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POLITY & GOVERNANCE

Inter-State Council: Key to Cooperative Federalism

UPSC Syllabus: Polity & Governance (Federal Structure, Centre-State Relations), Current Affairs

Why in News?

- The Indian government has **reconstituted the Inter-State Council (ISC)** after two years, appointing the **Prime Minister as Chairman**.
- This highlights a renewed commitment to **Centre-State cooperation** and **cooperative federalism**.

What is the Inter-State Council?

- **Establishment**:
    - Constituted under **Article 263** of the Constitution for facilitating **Centre-State coordination**.
    - Recommended by the **Sarkaria Commission (1988)** as a permanent body; formally established in **1990** through a Presidential Order.
- **Functions**:
    - Discusses issues of **common interest** between the Centre and States.
    - Investigates disputes affecting **Centre-State** or **inter-state relations** and recommends solutions.
- **Composition**:
    - **Chairman**: Prime Minister.
    - **Members**:
        - Chief Ministers of all States and Union Territories with Legislative Assemblies.
        - Administrators of UTs without Assemblies.
        - Six Union Cabinet Ministers nominated by the Prime Minister.
    - Amendments (1990, 1996) enabled Governors under **President's Rule** to attend ISC meetings and allowed **permanent invitees** from Union Ministers.
- **Standing Committee**:
    - Formed in **1996** under the Union Home Minister for **continuous consultation** and preliminary discussions.
- **Secretariat**:
    - **Inter-State Council Secretariat (ISCS)**, established in **1991**, coordinates ISC meetings.
    - Since **2011**, it also manages the **Zonal Councils**.

Key Benefits of ISC

- **Promotes Cooperative Federalism**: Enhances Centre-State collaboration and ensures Union decisions align with **federal principles**.
- **Greater Legitimacy**: Policies discussed in ISC gain **social acceptance** among states, reducing **friction**.
- **Power Balance**: Prevents dominance of the Centre or States and resolves issues such as GST implementation and fiscal reforms.

Other Key Inter-State and Centre-State Bodies

- **Zonal Councils**:
    - Established under the **States Reorganisation Act, 1956**; aim to promote **interstate cooperation**.
    - Five Zonal Councils (Northern, Central, Eastern, Western, and Southern), chaired by the **Union Home Minister**.
    - The **North Eastern Council** was set up in **1972** under the North Eastern Council Act.
- **River Water Dispute Tribunals**:
    - Formed under the **Inter-State River Water Disputes Act, 1956** for resolving water-sharing conflicts.
    - Supported by **Article 262**, empowering Parliament to adjudicate inter-state water disputes.
- **GST Council**:
    - Established under **Article 279A** for decisions on GST policies, exemptions, and tax rates.
    - Comprises Union and State Finance Ministers, promoting **consensus-based decision-making**.

Challenges Faced by ISC

- **Infrequent Meetings**:
    - ISC has only met **11 times since 1990**, despite a mandate of **three meetings annually**.
    - The last meeting occurred in **2016**, highlighting inconsistency in its functioning.
- **Non-Binding Recommendations**:
    - ISC decisions are **advisory** and lack **enforcement authority**.
    - Absence of follow-up mechanisms reduces the impact of its recommendations.
- **Political Dynamics**:

o **Political differences** between the Centre and States often hinder consensus-building on critical issues.

Reforms Needed for Effective ISC Functioning

- **Amendment of Article 263**:
  o As suggested by the **Punchhi Commission (2010)**, ISC should address both **inter-state** and **Union-state** challenges with a stronger mandate.
- **Regular Meetings**:
  o Mandate **timely meetings** to ensure ongoing dialogue and swift resolution of disputes.
- **Clear Agenda and Priorities**:
  o Focus meetings on **pressing issues** like water disputes, economic cooperation, and infrastructure development.
- **Technology Integration**:
  o Use **digital platforms** to streamline communication, data-sharing, and decision-making processes for greater efficiency.

Conclusion

The Inter-State Council plays a pivotal role in fostering **Centre-State harmony** and ensuring **cooperative federalism**. Addressing its structural and functional challenges through timely reforms will strengthen its role as a consultative forum, enabling seamless governance and policy coordination across India.

Appointment of Chief Justice of India: Process and Key Provisions

UPSC Syllabus: Polity & Governance (Judiciary, Constitutional Provisions), Current Affairs

Why in News?

- Justice **Sanjiv Khanna** was recently sworn in as the **51st Chief Justice of India (CJI)**, succeeding Justice **D.Y. Chandrachud**.
- Justice Khanna has delivered key rulings, including:
  o **Upholding the abrogation of Article 370**.
  o **Striking down the 2018 Electoral Bonds Scheme**.
  o Supporting the **use of Electronic Voting Machines (EVMs)** in elections.
  o Majority ruling on **AMU's minority status**.

Key Constitutional Provisions Related to the Chief Justice of India

- **Appointment**:
  o Under **Article 124(2)**, the CJI is appointed by the **President of India**.
  o Conventionally, the **senior-most Supreme Court judge** (based on length of service) is appointed as the CJI.
- **Qualifications**:
  o Must be a **citizen of India**.
  o Should fulfill one of the following:
    ▪ Served as a **High Court judge** for at least **5 years**.
    ▪ Practiced as an **advocate in a High Court** for **10 years**.
    ▪ Be a **distinguished jurist** in the opinion of the President.
- **Role of the CJI**:
  o **Master of the Roster**: Determines the allocation of cases to benches and schedules hearings.
  o Plays a key role in judicial appointments as part of the **Collegium System** (CJI + 4 senior-most SC judges).
  o Consulted under **Article 127** for appointing **ad-hoc judges** in the Supreme Court.
  o With **Presidential approval**, the CJI can **shift the seat of the Supreme Court** to any place other than Delhi.
- **Removal**:
  o The CJI can be removed by the **President** through a process that involves:
    ▪ A **special majority** in both Houses of Parliament (majority of total membership + two-thirds of members present and voting).

Appointment of CJIs in Other Democratic Countries

- **United States**:
  o The **Chief Justice** is appointed for a **life tenure**, serving until resignation, retirement, or impeachment.
- **United Kingdom**:
  o The **Lord Chief Justice** is appointed by the **Judicial Appointments Commission**.
  o The tenure is for life, but with a **mandatory retirement age of 75**.

Conclusion

The appointment of the Chief Justice of India reflects the **independence of the judiciary** and adherence to constitutional conventions. Justice Sanjiv Khanna's appointment upholds this tradition while reinforcing the judiciary's role as the **guardian of constitutional rights and justice delivery**.

SC Re-evaluates AMU's Minority Status: A Landmark Shift

UPSC Syllabus: Polity & Governance (Minority Rights, Fundamental Rights, Judiciary), Current Affairs

Why in News?

- A **7-judge bench of the Supreme Court**, in a **4:3 majority verdict**, overruled the **1967 S. Azeez Basha case** judgment, which denied Aligarh Muslim University (AMU) minority status.
- The determination of AMU's **minority status** under **Article 30** has been referred to a **regular bench** for further examination.

Key Highlights of the Supreme Court Judgment

- **Main Issues Considered**:
  - Can a university **established under a statute** (AMU Act, 1920) claim **minority status**?
  - Was the 1967 judgment (S. Azeez Basha vs Union of India) valid in rejecting AMU's minority status?
  - Legality of the **1981 amendment** to the AMU Act, which restored its minority status.
  - Validity of the **2006 Allahabad High Court decision**, which rejected AMU's 50% reservation for Muslim students.
- **Overruling of the Azeez Basha Judgment**:
  - The court overturned the 1967 ruling that **AMU is not a minority institution**, stating it was based on a narrow interpretation.
  - The argument that AMU must be both **established and administered** by the minority community was rejected.
- **New Test for Minority Status**:
  - **Establishment**: Assess the origin, purpose, and implementation of the institution's creation.
  - **Implementation**: Examine who contributed funds, donated land, or obtained permissions.
  - **Administration**: Ensure administration **affirms minority character** by protecting and promoting the interests of the minority.
- **Minority Character Principles**:
  - An institution's minority status cannot be dismissed solely because it was created by a statute.
  - Article **30(1)** must not be interpreted narrowly but in alignment with its **purpose and guarantees**.
  - **Core Essentials of Minority Institutions**:
    - Minority character is retained even if students from other communities are admitted.
    - **Secular education** does not affect minority character.
    - Institutions receiving **government aid** cannot force religious instruction.
    - Fully state-funded institutions cannot impart religious teachings but remain minority institutions.
- **Nature of Incorporation**:
  - Incorporation by law does not alter an institution's **minority character** if its establishment reflects minority contributions.
- **Dissenting Opinion**:
  - Three judges disagreed, holding that institutions established by statutes cannot claim **Article 30** protection.

Timeline of the AMU Minority Status Dispute

- **1875**: Sir Syed Ahmad Khan established **Muhammadan Anglo-Oriental College** to provide modern education to Muslims.
- **1920**: The **AMU Act** transformed the college into Aligarh Muslim University (AMU).
- **1967**: In **S. Azeez Basha vs Union of India**, the SC ruled AMU was not a minority institution since it was created by a statute.
- **1981**: The Union government amended the **AMU Act** to declare AMU was established by **Muslims of India**.
- **2005-2006**: AMU's **50% reservation for Muslims** in medical courses was struck down by the **Allahabad High Court**, citing the 1967 judgment.
- **2016**: The government withdrew its appeal against the HC decision, asserting AMU was not a minority institution.
- **2019**: A **7-judge bench** was constituted to resolve the legal status of AMU.
- **2024**: The Supreme Court overturned the Azeez Basha ruling, reopening the possibility of recognizing AMU as a **minority institution**.

Legal Provisions on Minority Educational Institutions (MEIs)

- **Article 30(1)**: Grants minorities the right to **establish and administer** educational institutions.
- **National Commission for Minority Educational Institutions Act, 2004**: Defines MEIs as institutions established or maintained by minority communities.

Key Cases Related to Minority Educational Institutions

- **Mother Provincial Case (1970)**: Defined "administration" under Article 30(1) as managing institutional affairs.
- **AP Christian Medical Association Case (1986)**: MEIs must primarily benefit their minority community.
- **Yogendra Nath Singh Case (1999)**: Minority institutions must be **both established and administered** by minorities.
- **TMA Pai Case (2002)**: Minority status determination happens at the **state level**, but clear criteria were not established.

Significance of the Ruling

- **Broad Interpretation of Article 30**: Protects minority rights to preserve culture, education, and identity.
- **Ensures Minority Protection**: Recognizes contributions of minority communities in establishing pre-Constitution institutions.
- **Federal and Cultural Harmony**: Helps balance majority-minority rights while promoting secular education.

Challenges in Implementation

- **Contention Over Minority Status**: Opponents may argue institutions created by statutes cannot claim minority status.
- **Policy Disputes**: Disagreements on minority reservations and educational autonomy may arise.
- **Judicial Complexity**: Requires clear guidelines to interpret the **establishment and administration** criteria under Article 30.

Conclusion

The Supreme Court's re-evaluation of AMU's minority status marks a critical step in **protecting minority rights** and ensuring a broader, purposive interpretation of **Article 30**. This decision could set a significant precedent for minority educational institutions, balancing constitutional guarantees with judicial scrutiny.

SC Mandates Prior Sanction for Public Servants Under PMLA

UPSC Syllabus: Polity & Governance (Judiciary, Civil Services, Laws & Governance), Current Affairs

Why in News?

- The **Supreme Court (SC)** upheld the **Telangana High Court's ruling** that **prior government sanction** is required before prosecuting public servants under the **Prevention of Money Laundering Act (PMLA), 2002**.
- This decision highlights the interplay between **Section 197(1)** of the **CrPC** and **PMLA provisions**.

What is Section 197(1) of the CrPC?

- **Prior Sanction**: Public servants, judges, or magistrates cannot be prosecuted for actions done in their **official capacity** without prior government sanction.
    - Sanction authority:
        - **Central Government** for Union officials.
        - **State Government** for State officials.
- **Objective**: To prevent **malicious prosecution** and protect officials acting in **good faith**.
- **Exceptions**: Gender-based crimes and sexual offences under the **IPC/BNS, 2023** do not require prior sanction.

How Does PMLA Interact with CrPC?

- **Section 65 of PMLA**: Allows CrPC provisions to apply to PMLA cases unless they **conflict** with the PMLA.
- **Section 71 of PMLA**: States that **PMLA provisions override other laws** in case of inconsistencies.
- **Supreme Court's Ruling**:
    - The **Enforcement Directorate (ED)** argued that Section 71 overrides the requirement for prior sanction.
    - The SC rejected this, clarifying that **Section 65** of the PMLA ensures CrPC provisions (like Section 197) are applicable unless a direct conflict exists.
    - No conflict exists between **PMLA and Section 197(1)** of CrPC, so prior sanction remains mandatory.

Key Implications of the SC Ruling

- **Limits ED's Powers**: The ED cannot prosecute public servants under PMLA without government approval, ensuring adherence to **due process**.
- **Reinforces Balance**: The ruling balances the need to **combat money laundering** with safeguards for **public servants** to ensure fair legal treatment.
- **Clarity on PMLA's Scope**: Sets a precedent on the **applicability of CrPC** provisions to PMLA cases, preventing misuse of overriding powers under Section 71.

Judicial Precedents

- **CBI v. Dr. R.R. Kishore Case, 2023**: The SC struck down **Section 6A** of the **Delhi Special Police Establishment (DSPE) Act**, which required sanction for arresting senior officials, as unconstitutional under **Article 13(2)**.
    - **Article 13(2)**: Any law that infringes upon **Fundamental Rights** under Part III of the Constitution is void.

Constitutional Protection for Civil Servants

- **Part XIV**: Regulates services under the Union and States.
- **Article 309**: Empowers Parliament and State legislatures to **regulate recruitment** and conditions of service.
- **Doctrine of Pleasure (Article 310)**: Civil servants serve **at the pleasure of the President or Governor**, but this power is limited.
- **Article 311**: Provides two major safeguards for civil servants:
    o **Dismissal/removal** can only be carried out by the **appointing authority**.
    o An **inquiry** with a reasonable opportunity to defend must be held for dismissal or reduction in rank.

Conclusion

The SC ruling on **prior sanction under PMLA** ensures a critical balance between effective **law enforcement** and protection of public servants from **arbitrary prosecution**. It reinforces the principle of **due process**, preserving the constitutional safeguards for civil servants while maintaining the integrity of anti-money laundering efforts.

MPLADS: A Debate on Local Development and Accountability
UPSC Syllabus: Polity & Governance (Parliament, Local Governance, Government Schemes), Current Affairs

Why in News?

- The **Member of Parliament Local Area Development Scheme (MPLADS)** has come under debate for its **effectiveness, accountability**, and **constitutional validity** amidst reports of **incomplete projects** and demands for **increased funding**.

What is MPLADS?

- **Introduction**: Launched in **1993** as a **Central Sector Scheme**, MPLADS allows MPs to recommend projects that create **durable community assets** reflecting **local needs**.
- **Implementation**: The **state nodal department** oversees projects, while **district authorities** sanction and implement them.
- **Funding Allocation**:
    o Each MP is allocated **₹5 crore annually** (₹2.5 crore in two installments).
    o Funds are **non-lapsable**, with mandatory allocations:
        ▪ **15% for SCs** and **7.5% for STs**.
- **Special Provisions**:
    o MPs can allocate up to **₹25 lakh** outside their constituencies for **national unity projects**.
    o Up to **₹1 crore** can be allocated for calamity relief anywhere in India.
- **Eligible Projects**:
    o Funds can be used under **MGNREGS** for asset creation or the **Khelo India program** for sports infrastructure.

Arguments For and Against MPLADS

Criticisms

- **Violation of Separation of Powers**:
    o Legislators encroach on **executive functions** by influencing project execution.
    o The **2nd Administrative Reforms Commission (2005)** recommended abolishing MPLADS due to this conflict.
- **Lack of Accountability**:
    o Inadequate monitoring allows **misuse** of funds for personal or political gains.
    o **No statutory law** governs MPLADS, making rule enforcement weak.
- **Political Misuse**:
    o Investigations into fund utilization are often **politically motivated**.
- **Execution Issues**:
    o **CAG reports** highlight:
        ▪ Underutilization of funds (49%-90%).
        ▪ Focus on improving **existing assets** rather than creating new ones.
        ▪ Delays in issuing work orders, poor record-keeping, and substandard works.

Supportive Views

- **Localized Development**: MPLADS enables MPs to address **constituency-specific issues** effectively.
- **Flexibility**: MPs argue it allows **quick project implementation** based on **local priorities**.
- **Demand for Increased Allocation**: MPs highlight that **current allocations** are insufficient compared to funds available to **MLAs** for smaller constituencies.

Supreme Court's Stance on MPLADS

- In **2010**, the SC upheld the scheme's constitutionality, stating:
    - MPs **recommend projects** while district officials execute them.
    - The Union government's fund allocation for MPLADS is valid under **Article 282** (public welfare expenditure).
    - MPLADS aligns with **Directive Principles of State Policy (Article 38)** by addressing **local development needs**.
- **Key Monitoring Issues**:
    - Lack of third-party evaluations.
    - Opaque fund utilization processes.
    - Non-updated project data, limiting public scrutiny.

Reform or Abolition: Key Considerations

Arguments for Reform

- **Statutory Backing**: Provide MPLADS a legal framework with an **independent monitoring body** to improve governance.
- **Transparency and Accountability**: Mandate **open tendering** with oversight from auditors like the **CAG**.
- **Integration with National Schemes**: Align MPLADS with programs like **MGNREGS** and **PM-JANMAN** to maximize impact.
- **Focus on Marginalized Communities**: Ensure targeted welfare initiatives for better equity.

Arguments for Abolition

- **Strengthen Local Governments**: Redirect funds to **Panchayats** and **Municipalities** for better alignment with **local needs**.
- **Duplication of Efforts**: Existing schemes address developmental needs, making MPLADS redundant.
- **Corruption and Inefficiency**: Weak regulations lead to **misuse of funds** and uneven development.

Conclusion

The MPLADS scheme highlights the **trade-off between empowering legislators** for local development and concerns over **separation of powers and accountability**. While the SC upheld its constitutional validity, strengthening **monitoring, transparency**, and **integration with national schemes** can ensure its efficient implementation. Alternatively, abolishing MPLADS could empower **local self-governments** to deliver **targeted development** while addressing systemic inefficiencies.

Comparative Analysis: Indian President vs. US President
UPSC Syllabus: Polity & Governance (Constitutional Roles, Comparative Study), Current Affairs

Why in News?

- The upcoming **2024 US Presidential election** on **November 5th, 2024** has brought focus on the **similarities and differences** in the roles, powers, and election processes of the Presidents of **India** and the **US**.

Electoral College System in the US

- **About**:
    - Citizens vote for **electors** who formally elect the **President** and **Vice-President** through the **Electoral College**.
    - This system balances direct public voting with Congressional oversight.
- **Composition**:
    - The Electoral College consists of **538 electors**.
    - A candidate needs **270 votes** to win the presidency.
- **Impact**:
    - A candidate winning the **popular vote** can still lose the election if they fail to secure a majority in the Electoral College (e.g., **2000, 2016 elections**).

How is the Indian Presidential Election Different?

- **Electoral College**: Includes **elected MPs** (Lok Sabha & Rajya Sabha) and **elected MLAs** from State/UT Legislative Assemblies.
- **Voting Process**: Utilizes a **preferential voting system** instead of a direct election.
- **Vote Value**:
    - **MP's Vote**: Fixed at **700**.
    - **MLA's Vote**: Based on **State Population/MLA strength**, further divided by 1000 (e.g., UP: 208; Arunachal Pradesh: 8).
- **Winning Quota**: A candidate requires **50% + 1 vote** of the total valid votes.

Constitutional Provisions:

- **Article 54**: Election of President.
- **Article 55**: Manner of election.
- **Article 56**: Term of office.
- **Article 57**: Eligibility for re-election.
- **Article 58**: Qualifications for election.

Similarities Between Indian and US Presidents

- **Head of State**: Both act as **ceremonial heads** of the state, representing their countries domestically and internationally.
- **Election Process**: Both are elected indirectly through an **Electoral College**.
- **Veto Power**: Both can **veto legislation** passed by their legislative bodies.
- **Emergency Powers**: Both can declare a **state of emergency**, although the extent of powers differs.
- **Diplomatic Role**: Both Presidents negotiate treaties and lead international relations.
- **Ceremonial Duties**: Attend official functions, inaugurate laws, and host foreign dignitaries.

Differences in Powers and Roles

Aspect	Indian President	US President
Powers	Limited, largely ceremonial; real power lies with the Prime Minister.	Significant executive power as **Head of State** and **Head of Government**.
Functioning	Acts on the advice of the **Council of Ministers**.	Autonomous; can issue **Executive Orders** independently.
Election Process	Indirect election by MPs and MLAs via **preferential voting**.	Indirect election through **Electoral College**, based on citizen votes.
Term Duration	**5 years**, eligible for unlimited re-election.	**4 years**, with a limit of **two terms** (8 years).
Impeachment	Can be impeached for **violating the Constitution**; requires a two-thirds majority in Parliament.	Can be impeached for **"treason, bribery, or high crimes"**; initiated by the **House**, trial in the **Senate**.
Executive Authority	Acts on advice of the **Prime Minister & Cabinet**.	Directs executive branch, appoints officials, and operates independently.
Privileges	Enjoys immunity from legal proceedings for official actions.	Has **executive privilege** to withhold sensitive information from Congress and courts.
Immunity	Immune from legal proceedings for official actions but can be sued for personal actions.	Immune for **civil suits** while in office but can face **criminal charges** post-tenure.
Political Affiliation	Expected to act **impartially**, despite political origins.	Represents a political party; actively engages in **partisan politics**.

Conclusion

The **Indian President** serves primarily as a **constitutional head**, acting on the advice of the Council of Ministers, ensuring the ceremonial and legal stability of the government. In contrast, the **US President** wields substantial **executive powers**, leading both the state and government independently. This comparison underscores the differing roles based on the **parliamentary system (India)** and the **presidential system (US)** of governance.

Supreme Court Limits State's Power to Acquire Private Property
UPSC Syllabus: Polity & Governance (Fundamental Rights, Directive Principles), Current Affairs

Context

- The Supreme Court ruled that **not every privately owned resource** can qualify as "**material resource of the community**" under **Article 39(b)** for state acquisition aimed at the "common good."
- The judgment came in response to a case filed by the **Property Owners Association (POA)** and others, challenging the **state's authority** over private property acquisition.

Background of the Case

- **Petition Origin**: Filed in **1992**, the case involved 16 petitions questioning the state's power to acquire private resources.
- **Key Constitutional Question**:
  - Can the state acquire **all private property** under **Article 39(b)** of the **Directive Principles of State Policy (DPSP)**?
  - Does **Article 31C** still exist in its post-Kesavananda Bharati (1973) position?

Key Issues Before the Supreme Court

1. **Existence of Article 31C**: Whether Article 31C (protecting laws under Articles **39(b) and 39(c)**) still exists, despite prior amendments being struck down.

