrial, aerial, and maritime navigation. This satellite will replace the IRNSS-1E satellite and improve the accuracy and reliability of navigation services across India and surrounding regions.

Future plans for ISRO following this milestone

- **Ambitious Missions:** Following this milestone, ISRO aims to undertake several high-profile missions, including a **sample return mission from the Moon, a mission to Venus,** and the **establishment of an Indian space station.** These initiatives are part of ISRO's broader goal to expand its capabilities and presence in space exploration.
- **Next Generation Launch Vehicle (NGLV):** ISRO is developing a heavier rocket called the NGLV, which will be capable of carrying up to **30,000 kg to low Earth orbit.** This vehicle will feature a reusable first stage to enhance cost-effectiveness in launches.
- **Expansion of Infrastructure:** Plans are underway to build a **third launch pad at Sriharikota** to accommodate increased launch frequency and support human spaceflight missions alongside commercial launches.

How will private sector involvement shape ISRO's future missions?

- **Collaboration and Innovation:** The PSLV-C60 mission exemplified successful collaboration between ISRO and private startups, allowing non-government entities to deploy payloads for in-orbit experiments. This initiative fosters innovation by enabling startups to test their technologies using ISRO's infrastructure, thereby reducing costs and encouraging diverse contributions to India's space capabilities.
- **Transitioning Operational Responsibilities:** ISRO aims to transfer more operational tasks to private companies, allowing them to manage activities traditionally handled by the agency. This shift is intended to increase

efficiency and scalability within the space sector, empowering private entities to take on significant roles in satellite launches and other space activities, thus expanding India's overall capabilities.

- **Commercialization of Space Activities:** The government has focused on increasing India's share of the global space economy from 2% to 10% over the next decade through public-private partnerships.

Way forward:

- **Strengthening Public-Private Synergy:** ISRO should continue fostering collaboration with private players by expanding access to launch infrastructure, streamlining regulatory frameworks, and incentivizing innovation through initiatives like IN-SPACe and NSIL.
- **Focus on Heavy-Lift and Reusability:** Prioritizing the development of the Next Generation Launch Vehicle (NGLV) with reusable technology will enhance cost-effectiveness, positioning India as a competitive player in the global commercial space sector.

18. What is U.S.'s new rule for exporting AI chips?

- The U.S. Bureau of Industry and Security (BIS) created a system with different levels to control the sale and export of AI chips and technology more effectively.

Main objective behind one of the last orders of the Biden administration

- **National Security and Foreign Policy:** The primary goal of the BIS regulations is to enhance control over the circulation of advanced AI technology and chips to align with U.S. national security and foreign policy interests. The regulations aim to prevent sensitive technologies from reaching adversarial nations, thereby mitigating risks associated with military advancements and cyber operations.

- **Secure Technology Ecosystem:** The regulations are designed to cultivate a secure and trusted technology ecosystem that promotes the responsible use and diffusion of AI technologies, ensuring that advanced AI capabilities do not fall into the hands of U.S. adversaries.

How will the tiered framework for licensing and exporting Artificial Intelligence chips work?

- **Three-Tier System:** The new regulations categorize countries into three tiers based on their relationship with the U.S.:

o **Tier 1:** No restrictions for exports to 18 U.S. allies, including Australia, Canada, and Japan.
o **Tier 2:** Countries like China and India face caps on volumes and require **Validated End User (VEU)** authorization for transactions contributing to advanced AI development.
o **Tier 3:** Arms-embargoed countries such as North Korea and Iran have no access to advanced AI technology.

How has the tech industry responded to the move?

- **Concerns Over Competitiveness:** Major tech companies, including NVIDIA and Oracle, have expressed apprehension that these regulations could undermine U.S. competitiveness in the global tech landscape. They argue that restricting access to widely available technologies may not enhance security but instead hinder innovation.
- **Call for Revisions:** Industry leaders hope that the incoming administration will reconsider or withdraw these regulations, citing potential disruptions to business operations and global supply chains.

Will it affect the Indian Economy?

- **Impact on AI Growth:** As India invests heavily in its National AI Mission, which aims to develop infrastructure with over 10,000 GPUs through a ₹10,000 crore investment, the restrictions could pose substantial challenges in scaling up AI capabilities post-2027. The limits on GPU imports may deter innovation and slow down the growth of India's tech sector.
- **Potential Delays in Infrastructure Development:** Major data center providers in India, such as Tata Communications and CtrlS, may face delays or downsizing of their plans due to restricted access to GPUs. This could place Indian companies at a competitive disadvantage compared to their U.S. counterparts.
- **India's Exclusion from Trusted Allies**: India is not included in the list of trusted U.S. allies due to concerns over the leakage of chips to countries like Russia.

Way forward:

- **Strengthen Domestic AI Capabilities**: India should accelerate the development of indigenous AI technologies and chips to reduce reliance on foreign imports, invest in local R&D and foster partnerships with global tech firms for technology transfer.
- **Diversify Global Alliances**: India could strengthen its technological partnerships with countries outside the U.S. and explore alternative markets

to source AI chips, ensuring the diversification of its supply chains to mitigate the impact of export restrictions.

19. The Union Budget as a turning point for climate action

- Everyone will be watching Finance Minister Nirmala Sitharaman on February 1 as she presents the FY26 Budget, which needs to focus on climate issues and help India reach its Net-Zero goal by 2030.

