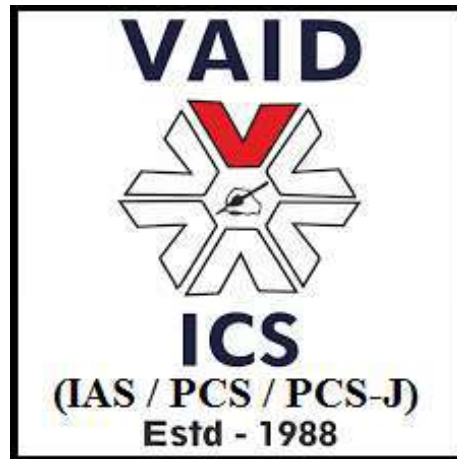


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USA's "Gold Card" Visa Program

Why in News ? A new visa program called “Gold Card” has been announced by Donald Trump, aimed at foreign investors seeking permanent residency and a pathway to American citizenship.

- **Price:** \$5 million flat fee.
- **Privileges:** Green Card benefits plus a direct route to citizenship.

Replacement for EB-5 Program:

- **EB-5 Program Overview:**
- Introduced in 1990, it required a minimum investment of \$1.05 million (\$800,000 in targeted areas).
- Investors had to create at least 10 jobs for Americans.

Gold Card Highlights:

- No requirement for investment in American businesses.
- No job creation requirement.
- Simpler model: Pay a flat fee of \$5 million.

Benefits to the US:

- **Economic Stimulus:** High-net-worth individuals may invest in real estate, luxury markets, and businesses.
- **Reduced Fraud:** Eliminates complexities and risks of fraud that plagued the EB-5 program.

Impact on Indians:

- **Low EB-5 Uptake:** Only **631 Indians** obtained Green Cards under the EB-5 program in 2023.
- **High Cost Barrier:** With a price of **₹43+ crore** (\$5 million), it is unlikely to appeal to many Indian investors.

Immigrant and Non-Immigrant Visas:

The United States offers various types of visas based on the applicant's purpose and requirements. These visas are broadly categorized into **Immigrant Visas** and **Non-Immigrant Visas**.

Immigrant Visas:

- These visas are for permanent residency, leading to obtaining a Green Card and eventually U.S. citizenship.

Visa Waiver Program (VWP):

- Allows citizens of specific countries to travel visa-free for up to 90 days.

TN Visa:

- For citizens of Canada and Mexico under NAFTA agreements.

T & U Visas:

- **T Visa:** For victims of human trafficking.
- **U Visa:** For victims of certain crimes.

Quality of Public Expenditure Index

Why in News? The Reserve Bank of India (RBI) has introduced a Quality of Public Expenditure (QPE) index to evaluate how well the Indian government (Centre and States) spends public money, considering the balance between fiscal discipline and developmental priorities.

Key Highlights:

Why it Matters?

- Government funds are taxpayer money, and effective spending directly impacts economic growth and public welfare.

- Quality spending ensures better outcomes in **infrastructure, education, healthcare**, and other developmental areas.

Challenges to Public Expenditure Quality:

- Economic shocks like the **2008 Global Financial Crisis (GFC)** and **Covid-19 pandemic** prompted countercyclical spending.
- Political trends like **freebies, subsidies, loan waivers**, and rising interest payments dilute expenditure quality.

RBI's QPE Index:

The index evaluates expenditure quality based on **five variables**:

1. **Capital outlay to GDP ratio**: Higher is better.
2. **Revenue expenditure to capital outlay ratio**: Lower is better.
3. **Development expenditure to GDP ratio**: Higher is better.
4. **Interest payments to total expenditure ratio**: Lower is better.

Key Observations:

Phases of Quality (1991–2023):

Phase 1 & 2: Declines due to fiscal pressures and increased revenue spending.

Phase 3: Improvement from **FRBM Act** and economic growth.

Phase 4: Decline post-GFC due to fiscal stimulus.

Phase 5: States improve via 14th Finance Commission; Centre faces GST challenges.

Phase 6: Covid recovery, heightened focus on Capex boost QPE to its highest.

Current Status:

- QPE index at its **highest level** since 1991 due to **focused Capex** and fiscal management.

Quantum Computing

Why in News? Microsoft recently announced a major breakthrough in quantum computing—a new way to create **qubits** (quantum bits) that are more **stable and scalable than current methods**. The company claims this technology could accelerate the development of **practical quantum computers**, potentially reducing the timeline from decades to just a few years. However, this announcement has invited **skepticism** due to the unprecedented nature of the claims and the difficulty of achieving such a feat.

Key Points:

What is Quantum Computing?

Quantum computing is a revolutionary technology that leverages the unique properties of quantum particles (like **superposition** and **entanglement**) to perform computations much faster than classical computers.

Traditional computers process data in **bits** (0 or 1), while quantum computers use **qubits**, which can exist in multiple states (0, 1, or both simultaneously) due to **superposition**.

This enables **parallel processing** and exponentially faster computations for complex problems.

Challenges in Quantum Computing:

Stability of qubits: Quantum states are fragile and easily disturbed by external factors (temperature, pressure, or observation), causing errors.

Error correction: Quantum computers require extensive error-correction mechanisms, which demand a very high number of physical qubits for each error-corrected (logical) qubit.

Scalability: Current quantum computers are limited to systems with a few hundred or thousand qubits, far from the **million-qubit** threshold needed for practical applications.

Expert Opinion:

- Arindam Ghosh, a professor at IISc Bangalore, said achieving a million-qubit system with fewer errors would be a **game-changer**, significantly advancing the development of quantum computing.
- However, he emphasized the difficulty of this achievement, noting the scrutiny is expected given the boldness of Microsoft's claim.

Why is it important?

Quantum computing has the potential to transform industries by solving problems that are impossible for classical computers. If Microsoft's breakthrough holds up to scrutiny, it could:

- Accelerate scientific research.
- Revolutionize industries like healthcare, cryptography, and artificial intelligence.
- Address global challenges like climate change and food security.

Global Glacier Mass changes from 2000 to 2023

Why in News? A recent study published in the journal *Nature* titled "**Community estimate of global glacier mass changes from 2000 to 2023**" highlights that melting glaciers worldwide have contributed to a **2 cm rise in sea level this century alone**. This study was conducted by scientists from the University of Edinburgh and the University of Zurich and emphasizes the alarming acceleration in sea level rise due to glacier melting and thermal expansion of seawater.