2. **Interpretation of Article 39(b)**: Can the **state acquire private property** by classifying it as a **"material resource of the community"**?

Key Observations of the Supreme Court

- **Shift from Socialism to Market Economy**:
  - India has transitioned from **socialism** to **liberalization** and a **market-based economy**.
  - The view advocating **greater state control** is outdated and inconsistent with India's economic reforms.
- **Limits on State Acquisition**: The state cannot take an **expansive view** of **Article 39(b)** to acquire all private property under the pretext of the **"common good."**
- **Economic Democracy**: The judgment reaffirmed the importance of **economic democracy** while ensuring that state intervention respects **individual freedoms** and democratic principles.
- **Context-Based Test for 'Material Resources'**:
  - Whether a resource qualifies as **"material resource of the community"** depends on several factors:
    - **Nature of the resource**.
    - **Scarcity and necessity** for community welfare.
    - Its impact on **economic, social, and environmental needs**.
  - Example: Personal assets like **houses and vehicles** cannot be deemed as community resources.
- **On Article 31C**: Restored its **post-Kesavananda position**: Laws for **resource redistribution** under Article 39(b) must not infringe on the **basic structure** of the Constitution, including **property rights** under **Article 300A**.

Arguments on Wealth Redistribution

For Redistribution	Against Redistribution
Fair Distribution: Promotes equality and reduces disparities.	**Infringement of Rights**: Violates private property rights.
Social Justice: Focuses on marginalized groups' welfare.	**Erodes Free Market**: Hampers economic efficiency and growth.
Poverty Alleviation: Raises living standards.	**Disincentivizes Innovation**: Reduces motivation for hard work.
Prevents Social Unrest: Addresses inequality-driven tensions.	**Dependency**: Fosters reliance on government aid.

Challenges Faced in Redistribution

1. **Weak Political Will**: Political pressures and lobbying hinder policy implementation.
2. **Ambiguity in 'Material Resources'**: Lack of clarity on what qualifies as community resources.
3. **Constitutional Hurdles**: Challenges under **Article 14** (equality) and **Article 19** (freedom to trade and own property).
4. **Economic Constraints**: Limited fiscal capacity in a developing economy like India.

Way Forward

- **Judicial Clarity**: The judiciary should provide **clear interpretations** on Article 300A, defining the limits of state intervention.
- **Protecting Vulnerable Groups**: Strengthen property rights for **marginalized communities** like tribals and women.
  - Example: The **Forest Rights Act, 2006** aimed at recognizing tribal land rights but faces slow implementation.
- **Balancing Growth and Rights**: Policies for economic development (e.g., land acquisition for infrastructure) must balance **public welfare** and **property rights**.

Conclusion

The Supreme Court's ruling is a significant step in safeguarding **property rights** while maintaining the state's role in **economic regulation**. By rejecting an **expansive interpretation** of Article 39(b), the Court upholds the balance between **economic democracy** and **individual freedoms**, reaffirming the constitutional principle of **property protection** under **Article 300A**.

CAG Report Highlights Financial and Operational Challenges in ULBs
UPSC Syllabus: Polity & Governance (Urban Local Bodies, 74th Amendment, Fiscal Federalism), Current Affairs

Context

The **CAG Report** on Urban Local Bodies (ULBs) reveals significant issues in financial management, resource utilization, and governance across **18 states**, covering **393 ULBs**.

Key Highlights of the CAG Report

- **Resource-Expenditure Gap**: ULBs face a **42% gap** between available resources and actual expenditure.
- **Funding Sources**: Only **32% of ULB revenue** comes from **internal sources**; the rest relies on **state and central transfers**.
- **Property Tax Collection**: ULBs realize only **56%** of total property tax demand.
- **Unrealistic Budgeting**: High variance in budgeting:
  - **Himachal Pradesh**: 403% variance in receipts; 274% in expenditure.
  - Other states: Odisha, Rajasthan, Punjab.

- **Staff Shortages**: **37% average vacancy rate**, impacting operational efficiency.
- **Recruitment Autonomy**: ULBs in **16 states** lack power over their recruitment processes.
- **Low Fund Utilization**: Only **61%** of funds were utilized on average, affecting project execution.
- **Development Spending**: Only **29%** of ULB spending goes towards development work; the majority is used for administrative expenses.

About Urban Local Bodies (ULBs)

- **Definition**: ULBs are the **lowest tier** of urban governance tasked with providing essential services, managing urban infrastructure, and improving the quality of life.
- **Types**: Municipal Corporations, Municipalities, Nagar Panchayats.

Significance of ULBs

- **Public Service Delivery**: Efficient management of services like **water supply, waste management**, and **sanitation**.
  - Example: **Bengaluru's BBMP** handles traffic and waste management challenges.
- **Democratic Participation**: Encourages **local governance** and citizen engagement.
  - Example: **Ward committees** and **Gram Sabhas** in Tamil Nadu.
- **Socio-Economic Development**: Implements urban welfare and smart city projects.
  - Example: **Pune Smart City Initiative**.
- **Inclusivity and Representation**: Promotes equity through **reserved seats for women, SCs, and STs**.
  - Example: Women-led councils in **Maharashtra**.
- **Catalyst for Federalism**: Strengthens decentralized governance under the **74th Amendment**.

Challenges Faced by ULBs

1. **Weak Financial Management**:
   - Municipal revenue contributes only **1% of GDP**, making ULBs heavily reliant on **state transfers**.
   - Example: ULBs in **Bihar** face delays in grants and outdated tax systems.
2. **Resource-Expenditure Gap**:
   - Significant revenue shortfalls affect service delivery.
3. **Low Fund Utilization**:
   - Poor planning and implementation lead to underutilization of funds.
   - Example: Inefficiencies in schemes like **AMRUT**.
4. **Limited Autonomy**:
   - State-appointed commissioners reduce ULBs' decision-making power.
   - Example: Tamil Nadu.
5. **Staff Shortages**:
   - Delays in recruitment and lack of skilled staff.
   - Example: Karnataka ULBs depend on **state-controlled recruitment**.
6. **Unrealistic Budgeting**:
   - Budget variances lead to financial mismanagement.
   - Example: **Uttar Pradesh**.
7. **Inadequate Devolution**:
   - Many states fail to implement functions mandated by the **74th Amendment**.
   - Example: Karnataka's **BBMP Act** limits taxation powers.

Way Forward

1. **Strengthen Revenue Autonomy**: Empower ULBs to revise **property taxes** and implement **fair user charges**.
2. **Improve Fund Utilization**: Establish robust planning and **monitoring mechanisms** for effective resource use.
3. **Capacity Building**: Train ULB staff in financial management and urban governance.
4. **Full Devolution of Powers**: Ensure compliance with the **74th Amendment**, granting ULBs autonomy over listed functions.
5. **Collaboration**:
   - Foster partnerships between governments, **private sector**, and **civil society**.
   - Example: **Indore's waste management success** through public-private collaboration.
6. **Global Best Practices**: Learn from cities like **Singapore** and **New York**, where empowered urban bodies ensure efficient governance.

16th Finance Commission Recommendations for ULBs

- **Enhanced Autonomy**: Greater control over revenue and expenditure.
- **Tax Reforms**: Simplified structures for better compliance.
- **Modernization**: Upgraded property tax systems.
- **Capacity Building**: Training for financial management.
- **Adequate Funding**: Addressing urban development needs.

Conclusion

The CAG report underscores the urgent need for **financial autonomy, accountability**, and **capacity building** in Urban Local Bodies. Effective implementation of the **74th Amendment** and reforms to enhance resource utilization will empower ULBs to drive inclusive and sustainable urban development in India.

ICA Global Cooperative Conference Highlights India's Leadership in Cooperatives

UPSC Syllabus: Polity & Governance (Cooperative Societies, 74th Amendment, Inclusive Development), Current Affairs

Context

- The **Indian Farmers Fertilizer Cooperative (IFFCO)** organized the **ICA Global Cooperative Conference** to promote cooperative innovation and strengthen global collaboration.
- The **UN International Year of Cooperatives 2025** was launched at this event.
- **Theme**: "**Cooperatives Build Prosperity for All**."

About International Cooperative Alliance (ICA)

- **Established**: **1895**, London, UK.
- **Objective**: Promote and support the **development of cooperatives** globally.
- **Headquarters**: **Brussels, Belgium**.
- **Membership**: Includes national and international cooperative organizations (e.g., **IFFCO**, **KRIBHCO**, **Amul**).

Cooperative Societies in India

- **Definition**: Voluntary associations that function on the principle of **self-help** and **mutual benefit** to address common economic and social needs.
- **Status**:
  - Over **8 lakh registered cooperatives** in sectors like **agriculture, dairy, housing, and finance**.
  - Ministry of Cooperation established in **2021** to realize the vision of *"Sahkar Se Samriddhi"*.
- **Constitutional Provisions**:
  - **State Subject**: Entry **32** of the **State List** under the **Seventh Schedule**.

Multi-State vs Single-State Cooperative Societies

Feature	Multi-State Cooperative Society	Single-State Cooperative Society
Jurisdiction	Multi-State Cooperative Societies Act, 2002	Respective State Cooperative Act
Area of Operation	Across multiple states	Within a single state
Regulatory Authority	Central Registrar	State Registrar
Member Base	Multiple states	Single state
Examples	IFFCO, Amul, NCDFI	State Cooperative Banks, PACS

Role of Cooperatives in India

1. **Rural Development**
   - **Credit and Financial Services**: Provides **20% of agricultural credit**.
   - **Input Supply**: Distributes **35% fertilizers** and produces **25%** of fertilizers in India.
2. **Poverty Reduction**
   - **Employment Generation**: Amul has empowered millions of dairy farmers.
   - **Skill Development**: Training programs enhance productivity and income.
3. **Social and Economic Empowerment**
   - **Women Empowerment**: Women-led cooperatives empower women financially and socially.
   - **Marginalized Groups**: Cooperatives provide access to resources for tribals and small farmers.
4. **Food Security**
   - **Increased Productivity**: Contributes to **31% sugar production** and **10% milk production**.
   - **Efficient Distribution**: Reduces food grain wastage and stabilizes prices.
5. **Catalyst for Federalism**
   - Strengthens **grassroots governance** and promotes inclusive development.

Challenges for Cooperative Societies

1. **Governance Issues**
   - **Lack of Transparency**: Financial mismanagement and corruption (e.g., **PMC Bank Crisis**).
   - **Limited Participation**: Low member engagement weakens cooperatives.
2. **Financial Constraints**
   - **Access to Finance**: High interest rates and limited access to credit.
   - **NPAs**: Rising Non-Performing Assets in cooperative banks.
3. **Capacity Constraints**
   - **Skilled Personnel**: Lack of trained staff impacts efficiency.
   - **Technology Gaps**: Slow adoption of modern tools hinders growth.
4. **Competition**
   - **Private Sector Dominance**: Better resources and technology make it difficult for cooperatives to compete.
   - **Market Fluctuations**: Price volatility affects profitability.
5. **Public Trust Deficit**
   - Fraudulent practices and mismanagement in cooperatives reduce confidence.

Way Forward

1. **Strengthening Governance**: Promote **transparency, accountability**, and **member participation**.
2. **Financial Management**: Introduce sound financial practices and alternative financing options.
3. **Capacity Building**: Invest in **training programs** and technological modernization.
4. **Policy Support**: Align policies to ensure full implementation of cooperative principles.
5. **Collaboration and Networking**:
   - Foster partnerships between **government, private sector**, and civil society for innovation.
   - Example: **Indore** Waste-to-Wealth initiatives through public-private collaboration.
6. **Global Perspective**: Adopt best practices from countries like **Singapore** and **New York** for efficient urban governance and service delivery.

Conclusion

The ICA Global Cooperative Conference highlights the crucial role of **cooperatives** in driving **inclusive growth** and **prosperity for all**. By addressing governance, financial, and capacity challenges, cooperatives can serve as powerful tools for **economic development**, rural empowerment, and **social equity** in India.

SC Issues Guidelines to Prevent Illegal Demolitions
UPSC Syllabus: Polity & Governance (Fundamental Rights, Separation of Powers, Article 21, Judicial Guidelines), Current Affairs

Context

The **Supreme Court** issued nationwide guidelines to prevent **illegal and retaliatory demolitions** of properties belonging to individuals accused of crimes. The ruling underscores the **unconstitutionality** of demolitions conducted without due process.

Background of the Case

- The judgment followed petitions challenging the **extra-legal demolitions** of properties in states like **Uttar Pradesh, Madhya Pradesh, Rajasthan**, and **Uttarakhand**.
- Trigger incidents: Demolitions in **Udaipur (Rajasthan)** and **Ratlam (Madhya Pradesh)** raised concerns about misuse of executive power.

Key Guidelines Issued by the Supreme Court

1. **Show Cause Notice**:
   - Authorities must issue a **show cause notice** to the property owner:
     - Sent via **registered post** and displayed outside the building.
   - A **15-day response period** (or longer, as per local laws) must be provided.
2. **Digital Recordkeeping and Accountability**:
   - **Digital Notification**: Upon serving a notice, authorities must send a digital notification to the **district collector/magistrate** via email to prevent backdating.
   - **Nodal Officer Appointment**: Within one month, a nodal officer must be appointed to oversee demolition notices.
   - **Digital Portal**: A centralized digital platform must record details of notices and demolition orders.
3. **Mandatory Videography**:
   - The entire demolition process must be **videographed**, with reports submitted to the **municipal commissioner**.
4. **Justification in Final Order**:
   - The **final demolition order** must explain why demolition is the **only option**, ruling out alternatives like partial demolition or compounding the violation.

5. **Accountability and Contempt of Court**:
   o Officials violating these guidelines will face **contempt of court** charges.
   o They must bear the cost of rebuilding demolished properties and pay **compensation** to affected individuals.
6. **Exceptions to Guidelines**:
   o The rules **do not apply** to unauthorized structures on:
     ▪ Public lands like **roads, footpaths**, or water bodies.
     ▪ Cases where a **court order** mandates demolition.
7. **Nationwide Implementation**:
   o The **Supreme Court Registrar** will circulate the judgment to all **Chief Secretaries** for compliance.
8. **No Relief for Past Demolitions**:
   o The guidelines do not cover compensation for **past illegal demolitions** or fix accountability for earlier violations.

Supreme Court's Reasoning

1. **Violation of Right to Shelter**: Demolitions conducted without due process violate the **Right to Shelter** under **Article 21**.
2. **Collective Punishment**: Punishing an accused's family by demolishing their home amounts to **collective punishment**, which is unconstitutional.
3. **Principles of Criminal Jurisprudence**: An accused is **presumed innocent until proven guilty**. Demolitions undermine this fundamental principle.
4. **Selective Demolitions**: Targeting a single property while others remain untouched suggests **mala fide intent** and **selective enforcement**.
5. **Separation of Powers**:
   o The executive cannot act as both **judge and enforcer**.
   o Such actions breach the **separation of powers**, a cornerstone of the **Constitution**.
6. **Rights of the Accused**: The accused, whether innocent or guilty, is entitled to **constitutional and legal safeguards**.

Significance of the Ruling

- **Judicial Safeguards**: Strengthens procedural fairness and protects the **fundamental rights** of citizens.
- **Executive Accountability**: Ensures officials are held responsible for violations of **due process**.
- **Rule of Law**: Upholds the **rule of law**, ensuring that punitive actions comply with constitutional principles.
- **Preventing Misuse**: Curbs arbitrary use of demolitions as a form of **retribution or punishment**.

Way Forward

1. **Transparent Processes**: Authorities must adhere to legal procedures and ensure demolitions are not misused for punitive purposes.
2. **Accountability Framework**: Implement strict penalties for officials violating guidelines to maintain public trust.
3. **Digital Systems**: Develop a centralized **digital portal** for demolition notices and orders to ensure transparency and prevent tampering.
4. **Public Awareness**: Inform citizens about their legal rights to contest arbitrary demolitions.

Conclusion

The Supreme Court's guidelines reinforce constitutional principles of **due process, equality, and justice**. By curbing illegal demolitions, the Court safeguards the **Right to Shelter (Article 21)** and ensures that punitive executive actions adhere to the **rule of law**.

Municipal Corporations in India

Why in the News?

- The **Reserve Bank of India (RBI)** released a report titled **"Own Sources of Revenue Generation in Municipal Corporations: Opportunities and Challenges"**, highlighting the financial and governance issues faced by Urban Local Bodies (ULBs).

Municipal Institutions in India

Significance

- **Urbanization**: Over 400 million people currently reside in urban areas, a number expected to double by 2050.
- **Economic Contribution**: Cities contribute more than **60% to India's GDP** despite occupying just **3% of the land area**.

Constitutional Framework

- **74th Constitutional Amendment Act, 1992**: Provided constitutional status to local governments, listing **18 functions** under the **12th Schedule**, including urban planning, water supply, and waste management.

- **Revenue Provisions**:
  - **Article 243X**: States can authorize ULBs to levy taxes, fees, and duties.
  - **Article 243Y**: Mandates State Finance Commissions (SFCs) to recommend the devolution of resources to ULBs.

Key Findings of the RBI Report

Revenue Generation

- **Low Contribution**: Municipalities generate **0.6% of GDP**, compared to **9.2%** by the central government and **14.6%** by states.
  - **Tax Revenues**: Constitute 30% of municipal income.
  - **Non-Tax Revenues**: Comprise 20.2%, mainly from user charges and fees.
  - **Grants and Subsidies**: Account for 24.9%.
- **Property Tax**:
  - Collections remain poor, with only **56% compliance** across 18 states (CAG report).

Dependence on Transfers

- Municipalities heavily rely on **Central and State government transfers**, which are often **delayed or inadequate**.

Borrowing and Bonds

- Municipal borrowing rose from **₹2,886 crore in 2019-20** to **₹13,364 crore in 2023-24**.
- **Municipal Bonds**: An underdeveloped market, with only **₹4,204 crore worth of bonds issued**, limiting investment in urban infrastructure.

Challenges Facing Municipal Corporations

1. Financial Challenges

- **Delayed SFC Implementation**:
  - Many states delay forming and implementing SFC recommendations.
  - Example: Telangana formed its SFC in **2015**, but it was operationalized only in **2018**.
- **Low Absorptive Capacity**:
  - ULBs utilize only **61% of allocated funds** on average.

2. Governance Challenges

- **Limited Devolution of Powers**:
  - Many states retain key functions like urban planning and land use regulation, limiting ULB autonomy.
- **Delayed Elections**:
  - Delays in municipal elections undermine governance.
  - Example: Elections to the **Bruhat Bengaluru Mahanagara Palike (BBMP)** have been pending since **2020**.
- **Human Resource Deficit**:
  - Vacancy rates are as high as **37%** in some states (CAG report).
  - Lack of training limits capacity for effective service delivery.

3. Service Delivery

- **Urban Development Spending**: Only **29% of municipal expenditure** is directed toward urban development, restricting infrastructure investment.

Way Forward

1. Enhance Own-Source Revenues

- **Property Tax**: Use **GIS mapping**, digital payment platforms, and regular property valuation to improve compliance.
- **Non-Tax Revenues**:
  - Revise user charges for services like water and waste management to ensure cost recovery.
  - Use public awareness campaigns to enhance fee collection.

2. Timely and Predictable Transfers

- Ensure regular and formula-based transfers from state governments to municipalities.
- Formulate and operationalize **SFCs** on time to recommend fair revenue sharing.

3. Diversify Funding

- **Municipal Bonds**: Promote market-linked municipal bonds for infrastructure financing.
- **Climate Finance**: Leverage international funding for green urban development projects.

4. Transparent Financial Management

- Implement the **National Municipal Accounting Manual (NMAM)** for uniform accounting standards.
- Link financial transfers to adherence to accounting best practices.

5. Strengthen Human Resources

- Address staffing shortages and establish dedicated municipal cadres for skilled professionals.
- Example: **Madhya Pradesh's Municipal Cadre** model for improved staffing and training.

6. Promote Urban Planning

- Invest in smart city projects, waste management systems, and sustainable urban infrastructure.

Conclusion

Urban Local Bodies are pivotal to India's growth and urbanization but face significant financial and governance challenges. Strengthening their financial independence, ensuring timely resource transfers, and addressing structural deficiencies can help municipalities fulfill their critical role in India's urban future. Prioritizing reforms will lead to more resilient, inclusive, and sustainable urban governance systems.

SC Limits Basic Structure Doctrine in Reviewing Ordinary Laws
UPSC Syllabus: Polity & Governance (Basic Structure Doctrine, Separation of Powers, Constitutional vs Ordinary Laws), Current Affairs

Context

The **Supreme Court of India** ruled that the **Basic Structure Doctrine** cannot be applied to strike down ordinary laws, highlighting its scope is limited to **constitutional amendments**. This ruling emerged while determining the validity of the **Uttar Pradesh Madrasa Education Board Act, 2004**.

Background

- **Allahabad High Court** had earlier quashed the UP Madrasa Act, 2004, citing violations of **Articles 14, 15, and 21-A** and concerns over secularism.
- The **SC partially upheld** the Act:
    o **Valid**: Regulations on **primary and secondary education**.
    o **Invalid**: Higher education provisions (Fazil and Kamil) as they conflict with **Entry 66** of the **Union List** under the UGC Act, 1956.

Key Highlights of the Supreme Court Ruling

1. **Basic Structure and Ordinary Laws**:
    o **Ordinary Laws** cannot be challenged solely for violating the **Basic Structure Doctrine**.
    o The doctrine applies **only to Constitutional Amendments** (Kesavananda Bharati Case, 1973).
2. **Abstract Terms**:
    o Principles like **secularism, democracy, and federalism** under Basic Structure are abstract.
    o These concepts cannot alone be grounds to invalidate laws unless specific **constitutional provisions** are breached.
3. **Legislative Autonomy**:
    o The SC affirmed that **legislatures** have autonomy to make ordinary laws within constitutional limits.
    o Using the **Basic Structure Doctrine** to invalidate such laws could disrupt the **constitutional balance**.
4. **Judicial Precedent**:
    o Referred to **Kesavananda Bharati Case (1973)** and **Raj Narain Case (1975)**:
        ▪ Ordinary laws operate under different frameworks than **constitutional amendments**.
        ▪ Justice A.N. Ray's opinion: Applying the Basic Structure to ordinary laws would amount to **"rewriting the Constitution"**.

UP Madrasa Education Board Act, 2004

- **About**: Introduced to regulate madrasa education in UP, covering subjects like **Islamic studies, Tibb**, and **Urdu**.
- **UP Madrasa Board**: Established to oversee curriculum, exams, and grant degrees at **Kamil (UG)** and **Fazil (PG)** levels.

Key SC Observations:

- **Primary and Secondary Education**: Regulating madrasas aligns with the **state's obligation** to provide education.
- **Higher Education Provisions**:
    o Conflict with **Entry 66** of the **Union List** under the UGC Act, which regulates higher education.
    o Declared **unconstitutional** for exceeding state legislative competence.