How will the proposed climate finance taxonomy influence investment in sustainable projects?

- **Standardization and Clarity:** The proposed climate finance taxonomy will standardize definitions of green finance, providing clarity and reducing ambiguity for investors. This will help in distinguishing genuinely sustainable projects from those that are not, thereby building investor confidence.
- **Increased Investment:** By standardizing green finance definitions, the taxonomy can attract a significant portion of the ₹162.5 trillion ($2.5 trillion) needed to achieve India's Nationally Determined Contributions (NDCs) by 2030. This is crucial for scaling up investments in sustainable projects.
- **Market Readiness:** The taxonomy will necessitate the development of institutional and technical infrastructure, including market readiness programs, verification systems, and capacity building of financial institutions. This will create a robust ecosystem for green investments.
- **Differential Tax Treatment:** The Budget could introduce differential tax treatment for investments aligned with the taxonomy, making green investments more attractive compared to conventional ones.

What specific measures are needed to incentivize green investments in the upcoming budget?

- **Expanding PLI Schemes for Solar Module Supply Chain**: India's domestic solar module manufacturing capacity stands at 18-20 GW, while the annual demand is 30-35 GW. Imported solar panels are 65% cheaper than domestically produced ones. So, need to expand the scope of PLI schemes can enhance domestic capacity and reduce dependency on imports.
- **Public-Private Partnerships for Railway Renewable Energy**: Indian Railways has 51,000 hectares of land available for renewable energy projects, yet only 142 MW of solar capacity has been installed so far, against a potential of 5 GW. Public-private partnerships can unlock this potential and align with the Railways' decarbonization goals.

- **Establishing a Climate Action Fund for CBAM Compliance**: India's exports of CBAM-covered products to the EU amount to $8.22 billion annually. MSMEs, which contribute 30% of GDP and 45% of exports, often lack resources for decarbonization. A dedicated Climate Action Fund could support MSMEs in meeting compliance requirements and maintaining competitiveness.
- **Fiscal Allocations for the RESCO Model**: Only 6.34 lakh (4.37%) of 1.45 crore registrations under the PM Surya Ghar Muft Bijlee Yojana have been completed. Additionally, 60% of Indian households find rooftop solar installations unaffordable due to upfront costs. The RESCO model can help by enabling financing solutions to bridge this affordability gap.
- **Tax Deductions and Depreciation Benefits for Circular Economy**: India generates 62 million tonnes of waste annually, with only 30% being recycled. Transitioning to a circular economy could contribute ₹40 lakh crore ($624 billion) annually by 2050. Tax incentives and accelerated depreciation benefits can encourage private sector participation in recycling and resource efficiency.

(Way forward)

- **Sovereign Green Bond Framework:** Establish a sovereign green bond framework specifically for financing circular economy infrastructure, ensuring that funds are allocated transparently and used for their intended purposes.
- **Verification Systems:** Implement robust verification systems to ensure that projects funded through green finance taxonomy are genuinely sustainable and meet the required environmental standards.
- **Capacity Building:** Invest in capacity building of financial institutions to effectively implement the climate finance taxonomy, including training programs and technical support.
- **Government Expenditure Classification:** Commit to classifying government expenditure according to green criteria, ensuring that public funds are directed towards sustainable projects.
- **Regular Reporting and Audits:** Mandate regular reporting and audits of climate-related expenditures and projects to ensure accountability and transparency. This will help in tracking progress and making necessary adjustments to policies and allocations.

20. DGFT launches enhanced eCoO 2.0 System

- The Directorate General of Foreign Trade (DGFT) has launched the enhanced Certificate of Origin (eCoO) 2.0 system, a major upgrade aimed at simplifying export certification and improving trade efficiency.

eCoO 2.0 System

- The **eCoO 2.0 system** is a **digital platform** launched by the **Directorate General of Foreign Trade (DGFT)** to simplify and streamline the issuance of **Non-Preferential Certificates of Origin (CoO)**.
- Effective **January 1, 2025**, exporters must **electronically file CoO applications** through this platform.
- It aligns with India's **Ease of Doing Business** initiative by improving **trade facilitation, digital authentication, and document processing**.

Key Features of the eCoO 2.0 System

- Exporters must submit **Non-Preferential Certificates of Origin (CoO)** online.
- Allows exporters to authorize multiple users under a **single Importer Exporter Code (IEC)**.
- **Aadhaar-based e-Signing** provides an alternative to **Digital Signature Tokens**, enhancing security and ease of use. Offers **real-time access** to eCoO services, Free Trade Agreement (FTA) details, trade events, and notifications.
- Exporters can request **In-lieu CoO** for rectifications on previously issued CoOs.
- The system handles **7,000+ eCoOs daily**, integrating **125 issuing agencies, 110 chambers of commerce, and 650+ issuing officers**.

Significance of the eCoO 2.0 System

- Reduces manual paperwork and speeds up export documentation.
- Digitally signed CoOs prevent **fraudulent certifications** and ensure **traceability**.
- Facilitates smoother **re-exports, trans-shipments, and intermediary trade**, boosting India's position in **global supply chains**.
- Faster approvals help exporters comply with international trade agreements, enhancing **competitiveness**.
- Aligns with India's push for **paperless trade**, reinforcing **DGFT's trade facilitation** efforts.