Key Points:

Findings of the Study:

- **Glacier Ice Loss:** Glaciers are losing **273 billion tonnes of ice annually**, equivalent to the water consumed by Earth's population in 30 years.
- **Global Contribution:** Glaciers have lost **5% of their total mass globally** since 2000, 18% more than the combined ice loss from the Greenland and Antarctic ice sheets.

- **Sea Level Rise:** Melting glaciers have caused a **2 cm rise in sea levels** since 2000.

Numbers at a Glance:

- **Since 1880:** Sea level has risen by **21 cm**, as per NOAA records.
- **Acceleration in Recent Years:**
- **1993-2024:** Global sea level rose by **more than 10 cm**.
- **Annual Rise:** Increased from **0.18 cm/year** in 1993 to **0.42 cm/year** currently.

Regional Variations:

- **Indian Ocean:** Sea level rise is **2.5 mm/year**, faster than the global average (WMO, 2022).
- **Indian Cities Affected:**
- **Mumbai:** 4.44 cm rise (1987–2021).

Haldia: 2.726 cm.

Visakhapatnam: 2.381 cm.

Kochi: 2.213 cm.

Future Predictions:

- **By 2050:** Another **20 cm rise** in global sea levels is expected, doubling the change seen in the last 100 years (NASA).
- **Impact on Floods:** Higher sea levels will increase the frequency and severity of floods globally.

This study reinforces the need for urgent action to curb greenhouse gas emissions and mitigate the impact of rising sea levels on human and natural ecosystems.

Segregation of waste at source

Why in News? The Supreme Court emphasized the importance of **segregating waste at source** for environmental protection and compliance with the **Solid Waste Management Rules, 2016**.

It directed states in the **National Capital Region (NCR)** to ensure compliance with these rules and submit progress reports.

Key Points:

Importance of Segregation at Source:

- Segregation of waste at source is crucial to reduce pollution.
- Unsegregated waste sent to **waste-to-energy plants** contributes to environmental degradation.

Supreme Court's Observation:

- Highlighted that smart city projects cannot succeed without compliance with the **Solid Waste Management Rules, 2016**.
- Non-compliance affects urban areas across the country.

Directives to NCR States:

- The Supreme Court ordered NCR states (Delhi, Haryana, Uttar Pradesh, Rajasthan) to:
 - Submit affidavits on compliance by urban local bodies.
 - Provide a **comprehensive waste management plan** with timelines and implementing agencies.
 - Highlight proposed **best practices** for waste management.

Role of Amicus Curiae:

Aparajita Singh, the amicus curiae, flagged issues such as:

Low segregation rates.

- Pollution from unsegregated waste sent to waste-to-energy plants.

Central Pollution Control Board (CPCB) Report:

- Directed to submit a report on the **environmental impact of waste-to-energy projects**.

Solid Waste Crisis in Delhi:

- Approximately **3,000 tonnes of untreated solid waste** are generated daily in Delhi.

- Supreme Court warned of **drastic measures**, including halting construction activities, if no real solutions are implemented.

Focus on Compliance:

- States must submit reports by the end of **March 2025**, after which the matter will be reviewed.

This issue underscores the critical need for proper waste management and adherence to environmental regulations to prevent further pollution.

Surveillance Capitalism

Why in News? Surveillance capitalism has come under scrutiny for its reliance on the commodification of personal data, **its impact on privacy and autonomy, and its links to state surveillance.**

What is Surveillance Capitalism?

- **Definition:** An economic system where personal data is collected, analysed, and sold by corporations to predict and manipulate human behaviour.
- **Core Concept:** Described by Shoshana Zuboff in her book *The Age of Surveillance Capitalism*, it expropriates human experience for data-driven profits, akin to exploitative systems like **colonialism** and **industrial capitalism**.
- **Shoshana Zuboff:** Introduced the concept of surveillance capitalism in *The Age of Surveillance Capitalism (2018)*.

How it Differs from Industrial Capitalism?

- **Focus:** Industrial capitalism prioritises labour and material production, while surveillance capitalism profits from **behavioural data extraction**.
- **Control:** Surveillance capitalism influences user behaviour through algorithms, reducing autonomy and turning every interaction into monetisation opportunities.

Entanglement with State Surveillance:

- **Collaboration:** Governments increasingly depend on tech companies for **intelligence gathering** and **social control**.
- **Reduced Accountability:** Private corporations manage surveillance, bypassing public scrutiny.
- **Legal Frameworks:** States gain access to data through agreements or extra-legal methods.

Challenges in Regulation:

- **Current Laws:** Frameworks like the EU's GDPR and India's DPDPA give users control over their data but fail to address the core issue of data commodification.
- **Corporate Influence:** Tech giants lobby to shape regulations in their favour, ensuring minimal restrictions on data collection.
- **Blurred Lines:** The overlap between corporate power and political authority limits accountability and individual protections.

The Way Forward:

- **Need for Policy Changes:** Stronger restrictions on data collection and better privacy protections are essential.

Public Awareness: Increased discussion and critical engagement with digital platforms can drive meaningful regulatory reform.

ERONET 2.0 Platform

Why in news?

The Election Commission of India (EC) announced that it will rectify **issues of duplicate Voter ID (EPIC)** numbers and ensure that every registered voter is assigned a unique **10-digit**

EPIC number. This decision comes in response to reports that some voters in one State had EPIC numbers matching those of voters in another State.

What is the issue?

- **Mamata Banerjee's Allegations:**
- West Bengal Chief Minister Mamata Banerjee accused the BJP, with the support of the EC, of manipulating the electoral rolls in West Bengal.
- She alleged that voters from other States were being added to the West Bengal voter list and cited instances of EPIC numbers in the State being linked to voters in Haryana, Gujarat, and Punjab.
- Banerjee further claimed this was being done to influence the 2026 Assembly elections.

What is ERONET?

ERONET is a web-based platform developed for election officials to manage voter registration, migration, and deletion of names in electoral rolls. It aims to ensure efficiency, accuracy, and transparency in the process.