Difference Between Ordinary Law and Constitutional Law

ASPECT	ORDINARY LAW	CONSTITUTIONAL LAW
DEFINITION	Laws made by Parliament or state legislatures.	Supreme law outlining governance and rights.
AMENDMENT PROCESS	Can be amended by a **simple majority**.	Requires a **special process** under Article 368.
APPLICABILITY OF BASIC STRUCTURE	**Not applicable**.	Applicable to **constitutional amendments**.
EXAMPLES	IPC 1860, RTI Act 2005, Consumer Act 2019.	Fundamental Rights, Directive Principles.

Implications of the Ruling

1. **Judicial Clarity**:
   - Reinforces that the **Basic Structure Doctrine** is limited to constitutional amendments.
   - Avoids judicial overreach and ambiguity in **ordinary law adjudication**.
2. **Legislative Authority**: Ensures the autonomy of **Parliament** and **state legislatures** to enact laws within their **constitutional competence**.
3. **Clear Separation of Powers**: Strengthens the distinction between **ordinary laws** and the **Constitution**, avoiding unnecessary judicial invalidation.
4. **Regulatory Oversight**: Limits state powers in **higher education**, reaffirming Union List provisions under **Entry 66**.

About the Basic Structure Doctrine

- **Introduced**: **Kesavananda Bharati Case (1973)**.
- **Concept**: Certain core principles of the **Constitution** cannot be altered by Parliament.
- **Undefined Features**: Supremacy of the Constitution, federalism, democracy, secularism, rule of law, and fundamental rights.

Components of Basic Structure:

- Supremacy of the Constitution
- Republican and democratic form of government
- Separation of powers
- Secular character of the Constitution
- Federal structure

Way Forward

1. **Legislative Prudence**: States must align **ordinary laws** with constitutional provisions to avoid conflict.
2. **Judicial Restraint**: Courts must interpret laws without overextending the **Basic Structure Doctrine**.
3. **Balanced Oversight**: Ensuring compliance with **constitutional boundaries** without undermining legislative autonomy.
4. **Strengthening Education Policy**: Address regulatory gaps between **state and central powers** in education.

Conclusion

The Supreme Court's ruling sets a critical precedent, reinforcing the **separation of powers** and clarifying the scope of the **Basic Structure Doctrine**. By limiting its application to constitutional amendments, the judgment ensures **legislative autonomy** while preserving judicial oversight within constitutional boundaries.

Anglo-Indian Reservations: Demand for Reinstatement

UPSC Syllabus: Polity & Governance (Constitutional Provisions, Reservations, and Minority Representation), Current Affairs

Context

The **Anglo-Indian community** has urged the central government to reinstate their **reserved seats** in the **Lok Sabha** and **State Assemblies**. These reservations were abolished by the **104th Constitutional Amendment Act, 2019**.

About the Anglo-Indian Community

- **Origins**: The community emerged during the British East India Company's rule, as a result of marriages between British officers and **local Indian women**.
- **Definition**:
  - Introduced in the **Government of India Act, 1935**.
  - Article **366(2)** of the Constitution defines an Anglo-Indian as:
    - A person whose **father or male ancestors** are of European descent.
    - Born in India, with habitual residence in Indian territory (not temporary presence).

Constitutional Provisions for Anglo-Indian Reservations

1. **Article 331**: Allowed the **President** to nominate **2 Anglo-Indians** to the **Lok Sabha** if the community lacked representation.
2. **Article 333**: Enabled a **State Governor** to nominate **1 Anglo-Indian** to the **State Assembly** under similar conditions.
3. **Article 334(b)**:
   o Originally provided reservations for **10 years** from 1950.
   o Repeatedly extended through constitutional amendments.
4. **National Commission for SCs (Article 338)**: Empowered to examine the **safeguards** provided for Anglo-Indians and report their effectiveness to the **President**.

Historical Context of Anglo-Indian Reservations

1. **Constituent Assembly Intent**: Reservations for Anglo-Indians, SCs, and STs were introduced for a limited **10-year period** (1950-1960) to ensure political representation.
2. **Amendments to Article 334**: The provision for **Anglo-Indian reservations** was repeatedly extended alongside SC/ST reservations through various constitutional amendments:
   ▪ **8th Amendment Act, 1969**: Extended reservations to 1980.
   ▪ Subsequent extensions occurred every 10 years.
3. **104th Constitutional Amendment Act, 2019**:
   o **Abolished** Anglo-Indian reservations in the Lok Sabha and State Assemblies.
   o Retained SC/ST reservations until **2030**, marking the end of an **80-year period** since 1950.

Arguments for Reinstating Anglo-Indian Reservations

1. **Political Underrepresentation**: The community's small size and scattered presence hinder its representation in **legislative bodies**.
2. **Preservation of Identity**: Reservations ensured the Anglo-Indian community retained their **unique cultural identity** and had a voice in policy decisions.
3. **Historical Role**: Anglo-Indians have contributed significantly to India's **education, railways, and defense sectors**, which warrants continued recognition.
4. **Equality for Minorities**: While protections exist for other minorities, the abolition of reservations has left the Anglo-Indian community politically vulnerable.

Arguments Against Reinstating Reservations

1. **Declining Population**: Census data indicates a sharp decline in the Anglo-Indian population, questioning the necessity of reserved representation.
2. **End of Exceptional Provisions**: Reservations were always meant to be temporary measures. Abolishing them aligns with the **original intent** of the Constitution.
3. **Egalitarian Representation**: Nomination-based reservations conflict with **democratic principles** of electoral representation.
4. **Focus on Socio-Economic Needs**: Support for the community can be provided through **targeted socio-economic schemes** rather than political reservations.

Way Forward

1. **Socio-Economic Inclusion**: Introduce welfare schemes focusing on education, employment, and cultural preservation for the Anglo-Indian community.
2. **Nomination in Committees**: Explore alternative avenues for representation, such as nominating members to **parliamentary committees** or councils.
3. **Regular Census**: Conduct a census to assess the **demographic status** of Anglo-Indians and justify future interventions.
4. **Legislative Dialogue**: Facilitate discussions between the government and Anglo-Indian leaders to address their **legitimate concerns**.

Conclusion

The **104th Amendment** marked the end of political reservations for Anglo-Indians, aligning with the constitutional intent of temporary affirmative action. However, the concerns of the Anglo-Indian community regarding underrepresentation merit attention through **targeted measures** that ensure their **cultural and socio-economic upliftment** while respecting democratic principles.

Justice K.S. Puttaswamy: Architect of the Right to Privacy

UPSC Syllabus: Polity & Governance (Fundamental Rights, Right to Privacy, Landmark Judgments, Current Affairs)

Context

Justice **K.S. Puttaswamy**, former Karnataka High Court judge and lead petitioner in the landmark **Right to Privacy case** challenging **Aadhaar**, passed away recently. His petition and persistence paved the way for the Supreme Court's historic recognition of **privacy** as a **fundamental right**.

About Justice K.S. Puttaswamy's Petition

1. **Background**:
   o In **2012**, Justice Puttaswamy filed a petition in the **Supreme Court** questioning the **constitutional validity of Aadhaar**.
   o His key arguments:
      ▪ Making Aadhaar mandatory violates **Fundamental Rights** under **Article 14 (Right to Equality)** and **Article 21 (Right to Privacy)**.
      ▪ Linking Aadhaar to government schemes and services compromises **individual privacy** and raises fears of a **surveillance state**.
2. **Objective**:
   o To establish that privacy is an **inherent aspect** of an individual's dignity and liberty, which must be protected under the **Constitution of India**.

2017 Supreme Court Judgment on Right to Privacy

1. **Recognition of Privacy**:
   o The **9-judge Constitution Bench** ruled that the **Right to Privacy** is a **fundamental right** protected under **Article 21** and other fundamental freedoms in **Part III of the Constitution**.
2. **Key Observations**:
   o Privacy is **integral to human dignity** and supports autonomy of **mind and body**.
   o It enables individuals to make **independent decisions** about their personal lives.
3. **Tests to Restrict Privacy**:
   o The Supreme Court established a **three-fold test** for state-imposed restrictions on privacy:
      ▪ **Legislative Mandate**: Any restriction must have a statutory basis.
      ▪ **Legitimate State Purpose**: The restriction must serve a valid public purpose.
      ▪ **Proportionality**: The restriction must be the **least intrusive** measure to achieve the objective.

Supreme Court Verdict on Aadhaar

1. **Constitutional Validity**:
   o Aadhaar was upheld as **constitutional**, but with safeguards to address privacy concerns.
2. **Rationale of the Court**:
   o Aadhaar collects only **minimal biometric data** (iris scans and fingerprints) for authentication purposes.
   o Transactional details such as purpose, location, or specifics are **not recorded** or centralized.
   o **UIDAI** (Unique Identification Authority of India) does not retain personal transactional data.
3. **Preventing Surveillance**:
   o The court ruled that Aadhaar does not create a **surveillance state** as information remains in **isolated silos** and is restricted to a simple **Yes/No** verification.
4. **Proportional Invasion of Privacy**:
   o The court held that Aadhaar's benefits, such as streamlining welfare delivery and preventing leakages, outweigh concerns over **reasonable invasion** of privacy.

Understanding the Right to Privacy

1. **Definition**:
   o The **Right to Privacy** protects an individual's **inner sphere** from undue interference by the **State** or **non-State actors**.
2. **Positive and Negative Content**:
   o **Negative Content**: Restrains the state from **intruding** upon personal liberty.
   o **Positive Content**: Imposes an obligation on the state to **protect privacy** and create safeguards against violations.
3. **Nature of Right**:
   o Like other **fundamental rights**, the Right to Privacy is **not absolute** and is subject to **reasonable restrictions** for public interest, national security, and other legitimate concerns.

Impact of the Judgment

1. **Strengthening Individual Liberty**: The judgment empowered citizens to challenge arbitrary actions of the state that infringe upon their privacy.
2. **Foundation for Data Protection**: It paved the way for the formulation of the **Personal Data Protection Bill** to regulate data collection and ensure accountability.
3. **Framework for Future Cases**: The tests for restricting privacy have become guiding principles for determining the validity of state actions affecting individual rights.
4. **Checks on Aadhaar**: Aadhaar's scope was **restricted**:
   - Cannot be made mandatory for private entities.
   - Cannot compromise individual autonomy or dignity.

Conclusion

Justice K.S. Puttaswamy's legacy lies in his unwavering commitment to the principles of **individual dignity, autonomy, and liberty**. The **2017 Supreme Court judgment** was a milestone in **India's constitutional history**, reaffirming that the **Right to Privacy** is fundamental to a democratic and just society.

'SOCIALIST' and 'SECULAR' in the Preamble

Context

- The Supreme Court recently dismissed petitions challenging the inclusion of the words **'Socialist'** and **'Secular'** in the **Preamble** of the Constitution through the **42nd Amendment Act, 1976** (Dr. Balram Singh vs Union of India, 2024).

Key Points

Why in News?

1. **Challenge to the Inclusion**:
   o Petitioners argued that the words **'Socialist'** and **'Secular'** were added during the Emergency (1975–1977), not representing the people's will.
   o They claimed the Preamble's original adoption date (26th November 1949) prevented later insertions.
2. **Supreme Court's Decision**:
   o The Court upheld that **Parliament's amending power** under **Article 368** includes the ability to amend the Preamble.
   o Reaffirmed that **Socialism** and **Secularism** are **integral to India's Constitution**.

Key Observations by the Supreme Court

1. **Power to Amend**:
   o The **date of adoption in the Preamble** does not limit Parliament's power to amend it.
   o Amending power extends to adding or varying provisions, provided it does not violate the **Basic Structure Doctrine**.
2. **Constitution as a Living Document**:
   o The Constitution evolves with time, and terms like **'Socialist'** and **'Secular'** have been interpreted in alignment with India's changing socio-political realities.
3. **Definitions**:
   o **Socialism**: Reflects India's commitment to a **Welfare State** ensuring equality of opportunity.
   o **Secularism**: Acknowledges the **neutrality** of the state toward religions while protecting individuals' rights to freely practice their faiths.
   o Both terms align with the **Basic Structure** of the Constitution as observed in **Kesavananda Bharati vs State of Kerala** (1973) and **S.R. Bommai vs Union of India** (1994).

Key Changes in the 42nd Amendment Act, 1976

1. **Preamble**:
   o Inserted the terms **'Socialist', 'Secular'**, and **'Integrity'**.
   o Changed "unity of the nation" to **"unity and integrity of the nation"**.
2. **Directive Principles of State Policy (DPSPs)**:
   o Added **Article 39A** (Equal justice and free legal aid), **Article 43A** (Worker participation in industries), and **Article 48A** (Environmental protection).
3. **Emergency Provisions**:
   o Amended **Article 352**, allowing declaration of Emergency in **specific regions**.
4. **Other Additions**:
   o Introduced **Part IV-A** (Fundamental Duties) and **Part XIV-A** (Administrative Tribunals).

Indian Concept of Secularism

1. **Definition**:
   o Indian secularism emphasizes **neutrality** toward religions while allowing regulation of secular aspects of religious practices.
   o It differs from **Western secularism**, which strictly separates the state from religion.
2. **Relevance**:
   o Protects **individual freedom** and **minority rights**.
   o Ensures **equal treatment** of all religions by the state.

Indian Concept of Socialism

1. **Definition**: Indian socialism follows a **mixed economy** model, combining state intervention for welfare with private enterprise for growth.
2. **Features**:
   o Inspired by **Jawaharlal Nehru** and **Mahatma Gandhi**, focusing on **equity**, **welfare**, and **non-violence**.
   o Different from Marxist socialism:
      ▪ Allows **private property** but regulates it to reduce inequality.
      ▪ Emphasizes **peaceful reform** through democratic means.
3. **Democratic Socialism**:
   o Combines **democracy** with socialist principles.
   o Views the state as a tool for **social welfare**, not exploitation.

Conclusion

- The SC ruling reiterates that constitutional amendments, like the inclusion of **'Socialist'** and **'Secular'**, reflect the evolving needs of Indian society.
- These terms uphold the **core values** of the Constitution: **justice, liberty, equality**, and **fraternity**.
- In facing contemporary challenges such as **inequality** and **environmental degradation**, a balanced approach rooted in these principles is essential.

SC Questions Delay in Delimitation for Northeastern States

1. **Context**: The Supreme Court questioned the delay in **delimitation** for **Arunachal Pradesh, Assam, Manipur, and Nagaland** following the 2020 Presidential order rescinding the deferral.
2. **About Delimitation**:
   o **Definition**: The process of redrawing boundaries of **Lok Sabha** and **State Assembly constituencies** to reflect population changes.
   o **Objective**:
      ▪ Equal representation for equal population segments.
      ▪ Adjust for population **growth** and **distribution changes**.
3. **Constitutional Provisions**:
   o **Article 82**: After every Census, Parliament enacts a **Delimitation Act**.
   o **Article 170**: Territorial constituencies in states are redrawn after every Census.
4. **Process of Delimitation**:
   o A **Delimitation Commission** is appointed by the **President of India** under the Delimitation Act.
   o The Commission determines:
      ▪ Number and boundaries of constituencies to ensure population equality.
      ▪ Reserved seats for **Scheduled Castes (SCs)** and **Scheduled Tribes (STs)**.
5. **Previous Delimitation Exercises**:
   o Conducted in **1952, 1963, 1973, and 2002**.
   o Delimitation was **deferred** after the **1981, 1991, and 2001** Censuses for security reasons in Assam, Manipur, Arunachal Pradesh, and Nagaland.
   o **2020**: A Delimitation Commission was reconstituted for these states and **Jammu & Kashmir**.
6. **About Delimitation Commission**:
   o **Independent Body**: Functions autonomously in collaboration with the **Election Commission of India**.
   o **Composition**:
      ▪ A **retired Supreme Court judge**.
      ▪ Chief Election Commissioner of India.
      ▪ Respective State Election Commissioners.
   o **Authority**: Its orders are **final and non-justiciable** in courts to prevent indefinite delays in elections.

Significance

- **Reconstitution of ISC**: Strengthens **Centre-State cooperation** and addresses **federal disputes** effectively.
- **Delimitation in Northeastern States**: Ensures **equitable representation** and upholds **electoral fairness** in states with changing demographics.

Way Forward

1. **Regular Meetings of ISC**: Ensure frequent deliberations to address issues of **Centre-State relations** and **policy implementation**.
2. **Timely Delimitation**: Expedite the **delimitation process** for northeastern states to ensure democratic representation.
3. **Digital Monitoring**: Enhance transparency in delimitation and ISC proceedings through **digital platforms**.

Conclusion:

The reconstitution of the **Inter-State Council** and addressing delays in delimitation are crucial steps toward strengthening **cooperative federalism** and ensuring fair political representation in India.

Supreme Court's Directions on Remission Policy for Convicts
UPSC Syllabus: Polity & Governance (Judiciary, Prison Reforms, Constitutional Provisions)

Context

- The Supreme Court has issued **directions to states and UTs** to ensure transparency, standardization, and fairness in remission policies for convicts.

Key Guidelines by Supreme Court

1. **Timely Communication**: Convicts must be **promptly informed** about their remission eligibility and decisions.
2. **Policy Accessibility**: Remission policies should be made **easily accessible** in prisons and **published online** in English for transparency.
3. **Rejection Notification**: If a remission plea is rejected, convicts must be informed within **one week**, and a copy of the rejection must be shared with **District Legal Services Authorities (DLSA)** for legal aid.
4. **Pending Appeals**: Convicts' remission must not be delayed due to pending appeals, **except** in cases where the state has appealed for:
   - **Sentence enhancement** or
   - **Acquittal**.
5. **Individual Consideration**: Avoid **generalized conditions** for remission; decisions should be tailored to **specific cases and circumstances**.

About Remission Policy

1. **Definition**: Remission refers to the reduction in the **duration** of a convict's sentence without changing its **nature**.
   - Example: A 5-year sentence reduced to 1 year while remaining rigorous imprisonment.
2. **Underlying Principle**: Focus on **rehabilitative justice** rather than purely retributive punishment.
3. **Objective**: Consideration of remission applications aims to address circumstances **beyond court proceedings** where executive mercy can be shown.

Constitutional Provisions for Remission

1. **Article 72**: Empowers the **President** to grant **pardon, reprieve, respite, commutation, or remission** of sentences.
2. **Article 161**: Provides similar powers to the **Governor** for cases under state jurisdiction.
3. **Executive Authority**: These powers are exercised **on the advice of the Council of Ministers**.

Statutory Provisions for Remission

1. **Section 432 of CrPC**: State governments can remit **part or whole** of a convict's punishment.
2. **Section 433A of CrPC**: For **life imprisonment**, remission can only be considered after the convict serves **14 years** in prison.
3. **State Subject**: As **'Prisons'** is a **State List subject**, individual states design specific rules for remission, often linking it to **reformative and rehabilitative activities**.

Supreme Court Guidelines on Remission

- **Laxman Naskar vs. Union of India (2000)**: The SC laid down **5 key grounds** for remission eligibility:
  1. **Nature of Offence**: Whether the crime is an individual act that does not impact society as a whole.
  2. **Recurrence Risk**: Likelihood of the convict re-offending.
  3. **Potential for Crime**: Whether the convict has lost the capacity to commit further crimes.
  4. **Purpose of Confinement**: Assessing if any meaningful purpose remains in prolonging imprisonment.
  5. **Family Condition**: Evaluating the socio-economic condition of the convict's family.

Significance of the Guidelines

1. **Transparency**: Ensures a **standardized and fair approach** across all states and UTs.
2. **Legal Aid Access**: Involving **District Legal Services Authorities** provides convicts with timely legal recourse.
3. **Human Rights Protection**: Prevents undue delays and ensures prisoners' **constitutional rights** are upheld.
4. **Rehabilitation Focus**: Promotes **rehabilitative justice** over punitive confinement.

Conclusion

The Supreme Court's directions on the remission policy reinforce **judicial accountability** and strengthen **human rights protections** for convicts. By prioritizing fairness, transparency, and individualized considerations, the ruling upholds the constitutional principle of **justice and rehabilitation** in the Indian penal system.

Governance and Artificial Intelligence (AI)

Why in the News?

India has launched its **first AI Data Bank**, aiming to foster innovation by offering access to diverse datasets for researchers, startups, and developers to create scalable AI solutions. This aligns with India's growing emphasis on integrating **AI in governance** for efficient service delivery, ethical innovation, and global collaboration.

Potential of AI to Transform Governance in India

1. **Efficient Service Delivery**

   - **Education**: Enables personalized learning and automates assessments.
     - *Example*: NCERT's **National Repository of Open Educational Resources (NROER)** uses AI to tag metadata for resources.
   - **Healthcare**: Improves accessibility through telemedicine.
     - *Example*: NITI Aayog's collaboration with DBT for a cancer-related image database.
   - **Agriculture**: Provides predictive insights on weather, pests, and resource use.
     - *Example*: The **National Pest Surveillance System** utilizes AI for crop health monitoring.

2. **Inclusivity and Accessibility:** AI systems like **Bhashini** ensure government services are available in regional languages, bridging linguistic and digital divides.

3. **Data-Driven Policymaking:** AI facilitates real-time data analysis for transparent and evidence-based policymaking.

   - *Example*: **India Urban Data Exchange** optimizes urban services, including traffic and waste management.

4. **Judicial Efficiency:** AI aids case prioritization, legal research, and translation services.

   - *Example*: **SUVAS (Supreme Court Vidhik Anuvaad Software)** bridges language gaps in legal proceedings.

5. **Disaster Management:** AI-based tools like the **RAHAT App** provide early warnings for natural disasters and support evacuation efforts.

Key Initiatives to Promote AI in India

1. **National Strategy for AI (#AIforAll)**: NITI Aayog's strategy focuses on leveraging AI in healthcare, education, and agriculture.
2. **India AI Program**: Promotes AI innovation and ethical practices.
3. **Digital Personal Data Protection Act**: Strengthens data privacy for AI operations.
4. **Global Partnerships**: Collaborations like the **US-India AI Initiative** and participation in **GPAI**.
5. **Skill Development**: Initiatives such as **Responsible AI for Youth** aim to expand AI education.

Challenges in AI Integration for Governance

1. **Fragmented Data Management:** Lack of implementation of the **National Data Governance Framework Policy (NDGFP)** limits standardized data access.
2. **Infrastructure Gaps:** Poor internet penetration (45% of the population lacks access) hampers AI adoption in rural areas.
3. **Regulatory Framework Deficiencies:** Absence of AI-specific laws creates challenges in managing ethics, privacy, and accountability.
4. **Skill Shortages:** A **140,000 AI professional gap** hinders growth, as reported by NASSCOM.
5. **Data Privacy and Security Risks:** Incidents like the **Aadhaar data leak** demonstrate vulnerabilities in sensitive data management.
6. **Ethical and Algorithmic Bias:** Biased AI systems can lead to discriminatory outcomes, undermining fairness and accuracy.

Way Forward

1. **Strengthen Risk Management and Ethical Oversight:** Regular audits, fairness metrics, and "model cards" to assess and mitigate AI biases.
2. **Enhance Data Privacy and Sovereignty:** Ensure compliance with the **Digital Personal Data Protection Act**, particularly for cross-border data flows.
3. **Bridge Skill Gaps:** Expand initiatives like **FutureSkills Prime** to train AI professionals, especially in underserved areas.
4. **Invest in Infrastructure:** Build robust internet and cloud infrastructure, prioritizing rural connectivity and affordable access.
5. **Encourage Public-Private Collaboration:** Initiatives like **IndiaAI Compute Capacity** aim to develop scalable AI systems with the support of over 10,000 GPUs.
6. **Promote Transparency and Inclusivity:** Adopt **Participatory AI Development** models to involve diverse stakeholders in AI governance.
7. **Cybersecurity Measures:** Leverage AI for real-time threat detection and establish secure monitoring frameworks.

Conclusion

AI offers immense potential to transform governance by improving service delivery, inclusivity, and decision-making. However, challenges related to data, regulation, and ethics need to be addressed comprehensively. A collaborative approach combining robust policy frameworks, skill development, and technological innovation will enable India to harness AI responsibly, aligning with its broader goals of sustainable and inclusive development

INTERNATIONAL RELATIONS

The 19th G20 Rio Summit, 2024

UPSC Syllabus: International Relations, Global Groupings, Climate Change

Context

The **19th G20 Summit** was held in **Rio de Janeiro, Brazil**, where leaders adopted a **Declaration** focusing on poverty eradication, climate change, multilateralism, and equitable global growth.

Key Highlights of the G20 Rio Leaders' Declaration

1. Global Alliance Against Hunger and Poverty

- **Objective**: Eradicate hunger and poverty globally by **2030**.
- **Three Pillars**:
  - **National Coordination**: Strengthen policies at the national level.
  - **Financial Mobilisation**: Raise funds to combat hunger and poverty.
  - **Knowledge Integration**: Share global best practices.
- **Headquarters**: Food and Agriculture Organisation (FAO), **Rome**.
- **India's Role**:
  - Expanding cash transfer programs for **500 million people**.
  - Providing school meals to **150 million children**.
  - Assisting **200 million children** and pregnant women through health programs.

2. Focus on Palestine and Gaza Ceasefire

- **Affirmation of Palestinian Rights**: Supports the **right to self-determination**.
- **Two-State Solution**: Envisions peaceful coexistence of **Israel and Palestine**.
- **Gaza Ceasefire**: Aligns with **UNSC Resolution 2735**.
- **Lebanon Ceasefire**: Safe return of citizens along the **Blue Line**.

3. Status of Sustainable Development Goals (SDGs)

- **Call for Action**: Speed up the implementation of the **G20 2023 SDG Action Plan**.
- **Progress Report**:
  - **On-Track Targets**: Only **17%** of SDG targets are on schedule.
  - **Limited Progress**: **50%** show minimal or moderate progress.
  - **Stalled/Regressed**: Over **one-third** have stalled or regressed.

4. Food Security and Nutrition

- Reaffirmed commitment to food security under the **Deccan High-Level Principles (2023)**.

- Introduced **SDG 18**: Focuses on **ethnic-racial equality** as a priority.

5. Ukraine War

- Highlighted **disruptions** in global food, energy, and financial stability.
- Called for **peace efforts** aligned with the **UN Charter**.

6. Climate Change Initiatives

- **Global Task Force for Climate Change Mobilization**: Strengthens climate financing for developing nations.
- **Key Commitments**:
  o Reduce **land degradation** by **50%** by 2040.
  o Establish the **Tropical Forest Forever Facility (TFFF)** for forest conservation.
  o Address impacts of extreme droughts and wildfires.

7. Efforts Against Corruption: Promotes use of the **GlobE Network** and other anti-corruption platforms to combat illicit financial flows.

8. Taxation Reforms: Advocates for **progressive taxation** of ultra-high-net-worth individuals.

9. Strengthening Multilateral Development Banks (MDBs): Endorsed a roadmap to improve MDBs' **financial capacity** and alignment with SDGs.

Challenges Facing G20

1. **Diverging Economic Interests**: Balancing interests of advanced and emerging economies.
2. **Geopolitical Tensions**: Conflicts like **Russia-Ukraine** and Middle East tensions disrupt consensus.
3. **Climate Finance Commitments**: Binding agreements on funding and emission reductions remain elusive.
4. **Lack of Enforcement Mechanisms**: G20 relies on **voluntary pledges** with no legal accountability.
5. **Underrepresentation of Global South**: Smaller and underdeveloped nations lack representation.

Way Forward

- **Address Hunger and Resource Crises**: Expand programs like the **Global Hunger and Poverty Alliance**.
- **Ensure Accountability**: Monitor G20 commitments with **targets and timelines**.
- **Enhance Representation**: Promote the voices of **Global South nations**.
- **Foster Diplomatic Dialogue**: Prioritize peaceful resolutions for conflicts like Ukraine and Gaza.
- **Fair Trade and Growth**: Address **protectionism** and reform global trade policies.

Conclusion

The 19th G20 Summit reaffirmed the G20's role in addressing global crises and promoting **inclusive growth**. As the presidency rotates, fostering accountability, equity, and sustainable development will be pivotal for global progress.

India and RCEP: Reviewing India's Strategic Trade Decisions

UPSC Syllabus: International Relations, International Trade Agreements

Context

The **CEO of NITI Aayog** has suggested that India should reconsider its decision to remain outside the **Regional Comprehensive Economic Partnership (RCEP)** to leverage its economic potential and integration into global markets.

About RCEP

- **Definition**: RCEP is the world's largest **free trade agreement (FTA)**, covering **15 countries**—10 ASEAN nations and 5 partners (China, Japan, South Korea, Australia, New Zealand).
- **Objective**: Eliminate tariffs, harmonize trade rules, and strengthen supply chain cooperation across the Asia-Pacific region.
- **Fast-Track Option**: India can rejoin without an **18-month waiting period** as it was a founding member.

Why India Withdrew from RCEP in 2019

1. Economic Challenges

- **High Tariff Reductions**: RCEP required India to reduce tariffs on **70%** of goods from China, Australia, and New Zealand, risking harm to domestic industries.
- **Worsening Trade Deficit**: India faced trade deficits with **11 out of 16 RCEP countries**, exacerbated by earlier FTAs.
  - Trade deficit with ASEAN grew by **303%**, South Korea by **164%**, and Japan by **138%** between 2007-09 and 2020-22.

2. Non-Tariff Barriers (NTBs): Indian companies faced **non-tariff barriers** in RCEP countries, restricting market access, particularly in China.

3. China Factor

- **Trade Distortion**: China's subsidies and state-controlled production created an **uneven playing field**.
- **Rules of Origin (RoOs)**: India feared **dumping of goods** routed through other RCEP countries.

4. Impact on Domestic Sectors

- **Dairy Industry**: Producers from **New Zealand and Australia** could dominate, harming India's small-scale dairy farmers.
- **Plantation and Rubber**: Cheap imports from Vietnam and Indonesia posed a threat to domestic production.

5. Lack of Protective Mechanisms

- **Auto-Trigger Mechanism**: India's demand for a **safeguard mechanism** against sudden import surges was rejected.
- **Ratchet Obligations**: RCEP's terms restricted raising tariffs later, limiting India's policy flexibility.

6. Data Localisation: India insisted on a **data localisation policy** to protect **national interests**, which RCEP did not accommodate.

7. Limited Gains in Services: RCEP lacked robust provisions on **services, IT, and skilled labour mobility**, crucial for India's export economy.

Potential Costs of India's Exclusion from RCEP

1. **China's Economic Dominance**: India's absence gives **China greater leverage** in the Asia-Pacific trade landscape.
2. **Missed Market Access**: RCEP covers over **2 billion people**. India's exports may decline as members focus on intra-bloc trade.
3. **Act East Policy Setback**: India's economic engagement with ASEAN and East Asia could weaken.
4. **Impact on Indo-Pacific Strategy**: Exclusion hampers India's partnerships like the **Supply Chain Resilience Initiative (SCRI)** with Australia and Japan.
5. **Manufacturing Ambitions**: India's vision to become a **global manufacturing hub** is limited without RCEP access.

Why India Should Reconsider RCEP

1. **Gateway to Global Supply Chains**: RCEP integrates economies, enabling India to position itself as a key supplier in regional production networks.
2. **Economic Growth**: Access to RCEP markets would boost exports, attract FDI, and promote economic expansion.
3. **Strategic Benefits**: Aligns India with East Asian economies and reduces dependence on the **China-plus-one** strategy.
4. **Support to Act East Policy**: Joining RCEP strengthens India's ties with ASEAN, fostering regional diplomacy and trade.

Way Forward for India

1. **Strengthen Domestic Industries**:
   - Boost **MSMEs**, manufacturing, and agriculture sectors to enhance global competitiveness.
   - Promote initiatives like **Atmanirbhar Bharat** for resilience.
2. **Tax Rationalisation**: Rationalize **direct and indirect taxes** to improve competitiveness for Indian exports.
3. **Focus on Services Sector**: Negotiate **bilateral agreements** to leverage India's strengths in **IT, digital trade**, and skilled labour mobility.
4. **Enhance Trade Partnerships**: Expedite ongoing negotiations with the **EU** and other partners for balanced trade agreements.
5. **Revisit China Plus One Strategy**: Capitalize on global shifts by attracting businesses seeking alternatives to China.

Conclusion

While **RCEP** presents challenges, it offers India an opportunity for deeper **economic integration**, enhanced global supply chain participation, and strengthened regional partnerships. A well-prepared and strategically sound India could reconsider joining RCEP to unlock long-term economic and geopolitical benefits.

US Elections 2024: Implications for India and the World

UPSC Syllabus: International Relations, India-US Relations, Global Politics

Context

Donald Trump's victory in the **2024 US Presidential Elections** brings significant geopolitical, economic, and strategic implications for India and the world.

Background

Donald Trump, the 45th President (2017-2021), won his second term in 2024 with over **270 Electoral College votes**. His previous tenure was marked by an **"America First"** agenda, economic protectionism, stricter immigration laws, and geopolitical confrontations with China and Iran.

Key Developments of Trump's First Term (2017-2021)

1. **Visa Restrictions**
   o **H-1B and L-1 Visas** faced stricter regulations under *Buy American, Hire American* policies.
   o **Impact**: Indian IT companies, heavily dependent on these visas, saw **H-1B denial rates rise** from **4% to 17%**.
2. **Economic Protectionism**
   o **Trade Wars**: Imposed tariffs on China, the EU, and others to **reduce trade deficits**.
   o **Impact**: India faced pressure on tariffs, particularly on products like **Harley Davidson motorcycles**.
3. **Global Agreements Withdrawal**
   o **Paris Climate Agreement**: Trump withdrew citing economic concerns.
   o **Iran Nuclear Deal**: Reimposed sanctions, escalating tensions.
   o **Trans-Pacific Partnership (TPP)**: Trump exited the trade pact.
4. **Geopolitical Moves**
   o **Abraham Accords**: Brokered normalization of ties between Israel and Arab nations.
   o **China Confrontation**: Banned **Huawei's 5G networks**.
   o **North Korea Talks**: Engaged Kim Jong-un but failed to achieve denuclearization.

Implications of Trump's Second Term for India

1. Strategic and Defence Relations

- **Countering China**: Trump's **China as a strategic threat** policy aligns with India's interests in countering Beijing's assertiveness.
  o Reviving initiatives like **QUAD** strengthens India's role in the Indo-Pacific.
- **Defence Cooperation**: Likely to **expand military hardware sales** to India, boosting bilateral defence trade.
- **Khalistani Separatism**: Trump may crack down on anti-India activities by Khalistani groups.

2. Trade and Economic Ties

- **US-China Trade War**: India may benefit as Trump's proposed **60% tariffs on Chinese imports** could redirect trade flows towards India.
- **Energy Security**: Trump's **pro-fossil fuel stance** encourages India to invest in US **oil and LNG** sectors.
- **Pharmaceutical Exports**: Deregulation could improve market access for Indian **generic drug manufacturers**.

3. Human Rights and Diplomacy

- **Reduced Human Rights Pressure**: Trump's non-interference stance means fewer critiques of India's domestic policies.
  o *Example*: Support for India during the **abrogation of Article 370** in J&K.
- **No Pressure Over Canada Tensions**: Strained Trump-Trudeau ties reduce US intervention in India's disputes with Canada.

4. People-to-People Ties

- **Immigration Reforms**: Trump's proposal to **grant green cards** to foreign graduates could benefit **Indian students** in the US.

Challenges for India Under Trump 2.0

1. **America-First Trade Policy**
   o Trump's focus on **reducing trade deficits** may pressure India to lower tariffs on US goods.
   o Example: Earlier demands to reduce **Harley Davidson bike tariffs**.
2. **Generalised System of Preferences (GSP)**
   o India lost **GSP benefits** in 2019, impacting handloom and agricultural sectors. Trump's protectionist stance may delay reinstatement.

3. **World Trade Organization (WTO) Disputes**
   o Trump's administration may challenge India's trade policies, leading to bilateral tensions.
4. **Immigration Challenges**
   o While reforms benefit legal immigration, Trump's tough stance on **illegal immigration** could lead to **mass deportations**, affecting Indian nationals.
5. **Geopolitical Balancing**
   o India may seek US intervention in **West Asia**, particularly in **Israel-Gaza conflicts** and **India-Middle East-Europe Economic Corridor (IMEC)**.

Global Implications of Trump's Presidency

1. **Rise in Protectionism**: Increased tariffs and trade disputes could disrupt **global trade flows**, impacting developing nations.
2. **Climate Policy Reversal**: Trump's withdrawal from international climate commitments could undermine **global climate action**.
3. **Geopolitical Tensions**: Continued confrontation with **China** and Iran may escalate regional instability.
4. **Global Alliances Shift**: Trump's **bilateral focus** may weaken multilateral forums like the UN and WTO.

Way Forward for India

1. **Enhance Strategic Partnerships**: Strengthen Indo-US ties through initiatives like **QUAD** to counter Chinese influence in the **Indo-Pacific**.
2. **Trade Negotiations**: Address US concerns on **tariffs** and promote Indian interests in areas like pharmaceuticals, agriculture, and digital trade.
3. **Defence Cooperation**: Expand US-India defence trade and explore joint ventures under **'Make in India'**.
4. **Immigration and People-to-People Ties**: Facilitate reforms on visas and immigration to benefit Indian students and professionals.
5. **Energy Security**: Enhance energy imports from the US to diversify sources and improve energy cooperation.

Conclusion

Trump's second term presents both **opportunities** and **challenges** for India. By aligning strategic interests, strengthening economic partnerships, and resolving trade disputes, India and the US can redefine their bilateral ties to promote mutual growth and global stability in a rapidly evolving geopolitical landscape.

India-Middle East-Europe Economic Corridor (IMEC)

Context

The India-Middle East-Europe Economic Corridor (IMEC), announced during the **G20 Summit in New Delhi (2023)**, aims to boost connectivity, trade, and economic collaboration between India, the Middle East, and Europe. Progress has been made in some areas, while challenges persist.

India-Middle East-Europe Economic Corridor (IMEC)

Key Features of IMEC

1. **Establishment**: MoU signed by **India, UAE, Saudi Arabia, USA, European Union**, and other member states.
2. **Structure**:
   o **Eastern Corridor**: Connects **India to the Gulf region**.
   o **Northern Corridor**: Connects **the Gulf to Europe**.
3. **Key Goals**:
   o Develop **multi-modal connectivity**: ports, railways, sea routes, and pipelines.
   o Enhance trade, energy cooperation, and digital connectivity.
   o Counter **China's Belt and Road Initiative (BRI)** through the **Partnership for Global Infrastructure and Investment (PGII)**.
4. **Scope**: Open to **regional expansion** to include Qatar, Oman, Egypt, Türkiye, and Iraq.
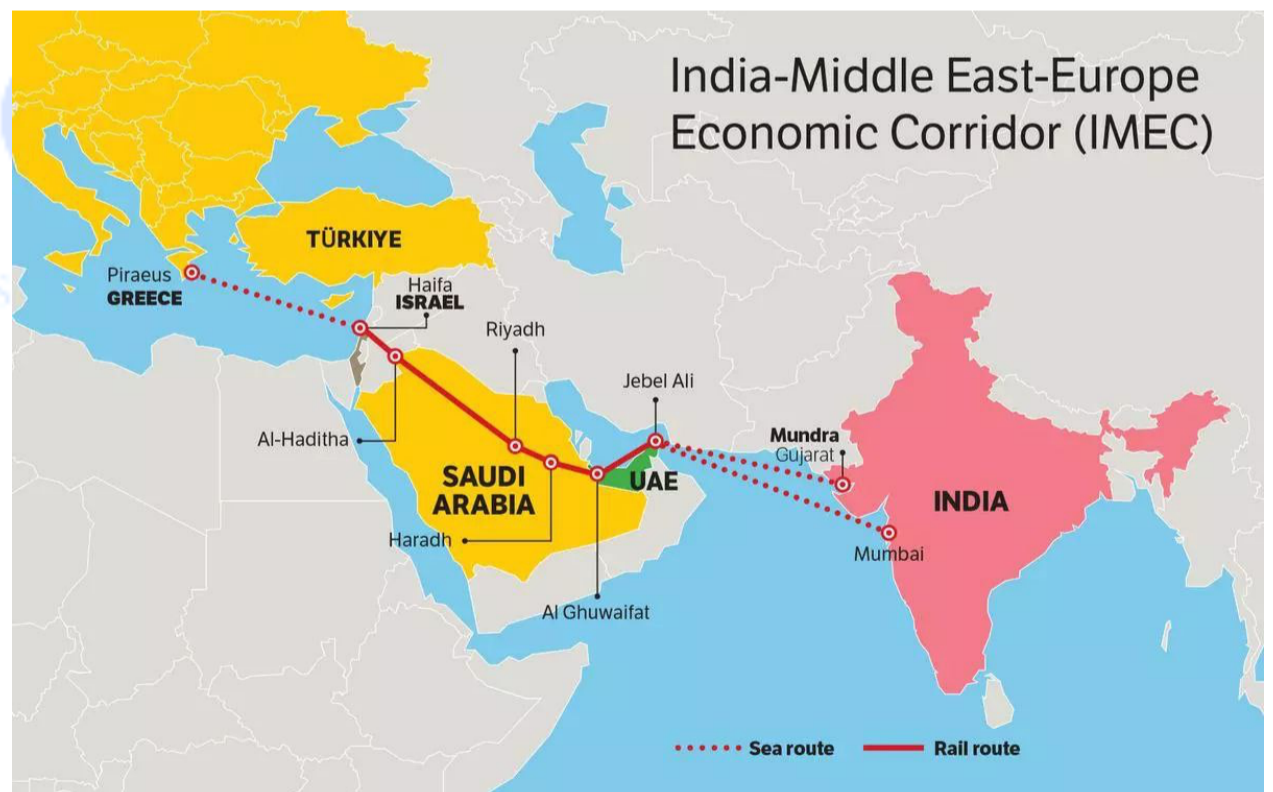
Significance of IMEC

Global Impacts

- **Diversified Trade Routes**: Offers an alternative to traditional maritime chokepoints like the **Suez Canal**.
- **Economic Growth**: IMEC nations collectively represent **40% of global GDP** ($47 trillion).
- **Geopolitical Counterweight**: Serves as a strategic counter to China's growing influence via BRI.

- **Regional Stability**: Economic interdependence may promote peace in the conflict-prone Middle East.

India's Interests

- **Faster Connectivity**: Shipments to Europe are expected to be **40% faster**, with a **30% cost reduction** compared to current routes.
- **Strengthened Gulf Ties**: Enhances trade relations with the Gulf Cooperation Council (GCC).
- **Geopolitical Aspirations**: Positions India as a pivotal player in international trade and infrastructure.

Progress and Challenges

Progress

1. **Infrastructure**: Development in the **UAE-Israel rail network** and expansion of Israel's **Haifa port**.
2. **Digital Trade**: Launch of the **Virtual Trade Corridor (VTC)** between India and UAE to streamline trade processes.

Challenges

1. **High Costs**: Multi-modal complexities could lead to higher freight costs.
2. **Limited Inclusion**: Key players like **Türkiye, Egypt, and Iran** are excluded.
3. **Regional Instability**: Conflicts like the **Israel-Hamas war** threaten progress.
4. **Lack of Financial Commitments**: Insufficient clarity on funding mechanisms for large-scale infrastructure.

Comparison with Other Corridors

1. **International North-South Transport Corridor (INSTC)**: Connects **India to Russia via Iran**; focuses on Eurasian trade.
2. **Belt and Road Initiative (BRI)**: China's transcontinental project linking **Asia, Europe, and Africa**.
3. **Trans-Caspian International Transport Route (TITR)**: Links **China to Europe** via **Central Asia and Türkiye**.

India-CARICOM Summit 2024: Strengthening Ties for Mutual Growth

UPSC Syllabus: International Relations, Economic and Strategic Relations

Context

Prime Minister Narendra Modi attended the **Second India-CARICOM Summit** in **Guyana**, where he proposed **seven pillars** to enhance India-CARICOM cooperation.

Key Proposals: Seven Pillars of India-CARICOM Relations

1. **Capacity Building**
   - Establishment of a **Forensic Centre** for the CARICOM region.
   - Proposal to create a training portal like **iGOT Karmayogi** for continuous capacity building of civil servants.
2. **Agriculture and Food Security**
   - Collaboration to enhance **agricultural practices** and ensure **food security** in CARICOM nations.
3. **Renewable Energy and Climate Change**
   - Focus on renewable energy projects and climate mitigation.
   - Announcement of a **$150 million credit line** for renewable energy initiatives.
4. **Innovation, Technology, and Trade**
   - Strengthen technological collaboration and trade partnerships.
   - Proposal for an **online portal** to connect private sectors and stakeholders.
   - Implementation of a **$1 million grant** for SMEs announced earlier.
5. **Cricket and Culture**
   - Promotion of **cricket** as a cultural link.
   - Preservation and sharing of **cultural heritage** to strengthen people-to-people ties.
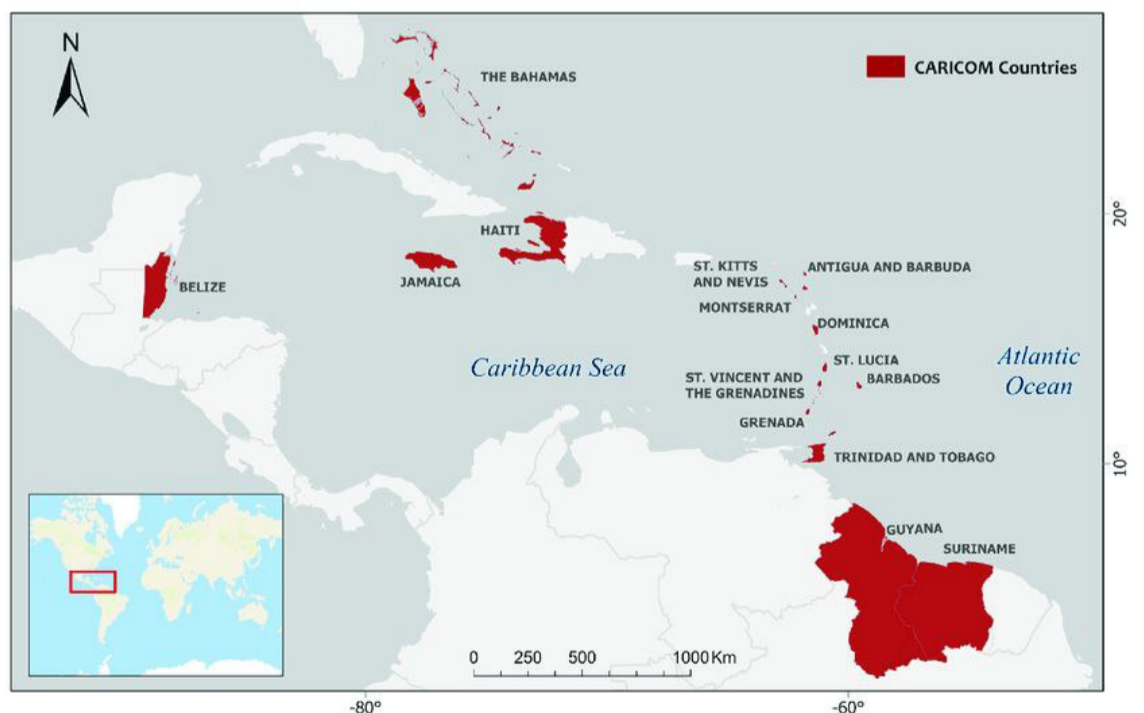
6. **Ocean Economy**
   o Focus on sustainable development through **blue economy** sectors.
7. **Medicine and Healthcare**
   o Strengthening healthcare systems and addressing public health challenges.