EC's Clarification and Actions:

- Despite identical EPIC numbers in some cases, other voter details, including demographic information, Assembly Constituency, and polling booth, are unique.
- To address concerns and prevent misuse, the EC will update its ERONET 2.0 platform to rectify duplicates and allocate unique EPIC numbers to every voter.
- The EC emphasized that a person can only vote at their designated polling station in their enrolled constituency, irrespective of their EPIC number.

Steps Taken for Election Reforms:

1. **Introduction of Voter Verifiable Paper Audit Trail (VVPAT):**
 - Linked to Electronic Voting Machines (EVMs) to ensure transparency and trust in the voting process.
2. **NOTA (None of the Above):**

- Introduced in 2013 to allow voters to reject all candidates if none is deemed suitable.
- 3. **Curbing Money Power in Elections:**
 - Imposition of limits on election expenditure by candidates.
 - Mandatory filing of affidavits by candidates declaring assets, liabilities, and criminal records.
- 4. **Linking Aadhaar with Voter ID:**
 - Initiated to reduce duplication and ensure a clean voter database.
- 5. **Online Voter Registration:**
 - Digitization of the voter registration process through the ERONET platform.
- 6. **Model Code of Conduct (MCC):**
 - Ensures fair practices during elections, preventing misuse of government machinery by political parties.
- 7. **Use of Technology:**
 - Introduction of mobile applications like *cVIGIL* for citizens to report violations.
 - Web-based platforms like ERONET for efficient electoral roll management.

Important Committees and Recommendations:

1. Goswami Committee on Electoral Reforms (1990):

- Recommended state funding of elections to reduce corruption.
- Called for stricter rules on candidate eligibility and filing of nominations.

2. Indrajit Gupta Committee (1998):

- Advocated for **state funding of elections** to ensure level playing fields for candidates.

3. Law Commission of India (170th Report, 1999):

- Suggested disqualification of candidates with serious criminal charges.
- Recommended strengthening the Model Code of Conduct.

4. National Commission to Review the Working of the Constitution (NCRWC, 2001):

- Proposed simultaneous elections to Lok Sabha and State Assemblies to reduce electoral expenditure.

5. Second Administrative Reforms Commission (2008):

- Called for stronger laws to curb criminalization of politics.
- Suggested improving transparency in political funding.

6. Dinesh Goswami Committee:

- Advocated for more autonomy to the Election Commission of India.
- Focused on reforms in political financing and reducing the influence of money in elections.

Challenges in Election Reforms:

- **Criminalization of Politics:** Despite recommendations, candidates with criminal charges still contest elections.
- **Opaque Political Funding:** Electoral bonds have been criticized for lacking complete transparency.
- **Misuse of Social Media:** Rising concerns over fake news and paid advertisements.
- **Delay in Simultaneous Elections:** Implementation is still under discussion due to logistical and constitutional hurdles.

Way Forward:

- Strengthen the Election Commission's independence and powers.
- Implement state funding of elections.
- Introduce robust measures to counter fake news and misuse of social media.
- Push for simultaneous elections to reduce expenditure and ensure governance continuity.

The Immigration and Foreigners Bill, 2025

Why in News? The Immigration and Foreigners Bill, 2025 was recently introduced in the LOK Sabha.

Purpose of the Bill:

- Introduced in the **Lok Sabha** by the Union Government to:
 - Strengthen India's borders.
 - Streamline immigration laws and procedures for regulating entry, stay, and exit of foreigners in India.
 - Replace outdated pre-independence laws.

Laws Repealed and Replaced:

1. Immigration (Carriers' Liability) Act, 2000.
 2. Passport (Entry into India) Act, 1920.
 3. Registration of Foreigners Act, 1939.
 4. Foreigners Act, 1936.
- The **Statement of Objects and Reasons** highlights that the repealed laws:
 - Were enacted during extraordinary circumstances like World War I and II.
 - Contained overlapping provisions.
 - Required modern and comprehensive legislation.

Key Features of the Bill:

1. **Establishment of Bureau of Immigration:**
 - A centralized **Bureau of Immigration** will be created (Section 5).
 - Headed by a **Commissioner** and assisted by:
 - Foreigners Regional Registration Officers.
 - Foreigners Registration Officers.
 - Chief Immigration Officers and other designated officials.

- Tasks include regulating the entry, stay, and exit of foreigners.

Criticism and Opposition:

1. Violation of Fundamental Rights:

- Critics argue that the Bill:
 - Denies an **appeal mechanism** against decisions of immigration officers.
 - Violates principles of **natural justice**.
 - May be used to exclude individuals based on political or ideological differences.

2. Impact on Talent Inflow:

- **TMC MP Saugata Roy**: The Bill could restrict the inflow of foreign talent in fields like **academics and medical science**.

3. Concerns about Ideological Bias:

- **Congress MP Manish Tewari**: Provisions might be used selectively to align with the ideology of the ruling party.

Conclusion:

The **Immigration and Foreigners Bill, 2025** is an effort to modernize India's immigration framework. While it seeks to ensure stricter control over foreigners, critics highlight concerns over the lack of appeal mechanisms, potential misuse, and negative effects on talent inflow and innovation.

Diplomatic Immunity & Protocol

What is Diplomatic Immunity?

Why in News ? The **United States** authorities has recently denied entry to **Pakistan's** ambassador to Turkmenistan, K.K. Wagan, and deported him from **Los Angeles**, citing "immigration objections."

Reason for Deportation:

The deportation was reportedly due to an immigration objection, although the specifics of the issue remain unclear. It raised concerns about the official's diplomatic protocol and visa

Diplomatic Immunity and Protocols:

1. What is Diplomatic Immunity?

Diplomatic immunity is a principle of international law codified under the **Vienna Convention on Diplomatic Relations (1961)**. It grants diplomats immunity from the jurisdiction of the host country's laws and ensures that they are not subject to arrest, detention, or deportation while performing their duties.

- **Purpose:**

- To protect diplomats from harassment or influence by the host state.
- To allow them to perform their duties without fear of retaliation or legal action.

- **Scope:**

- Full immunity for ambassadors and high-level envoys.
- Limited immunity for consular officials (e.g., only in matters related to their consular duties).