Key Awards Conferred on PM Modi

1. **Guyana**
   o **Order of Excellence**: Guyana's highest national award, recognizing leadership in strengthening India-Guyana ties.
   o **Key to Georgetown**: Symbolizing goodwill and historic bonds.
2. **Dominica**
   o **Dominica Award of Honour**: Recognizing India's **COVID-19 vaccine support** and leadership in **health, education, and climate resilience**.

Key Proposals by India

- **Online Portal**: Connecting stakeholders and businesses between India and CARICOM nations.
- **Support for SMEs**: Implementation of a **$1 million grant** for SME development.
- **Economic Cooperation**: Renewed focus on renewable energy, climate resilience, and sustainable economic growth.
- **Vision for Collaboration**: Emphasis on the **Five Ts**:
   o **Trade, Technology, Tourism, Talent, and Tradition**.

About CARICOM (Caribbean Community)

- **Founded**: 1973 (Treaty of Chaguaramas).
- **Headquarters**: Georgetown, Guyana.
- **Current Chair**: Antigua and Barbuda.
- **Members**: 15 nations, including Jamaica, Haiti, Trinidad and Tobago, and Suriname.
- **Objectives**:
   o **Economic Integration** and cooperation.
   o Ensuring **equitable benefits** of regional growth.
   o Coordinating **foreign policies** of member states.
- **Global Status**: Recognized as a **UN Observer**.

Significance of India-CARICOM Partnership

1. Strategic Significance

- Strengthens India's role in the **Global South**.
- Enhances India's **diplomatic leverage** in multilateral forums.

2. Climate Action and Sustainability

- **Shared Challenges**: Both regions face climate change risks, especially **small island nations**.
- India's leadership in the **International Solar Alliance (ISA)** and **Coalition for Disaster Resilient Infrastructure (CDRI)** provides solutions.
- **$150 million credit line**: Financial support for renewable energy projects.

3. Economic Cooperation

- Opportunities for Indian investment in **IT, renewable energy, healthcare**, and **medical tourism**.
- Capacity-building initiatives, leveraging India's expertise in **digital healthcare** and **agriculture**.

4. Cultural and Diaspora Ties

- **Indian Diaspora**: Significant population in the Caribbean strengthens cultural and historical bonds.
- **Cultural Exchange**: Initiatives to preserve and celebrate shared heritage.

Way Forward

1. **Sustainable Development**: Focus on the **blue economy** and renewable energy for long-term regional growth.
2. **Trade and Innovation**: Leverage technological advancements to enhance trade relations.
3. **Capacity Building**: Extend Indian expertise through skill development programs and knowledge-sharing platforms.
4. **Climate Resilience**: Collaborate to implement climate mitigation strategies, particularly for small island nations.
5. **Cultural Engagement**: Promote cricket, arts, and education to deepen people-to-people connections.

Conclusion

The India-CARICOM Summit signifies a **renewed focus** on economic, cultural, and strategic collaboration. By aligning initiatives with the **Seven Pillars**, India and CARICOM nations can foster a partnership rooted in **sustainable growth, innovation**, and shared global aspirations.

India-Nigeria Relations: A Strategic Partnership for Growth

UPSC Syllabus: International Relations, India and Africa

Context

Recently, the **Indian Prime Minister** visited **Nigeria**, marking the first high-level visit since 2007. The visit underlines the growing strategic, economic, and cultural cooperation between the two nations.

Key Highlights of the Visit

1. **High-Level Discussion**
   o PM Modi met Nigerian President **Bola Ahmed Tinubu** and held delegation-level talks on bilateral ties.
2. **National Honor**
   o PM Modi was conferred **Nigeria's national honor**, **Grand Commander of the Order of Niger**.
   o Previously, this honor was awarded only to **Late Queen Elizabeth II**.
3. **Strategic Agreements**
   o **Six agreements** were reached to strengthen the strategic partnership.
4. **MoUs Signed**
   o **Cultural Exchange Programme**: Promotes cultural ties and people-to-people exchanges.
   o **Customs Cooperation**: Enhances trade facilitation and reduces customs-related barriers.
   o **Survey Cooperation**: Strengthens technical collaboration for surveys and research.

India-Nigeria Bilateral Relations

1. Historical Ties

- India established its diplomatic mission in Lagos in **1958**, two years before Nigeria's independence in **1960**.
- The two nations share a common colonial past and membership in **Commonwealth Nations**.

2. Economic and Trade Relations

- **India** is Nigeria's **largest trading partner**, while **Nigeria** is India's largest trade partner in Africa.
- **Key Sectors**: Energy, pharmaceuticals, automobiles, and technology.
- **Trade Statistics**:
   o **Crude Oil**: Nigeria supplies **11-12% of India's crude oil needs**, making it a critical energy partner.
   o **Investments**: Indian investments in Nigeria stand at **$27 billion**, with opportunities for expansion in sectors like infrastructure and manufacturing.

3. Cultural and Educational Exchange

- **Indian Diaspora**: Around **50,000 Indians** reside in Nigeria, forming the largest Indian community in West Africa.
- **Indian Influence**: Bollywood movies and cultural products have enjoyed popularity in Nigeria since the **1970s**.
- **Contribution**: Indian teachers, doctors, and professionals have significantly contributed to Nigerian society.

4. Defence and Security Cooperation

- **Historical Defence Ties**:
   o India helped establish Nigeria's **National Defence Academy** in **Kaduna** (1964).
   o India provided military instructors for nearly **two decades**.
- **Training**: Around **27,500 Nigerian personnel** have been trained in India, including at institutions like the **Defence Services Staff College (DSSC), Wellington**.
- **Maritime Security**: India and Nigeria collaborate on securing the **Gulf of Guinea**, addressing piracy and maritime trade disruptions.

5. Healthcare and Education

- **Healthcare**: India is the **top destination** for Nigerians seeking high-quality, affordable medical care.
- **Education**: Indian institutions are popular among Nigerian students for affordable and quality higher education.

Key Areas of Cooperation

Sector	Details
Energy	Nigeria is a key supplier of crude oil, meeting India's energy security needs.
Trade and Investment	Indian businesses dominate pharmaceuticals, IT, and infrastructure sectors.
Defence	Military training, capacity building, and maritime security cooperation.
Culture	Bollywood and Indian professionals strengthen cultural ties.
Healthcare	Medical tourism from Nigeria to India is significant.

Significance of the Visit

1. **Strengthening Strategic Partnership**: Focus on trade, energy security, and maritime cooperation solidifies strategic ties between the two nations.
2. **Energy Security**: Nigeria plays a vital role in India's energy diversification strategy, reducing dependency on the Middle East.
3. **Economic Growth**: Indian investments in Nigeria's infrastructure and SMEs are crucial for mutual economic development.
4. **Cultural Diplomacy**: Shared cultural affinities, such as cricket and cinema, promote **soft power diplomacy**.
5. **Regional Influence**: Nigeria's leadership in **ECOWAS (Economic Community of West African States)** aligns with India's **Africa-focused outreach**.

Challenges in India-Nigeria Relations

1. **Security Concerns**: Issues like piracy in the Gulf of Guinea and internal insurgencies affect economic ties.
2. **Bureaucratic Hurdles**: Trade and investment are hindered by delays and policy inconsistencies.
3. **Healthcare Accessibility**: Improving India's medical outreach for Nigerians with targeted health infrastructure.

Way Forward

1. **Enhanced Energy Cooperation**: Expand energy partnerships, including renewable energy projects.
2. **Maritime Security**: Deepen collaboration on securing trade routes and combating piracy in the Gulf of Guinea.
3. **Cultural Exchanges**: Promote cultural programs and people-to-people ties through initiatives like **Study in India**.
4. **Trade Facilitation**: Ease customs processes and expand Indian investments in **Nigerian infrastructure and agriculture**.
5. **Defence Training**: Expand training programs for Nigerian forces and enhance technology sharing.

Conclusion

India-Nigeria relations are poised for a new era of cooperation, focusing on **energy security, trade, culture**, and **defence**. PM Modi's visit reinforces India's commitment to strengthening its ties with Africa's largest economy, positioning both nations for mutual growth and sustainable development.

India-Spain Relations: Strengthening Bilateral Ties for a Shared Future

UPSC Syllabus: International Relations, India and European Union

Context

At the invitation of India's Prime Minister, Spain's President **Pedro Sanchez** visited India, highlighting renewed focus on defence, trade, culture, and multilateral cooperation.

Key Highlights of the India-Spain Joint Statement

1. **Defence Partnership**
   - Joint inauguration of the **C-295 aircraft assembly line** in **Vadodara, Gujarat**.
   - Significance: Boosts **'Make in India'** and strengthens India's domestic defence manufacturing sector.
2. **Economic and Commercial Cooperation**
   - Agreement to establish a **Fast Track Mechanism** to promote ease of business.
   - **India-Spain CEOs Forum**: Both sides emphasized enhancing business-to-business (B2B) collaboration.
3. **India-Spain Year of Culture, Tourism, and AI (2026)**
   - 2026 designated as a **special year** to promote cultural exchanges, tourism, and collaboration in **artificial intelligence (AI)**.
4. **Global and Regional Cooperation**
   - Emphasis on **multilateralism** and mutual support for **UN Security Council** candidatures.
   - Collaboration on **climate action** and **renewable energy**.
5. **Commitment to EU-India Relations**
   - Support for the **India-EU Free Trade Agreement** to strengthen trade ties.
   - Endorsement of the **India-Middle East-Europe Economic Corridor (IMEEC)** to enhance connectivity and logistics.

India-Spain Bilateral Relations

1. Diplomatic Relations

- India and Spain established formal diplomatic ties in **1956**, marking over **six decades** of cooperation.

2. Economic and Trade Relations

- **Spain** is India's **6th largest trading partner** within the European Union.
- **Trade Figures**: Total bilateral trade in **2023** amounted to **$8.25 billion**, registering a **4.2% increase** from 2022.
- **Foreign Direct Investment (FDI)**: India is among Spain's **top 30 global investors** and **top 5 investors from Asia**.
- **Joint Commission on Economic Cooperation (JCEC)**: Established in **1972**; the latest 12th meeting was held in **April 2023** in New Delhi.
- **India-Spain CEOs Forum**: Founded in **2015** to promote business dialogue.

3. Defence and Strategic Cooperation

- Inauguration of the **C-295 aircraft assembly line** marks a significant milestone in India's defence self-reliance and Spain's role as a trusted partner.
- Potential for future collaboration in **aerospace technology** and defence equipment.

4. Sustainable Development and Climate Action

- **Paris Agreement**: Both countries reaffirmed their commitment to achieving **climate goals** under the Paris Agreement.
- **International Solar Alliance (ISA)**: Spain is a member of the **ISA**, aligning with India's global leadership in promoting **solar energy**.
- Focus on **renewable energy projects** and green technologies.

5. Cultural and People-to-People Ties

- **Indian Diaspora**:
  - Approx. **55,000 Indians** reside in Spain as of 2023.
  - Significant contributions in **hospitality, IT, retail, and healthcare** sectors.
- **Cultural Exchange**: 2026 declared as the **India-Spain Year of Culture, Tourism, and AI**, aiming to foster greater people-to-people interaction.

Key Areas of Cooperation

Sector	Details
Defence	C-295 assembly line boosts India's defence manufacturing under Make in India.
Trade and Investment	Strengthening B2B ties; $8.25 billion trade; fast-track mechanisms proposed.
Sustainability	Collaboration in solar energy (ISA) and climate change initiatives.
Cultural Exchange	Focus on tourism, cultural heritage, and AI collaboration.
Diaspora	55,000 Indians in Spain contribute to bilateral people-to-people ties.

Significance of India-Spain Relations

1. **Strategic Partnership**: Enhancing **defence cooperation** strengthens India's self-reliance in defence and Spain's role as a defence partner.
2. **Economic Growth**: Spain's investment in **infrastructure, energy**, and **manufacturing** aligns with India's growth ambitions.
3. **Sustainable Development**: Joint commitments to renewable energy and climate change reinforce both countries' leadership in green initiatives.
4. **Strengthened EU Ties**: India-Spain cooperation promotes progress on the **India-EU Free Trade Agreement (FTA)** and EU relations.
5. **Cultural Diplomacy**: Shared focus on cultural exchanges and tourism builds **soft power ties**.

Challenges in India-Spain Relations

1. **Trade Imbalance**: Need for diversification to balance trade flows.
2. **Regulatory Hurdles**: Streamlining business processes for smoother bilateral investments.
3. **Renewable Energy Transition**: Addressing funding and technology transfer challenges in green projects.

Way Forward

1. **Boost Defence Ties**: Explore joint ventures and technology sharing in aerospace and defence.
2. **Trade Facilitation**: Finalize the **India-EU Free Trade Agreement** to expand bilateral trade.
3. **Green Energy Collaboration**: Implement joint initiatives under ISA to achieve renewable energy goals.
4. **Cultural Exchange Programs**: Enhance tourism, education, and people-to-people ties.
5. **Support Innovation**: Collaborate on AI, digital technologies, and SME growth.

Conclusion

India-Spain relations have entered a new era of partnership marked by **defence cooperation, trade**, and **sustainability goals**. By leveraging mutual strengths, the two nations can address global challenges and drive inclusive growth, solidifying their roles as trusted strategic partners.

India-Australia Relations

Context

The 2nd India-Australia Annual Summit, held on the sidelines of the G20 Summit in Rio de Janeiro, marked another milestone in the growing partnership between India and Australia, focusing on renewable energy, trade, and defence cooperation.

Key Highlights of the Summit

1. **Renewable Energy Partnership (REP)**
   o Focus on **solar energy**, **green hydrogen**, energy storage, and allied investments.
   o Objective: Accelerate the clean energy transition, leveraging India's manufacturing expertise and Australia's energy resources.
   o Supports both India's **'Make in India'** and Australia's **'Future Made in Australia'** initiatives.
2. **Comprehensive Economic Cooperation Agreement (CECA)**
   o Both nations committed to advancing the **CECA** to unlock the full potential of their bilateral economic partnership.
   o Builds on the success of the **India-Australia Economic Cooperation and Trade Agreement (ECTA)**.
3. **Defence and Security Cooperation**
   o Shared vision for long-term collaboration in **defence and security**.
   o **Indo-Pacific Vision**:
      ▪ Commitment to **freedom of navigation, respect for sovereignty**, and **adherence to international law** under **UNCLOS**.
      ▪ Address regional challenges like **China's assertiveness** in the **South China Sea**.
   o **Quad Partnership**: Recognized as a **"force for global good"** to deliver outcomes in the Indo-Pacific.
4. **Commitment to Global Peace and Reforms**
   o Advocated for resolving conflicts through **dialogue and diplomacy**, particularly in the Indo-Pacific.
   o Called for reforms in **global institutions** to address emerging geopolitical and economic challenges.
5. **Education, Mobility, and Cultural Exchange**
   o **Protection of the Indian Diaspora**: Australian PM assured safety and support for the large Indian student and diaspora communities in Australia.
   o Strengthening **people-to-people ties** through education, skilled workforce mobility, and cultural exchange programs.

Significance of India-Australia Relations

Strategic Partnership

- **Comprehensive Strategic Partnership (2020):**
  o Counters China's assertiveness in the Indo-Pacific.
  o **AIIPOIP:** Maritime cooperation initiative in the Indo-Pacific.
- **Quad Grouping:** Collaboration with the US and Japan on strategic and regional security.

Economic and Trade Relations

- **Bilateral Trade:**
  o Crossed **$30 billion in 2023**, driven by the **Economic Cooperation and Trade Agreement (ECTA)**.
  o Focus areas: Australian **coal and LNG** imports; Indian **textiles, pharmaceuticals**, and IT exports.
- **Supply Chain Resilience Initiative (SCRI):** Collaboration with Japan to diversify supply chains and promote sustainable trade.

Critical Minerals Cooperation

- **Critical Minerals Investment Partnership:**
  o Supports Indian investments in Australian critical mineral projects.
  o Australia is a key producer of **lithium, cobalt, and rare earths**.

Green Energy Cooperation

- **Green Hydrogen Taskforce:** Enhances green hydrogen production.
- **Solar Taskforce:** Accelerates solar PV deployment.

Defence Cooperation

- Agreements like the **Mutual Logistics Support Agreement** and exercises such as **AUSTRAHIND, AUSINDEX**, and **Pitch Black** improve defence interoperability.

Regional and Multilateral Engagement

- Australia supports India's **UN Security Council candidature**.
- Collaboration on platforms like **G20** and the **Indian Ocean Rim Association (IORA)**.

People-to-People Ties

- **Largest source of skilled migrants** to Australia.
- **Migration and Mobility Partnership Agreement:** Facilitates movement of students, professionals, and researchers.

Science and Technology Cooperation

- **Telemetry Terminals Agreement:** Collaboration on India's **Human Space Flight Mission** from **Cocos Island**.

Challenges in India-Australia Relations

1. **Trade and Market Access:**
   o Prolonged negotiations on the **Comprehensive Economic Cooperation Agreement (CECA)**.
   o Barriers like **pharmaceutical pricing controls** limit Indian exports.
2. **Extremism and Anti-India Activities:** Rise of **Khalistani elements** in Australia, leading to incidents like temple vandalism.
3. **Stalled Nuclear Cooperation:** No commercial uranium sales to India despite a **2014 Agreement**.
4. **Visa Issues:** A **125% hike in visa fees** affects Indian students financially.

Way Forward

1. **Economic and Trade Partnership:**
   o Strengthen ECTA and finalize CECA.
   o Focus on investments in **clean energy, mining**, and **technology sectors**.
2. **Strategic and Security Collaboration:** Enhance cooperation in **cybersecurity, counterterrorism**, and maritime security.
3. **Indo-Pacific Cooperation:** Collaborate through ASEAN, the Pacific Islands Forum, and support for small island nations.
4. **Addressing Extremism:** Strengthen joint intelligence-sharing frameworks and promote community dialogues.

Conclusion

India and Australia's partnership holds immense potential in addressing **economic challenges, strategic security**, and fostering cultural and people-to-people ties. By navigating global and regional uncertainties together, this partnership can significantly contribute to a **stable and prosperous Indo-Pacific region**.

India-Italy Relations

Context

Prime Ministers of India and Italy held a bilateral meeting on the sidelines of the G20 Summit in Rio de Janeiro, announcing the **Joint Strategic Action Plan 2025-2029** to deepen cooperation in various areas.

Key Highlights of the Joint Strategic Action Plan 2025-2029

1. **Economic Cooperation and Investments**
   o Focus on **automotive, semiconductors, infrastructure**, and advanced manufacturing.
   o Strengthening trade and investment via the **Joint Commission for Economic Cooperation** and the **Joint Working Group on Food Processing**.
2. **Connectivity**: Collaboration on maritime and land infrastructure under the **India-Middle East-Europe Economic Corridor (IMEC)**.
3. **Science and Technology**
   o Expansion of cooperation in critical areas like **AI and digitalization**.
   o Implementation of the **2025-27 Executive Programme for Scientific and Technological Cooperation**.
   o Launch of the **Indo-Italian Innovation and Incubation Exchange Program** for academic and industrial collaboration.
4. **Space Sector**: Collaboration between the **Italian Space Agency (ASI)** and **ISRO** on Earth observation, heliophysics, and lunar exploration.
5. **Energy Transition**: Organizing "Tech Summits" to strengthen alliances like the **Global Biofuels Alliance (GBA)** and **International Solar Alliance (ISA)**.
6. **Defence Cooperation**
   o Annual **Joint Defense Consultative (JDC) meetings** and **Joint Staff Talks (JST)** to enhance coordination.
   o Development of a **Defense Industrial Roadmap** for cooperation in defence manufacturing.

Overview of India-Italy Relations

Historical Ties

- **Trading History:** Italian port cities were part of the ancient spice route.
- **Marco Polo:** The Venetian merchant visited India in the 13th century.

Strategic Partnership

- Declared in 2023, focusing on **Indo-Pacific** and **Mediterranean** regions.
- **Italy's Exit from China's BRI:** Aligns with India's stance on countering China's dominance.

Economic Relations

- **Trade Figures:** Bilateral trade stood at **$14.56 billion (2023-24)**, with India's exports at **$8.76 billion**.
- **FDI Ranking:** Italy ranks 18th in terms of FDI inflows into India (April 2000-June 2024).

Defence and Security Cooperation

- **Defence Cooperation Agreement (2023):** Collaboration in research, maritime domain awareness, and counter-terrorism.
- Regular consultations under the **Italy-India Military Cooperation Group**.

Climate and Environment

- Italy actively participates in **ISA, CDRI**, and **GBA**.

People-to-People Ties

- Hosts the **second-largest Indian diaspora** in the EU (~200,000).
- **Migration and Mobility Agreement (2023):** Allows temporary residence for Indian students post-graduation.

Space and Blue Economy

- **Chandrayaan-2 Collaboration:** Italian space agency contributed to the mission.
- **Blue Economy Conference:** Explored cooperation in ocean-based sustainable industries.

Significance of the Relationship

1. **Geopolitical Importance**
   - Italy's exit from BRI strengthens **India-EU cooperation**.
   - Italy joining **IPOI** enhances maritime collaboration in the Indo-Pacific.
2. **Economic Growth**
   - Increased trade and investment opportunities.
   - Critical for advancing **semiconductors, green energy, and advanced manufacturing** sectors.
3. **Cultural and Academic Exchange**
   - Opportunities for Indian students and professionals in Italy.
   - Tourism and cultural events bridge bilateral trust deficits.
4. **Defence and Space Cooperation**
   - Strengthens India's indigenous capabilities in **space and defence manufacturing**.

Challenges

1. **Trade Barriers:** Non-tariff barriers like **Carbon Border Adjustment Mechanism (CBAM)** hinder exports.
2. **Trust Deficit:** Historical issues, like the AugustaWestland helicopter case, impact defence ties.
3. **Limited FDI:** Despite strong ties, Italy's FDI in India remains modest compared to other EU nations.
4. **Demographic Challenges in Italy:** Italy's ageing population limits its labour force, impacting bilateral economic collaboration.

Way Forward

1. **Implementation of the Joint Strategic Action Plan**: Focus on key sectors like **defence, space, and energy transition**.
2. **Strengthen Regional and Multilateral Cooperation**: Align India's **Act East Policy** with the EU's **Indo-Pacific Strategy**.
3. **Trade and Investment Facilitation**: Expedite the **EU-India Free Trade Agreement** negotiations.
4. **Deepen People-to-People Ties**: Increase cultural exchanges and facilitate migration for Indian workers to address Italy's demographic challenges.

Conclusion

India-Italy relations, bolstered by the **Joint Strategic Action Plan 2025-2029**, represent a growing partnership crucial for addressing global challenges like **climate change, Indo-Pacific security**, and **economic cooperation**. This partnership also strengthens India's position as a key player in the EU and Mediterranean regions.

First India-U.S. Indian Ocean Dialogue: Enhancing Regional Cooperation

UPSC Syllabus: International Relations, Maritime Security, Indo-Pacific Strategy

Context

India and the United States are set to hold the **inaugural U.S.-India Indian Ocean Dialogue** to deepen collaboration in the **Indian Ocean Region (IOR)** and address regional challenges.

Key Highlights of the First India-U.S. Indian Ocean Dialogue

1. **Historical Context**
   o Collaboration began in **2015** with the **Joint Strategic Vision for the Asia-Pacific and Indian Ocean Region** during **President Barack Obama** and **Prime Minister Narendra Modi's** leadership.
   o The focus has since been on enhancing **regional security**, **economic growth**, and **technological cooperation** in the Indo-Pacific.
2. **Objective of the Dialogue**
   o Enhance **maritime security** and **economic prosperity** in the Indian Ocean Region (IOR) and broader Indo-Pacific.
   o Strengthen bilateral cooperation to ensure a **free, open, inclusive**, and **rules-based Indo-Pacific**.
3. **Key Participants**
   o **U.S. Deputy Secretary of State** and **Principal Deputy National Security Adviser** will join virtually.
   o Indian officials and experts on security, technology, and economic growth.
4. **Technological Cooperation**
   o Parallel discussions under the **iCET (Initiative on Critical and Emerging Technologies)** Intersessional Meeting.
   o Focus on critical areas like **semiconductors, AI, cybersecurity**, and **defence technology innovation**.

About the Indian Ocean Dialogue (IOD)

1. **Origin**:
   o Established at the **13th Council of Ministers Meeting in 2013** (Perth, Australia).
   o Aimed to enhance regional collaboration for shared growth and sustainable development.
2. **First Session**:
   o Held in **2014 in Kerala, India**.
   o Discussed **maritime safety**, **disaster relief**, and **economic partnerships**.
3. **Key Focus Areas**:
   o **Maritime Safety and Security**: Tackling piracy, illegal fishing, and ensuring freedom of navigation.
   o **Blue Economy**: Sustainable use of ocean resources for economic growth and environmental protection.
   o **Disaster Relief and Response**: Collaborative response to climate-related disasters in the region.
   o **Economic Cooperation**: Promoting trade, connectivity, and regional growth.

About the Indian Ocean Rim Association (IORA)

1. **Establishment**: Founded in **1997** as an **intergovernmental organisation** to promote cooperation in the IOR.
2. **Membership**:
   o **23 Member States** and **11 Dialogue Partners**.
   o India, Australia, South Africa, Indonesia, and the UAE are key members.
3. **Objectives**:
   o **Maritime Security**: Addressing common threats like piracy and illicit trafficking.
   o **Blue Economy**: Promoting sustainable economic practices.
   o **Disaster Risk Management**: Enhancing regional preparedness for natural disasters.
   o **Trade and Investment**: Boosting regional economic integration.

Significance of the U.S.-India Indian Ocean Dialogue

1. **Strategic Cooperation**
   o Reinforces India-U.S. **strategic partnership** in the Indo-Pacific.
   o Enhances cooperation to counter China's growing influence in the Indian Ocean.
2. **Maritime Security**
   o Addresses challenges like **piracy**, **illegal fishing**, and **freedom of navigation**.

- o Strengthens joint naval exercises and information-sharing mechanisms.
3. **Economic and Trade Opportunities**
   - o Promotes blue economy initiatives, port connectivity, and infrastructure development.
   - o Encourages private-sector investments in IOR nations.
4. **Technological Collaboration**
   - o Builds on the **iCET initiative** to develop critical technologies like **AI, semiconductors**, and **cybersecurity**.
5. **Climate Change and Disaster Response**
   - o Enhances cooperation in climate action, disaster relief, and resource management.

Challenges in the Indian Ocean Region (IOR)

1. **China's Assertive Maritime Activities**: Increasing presence of Chinese naval forces and influence through the **Belt and Road Initiative (BRI)**.
2. **Piracy and Illegal Activities**: Persistent issues of piracy, drug smuggling, and illegal fishing.
3. **Climate Change**: Rising sea levels and natural disasters threaten small island nations in the Indian Ocean.
4. **Lack of Regional Coordination**: Differing national priorities hinder unified efforts for maritime governance and security.

Way Forward

1. **Strengthen India-U.S. Maritime Cooperation**: Increase naval exercises (e.g., **Malabar Exercise**) and joint patrols in the Indian Ocean.
2. **Leverage Blue Economy Potential**: Promote sustainable economic development through **fisheries, tourism**, and **renewable energy projects**.
3. **Expand IORA Engagement**: Enhance India's leadership role in IORA to promote multilateral collaboration in the IOR.
4. **Enhance Technological Partnerships**: Develop critical technologies under **iCET** and promote innovation for maritime applications.
5. **Regional Climate Action**: Partner on climate change mitigation and strengthen disaster response frameworks.

Conclusion

The **India-U.S. Indian Ocean Dialogue** is a pivotal step towards enhancing bilateral and regional cooperation. By addressing **maritime security**, **economic growth**, and **technological innovation**, both nations can ensure a **free, open, and stable Indian Ocean Region**, aligned with their shared vision of an **inclusive Indo-Pacific**.

India Joins ARIN-AP Steering Committee

UPSC Syllabus: International Relations, Internal Security

Context

India, represented by the **Directorate of Enforcement (ED)**, has been inducted into the **ARIN-AP Steering Committee**, signifying a major role in global **asset recovery efforts**.

India's Role in ARIN-AP

1. **Leadership Opportunity**:
   - o India will assume the **ARIN-AP Presidency** in **2026**.
   - o India will host the **Annual General Meeting** in the same year, highlighting its growing leadership in asset recovery and financial crime prevention.
2. **Promoting Collaboration**: India will facilitate **knowledge sharing, training**, and **capacity building** across jurisdictions to strengthen asset tracing and confiscation efforts.
3. **Enhancing Global Partnerships**: The ED will coordinate with international bodies like **UNODC** and regional ARIN networks to foster seamless cross-border cooperation.

About Asset Recovery Interagency Network-Asia Pacific (ARIN-AP)

1. **Purpose**: ARIN-AP is dedicated to **tracing, freezing, and confiscating assets** linked to criminal activities across the **Asia-Pacific region**.
2. **Key Objectives**:
   - o **Asset Recovery Focus**: Prioritises confiscation of proceeds of all types of crimes.
   - o **Knowledge Hub**: Serves as a centre of expertise for **best practices** and training in asset recovery.
   - o **Collaboration**: Enhances **partnerships** with agencies like **UNODC** and private sector players.
3. **Membership**:
   - o **28 member jurisdictions**.
   - o **9 observer organisations**, fostering informal information-sharing channels to track illicit financial flows.
4. **Global Significance**: Part of the **CARIN** network, enabling international cooperation and expertise.

About Camden Asset Recovery Inter-Agency Network (CARIN)

1. **Overview**: CARIN is a **global informal network** of law enforcement and judicial authorities focusing on **asset tracing, freezing, and confiscation**.
2. **Objectives**:
   - Prevent criminals from **profiting** from illicit activities.
   - Facilitate **cross-border collaboration** and **information exchange**.
3. **Membership**:
   - **61 jurisdictions** (including 27 EU members).
   - **13 international organisations**.
   - CARIN connects with **7 regional ARIN networks** globally (e.g., ARIN-AP, ARIN-WA for West Africa).

Significance of India Joining ARIN-AP Steering Committee

1. **Enhanced Global Standing**: India's inclusion reinforces its position as a key player in global financial crime prevention and asset recovery.
2. **Strengthened Enforcement**: The **Directorate of Enforcement** can collaborate more effectively with regional and global agencies to recover illicit funds.
3. **Combating Money Laundering**: India can leverage ARIN-AP's platform to tackle **money laundering** and transnational organized crime networks.
4. **Leadership in Asia-Pacific**: Hosting the **2026 AGM** will strengthen India's influence in regional decision-making on asset recovery policies.
5. **Boost to G20 Priorities**: Aligns with India's focus on **anti-corruption**, **financial transparency**, and **asset recovery**, reiterated during its G20 Presidency.

Way Forward

1. **Capacity Building**: Enhance training for Indian agencies to strengthen expertise in **asset tracing and seizure**.
2. **Regional Partnerships**: Collaborate with ARIN-AP members to target organized crimes like **drug trafficking**, **terror financing**, and **cybercrime**.
3. **Technology Integration**: Leverage digital tools for real-time cross-border financial information sharing.
4. **Legal Reforms**: Streamline domestic laws to ensure faster **asset confiscation** and recovery.

Conclusion

India's inclusion in the **ARIN-AP Steering Committee** marks a significant step in strengthening global cooperation against financial crimes and enhancing its leadership in the Asia-Pacific region. This role aligns with India's larger vision of ensuring **financial transparency** and combating **illicit financial flows** globally.

U.S., Japan, and South Korea Sign DiGi Framework

Context

The **Digital Infrastructure Growth Initiative for India (DiGi Framework)** was recently signed by the **United States, Japan, and South Korea** to foster cooperation in building India's digital infrastructure.

Key Features of the DiGi Framework

1. **Objective**: To advance **collaboration with the Indian private sector** in supporting and expanding **digital infrastructure** in India.
2. **Partner Agencies**
   - **U.S. International Development Finance Corporation (DFC)**
   - **Japan Bank for International Cooperation (JBIC)**
   - **Export-Import Bank of Korea (Korea Eximbank)**
3. **Implementation Focus**
   - Projects include:
     - **5G and Open RAN Technologies**
     - **Submarine Cables**
     - **Optical Fiber Networks**
     - **Data Centers**
     - **Smart City Initiatives**
     - **E-Commerce Platforms**
     - **Artificial Intelligence (AI) and Quantum Technology**

Digital Public Infrastructure (DPI) in India

1. **India's Leadership in DPI**

- o India is the **first country to build all three foundational DPIs** under **India Stack**:
    - ▪ **Digital Identification (Aadhaar)**
    - ▪ **Real-Time Payments (UPI)**
    - ▪ **Data Sharing Architecture (Data Empowerment and Protection Architecture - DEPA)**
2. **Significance of DPI in India**
    - o **Inclusive Development:**
        - ▪ Achieved **80% financial inclusion** during 2018–2023.
        - ▪ Enabled **direct benefit transfers (DBTs)**, benefiting **87% of poor households** during COVID-19.
    - o **Economic Growth:**
        - ▪ DPI implementation in the financial sector could accelerate economic growth by **33%**.
    - o **Emission Reduction:**
        - ▪ DPI in the climate sector could **accelerate emissions control** by 5–10 years through enhanced carbon offset tracking, land mapping, and weather monitoring.

India's Global DPI Efforts

1. **US-India Global Digital Development Partnership**: Focus on **deploying digital technologies responsibly** across **Asia and Africa**.
2. **G20 Framework for Systems of DPI**: Adopted under **India's G20 leadership** to outline principles for designing and deploying DPIs globally.
3. **Virtual Global DPI Repository**: Being set up by India to host **DPI-focused tools, resources, and experiences** for the global community.

Implications of DiGi Framework

1. **Strengthening Digital Infrastructure in India**: Boosts investments in cutting-edge technologies like **5G** and **quantum computing**, aligning with India's **Digital India** mission.
2. **Fostering Strategic Partnerships**: Reinforces India's ties with the **U.S., Japan, and South Korea**, deepening trilateral and multilateral collaborations.
3. **Enhancing Global Competitiveness**: Supports India in becoming a **global digital hub** by expanding its infrastructure and digital capabilities.
4. **Promoting Sustainability and Innovation**: Encourages **sustainable development** through smart city initiatives and **climate-focused DPIs**.

Challenges

1. **Implementation Hurdles**: Large-scale coordination among stakeholders may pose challenges.
2. **Digital Divide**: Ensuring equitable access to digital technologies across rural and urban areas is critical.
3. **Cybersecurity Concerns**: Expanding digital infrastructure necessitates robust **cybersecurity frameworks** to protect sensitive data.

Way Forward

1. **Strengthen Private Sector Engagement**: Foster partnerships between global financial agencies and Indian enterprises to accelerate project implementation.
2. **Expand Global DPI Outreach**: Leverage the **Virtual Global DPI Repository** to showcase India's **digital expertise** and attract international collaborations.
3. **Focus on Capacity Building**: Invest in **digital literacy programs** to bridge the digital divide and enhance public awareness about DPI applications.

Conclusion

The **DiGi Framework** marks a significant milestone in India's digital journey, leveraging international collaboration to bolster its **digital infrastructure**. With India's leadership in DPI and partnerships with global stakeholders, this initiative can drive **economic growth, inclusivity, and innovation**, placing India at the forefront of the **digital revolution**.

India-Nepal-Bangladesh Trilateral Power Transaction

UPSC Syllabus: International Relations, Energy Security

Context

India, Nepal, and Bangladesh successfully launched their **first trilateral power flow transaction**, marking a milestone in regional **energy cooperation**.

Key Highlights

1. **Transaction Details**:
    - o **Power Export**: Nepal will export **40 MW** of electricity to Bangladesh.
    - o **Transmission Route**: The power will flow through **India's transmission lines,** enabling cross-border connectivity.
2. **Facilitating Agreement**:
    - o The deal was formalized via the **Tripartite Power Sales Agreement** on **October 3, 2024**, in **Kathmandu**.

- o Parties Involved:
  - **Nepal Electricity Authority (NEA)**
  - **Bangladesh Power Development Board (BPDB)**
  - **NTPC Vidyut Vyapar Nigam (India)**
3. **Transmission Infrastructure**:
  - o India's robust power infrastructure will act as the **transmission corridor**, facilitating energy trade between Nepal and Bangladesh.
4. **Regional Impact**:
  - o **Strengthened Cooperation**: Enhances **sub-regional energy cooperation** under the South Asian framework.
  - o **Economic Linkages**: Supports mutual economic benefits through energy connectivity.
  - o **Energy Security**: Diversifies the energy portfolio for all three nations.

Significance for India

1. **Regional Power Hub**: Strengthens India's role as an **energy facilitator** and **power hub** in South Asia.
2. **Geopolitical Influence**: Reinforces India's position as a trusted partner for both **Nepal** and **Bangladesh**, countering China's increasing presence in the region.
3. **Economic Gains**: India benefits from **transmission fees** and boosts its energy diplomacy.
4. **Energy Market Integration**: Promotes regional **power grid connectivity** in line with SAARC and BIMSTEC energy goals.

Significance for Nepal

1. **Revenue Generation**: Power exports provide a new revenue stream for Nepal's energy surplus.
2. **Regional Integration**: Expands Nepal's access to regional energy markets.
3. **Utilization of Hydropower**: Nepal leverages its rich **hydropower potential** for economic development.

Significance for Bangladesh

1. **Meeting Energy Demand**: Addresses Bangladesh's rising energy demand, supporting its **industrial growth**.
2. **Clean Energy Access**: Hydropower from Nepal aligns with Bangladesh's **renewable energy goals**.
3. **Reduced Energy Dependence**: Diversifies Bangladesh's energy imports, reducing reliance on fossil fuels.

Challenges

1. **Infrastructure Constraints**: Upgrading cross-border transmission infrastructure remains critical.
2. **Geopolitical Competition**: Regional rivalries, including **China's energy investments**, may complicate cooperation.
3. **Regulatory Harmonization**: Harmonizing energy policies among the three countries is essential for sustained transactions.
4. **Dependence on India**: The transmission route's reliance on India could create concerns over **energy security** for Nepal and Bangladesh.

Way Forward

1. **Infrastructure Investment**: Expand and modernize cross-border power transmission networks.
2. **Policy Integration**: Develop a harmonized **regional energy policy** to facilitate smoother transactions.
3. **Diversifying Energy Cooperation**: Explore larger energy projects involving **hydropower, renewables, and grid connectivity**.
4. **Leveraging Multilateral Platforms**: Utilize platforms like **SAARC**, **BIMSTEC**, and the **International Solar Alliance (ISA)** to promote energy cooperation.

Conclusion

The trilateral power transaction between India, Nepal, and Bangladesh is a major step toward enhancing **regional energy security** and **economic integration**. By leveraging its role as a facilitator, India strengthens its geopolitical and economic ties, fostering sustainable development across South Asia.

ECONOMY

Bad Bank in India

UPSC Syllabus: Indian Economy – Banking Sector, Non-Performing Assets (NPAs)

Context

Recently, **Finance Minister Nirmala Sitharaman** urged Indian banks to actively utilize the **Bad Bank** mechanism to resolve distressed assets and clean their balance sheets.

What is a Bad Bank?

- A **Bad Bank** is a specialized **Asset Reconstruction Company (ARC)** that purchases **Non-Performing Assets (NPAs)** from commercial banks.
- It focuses exclusively on resolving stressed loans, **not involved in lending or deposit-taking activities**.
- Bad Banks **buy NPAs below their book value** and attempt to recover as much as possible through restructuring or selling the assets.

National Asset Reconstruction Company Limited (NARCL)

Feature	Details
Establishment	Officially launched in **2021**.
Objective	Cleanse the financial system of distressed assets and stabilize the banking sector.
Ownership Structure	**51% stake**: State-owned banks, **49% stake**: Private banks.
Role	Purchase bad loans from commercial banks at a discounted value.
Payment Mechanism	Pays **15% in cash** and **85%** through **government-backed security receipts**.
Focus	Acquisition of bad loans to facilitate quicker resolution.

India Debt Resolution Company Ltd. (IDRCL)

Feature	Details
Ownership	**51% stake**: Private banks, **49% stake**: Public banks.
Role	Resolution and sale of distressed assets purchased by NARCL.
Collaboration	Works in conjunction with NARCL to **maximize asset recovery**.
Focus	Unlocking value from large corporate distressed assets.

Dual-Entity Approach:

- **NARCL** acquires the NPAs from banks.
- **IDRCL** resolves and sells the assets to recover maximum value.

Advantages of a Bad Bank

1. **Centralized NPA Management**: Creates a unified platform to handle NPAs across multiple banks, ensuring a **streamlined resolution process**.
2. **Capital Relief for Banks**: Transferring NPAs allows banks to **free up capital** tied up as provisions, enabling them to focus on lending.
3. **Revival of Credit Growth**: With cleaner balance sheets, banks can extend loans to **creditworthy borrowers**, stimulating economic growth.
4. **Stabilization of the Financial System**: Improves **financial health** of banks, restoring confidence in the banking system.
5. **Time-Efficient Resolution**: Dedicated mechanisms like NARCL and IDRCL ensure quicker resolution of stressed assets compared to traditional methods.

Challenges of Bad Bank

1. **Recovery Issues**: Success depends on efficient asset recovery, which can be challenging given **market conditions** and legal complexities.
2. **Moral Hazard**: Banks may resort to risky lending, knowing bad loans can be transferred to the Bad Bank.
3. **Valuation of NPAs**: Determining the right value for NPAs can create disputes and delay resolution.
4. **Operational Challenges**: Effective coordination between NARCL, IDRCL, and banks is essential for smooth functioning.
5. **Government Guarantees**: Dependence on **government-backed security receipts** increases fiscal burden if recoveries are lower than expected.

Way Forward

1. **Strengthening Legal Framework**: Ensure faster resolution under laws like the **Insolvency and Bankruptcy Code (IBC)**.
2. **Performance Metrics**: Track NARCL and IDRCL's performance through recovery rates and time taken for resolution.
3. **Risk Management Practices**: Improve lending practices to reduce the creation of NPAs.
4. **Transparency and Oversight**: Establish robust **governance mechanisms** to prevent misuse of the Bad Bank framework.
5. **Market-Based Solutions**: Encourage private-sector participation in asset resolution to ensure fair valuation and competitive recovery.

Conclusion

The **Bad Bank mechanism** through NARCL and IDRCL represents a significant step in addressing India's NPA crisis. However, for sustainable success, it must be accompanied by reforms in lending practices, legal infrastructure, and operational transparency to ensure long-term stability of India's financial sector.

Large Trade Agreements

Context

India's participation in large trade agreements like the **Regional Comprehensive Economic Partnership (RCEP)** and **Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP)** is being deliberated, with both opportunities and challenges highlighted by policymakers and economists.

About Regional Comprehensive Economic Partnership (RCEP)

- **Establishment:** Signed in 2020; negotiations began in 2013.
- **Members:** ASEAN (10) + 5 FTA partners (Australia, China, Japan, South Korea, and New Zealand).
- **Objective:** Enhance trade liberalization and economic integration among members.
- **Significance:** World's largest FTA, accounting for:
  - **30% of global GDP**
  - **33% of the world's population**
- **India's Position:** Withdrew in 2019 due to concerns about trade deficits and domestic industry impacts.

About Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP)

- **Members:** Canada, Mexico, Peru, Chile, New Zealand, Australia, Brunei, Singapore, Malaysia, Vietnam, and Japan.
- **UK Membership:** Joins officially by December 2024.
- **Significance:** Covers 11.4% of global GDP and 6.5% of the world's population.
- **Focus Areas:** Trade liberalization, investment protections, and regional economic integration.

Significance of Participation in Large Trade Agreements

1. **Integration into Global Value Chains (GVCs):**
   - Facilitates supply chain development and global economic integration.
   - E.g., Easier import of capital goods supports domestic industries.
2. **Boost to MSME Sector:**
   - MSMEs contribute 40% of India's exports; FTAs can expand export markets.
   - Enhances manufacturing potential and export opportunities for small businesses.
3. **Improved Trade Competitiveness:**
   - Equal tariffs with competitors (e.g., ASEAN) attract investments.
   - Strengthens India's position in the **"China Plus One" strategy**.
   - Potential economic gains: **USD 60 billion by 2030** upon joining RCEP.
4. **Strategic and Geopolitical Significance:**
   - **RCEP:** Complements India's **Act East Policy** and strengthens ties with ASEAN.
   - **CPTPP:** Enhances engagement in the **Indo-Pacific** and counterbalances China's influence.
5. **Trade Liberalization and Policy Influence:**
   - Participation provides opportunities to shape policies on e-commerce, labor, and environmental standards.
6. **Faster Economic Growth:**
   - Greater market access encourages **FDI inflows**, generates employment, and boosts exports.