2. Protocols for Treating Diplomats:

Protocols are established procedures for how diplomats should be treated when traveling to or residing in a foreign country. Key aspects include:

- **Entry and Exit:** Diplomats are usually exempt from standard immigration checks. Their visas are often granted special status.
- **Protection of Dignity:** Host nations must respect the dignity of foreign diplomats and their family members.
- **Due Process in Case of Issues:** If a diplomat violates local laws, the host country can request their **recall** or declare them **persona non grata** (unwelcome person), instead of deportation or detention.

3. Treatment of Foreign Diplomats:

- The treatment of K.K. Wagan highlights potential issues in the **handling of foreign diplomats** by immigration authorities:
 - If his visa was valid, why was he deported?
 - Was this due to a procedural lapse or geopolitical considerations?
- Such incidents can harm the **trust and goodwill** between nations, especially if they involve allegations of unfair treatment or bias.

4. Key Questions Raised by the Incident:

- **Transparency:** Why wasn't the reason for the deportation shared with Pakistan or publicly disclosed?
- **Diplomatic Repercussions:** Could this lead to retaliatory actions or strained relations between the two nations?
- **Precedent:** Does this set a precedent for how other diplomats may be treated in similar situations?

5. Conclusion:

The deportation of Pakistan's envoy K.K. Wagan underscores the importance of adhering to diplomatic protocols and respecting immunity. While nations have the right to enforce immigration rules, such actions should be transparent, justified, and consistent with international law to avoid damaging diplomatic relationships.

Bodo Peace Accord / Bodoland Territorial Region

Why in News? Union Home Minister Amit Shah has recently highlighted the success of the third **Bodo Peace Accord** at the annual conference of the **All Bodo Students' Union (ABSU)** in Assam, emphasizing its role in bringing peace and development to the **Bodoland Territorial Region (BTR)**.

Key Points:

Success of the Bodo Peace Accord:

- The third Bodo Peace Accord, signed in 2020, transformed a region once associated with conflict and violence into one of peace and development.
- Mr. Shah criticized Congress for mocking the accord, stating it had proven its critics wrong.

Peace and Development in BTR:

- The agreement facilitated ₹1,500 crore in development funds for the Bodoland Territorial Council (BTC).
- Rehabilitation efforts included spending ₹287 crore to reintegrate 4,881 former extremists into mainstream society.

Rehabilitation Initiatives:

- Over 10,000 youth have been reintegrated into the mainstream under the leadership of Prime Minister Narendra Modi.
- Assam Chief Minister Himanta Biswa Sarma employed 400 rehabilitated Bodo youth in a commando battalion.

About Bodo Peace Accord :

The **Bodo Peace Accord**, signed on **January 27, 2020**, is the third agreement aimed at resolving the longstanding demands and conflicts involving the **Bodo people in Assam**. It marked a significant step toward peace and development in the **Bodoland region**.

Key Highlights of the Bodo Peace Accord:

- **Historical Context:**
 - The first Bodo Accord was signed in 1993, creating the Bodoland Autonomous Council (BAC).
 - The second Accord in 2003 led to the formation of the **Bodoland Territorial Council (BTC)** under the Sixth Schedule of the Indian Constitution.
 - The third Accord in 2020 aimed to resolve remaining issues and bring lasting peace.
- **Signatories:**
 - The Accord was signed between the **Government of India**, the **Government of Assam**, and **Bodo groups**, including the All Bodo Students' Union (ABSU) and factions of the National Democratic Front of Bodoland (NDFB).

About Bodoland Territorial Region (BTR):

The **Bodoland Territorial Region** is an autonomous region in Assam created under the provisions of the Sixth Schedule of the Indian Constitution. It was established as part of the second Bodo Accord in 2003 and redefined under the third Accord in 2020.

Key Features of the BTR:

- **Geographical Area:**
- Covers approximately 8,970 sq. km. in western Assam.
- Comprises **five districts**: Kokrajhar, Chirang, Baksa, Udalguri, and Tamulpur.
- **Governance:**
- Administered by the **Bodoland Territorial Council (BTC)**, which has legislative, executive, and financial powers over 40 subjects.

Challenges and Way Forward:

- **Ethnic Tensions:** Balancing the interests of Bodo and non-Bodo communities remains a sensitive issue.

- **Developmental Goals:** Ensuring equitable development across all communities and addressing issues like unemployment and infrastructure gaps.
- **Political Stability:** Strengthening governance under the BTC and ensuring free and fair elections.

The Bodo Peace Accord and the BTR serve as important steps toward achieving peace, cultural preservation, and socio-economic development in Assam.

CBI Special Courts/Prevention of Corruption Act, 1988 (PCA)

Why in News ? The home Minister Amit Shah has recently said that not a single CBI special court is functional in Bengal.

About CBI Special Courts :

CBI Special Courts are specialized judicial bodies in India established to adjudicate cases investigated by the **Central Bureau of Investigation (CBI)**, focusing on corruption, economic offenses, and serious crimes. They derive their authority from the **Prevention of Corruption Act, 1988 (PCA)** and the **Delhi Special Police Establishment (DSPE) Act, 1946**, ensuring swift and specialized trials.

Powers of CBI Special Courts:

- **Exclusive Jurisdiction:**

They have exclusive authority to try CBI-investigated cases, including PCA offenses, economic frauds (e.g., bank scams), and other crimes assigned by the Supreme Court or High Courts, bypassing regular courts for efficiency.
- **Trial Powers:**

Special Judges exercise powers equivalent to a Sessions Court under the **Bharatiya Nagarik Suraksha Sanhita, 2023 (BNSS)** (replacing CrPC, 1973, from July 1, 2024). They can summon witnesses (BNSS Section 253), issue warrants (BNSS Section 72), and impose sentences up to life imprisonment or death, subject to appeal.

- **Speedy Disposal Mandate:**

Mandated to expedite trials, they aim to conclude cases within 2 years post-2018 PCA amendments (Section 4(4)), though backlogs persist, with over 6,900 cases pending as of March 2025, per Amit Shah's Rajya Sabha statement.

- **Sanction Oversight:**

They verify prior sanction for prosecuting public servants under PCA Section 19, ensuring legal compliance before trials, a power critical to anti-corruption cases.

- **Evidence and Procedure:**

Authority to admit electronic evidence (BNSS Section 176) and conduct trials in absentia (BNSS Section 356) for absconding accused, enhancing procedural flexibility over CrPC provisions.

- **Contempt and Enforcement:**

Possess contempt powers akin to High Courts under the Contempt of Courts Act, 1971, ensuring compliance with orders, and can enforce CBI seizures or arrests (BNSS Sections 49-50).

Significance and Challenges:

- **Anti-Corruption Role:**

- **Pivotal in enforcing PCA**, they've delivered landmark verdicts, like the January 2025 life sentence in the RG Kar case (Sealdah CBI Court), reinforcing accountability.

- **Federal Tensions:**

State consent under DSPE Act Section 6 limits CBI's reach, impacting court functionality where states like West Bengal resist, as Shah criticized, stalling 6,900+ cases.

- **Resource Constraints:**

Vacancies and lack of courts (e.g., West Bengal) hinder their mandate, despite their robust powers, reflecting systemic judicial bottlenecks.

T.N.'s Mangrove Cover expected to be doubled

Why in News ? Tamil Nadu's mangrove cover has nearly doubled over the past three years, increasing from 4,500 hectares (ha) in 2021 to 9,039 ha in 2024, as per a report by the Centre for Climate Change and Disaster Management, Anna University.

Key Findings:

1. Largest Mangrove Areas by Districts:

- **Tiruvavur:**
 - Total area: **2,142 ha** (1,470 ha existing + 672 ha new plantations).
- **Thanjavur:**
 - Total area: **2,063 ha** (1,209 ha natural + 854 ha plantations).
- **Cuddalore and Nagapattinam:**
 - **Cuddalore:** 1,117 ha
 - **Nagapattinam:** 1,021 ha

2. Carbon Storage Capacities:

- **Districts with High Carbon Stocks:**
 - **Cuddalore:** 249 tonnes/ha
 - **Tiruvavur:** 145 tonnes/ha
 - **Thanjavur:** 77.5 tonnes/ha
- **Lower Carbon Stocks:**
 - **Villupuram:** 2.59 tonnes/ha
 - **Tiruvallur:** 13.1 tonnes/ha

Importance of Mangrove Forests:

- **Ecological Stability:**
 - Coastal protection
 - Nutrient cycling

- Breeding grounds for marine life
- **Climate Change Mitigation:**
 - Act as carbon sinks, absorbing atmospheric carbon.

Challenges:

- **Invasive Species:**
 - Presence of **Prosopis juliflora** in mangrove forests across districts like **Thoothukudi, Ramanathapuram, Thanjavur, Tiruvarur, and Tiruvallur.**

Recommendations:

- **Sustainable Livelihoods:**
 - Eco-tourism
 - Carbon credit programs
- **District-Specific Conservation Strategies:**
 - Tailored plans to preserve and expand mangroves.

Statistics (2021–2024):

- **Total Area:** Increased from 4,500 ha (2021) to 9,039 ha (2024).
 - New plantations: **40.1% (3,625 ha)**
 - Existing mangroves: **59.9% (5,414 ha)**

Mangroves play a pivotal role in Tamil Nadu's ecological and economic landscape, and the report emphasizes continued preservation efforts to sustain these crucial ecosystems.

PM Internship Scheme (PMIS)

Why in News ? The Union Finance and Corporate Affairs Minister Nirmala Sitharaman has urged more companies to participate in the **PM Internship Scheme (PMIS)**. Currently, in its second round, the scheme remains in the pilot stage and has expanded its internship offerings to **327 companies, up from around 280** in the first round. Announced in the Union

Budget for 2024-25, the PMIS aims to provide internships to one crore youth in the top 500 companies over the next five years.

About PM Internship Scheme (PMIS):

The PM Internship Scheme (PMIS) is a government initiative aimed at providing quality internship opportunities to Indian youth in top companies, enhancing their employability and skill development.

Key Features of PMIS:

1. Objective:

- To offer internships to one crore youth in India's top 500 companies over five years.
- Focuses on enhancing practical knowledge and employability among students and young professionals.

2. Scope:

- Aims to bridge the gap between academia and industry by providing real-world exposure to students.
- Encourages corporate participation to achieve the larger national interest of skill development.

3. Benefits for Youth:

- Provides hands-on training and work experience.
- Improves job readiness and builds networks in the corporate sector.
- Opens avenues for future employment opportunities.

The PMIS reflects the government's commitment to equipping India's youth with the skills and experience needed for their professional careers, while also fostering stronger collaboration between the government and the corporate sector.

e-NAM 2.0

Why in News? The Centre announced the **upgradation of the e-NAM platform to e-NAM 2.0** to address logistical hurdles faced in inter-state and inter-mandi trade of agricultural commodities.

Key highlights of the announcement by Union Agriculture Minister **Shivraj Singh Chouhan**:

1. Main Features of e-NAM 2.0:

- **Bank Account Validation:** Enhancing transparency and security in payments.
- **eKYC using Aadhaar:** Streamlining farmer verification processes.
- **Onboarding of Service Providers:** Inclusion of assaying, logistics, and other value-added services for better efficiency.

2. Objective:

- To resolve **logistic challenges**, ensuring faster trade, reduced wastage, and increased farmer incomes.

About e-NAM Scheme:

e-NAM (National Agriculture Market) is a flagship initiative launched by the **Government of India** on **14th April 2016** to create a unified national market for agricultural commodities. It operates under the **Ministry of Agriculture and Farmers' Welfare** and aims to integrate existing APMC (Agricultural Produce Market Committee) markets through an online trading platform.

Objectives of e-NAM:

1. **Integration of Mandis:** Connects mandis across India into a single online marketplace.
2. **Transparency:** Promotes fair and transparent price discovery for agricultural produce.
3. **Market Access:** Facilitates farmers' access to inter-state and inter-mandi markets.
4. **Reduction in Post-Harvest Losses:** Minimizes logistical inefficiencies and wastage.
5. **Empowering Farmers:** Enhances farmers' bargaining power and income.

Key Features of e-NAM:

1. **Online Trading Platform:**
 - Provides a real-time price discovery mechanism.
 - Enables farmers to sell their produce online across mandis.
2. **Unified Licensing:**
 - Traders can operate in any mandi across states with a single license.
3. **Single Point Levy:**
 - Market fees are charged only once, reducing costs for farmers.
4. **Assaying Services:**
 - Quality checks through accredited labs to ensure fair pricing.