Challenges of Joining Large Trade Agreements

1. **Trade Imbalances: China's dominance in RCEP** may worsen India's trade deficit (USD 85 billion in FY2024).
2. **Marginal Benefits:** Existing FTAs with 13 out of 15 RCEP members limit additional advantages.
3. **Divergent Policy Approaches:**

o Differences in taxation, investor protections, and dispute settlements.

o E.g., India's **2015 Model BIT** excludes the **Most Favored Nation (MFN)** principle.

4. **Stringent Competition:** Reduced tariffs could flood markets with cheap imports, threatening industries like dairy and agriculture.
5. **Impact on Indigenous Enterprises:** Provisions on labor conditions and environmental protections may restrict local entrepreneurship.
6. **Regional Instability:** Geopolitical conflicts and regional uncertainties, particularly in West Asia and the Indo-Pacific, may impact trade reliability.

Way Forward

1. **Comprehensive Cost-Benefit Analysis:** Include stakeholders to evaluate economic, strategic, and domestic impacts.
2. **Enhancing Trade Competitiveness:** Reduce **non-tariff barriers** and focus on **trade diversification**.
3. **Negotiations for Favorable Terms:** Advocate for balanced agreements that align with India's long-term economic goals.
4. **Strategic Prioritization:** Align FTAs with **Atmanirbhar Bharat** and **strategic autonomy** while balancing global integration.
5. **Support Domestic Industry:** Strengthen industries vulnerable to global competition through subsidies, R&D, and technology upgrades.

Conclusion

While large trade agreements like RCEP and CPTPP offer significant economic and strategic benefits, India's decision must align with its **domestic priorities** and **long-term goals**. Rational and pragmatic analysis will ensure that such integration fosters growth while protecting the interests of its industries and people.

Merging Regional Rural Banks (RRBs)

UPSC Syllabus: Indian Economy – Banking Sector, Financial Inclusion

Context

The Indian government has proposed merging **Regional Rural Banks (RRBs)** to reduce their number from **43 to 28**. The plan aligns with the **'One State-One RRB'** objective.

About Regional Rural Banks (RRBs)

Feature	Details
Established	**1975**, based on the recommendations of the **Narasimham Working Group** (1975).
Legal Basis	**Regional Rural Banks Act, 1976**.
Objective	To provide credit and financial services to small/marginal farmers, rural artisans, and small entrepreneurs in rural areas.
First RRB	**Prathama Grameen Bank** (established on October 2, 1975).
Regulation	Regulated by **RBI** and supervised by **NABARD**.
Priority Sector Target	**75%** of total advances (higher than 40% for Scheduled Commercial Banks).
Shareholding	- Government of India: **50%** - State Government: **15%** - Sponsor Bank: **35%**.

Phases of RRB Consolidation

Phase	Timeframe	Impact
Phase I	2005-2010	Reduced RRBs from **196 to 82**.
Phase II	2010-2013	Further reduced RRBs to **56**.
Phase III	2013-2020	Consolidated RRBs to the current **43**.
Phase IV (ongoing)	2024	Aim: Reduce RRBs to **28** by merging multiple RRBs in single states.

Need for Consolidation

1. **Economies of Scale**: Reducing operational costs by consolidating resources and infrastructure.
2. **Improved Capital Base**: Larger capital allows for improved credit delivery to rural customers.
3. **Technology Adoption**: Encourages digitization and integration with core banking solutions.
4. **Enhanced Operational Efficiency**: Reduces duplication of efforts, streamlines operations, and improves governance.
5. **Alignment with 'One State-One RRB' Goal**: Simplifies administration and regulation, reducing fragmentation in the banking system.

Challenges in RRB Consolidation

1. **Regional Diversity**: Different states have unique agricultural and credit needs, which might not be fully addressed under consolidated RRBs.
2. **Resistance from Stakeholders**: Employees, state governments, and sponsor banks may resist mergers due to job security concerns and administrative complexities.
3. **Technological and Financial Integration**: Merging entities face challenges in integrating their IT systems and resolving capital disparities.
4. **Loss of Local Touch**: Consolidation could weaken the **localized focus** of RRBs, affecting their ability to meet region-specific needs.
5. **Asset Quality Concerns**: Merged RRBs may inherit NPAs (Non-Performing Assets) from weaker banks, impacting their financial health.

Way Forward

1. **Strengthening Governance**: Implement robust governance mechanisms to ensure operational efficiency post-merger.
2. **Technology Upgradation**: Upgrade IT systems to ensure smooth financial and technological integration.
3. **Capacity Building**: Train employees to adapt to larger organizational structures and new technologies.
4. **Focus on Financial Inclusion**: Consolidation must ensure continued access to credit and financial services for rural customers.
5. **Address State-Specific Needs**: Develop state-specific credit policies to address regional economic priorities post-merger.

Conclusion

The **consolidation of RRBs** into a **'One State-One RRB'** model is a significant step toward financial stability, cost efficiency, and technological modernization. However, to avoid regional disparities and ensure inclusive growth, the mergers must be supported by robust governance, advanced technology, and tailored rural banking strategies.

Direct Benefit Transfer (DBT)

Why in News?

A recent **State Bank of India (SBI)** report revealed that **Direct Benefit Transfer (DBT)** to women under various state schemes has crossed ₹2 trillion, showcasing its transformative potential in socio-economic development.

Key Highlights from the Report

- **Total Transfers:** ₹2.11 lakh crore across eight states, amounting to 3–11% of respective states' revenue receipts.
- **Boost to Economy:** These schemes increase consumption and economic spending, particularly among low-income families.
- **Prominent Schemes:**
  - *Gruha Lakshmi (Karnataka):* ₹2,000/month to female heads of families.
  - *Mukhyamantri Ladli Behna Yojana (Madhya Pradesh):* ₹1,250/month to eligible women.
  - *Subhadra Yojana (Odisha):* ₹50,000 over five years to eligible women.

What is Direct Benefit Transfer (DBT)?

- **Launch Year:** 2013.
- **Objective:** Enhance transparency, reduce leakages, and improve the efficiency of subsidy and benefit transfers.
- **Scope:**
  - **Cash Transfers:** Schemes like PM-KISAN, pensions, scholarships.
  - **In-Kind Transfers:** Fertilizer subsidies, PDS, and school meals.
- **Mechanism:**
  - **Public Financial Management System (PFMS):** Processes payments via Aadhaar Payment Bridge (APB).
  - **JAM Trinity:** Integration of *Jan Dhan*, *Aadhaar*, and *Mobile* for seamless fund transfers.
  - **Banking Infrastructure:** Use of Business Correspondents, Payment Banks, and Aadhaar-enabled Payment Systems (AePS).
  - **UPI Integration:** Expands interoperability for public and private participation.

Transformative Impact of DBT in India

1. Effective Welfare Delivery

- **Scale:** Since 2016, over **450 schemes** have benefited **900 million people**, transferring $450 billion directly.
- **COVID-19 Relief:**
  - ₹27,442 crore transferred to 11.42 crore beneficiaries under schemes like PM-KISAN and MGNREGS.
  - ₹9,217 crore distributed by states under 180 welfare schemes.

2. Financial Inclusion

- **Banking Penetration:** Over **53 crore PM Jan Dhan Yojana accounts**, with 67% in rural areas and 56% owned by women.

3. Transparency and Efficiency

- **Aadhaar Integration:** Eliminated **90 million fake beneficiaries**, saving $40 billion by reducing leakages.

4. Socio-Economic Empowerment

- **Women Empowerment:** Promotes financial independence through cash transfers to Jan Dhan accounts.

- **Agriculture Support:** Direct assistance for fertilizers and crop insurance enhances farmer productivity.
- **Social Mobility:** Programs like *Self-Employment for Manual Scavengers* rehabilitate marginalized communities.

5. International Recognition

- **IMF:** Called DBT a "logistical marvel."
- **World Bank:** Highlighted its success in targeting cash transfers to 85% of rural and 69% of urban households.

Challenges

1. Accessibility and Awareness

- **Geographical Barriers:** Limited banking and digital infrastructure in remote areas.
- **Financial Literacy:** Lack of awareness about DBT benefits and enrollment processes.

2. Inclusion and Exclusion Errors

- **Beneficiary Identification Issues:** E.g., 6.65 lakh farmers lost PM-KISAN benefits in 2022 due to e-KYC lapses.

3. Over-Reliance on Technology

- **State Capacity:** Neglects systemic issues in public services like education and healthcare.
- **Transaction Failures:** Inconsistent payment systems and lack of standardization.

4. Short-Term Solutions

- **Structural Challenges:** Cash transfers do not address long-term poverty and inequality.

5. Grievance Redressal

- Lack of robust mechanisms to address complaints effectively.

Way Forward

1. Reform Goals

- **DBT 2.0:** Expand real-time, citizen-friendly welfare delivery using Aadhaar-based online eligibility verification.
- **DBT 3.0:** Develop a **national-level social registry** and centralized database to integrate best practices (e.g., Karnataka's *Kutumba*, Rajasthan's *Jan Aadhaar*).

2. Enhance Accessibility

- **Digital Literacy:** Collaborate with NGOs for rural outreach.
- **Expanded Infrastructure:** Increase the number of **Common Service Centres (CSCs)** and trained Business Correspondents.

3. Grievance Redressal Mechanisms

- Establish a **single-window system** accessible at the Gram Panchayat level for reporting issues.
- Collect real-time beneficiary feedback to improve processes.

4. Targeted Outreach: Tailored programs for marginalized groups like informal workers and tenant farmers.

5. Global Leadership: Position DBT as a scalable model for poverty alleviation and financial inclusion in the **Global South**.

Conclusion

DBT has revolutionized welfare delivery in India by enhancing transparency, financial inclusion, and socio-economic impact. However, addressing challenges like accessibility, exclusion errors, and grievance redressal will ensure its **sustainability** and **scalability**. With DBT's global recognition, India can showcase it as a model for **digital public infrastructure** and **citizen welfare** worldwide.

New RBI Framework for Reclassifying FPI to FDI

UPSC Syllabus: Indian Economy – Foreign Investment, RBI Policies

Context

The **Reserve Bank of India (RBI)** has introduced an **operational framework** to regulate the reclassification of **foreign portfolio investment (FPI)** to **foreign direct investment (FDI)** when certain **ownership limits** are breached.

Key Highlights of the Framework

1. **FPI Investment Limit**:
   o Under the **Foreign Exchange Management Act (FEMA)**, **foreign portfolio investors (FPIs)** can hold up to **10%** of a company's total **paid-up equity capital**.
   o If an **FPI or its investor group** breaches this 10% threshold, the investment must be reclassified as **FDI**.
2. **Compliance Options for FPIs**:
   o FPIs that breach the 10% limit must **choose between two options**:
     ▪ **Divest** their excess holdings.
     ▪ **Reclassify** their investment as **FDI**.
   o **Timeline**: FPIs have a **5-day window** from the trade settlement date to comply with these requirements.
3. **Conditions for Reclassification**:
   o Once an investment is reclassified as **FDI**, the **entire investment** will remain categorized as FDI **permanently**, even if the holdings drop below the 10% threshold later.
   o For reclassification, the **FPI and its investor group** will be treated as a **single entity**.

Types of Foreign Investment

Basis	Foreign Direct Investment (FDI)	Foreign Portfolio Investment (FPI)
Meaning	Long-term investment with significant ownership and control	Passive investment in financial assets (stocks/bonds)
Nature	Physical assets or controlling stakes	Financial assets (secondary market)
Ownership Control	Involves management control and long-term commitment	Minority shareholding without management control
Sector Restrictions	Subject to sector-specific caps and government approval	Fewer restrictions for passive investments
Regulatory Authority	Department for Promotion of Industry and Internal Trade	Securities and Exchange Board of India (SEBI)

Significance of the New Framework

1. **Ensuring Compliance**: Maintains **ownership transparency** and prevents misuse of the FPI route for acquiring significant stakes.
2. **Improved Monitoring**: Creates a streamlined approach to identify and regulate breaches of investment limits.
3. **Financial Stability**: Protects domestic markets from the volatility of short-term foreign investments.
4. **Promoting Long-Term Investments**: Encourages FPIs to adopt **long-term investment strategies** if they breach limits.
5. **Alignment with FEMA**: Ensures consistency with India's **Foreign Exchange Management Act** and broader foreign investment policies.

Challenges and Concerns

1. **Market Impact**: Forced divestment or reclassification may lead to short-term **market volatility**.
2. **Operational Burden**: FPIs may face difficulties in adhering to the **5-day compliance window**.
3. **Investment Sentiment**: Stricter regulations could discourage FPIs, reducing foreign capital inflows.

Conclusion

The RBI's new framework for **reclassifying FPI to FDI** is a critical step in ensuring compliance, transparency, and financial stability. By addressing **ownership breaches**, the framework encourages long-term, stable investments while aligning foreign investment practices with India's economic goals.

Rural Non-Farm Economy (RNFE)

Why in News?

The "State of Rural Youth Employment 2024" report highlights that **70% of rural youth** find agriculture unattractive due to **low productivity and poor profits**, showing a growing preference for **non-farm jobs** and small businesses.

About Rural Non-Farm Economy (RNFE)

- **Definition:** RNFE comprises all non-agricultural activities in rural areas, such as:
  - **Agro-based value chain:** Agro-processing, transport, marketing, and retail.
  - **Self-employment:** Handicrafts, bakeries, kiosks, mechanics.
  - **Other sectors:** Tourism, manufacturing, construction, and mining.
- **Significance:**
  - Two-thirds of rural income now comes from **non-agricultural activities**.
  - Over **50% of manufacturing sector value addition** is contributed by rural areas.

Key Determinants of RNFE in India

1. **Government Policies:**
   - *Ashok Dalwai Committee* emphasized shifting surplus farm labor to RNFE to double farmers' income.
   - Initiatives: Promoting agri-tech startups, schemes like **Namo Drone Didi**.
2. **Education and Skills:** Non-farm income rises with **higher educational attainment**.
3. **Family Size:** Larger families earn less from farms but more from non-farm jobs.
4. **Climate Change:** Increased vulnerability of agricultural jobs makes RNFE critical.
5. **Public Spending and Diversification:** Investments in infrastructure and factory growth boost RNFE employment.
6. **Infrastructure Development:** Expenditure on rural infrastructure (e.g., roads, electricity) drives employment in construction and manufacturing.

Challenges in RNFE

1. **Limited Access to Credit:** Reliance on personal savings or moneylenders; institutional credit is less accessible than for farming activities.
2. **Low Worker Productivity:**
   - Worker productivity in RNFE is **lower than in urban areas**.
   - Only **13% of enterprises** are modern; most are traditional with minimal value addition.
3. **Informal and Volatile Employment:**
   - Jobs often lack stability, social security, and fair wages.
   - Construction, the largest RNFE employer, is cyclically volatile.
4. **Declining Income Levels:** Non-agricultural households earn **less (₹11,438/month)** compared to agricultural households **(₹13,661/month)**.

Government Initiatives Supporting RNFE

1. **Institutional Support:**
   - **Khadi and Village Industries Commission (KVIC)**.
   - **National Small Industries Corporation (NSIC)**.
2. **Traditional Industries Promotion:**
   - **SFURTI** (Scheme of Fund for Regeneration of Traditional Industries).
   - **USTAD** (Upgrading Skills in Traditional Arts).
3. **Credit Access:**
   - SHG-Bank Linkage Program under **NABARD**.
   - Establishment of **SIDBI** (Small Industries Development Bank of India).
4. **Skill Development:**
   - **DDU-GKY (Deen Dayal Upadhyaya Grameen Kaushalya Yojana)**.
   - **DAY-NRLM (Deendayal Antyodaya Yojana – National Rural Livelihoods Mission)**.
5. **Infrastructure Development:** BharatNet, **PMGSY (Pradhan Mantri Gram Sadak Yojana)**.
6. **Employment Generation:** MGNREGA: Demand-driven wage employment scheme.

Way Forward for Sustainable RNFE

1. **Expand Credit Access:** Strengthen **microfinance, cooperative banks**, and institutional credit mechanisms for RNFE enterprises.
2. **Diversify Employment Opportunities:** Promote sectors like **renewable energy, tourism, digital services**, and agro-industries.
3. **Encourage Value Addition:** Focus on **high-value activities** such as agro-processing, handicrafts, and exports.
4. **Regulate Informal Employment:** Establish frameworks for **fair wages**, improved working conditions, and **social security**.
5. **Cluster-Based Development:** Develop **rural industrial clusters** to foster collaboration, innovation, and economies of scale.

Conclusion

The RNFE is a vital component of India's rural transformation, offering diverse opportunities beyond agriculture. Addressing its challenges through targeted investments, policy support, and skill development can enhance rural livelihoods, reduce poverty, and ensure sustainable growth in rural areas.

RBI Repatriates Gold Reserves from England

UPSC Syllabus: Indian Economy – Monetary Policy, Forex Reserves

Context

The **Reserve Bank of India (RBI)** has repatriated **130 metric tonnes** of gold from the **Bank of England** and the **Bank for International Settlements (BIS)** over the last **2.5 years**, enhancing domestic gold reserves.

Background

- **1991 Foreign Exchange Crisis**:
  - India pledged part of its **gold reserves** to secure a **USD 405 million** loan to address the economic crisis.
  - After repayment, the RBI **retained gold in the UK** for trading and logistical purposes.
- **Recent Repatriation**:
  - **No impact** on GDP, tax collections, or RBI's balance sheet.
  - Gold repatriation involves no customs or GST, as the gold was already **India-owned**.

Reasons for Repatriation

1. **Cost Efficiency**: Eliminates **custodial fees** paid to foreign banks for storing gold.
2. **Enhanced Domestic Infrastructure**: India now has **state-of-the-art storage facilities** for safely storing large gold reserves.
3. **Strategic Control**: Reduces dependence on **foreign custodians** and improves **diversification** of storage locations.
4. **Sovereign Security**: Increases confidence in domestic handling of critical assets.

Current Gold Reserve Distribution

- **Total Reserves (as of September 2024)**: **854.73 tonnes**.
  - **Stored in India**: **510.46 tonnes** (60%).
  - **Stored Abroad**: **324.01 tonnes** (Bank of England and BIS).
  - **Held as Deposits**: **20.26 tonnes**.

Impact on Forex Reserves

1. **Gold's Share in Forex Reserves**: Increased from **8.15%** (March 2024) to **9.32%** (September 2024).
2. **Forex Reserves Growth**: Rose from **USD 646.42 billion** (March 2024) to **USD 705.78 billion** (September 2024).
3. **Strengthening Economic Stability**: Enhancing gold reserves aligns with RBI's strategy to diversify and strengthen **India's foreign exchange holdings**.

Significance of Gold in Forex Reserves

1. **Hedge Against Inflation**: Gold retains value during **inflationary pressures** and economic uncertainties.
2. **Stability During Global Crises**: Acts as a **safe-haven asset** during global financial crises.
3. **Diversification of Reserves**: Reduces reliance on **foreign currencies** like the USD, enhancing economic resilience.
4. **Strategic Asset**: Repatriation reflects India's confidence in its **economic stability** and **security infrastructure**.

Way Forward

1. **Strengthening Domestic Storage**: Continue investments in advanced storage infrastructure for gold.
2. **Diversifying Forex Reserves**: Balance between gold, foreign currencies, and bonds to manage external risks.
3. **Enhancing Sovereign Security**: Maintain strategic control over key reserves to strengthen **economic sovereignty**.

Conclusion

The repatriation of gold reserves by the RBI highlights India's efforts to ensure **cost efficiency**, strengthen **economic resilience**, and reduce **dependency on foreign custodians**. This strategic move also aligns with global best practices for managing **foreign exchange reserves** and ensures greater control over the country's critical assets.

Domestic Systemically Important Banks (D-SIBs)

Why in News?

The **Reserve Bank of India (RBI)** released its 2024 list of **Domestic Systemically Important Banks (D-SIBs)**, identifying:

- **State Bank of India (SBI)**
- **HDFC Bank**
- **ICICI Bank**
  These banks continue to be classified as D-SIBs due to their systemic importance.

What are D-SIBs?

- **Definition:** D-SIBs are banks that are:
  - **Too Big to Fail**: Their size, interconnections, and importance to the financial system mean their failure would disrupt the overall economy.
  - **Systemic Risk**: If these banks face stress, it can lead to significant disruptions in essential financial services.

Criteria for Declaring D-SIBs

1. **RBI Framework (2014):**
   - Based on the **Basel Committee on Banking Supervision (BCBS)** framework.
   - **Eligibility:** Banks with assets greater than or equal to **2% of GDP** are evaluated for inclusion in the D-SIB list.
2. **Capital Surcharge:**
   - Banks are categorized into **five buckets** based on the **Additional Common Equity Tier 1 (CET1)**requirement as a percentage of **Risk-Weighted Assets (RWAs)**:
     - **Bucket 1:** Lowest CET1 requirement.
     - **Bucket 5:** Highest CET1 requirement.
3. **Foreign Banks:**
   - If a foreign bank with a branch presence in India is classified as a **Global Systemically Important Bank (G-SIB)**, it must maintain an additional CET1 capital surcharge.

Global Systemically Important Banks (G-SIBs):

- **Definition:** Banks identified as globally significant under the **Financial Stability Board (FSB)** framework.
- **Relevance for India:** Foreign banks with G-SIB status and operations in India must adhere to additional capital requirements.

Significance of D-SIBs

1. **Economic Stability:** Ensures that large banks have additional safeguards to withstand financial stress and avoid systemic risks.
2. **Enhanced Regulation:** Higher capital requirements for D-SIBs to ensure they can absorb shocks and continue operations during financial crises.
3. **Public Confidence:** Designation assures stakeholders of the bank's critical role and its enhanced capacity to handle financial stress.
4. **Interconnection Management:** Identifies and mitigates risks posed by interconnectedness with other banks and financial institutions.

Conclusion

The identification of D-SIBs reflects their critical role in ensuring **financial stability** and mitigating systemic risks. Enhanced capital requirements and stringent monitoring help safeguard the economy from potential disruptions, underscoring the RBI's proactive approach to banking sector regulation.

WIPO Indicators 2024 Report

UPSC Syllabus: Indian Economy – Intellectual Property Rights, Innovation & Development

Context

The **World Intellectual Property Organization (WIPO) Indicators 2024 Report** highlights India's **significant progress** in **patent, trademark, and industrial design filings**, reflecting its growing role in global innovation and intellectual property (IP) protection.

Key Highlights of India's Performance

1. Patents

- **Global Rank**: **6th** in patent filings globally.
- **Total Filings**: **64,480** in 2023.
- **Growth**: **15.7% increase** compared to the previous year.
- **Patent-to-GDP Ratio**: Improved significantly to **381** (from **144** in the past decade).