Benefits of e-NAM:

1. **For Farmers:**
 - Wider market access.
 - Transparent and better price realization.
 - Reduced dependency on middlemen.
2. **For Traders:**
 - Access to a larger pool of buyers and sellers.
 - Simplified licensing and reduced costs.
3. **For Consumers:**
 - Lower prices due to efficient supply chain management.
4. **For State Governments:**
 - Improved regulation and monitoring of mandis.

Current Status:

- Over **1,000 mandis** across **18 states and 3 Union Territories** have been integrated into e-NAM.
- Covers **200+ agricultural commodities**, including grains, fruits, vegetables, and spices.

97th Academy Awards

Key Highlights:

“Anora” Wins Big Despite Small Budget

- The independent film Anora, made for just \$6 million, won **Best Picture** and four other Oscars.
- It outshone blockbusters like Wicked and Dune: Part Two.
- This aligns with the Academy’s recent trend of honoring independent films like Nomadland and CODA.

Sean Baker Ties Walt Disney’s Record

- Director Sean Baker won **four Oscars**: Best Picture, Best Director, Best Editing, and Best Original Screenplay.
- He now shares the record for most Oscars in a single year with Walt Disney (1954).

Advocacy for Theatres and Independent Cinema:

- In his speech, Sean Baker emphasized the importance of cinemas and encouraged filmmakers to continue making movies for the big screen.
- He passionately declared, “Long live independent film!”

Mikey Madison Wins Best Actress:

- Madison won for her performance in Anora, beating favourites like Demi Moore.

Adrien Brody’s Emotional Second Oscar:

- Brody won Best Actor for his portrayal of a Holocaust survivor in The Brutalist.
- His speech called for a more inclusive and compassionate world.

Surprise Win in Best Animated Feature:

- Latvian film Flow, a dialogue-free environmental parable, beat The Wild Robot.
- Director Gints Zilbalodis thanked his pets humorously in his speech.

Historic Wins:

- Zoë Saldaña became the **first American of Dominican origin** to win an Oscar for Best Supporting Actress in Emilia Pérez.
- Paul Tazewell became the **first Black man** to win Best Costume Design for Wicked.

Other Notable Wins:

- The Brutalist: Best Cinematography and Best Original Score.
- Dune: Part Two: Best Visual Effects and Best Sound.
- Wicked: Best Production Design and Costume Design.

Glacier Avalanche

Why in News ? A glacier avalanche struck a BRO project site in Uttarakhand's Chamoli district, trapping 22 workers under ice.

What is a Glacier Avalanche?

A glacier avalanche occurs when a large mass of ice, snow, and debris breaks off from a glacier and hurtles down a slope. These avalanches are highly destructive and can be caused by various natural or human-induced factors. They are especially common in mountainous regions with unstable glaciers.

Causes of Glacier Avalanches:

1. **Climate Change:** Rising global temperatures lead to glacier melting and destabilization.
2. **Heavy Rainfall or Snowfall:** Increases the weight on glacier surfaces, leading to collapse.
3. **Seismic Activity:** Earthquakes can cause glacier sections to break off.
4. **Rockfalls:** Falling rocks can trigger an ice break and initiate an avalanche.

5. **Human Activity:** Infrastructure development or deforestation near glacier zones may contribute to instability.

Recent Examples of Glacier Avalanches:

1. Chamoli, Uttarakhand (India), February 2021:

- **Incident:** A glacier burst in the Nanda Devi region triggered an avalanche and flooding in the Rishiganga and Dhauliganga rivers. Over 200 people were killed or went missing. It caused massive damage to hydropower projects in the area.

2. Chamoli, Uttarakhand (India), February 2025:

- **Incident:** A glacier avalanche struck a BRO (Border Roads Organisation) project site in the Chamoli district, trapping 22 workers under ice. The rescue operations are ongoing, and this highlights the recurring risks in the region.

3. Kolka Glacier Disaster, Russia (2002):

- **Incident:** A massive glacier collapse triggered a high-speed avalanche in the Caucasus Mountains. Approximately 140 people were killed, and several villages were destroyed.

4. Manaslu Avalanche, Nepal (2012):

- **Incident:** An avalanche caused by a glacier collapse struck a base camp on Mount Manaslu. 11 climbers were killed.

5. Marmolada Glacier Collapse, Italy (2022)

- **Incident:** A glacier avalanche occurred in the Dolomite Mountains during a heatwave. 11 people were killed, highlighting the role of climate change in glacier instability.

Why Glacier Avalanches are increasing:

- **Global Warming:** Higher temperatures are accelerating glacier retreat and increasing their instability.
- **Increased Human Activities:** Development projects in ecologically sensitive zones can contribute to disasters.
- **Natural Variability:** Cyclical changes in weather patterns can intensify such events.

Chandrayaan-5 Mission

Why in News? The **Chandrayaan-5 mission** received approval from the Indian government.

- **ISRO Chairman V. Narayanan** announced this during an event to felicitate him for his new role.
- The mission marks another significant step in India's lunar exploration program, building on the success of Chandrayaan-3.
- Collaboration with **Japan** adds an international dimension to the project.

Key Points:

1. Chandrayaan-5 Overview:

- Will carry a **250-kg rover**, significantly larger than Chandrayaan-3's 25-kg 'Pragyaan' rover.
- The mission's objective is to study the **lunar surface** in greater detail.

2. Previous Chandrayaan Missions:

- **Chandrayaan-1 (2008):**
 - Focus: Chemical, mineralogical, and photo-geologic mapping of the Moon.
 - Achievements: Discovery of water molecules on the lunar surface.
- **Chandrayaan-2 (2019):**
 - Focus: Attempted a soft landing on the Moon's South Pole.
 - Achievements: 98% success; its orbiter continues to send high-resolution images.
- **Chandrayaan-3 (2023):**
 - Focus: Demonstrating safe landing and roving capabilities.
 - Achievements: **Soft landing on the Moon's South Pole (August 23, 2023)**; a historic milestone for ISRO.

3. Chandrayaan-4 Mission:

- Expected launch: **2027**.

- Objective: To bring **lunar samples** back to Earth.

4. Chandrayaan-5 Mission Significance:

- Enhanced rover capacity (**250 kg**) for deeper lunar exploration.
- Collaboration with **Japan** underlines growing international partnerships in space exploration.
- Builds on India's expanding expertise in **lunar technology and exploration**.

Facts for Prelims

Antiretroviral Therapy (ART)

About Antiretroviral Therapy (ART)

Antiretroviral Therapy (ART) is a medical treatment for managing **Human Immunodeficiency Virus (HIV)** infection. It involves the use of **antiretroviral drugs** that suppress the replication of the virus in the body, improving the quality of life for people living with HIV and reducing the risk of disease progression.

Key Objectives of ART:

1. **Suppress HIV Replication:** ART reduces the amount of HIV in the blood (viral load) to undetectable levels.
2. **Boost Immune Function:** It helps restore and maintain the immune system, protecting the body from opportunistic infections and diseases.
3. **Prevent Progression to AIDS:** ART prevents HIV from advancing to Acquired Immunodeficiency Syndrome (AIDS), the most severe stage of HIV infection.
4. **Reduce Transmission:** People on effective ART with an undetectable viral load cannot transmit HIV to others (Undetectable = Untransmittable, or U=U).

Types of Antiretroviral Drugs:

1. **Nucleoside Reverse Transcriptase Inhibitors (NRTIs):** Block reverse transcriptase, an enzyme needed for HIV replication.
 - Examples: Zidovudine, Lamivudine.
2. **Non-Nucleoside Reverse Transcriptase Inhibitors (NNRTIs):** Directly inhibit reverse transcriptase.
 - Examples: Efavirenz, Nevirapine.

3. **Protease Inhibitors (PIs):** Prevent the virus from maturing by inhibiting the protease enzyme.
 - Examples: Lopinavir, Ritonavir.
4. **Integrase Strand Transfer Inhibitors (INSTIs):** Block the integrase enzyme, preventing the integration of viral DNA into the host genome.
 - Examples: Raltegravir, Dolutegravir.

Saras Aajeevika Mela 2025

The **Saras Aajeevika Mela 2025** is a flagship event organized by the **Ministry of Rural Development**, aimed at promoting the livelihoods of artisans, craftsmen, and Self-Help Group (SHG) members across India.

- The event takes place from **21st February to 10th March 2025** at **Noida Haat, Sector 33 A, Noida, Uttar Pradesh**.
- This is the 5th edition of the Mela, which celebrates India's rich tradition, art, and culture while focusing on developing the **export potential** of rural products.

Sashakt Panchayat-Netri Abhiyan

Why in News?

The **Sashakt Panchayat-Netri Abhiyan** is a key initiative by the Ministry of Panchayati Raj to enhance the leadership skills and decision-making abilities of **Women Elected Representatives (WERs)** in Panchayati Raj Institutions (PRIs).

Key Highlights:

1. **Capacity Building for WERs:**

- Focus on leadership development, decision-making, and grassroots governance.
 - Launch of training modules and a primer on laws addressing gender-based violence for Panchayat representatives.
2. **National Workshop (Ahead of International Women's Day):**
- First-ever national platform for women leaders from all three tiers of PRIs.
 - Participation of over 1,200 women Panchayat leaders from diverse backgrounds.
3. **Panel Discussions:**
- Themes include “Women's Participation and Leadership in PRIs” and “Women-Led Local Governance: Sectoral Interventions.”
 - High-level officials like Smt. Debashree Mukherjee and Smt. Alka Upadhyaya to lead discussions.

Radical Democracy

What is Radical Democracy ?

1. **Origins and Historical Context**
 - Emerged as a response to 19th-century liberal democracy's exploitation under capitalism.
 - Reaction to the failures of collectivist doctrines and dictatorship during the 20th century.
2. **Philosophical Foundation: New Humanism**
 - Advocates a rational, secular morality derived from human nature and scientific understanding.

- Emphasizes human dignity, sovereignty, and creativity based on individual rationality.

3. Democratic Reforms

- Democracy must transcend mere voting to include active public participation.
- Calls for local and regional discussions to educate and empower voters.
- Proposes electing independent candidates directly responsible to the electorate.
- Advocates for the right of recall and referendums to enhance accountability.

4. Economic Vision

- Critiques both capitalist and state-driven centralization of wealth.
- Focuses on agriculture modernization, rural economy organization, and infrastructure development.
- Prioritizes human needs over profit in economic planning.

5. Socioeconomic Provisions

- Proposes unemployment insurance, old-age pensions, and health, housing, and education development.
- Advocates cooperative structures for rural employment and income generation.

6. Relevance Today

- Addresses contemporary issues of democracy, freedom, and justice.
- Stresses scientific thought and humanist philosophy to tackle global disintegration threats.
- Encourages creative, rational individuals to reshape society toward justice and freedom.

COP30 : Additional Multilateral Mechanisms

Why in News? Brazil, as the host of the upcoming COP30 climate conference in Belem, has proposed setting up “**additional multilateral mechanisms**” to strengthen global climate governance and ensure the fulfillment of climate commitments.

Key Points:

Proposal for Additional Mechanisms:

- Brazil suggested **complementary structures** to the Paris Agreement framework to monitor and ensure climate action commitments are met.
- Aimed at addressing the gaps in the current system, including infrequent reviews of **Nationally Determined Contributions (NDCs)**, which occur every five years.

Brazil’s Stance on Climate Governance:

- Minister for Environment and Climate **Marina Silva** emphasized the need to reform global governance structures under the UN framework for better efficiency.
- President **Lula da Silva** of Brazil has raised this issue in previous discussions.
- Proposal will feature in the **Action Agenda** at COP30, not as part of formal negotiations.

Importance of Multilateral Cooperation:

- Recognized the challenge posed by the **US withdrawal from the Paris Agreement** but reiterated the importance of multilateral efforts involving all UNFCCC parties.
- Called for enhanced collaboration among countries like **Brazil, India, China, the EU, and the UK** to strengthen the system.

COP30 Agenda:

- COP30 will include discussions on this proposal in its **Action Agenda**, a voluntary platform for encouraging additional climate measures.
- **Formal negotiations** at COP30 will focus on decisions that form part of international law.

Amrut Biodiversity Park

Why in News? Lieutenant Governor V.K. Saxena inaugurated the **Amrut Biodiversity Park** along NH-24 in the Yamuna floodplains. This initiative is a significant step towards restoring Delhi's floodplain ecosystem and enhancing the city's green cover.

Key Points:

1. Location and Area:

- The park spans **90 hectares** on the **eastern bank of the Yamuna**, near NH-24.

2. Objective:

- Part of the DDA's **floodplain restoration efforts** to rejuvenate the Yamuna floodplains.

3. Ecological Features:

- **Six water bodies** with a combined capacity of **225 million litres** have been developed.
- The landscape is designed to manage **stormwater**, mitigate **flood risks**, and enhance **groundwater recharge** through natural filtration.
- Use of **jute-reinforced slopes** and **riverine grass communities** to stabilise the flood-prone land.

4. Significance:

- Enhances **Delhi's green cover**.
- Aligns with the government's mission of creating a **"Green Delhi"**.
- Addresses **environmental challenges**, including flood management and ecosystem restoration.

The World Air Quality Report 2024

Why in news ? The World Air Quality Report 2024 by Swiss air quality technology company IQAir said Delhi remains the most polluted capital city globally, while India ranked as the world's fifth most polluted country in 2024, down from third in 2023

Key Points:

1. New Delhi:

- It is ranked as the **world's most polluted capital city** with an average PM2.5 concentration of **91.5 $\mu\text{g}/\text{m}^3$** in 2024.
- It has held this position consistently, except for 2022.

2. Meghalaya's Byrnihat:

- This city has been identified as the **world's most polluted city**, surpassing others in terms of PM2.5 pollution.

3. Top Polluted Capitals:

- The report lists **New Delhi (91.5)**, **N'Djamena (Chad – 89.7)**, **Dhaka (Bangladesh – 78.1)**, and **Kinshasa (Congo – 58.2)** as the most polluted capital cities globally.

4. Top Polluted Countries:

- The most polluted countries are:
 - **Bangladesh (77.1 $\mu\text{g}/\text{m}^3$)**,
 - **Pakistan (70.9 $\mu\text{g}/\text{m}^3$)**,
 - **India (53.3 $\mu\text{g}/\text{m}^3$)**, and
 - **Congo (52.7 $\mu\text{g}/\text{m}^3$)**.

5. India's Air Pollution:

- India's air pollution is attributed to industrial emissions, power generation, vehicle emissions, construction, biomass burning, agriculture, and waste management practices.

- The annual average PM2.5 level in India for 2024 was reported as **53.3 $\mu\text{g}/\text{m}^3$** , which exceeds the WHO's safe level of **5 $\mu\text{g}/\text{m}^3$** by a significant margin.

6. Global Comparison:

- PM2.5 pollution is a major health concern as it includes fine particulate matter that can penetrate deep into the lungs and bloodstream, causing respiratory and cardiovascular issues.

Conclusion:

The report underscores the urgency for stronger air quality regulations and pollution control measures in cities like New Delhi and countries such as India, Bangladesh, and Pakistan to address the health hazards posed by high PM2.5 level.

Indian Long-Billed Vulture (*Gyps indicus*)

Why in News ? Recently, an **Indian long-billed vulture**, along with its chick, was sighted at **Ramadevarabetta**, Karnataka, which is **India's only vulture sanctuary**.

About Indian Long-Billed Vulture (*Gyps indicus*):

- The Indian long-billed vulture, also known as the Indian vulture, is a critically endangered species of vulture native to the Indian subcontinent.
- It is a medium-sized vulture with a pale yellowish-brown body, a slender neck, and a characteristic long bill. These vultures primarily feed on carrion, playing a vital role in the ecosystem by disposing of animal carcasses and preventing the spread of diseases.

Key characteristics of the Indian long-billed vulture include:

- **Habitat:** Found in rocky cliffs, scrub forests, and open areas near human settlements.
- **Diet:** Carrion scavenger, feeding on dead animals.

- **Conservation Status:** Listed as **Critically Endangered** by the IUCN due to habitat loss, poisoning by diclofenac (a veterinary drug), and a declining food base.

Rashtriya Karmayogi Jan Seva Program

Why in News? The **Rashtriya Karmayogi Jan Seva Program** was conducted for employees of the **Department of Pension & Pensioners' Welfare (DoPPW)** to inspire a “**citizen-first**” approach and strengthen their capacity for effective governance and service delivery.

Key Points:

Program Details:

- **Purpose:** Capacity building of DoPPW employees across all levels, from MTS to Joint Secretary.
- **Focus:** Transforming employees into Rashtriya Karmayogis for better governance.
- **Launch:**
 - Inaugurated by Shri V. Srinivas, Secretary, DoPPW.

Core Objectives:

1. Transformation Themes:

- Karamchari to Karmayogi.
- Rule-based to Role-based governance.
- Organizational transformation.

2. Focus Areas:

- Understanding qualities of Rashtriya Karmayogis.
- Building a motive to serve as Rashtriya Karmayogis.
- Creating “Karmayogi moments.”
- Highlighting their role as Nation Builders.

Significance:

- Promotes **good governance** and strengthens the **public delivery mechanism**.

- Aligns individual responsibilities with departmental vision and nation-building goals.
- Highlights the government's commitment to employee capacity building for better citizen-centric services.

Border Roads Organisation

The **Border Roads Organisation (BRO)** is a premier infrastructure-building agency under the **Ministry of Defence, Government of India**. Established in **1960**, its primary role is to develop and maintain road networks in India's border areas and friendly neighboring countries.

Key Responsibilities:

1. **Infrastructure Development:** Constructs roads, bridges, and tunnels in remote border areas.
2. **Strategic Importance:** Ensures road connectivity for the armed forces in challenging terrains.
3. **Disaster Relief:** Provides assistance during natural disasters, including road clearance and rehabilitation.

Notable Projects:

- Construction of the **Atal Tunnel** in Himachal Pradesh.
- Development of roads in **Arunachal Pradesh** and **Ladakh** to enhance border connectivity.

BRO Motto:

“Shramena Sarvam Sadhyam” (Everything is achievable through hard work).