2. Trademarks

- **Global Position**:
  - India's **IP office** ranks **2nd** globally for total trademark registrations.
  - Ranks **4th** globally in **trademark filings**.
- **Registrations**: **3.2 million** in 2023.
- **Growth**: **6.1%** rise, with nearly **90%** of filings by Indian residents.
- **Key Sectors**: Health, agriculture, and clothing lead the trademark filings.

3. Industrial Designs

- **Global Rank**: **10th** in industrial design filings.
- **Growth**: **36.4% increase** in 2023.
- **Top Sectors**: Textiles, accessories, tools, machines, and health & pharma account for nearly **50%** of all designs filed.

About the World Intellectual Property Report

- **Publisher**: World Intellectual Property Organization (WIPO).
- **Frequency**: Published **annually**.
- **Purpose**:
  - Provides **comprehensive insights** into global trends in intellectual property.
  - Supports **evidence-based policymaking** to encourage innovation.
  - Focuses on specific areas of **IP** in each edition.

Significance of India's IP Growth

1. **Innovation Capacity**: India's rise reflects its strengthening **research and development (R&D)** ecosystem and a focus on innovation-driven growth.
2. **Economic Impact**: Improved IP filings attract **foreign investments** and enhance the competitiveness of Indian industries globally.
3. **Sectoral Boost**: Growth in trademarks and designs indicates booming industries in **healthcare, agriculture**, and **textile sectors**, creating jobs and exports.
4. **Resident Filings**: Nearly **90% of trademark filings** being domestic signals a rising entrepreneurial and innovation spirit in India.
5. **Global Recognition**: India's progress in global IP rankings strengthens its position as an **emerging innovation hub**.

Challenges to Address

1. **Patent Processing Delays**: Despite progress, the Indian Patent Office faces a backlog of applications.
2. **Low Awareness**: Lack of knowledge about **IP protections** among MSMEs, startups, and rural innovators.
3. **Enforcement of IP Rights**: Ensuring strict enforcement of patents and trademarks remains a challenge.
4. **R&D Funding**: India's expenditure on R&D (less than 1% of GDP) needs improvement to sustain innovation growth.

Way Forward

1. **Strengthening Patent Offices**: Reduce pendency through **digitalization** and faster processing of IP filings.
2. **Public Awareness Programs**: Promote IP education, especially for startups and small businesses.
3. **Global Collaboration**: Partner with international organizations to adopt best practices in IP enforcement.
4. **Incentives for Innovation**: Offer incentives such as tax rebates for R&D, particularly in priority sectors like **healthcare and clean energy**.
5. **Supporting Startups**: Enhance access to IP-related services for startups under programs like **Startup India**.

Conclusion

India's remarkable progress in **patents, trademarks, and industrial designs** reflects its potential as a **global innovation leader**. By addressing systemic challenges and promoting a robust **IP ecosystem**, India can further boost its economic growth, technological leadership, and global competitiveness.

21st Livestock Census

Why in News?

The **Union Minister of Fisheries, Animal Husbandry, and Dairying** launched the **21st Livestock Census** to update data on livestock population. This initiative aims to address issues like **disease control**, **breed improvement**, and enhancing **rural livelihoods**.

Key Highlights of the 21st Livestock Census

- **Schedule:** Conducted between **October 2024 and February 2025**.
- **Key Features:**
    1. **Digitized Process:** Fully digitized, continuing the trend set by the **20th Livestock Census** (2019).
    2. **Species Coverage:** Includes **16 species** of livestock and their **219 indigenous breeds**.
    3. **New Data Collection on Pastoralists:** For the first time, data on **pastoralists** (communities dependent on livestock herding) will be collected.
    4. **Focus on Gender Roles:** Captures gender-specific data on livestock rearing to understand the contribution of women.

Historical Background

- The **Livestock Census** has been conducted every **five years** since **1919**.
- The **20th Livestock Census (2019)** recorded:
    - Total livestock population: **535.78 million** (an increase of 4.6% over 2012).
    - Increase in **cattle population**, particularly indigenous breeds.

Significance of the 21st Livestock Census

1. **Policy and Planning:** Provides **comprehensive data** to design effective policies for:
    - **Disease control** and management.
    - **Breed improvement** programs.
    - Enhancing **milk, meat, and egg production**.
2. **Focus on Rural Livelihoods:** Livestock is critical to **rural economies**, especially for small and marginal farmers.
3. **Support to Women and Pastoralists:** Recognizes the **role of women** and **pastoralist communities**, ensuring better-targeted interventions.
4. **Improved Livestock Services:** Data aids in strengthening veterinary services and healthcare systems.
5. **Promoting Indigenous Breeds:** Focus on **219 indigenous breeds** aligns with government initiatives for breed conservation and enhancement.

Conclusion

The **21st Livestock Census** aims to provide **real-time, comprehensive data** to enhance **livestock development** and support rural livelihoods. Its digitized and inclusive approach, particularly focusing on **gender roles** and **pastoralists**, is a significant step toward **sustainable livestock management** and addressing the needs of marginalized communities.

Sustainable Trade Index 2024

UPSC Syllabus: Economy – International Reports, Trade and Environment

Context

India ranks **23rd globally** in the **Sustainable Trade Index 2024**, reflecting its progress and challenges in **trade sustainability** across economic, societal, and environmental dimensions.

About the Sustainable Trade Index 2024

- **Developed By**: **Hinrich Foundation** and **IMD**
- **Purpose**: To assess how economies balance **economic growth**, **societal advancement**, and **environmental resilience** while ensuring sustainable trade practices.
- **Three Key Pillars**:
    1. **Economic Growth**
    2. **Societal Advancement**
    3. **Environmental Resilience**

India's Performance

Indicator	Score
Overall Rank	23rd
Overall Score	24
Economic Score	62.3
Societal Score	13.3
Environmental Score	43.1

Key Observations

1. **Strength in Economic Growth**
   - India's high **economic score (62.3)** highlights strong trade-driven economic development.
   - Factors:
     - Expanding trade partnerships (e.g., FTAs with UAE, Australia).
     - Growth of exports in **services** and **manufacturing sectors**.
2. **Low Societal Score**
   - **Societal advancement score (13.3)** remains a challenge.
   - Issues:
     - **Income inequality**, labor rights concerns, and gender disparities.
     - Limited benefits of trade reaching marginalized populations.
3. **Moderate Environmental Resilience**
   - **Environmental score (43.1)** indicates efforts but scope for improvement.
   - Efforts Taken:
     - **National Green Hydrogen Mission**.
     - Participation in the **International Solar Alliance (ISA)**.
     - Policies on renewable energy and emission reductions.
   - Challenges:
     - High carbon emissions due to rapid industrialization.
     - Balancing trade expansion with environmental sustainability.

Global Context

- The **Sustainable Trade Index** ranks countries based on their ability to foster trade while ensuring social and environmental progress.
- Top Performers: Countries with high scores in **environmental sustainability** and **inclusive economic growth**.

Significance for India

1. **Promoting Sustainable Growth**: India's economic momentum should integrate stronger **social inclusiveness** and **environmental goals**.
2. **Global Recognition**: India's participation in initiatives like **SDGs, Paris Agreement**, and **net-zero targets** can improve its standing in future rankings.
3. **Trade as a Lever for Development**: Strengthening trade policies to focus on **inclusive growth** and **green technologies**.

Way Forward for India

1. **Enhancing Societal Advancement**: Improve labor standards, gender equality, and equitable distribution of trade benefits.
2. **Green Trade Policies**: Focus on **low-carbon manufacturing** and adoption of green technologies in exports.
3. **Climate-Resilient Infrastructure**: Invest in climate-resilient supply chains and sustainable logistics.
4. **Innovation and Technology**: Leverage **digital tools** and **innovations** to make trade practices more efficient and sustainable.

Conclusion

India's **23rd rank** in the Sustainable Trade Index 2024 underlines its strong economic growth but highlights gaps in societal progress and environmental resilience. A **balanced approach** integrating economic, social, and environmental priorities will be key to achieving sustainable trade goals in the coming years.

World Organisation for Animal Health (WOAH)

Why in News?

The **Indian Council of Agricultural Research-National Research Centre on Equines (ICAR-NRC Equine)** in Haryana has been granted **WOAH Reference Laboratory** status for its expertise in managing **Equine Piroplasmosis**, a disease affecting horses, donkeys, mules, and zebras.

About WOAH

- **Full Name:** World Organisation for Animal Health (previously Office International des Epizooties, OIE).
- **Founded:** 1924.
- **Headquarters:** Paris, France.
- **Membership:** 183 countries, including India.

Key Objectives:

1. **Global Animal Health:**
   - Collects, analyzes, and disseminates information on **animal diseases**.
   - Promotes global standards for improving animal health and welfare.
2. **Disease Prevention and Control:**
   - Focuses on controlling animal diseases, especially those with transboundary impacts.
   - Develops guidelines for safe international trade of animals and animal products.
3. **Capacity Building:** Provides technical support to member nations for disease surveillance and veterinary capacity building.
4. **Animal Welfare:** Encourages the development of humane treatment practices and standards globally.

About Equine Piroplasmosis

- **Cause:** Tick-borne disease caused by **protozoan parasites** (*Babesia caballi* and *Theileria equi*).
- **Hosts:** Affects **horses**, **donkeys**, **mules**, and **zebras**.
- **Symptoms:** Fever, anemia, jaundice, reduced appetite, and lethargy.
- **Impact:** Leads to significant economic losses in equine populations due to reduced work efficiency and increased mortality.

Significance of WOAH Reference Laboratory Status

1. **Global Recognition:** Validates **ICAR-NRC Equine's** capabilities in diagnosis, surveillance, and research on **Equine Piroplasmosis**.
2. **Capacity Building:** Facilitates training of veterinarians and researchers across India and globally.
3. **International Collaboration:**
   - Strengthens India's position in global animal health networks.
   - Provides expertise and resources for other countries to combat equine diseases.
4. **Enhanced Research Opportunities:** Promotes advancements in diagnostics, vaccine development, and disease management practices.

Conclusion

India's recognition by the **WOAH** as a reference laboratory for **Equine Piroplasmosis** underscores its growing stature in **veterinary science and animal health research**. It further aligns with global efforts to ensure **sustainable livestock management** and **safe international trade** of animals.

Futures Trading in Agricultural Products

UPSC Syllabus: Indian Economy – Pricing, Agricultural Marketing, and SEBI Regulation

Context

A recent study revealed that the suspension of **futures trading in agricultural commodities** in **2021** disrupted the **agricultural pricing system** and exacerbated **inflation**.

Background

- The Indian Government suspended **futures derivative trading** in 2021 for **seven key commodities** to curb price rises.
- Commodities affected: Gram, Wheat, Paddy, Moong, Crude Palm Oil, Mustard, and Soybean.

About Commodity Futures Contract

1. **Definition**: A **commodity futures contract** is an agreement to **buy or sell** a specific amount of a commodity at a **predetermined price and date** in the future.
2. **Nature**: Unlike **option contracts**, futures obligate the buyer to purchase or the seller to sell at the agreed-upon terms.
3. **Purpose**:
   - **Hedging**: Protects producers and traders from price volatility.
   - **Speculation**: Allows investors to profit from price movements.
4. **Regulation**:
   - **SEBI (Securities and Exchange Board of India)** regulates commodity futures trading under the **F&O segment**.

- o Before 2015, commodity trading was regulated by the **Forward Markets Commission (FMC)** under the **Forward Contracts Regulation Act, 1952**.
- o **FMC Merger**: In 2015, FMC merged with SEBI to ensure more robust and unified regulation of commodities markets.

Significance of Futures Trading in Agriculture

1. **Price Discovery**: Futures trading enables farmers and traders to determine fair prices by factoring in **demand-supply dynamics** and **market trends**.
2. **Hedging Price Risk**:
   - o Protects farmers and traders from **unexpected price fluctuations**.
   - o Example: A farmer can lock in prices to avoid losses during a bumper crop or market glut.
3. **Efficient Market Operations**: Futures contracts incentivize better **production planning**, storage, and marketing strategies.
4. **Transparency**: Reduces **information asymmetry** by providing real-time price signals, improving decision-making for stakeholders.
5. **Inflation Control**: Futures markets help regulate **seasonal price surges** by balancing supply and demand through contracts.

Impact of Suspension of Futures Trading

1. **Disruption in Price Discovery**: Without futures trading, real-time price signals disappeared, leading to **market inefficiencies**.
2. **Increased Inflation**: The absence of price stabilization tools worsened **inflationary pressures** on essential commodities.
3. **Uncertainty for Farmers**: Farmers lacked reliable mechanisms to **hedge risks**, affecting income security.
4. **Speculation Concerns**: Government rationale for suspension was to curb **speculative trading**, which can sometimes distort prices.

Way Forward

1. **Reintroduce Futures Trading**: Regulate it with safeguards to **prevent manipulation** while ensuring **transparent price discovery**.
2. **Strengthen SEBI Oversight**: Enhance SEBI's monitoring capabilities to strike a balance between price stabilization and market efficiency.
3. **Educate Stakeholders**: Train farmers, traders, and policymakers to utilize **futures contracts** effectively.
4. **Develop Alternatives**: Explore price stabilization mechanisms like **Minimum Support Prices (MSP)** and **e-NAM integration** for better risk management.
5. **Targeted Policy Framework**: Allow futures trading only in **non-sensitive commodities** initially, followed by gradual inclusion of others.

Conclusion

While concerns about speculation are valid, the benefits of **futures trading** for **price discovery**, risk hedging, and inflation control cannot be ignored. A well-regulated futures market, overseen by SEBI, is vital to achieving **agricultural market efficiency** and ensuring **income security for farmers**.

AGRICULTURE

State of Food and Agriculture 2024 Report

UPSC Syllabus: Indian Economy – Agriculture and Food Systems, Health, Environment

Context

The **State of Food and Agriculture 2024 Report** highlights that **India's hidden costs of agrifood systems** amount to approximately **$1.3 trillion annually**, driven largely by **unhealthy dietary patterns** and associated **non-communicable diseases (NCDs)**.

What are Agrifood Systems?

Agrifood systems encompass all activities, actors, and processes involved in the journey of food:

1. **Production**: Farming and agricultural processes.
2. **Processing**: Converting raw materials into consumable food products.
3. **Distribution**: Transporting and supplying food to markets and consumers.
4. **Consumption**: Food utilization by individuals or households.
5. **Waste Management**: Handling food waste and by-products.

Significance: Agrifood systems are influenced by **economic, social, and environmental factors** and directly impact **food security**, **nutrition**, and **sustainability**.

Key Findings for India

1. **Hidden Costs**: India's **hidden costs** of agrifood systems are estimated at **$1.3 trillion annually**.
2. **Major Drivers**:
   o **Unhealthy Dietary Patterns**: Poor diets leading to malnutrition and diet-related NCDs.
   o **Health Risks**: Rising healthcare costs linked to NCDs like diabetes, cardiovascular diseases, and obesity.
3. **Global Trends**: India reflects a broader global concern where the hidden costs of food systems are undermining progress in health, economy, and the environment.

What are Hidden Costs in Agrifood Systems?

1. Environmental Costs:

- **Greenhouse Gas Emissions**: Food production contributes to CO_2, CH_4, and N_2O emissions.
- **Water Pollution**: Excessive use of fertilizers, pesticides, and improper waste disposal pollute groundwater.
- **Biodiversity Loss**: Monoculture practices reduce genetic diversity and harm ecosystems.

2. Health Costs:

- **Diseases**: Poor diets contribute to NCDs like **diabetes**, **hypertension**, and **obesity**.
- **Healthcare Expenses**: Rising medical costs due to diet-related illnesses.

3. Social and Economic Costs:

- **Low Wages for Workers**: Agrifood workers face exploitation, resulting in **poverty and inequality**.
- **Productivity Loss**: Poor health reduces labor productivity, impacting economic growth.
- **Food Waste**: Mismanagement of food supply chains exacerbates resource losses.

About the SOFA Report

PUBLISHED BY	FOOD AND AGRICULTURE ORGANIZATION (FAO)
PURPOSE	Comprehensive analysis of global agrifood systems, offering insights and policy recommendations.
FOCUS AREAS	- Food security and nutrition - Agricultural productivity - Sustainability and climate impact - Socioeconomic challenges

Significance of the SOFA Report

1. **Policy Guidance**: Provides data-driven solutions for **sustainable agricultural practices**.
2. **Food Security**: Addresses challenges related to **nutrition and dietary patterns**.
3. **Sustainability**: Highlights environmental impacts and strategies for reducing hidden costs.
4. **Economic Impact**: Advocates for investments to reduce **social and economic disparities** in agrifood systems.

Recommendations for India

1. **Promoting Sustainable Diets**:
   o Introduce **nutrition-based policies** to promote healthy and affordable food.
   o Support diversified crop production to include **pulses, vegetables, and millets**.
2. **Addressing Environmental Impact**:
   o Encourage **sustainable agriculture practices** to reduce emissions and protect ecosystems.
   o Strengthen **waste management systems** to minimize food loss.
3. **Health-Centric Policies**:
   o Implement **awareness campaigns** to reduce NCD risks and improve dietary habits.
   o Enhance access to healthcare facilities for early diagnosis and treatment of NCDs.
4. **Social and Economic Reforms**:
   o Ensure **fair wages** and better working conditions for agrifood workers.
   o Invest in infrastructure and technology to improve food distribution and reduce hidden costs.
5. **Strengthening Data and Analysis**:
   o Develop mechanisms to monitor **hidden costs** of food systems for better policymaking.

Conclusion

The **State of Food and Agriculture 2024** underscores the **urgent need** to reform agrifood systems in India. By addressing hidden costs through **sustainable practices**, **nutritious diets**, and **inclusive policies**, India can promote **food security**, reduce **healthcare expenses**, and achieve **sustainable development goals** (SDGs).

Nano Fertilizers

Why in News?

Indian scientists have developed a **nanomaterial coating** made of **nanoclay** for **Muriate of Potash (MoP)** to improve nutrient use efficiency and promote sustainable agriculture. MoP accounts for **80% of the potassium fertilizer needs** in India.

What are Nano Fertilizers?

- Nano fertilizers are **nutrients** encapsulated or coated within **nanomaterials** (particles measuring 100 nanometres or less).
- These fertilizers are designed for **controlled release**, ensuring optimal nutrient availability to crops.

Key Features and Composition

1. **Nanomaterial Coating:** The nanoclay coating for MoP enables **slow nutrient release**, minimizing leaching and wastage.
2. **Composition:**
   o Made of biodegradable materials like **nanoclay, chitosan, and lignin**.
   o Provides a **hydrophobic layer**, ensuring a gradual dissolution of nutrients.

Benefits of Nano Fertilizers

1. **Enhanced Nutrient Efficiency:**
   o Ensures **synchronization of nutrient release** with crop requirements.
   o Improves **nutrient use efficiency**, reducing the total amount of fertilizer needed.
2. **Sustainable Farming Practices:**
   o Reduces **soil and water contamination** caused by excessive fertilizer runoff.
   o Decreases the environmental footprint of conventional fertilizers.
3. **Economic Advantages:**
   o Cost-effective due to reduced application frequency and minimized wastage.
   o Potential to increase **agricultural productivity** while lowering input costs.
4. **Climate Resilience:** Mitigates environmental degradation and supports **climate-smart agriculture**.

Applications of Nano Fertilizers

- **Agriculture:**
    - Used in key crops like rice, wheat, and maize for improved yields.
    - Specific products include **Nano Urea** and **Nano DAP** for nitrogen and phosphorus supply.
- **Horticulture:** Enhances nutrient availability in fruit and vegetable cultivation.

Challenges

1. **Limited Awareness:** Lack of awareness among farmers regarding the benefits and application techniques.
2. **Infrastructure Needs:** Requires advanced manufacturing and distribution systems.
3. **Regulatory Framework:** Absence of a comprehensive framework for ensuring safety and standardization.

Way Forward

1. **Research and Development:** Expand R&D on nano fertilizers for different crops and agro-climatic conditions.
2. **Capacity Building:** Train farmers and agricultural workers on the effective use of nano fertilizers.
3. **Policy Support:** Establish regulatory mechanisms and provide subsidies to encourage adoption.
4. **Public-Private Collaboration:** Foster partnerships for scaling up production and distribution.

Conclusion

Nano fertilizers hold the potential to **revolutionize Indian agriculture** by enhancing productivity, reducing environmental harm, and promoting sustainable farming practices. With focused efforts on R&D, capacity building, and policy support, nano fertilizers can be a key driver in achieving **self-reliant and climate-resilient agriculture** in India.

National Mission on Natural Farming (NMNF)

Why in the News?

The Union Cabinet approved the **National Mission on Natural Farming (NMNF)** as a standalone scheme to promote chemical-free, low-input farming practices.

About National Mission on Natural Farming

- **Implementation**: **15,000 clusters** targeting 7.5 lakh hectares and 1 crore farmers over the next 2 years.
- **Key Components**:
    - **Bio-input Resource Centres (BRCs)** for easy access to inputs.
    - **Model Demonstration Farms** for farmer training.
    - **Krishi Sakhis** for mobilization and handholding of farmers.
- **Budget**: Financial assistance of **₹12,200/ha for 3 years** for cluster formation and capacity building.

Natural Farming vs Organic Farming

Parameter	Organic Farming	Natural Farming
Inputs	Off-farm organic and biological inputs	Locally available on-farm inputs
Soil Correction	Involves compost/vermi-compost	Minimal intervention
Cost	Higher costs due to organic manures	Lower costs using local biodiversity

Significance of Natural Farming

1. **Improved Yield**: Maximizes production factors while avoiding synthetic inputs.
2. **Higher Income**: Lowers dependency on expensive fertilizers and boosts farmer profitability.
3. **Health Benefits**: Produces chemical-free, nutrient-dense food.
4. **Environmental Conservation**:
    - Enhances soil health and agro-biodiversity.
    - Reduces carbon and nitrogen footprints.
5. **Employment Generation**: Creates job opportunities in agriculture-related value chains.

Challenges in Adoption

1. **Yield Variability**: Initial lower yields and investment risks.
2. **Input Constraints**: Limited access to cow dung and bio-fertilizers.
3. **Knowledge Gaps**: Lack of farmer awareness and extension services.
4. **Market Issues**:

- o Absence of supply chains for natural produce.
- o Low consumer awareness and certification bottlenecks.
5. **Policy and Support Deficiency**:
   - o Limited guidelines for input quality.
   - o Insufficient government funding.

Way Forward

1. **Policy Framework**:
   - o Enhance financial support and incentives for adopting natural farming.
   - o Introduce clear certification guidelines.
2. **Market Development**:
   - o Establish dedicated outlets for natural produce.
   - o Promote consumer awareness.
3. **Farmer Training**:
   - o Offer comprehensive training on bio-input preparation (e.g., Jeevamrit).
   - o Encourage knowledge-sharing through **Farmer Producer Organizations (FPOs)**.
4. **Best Practices**: Scale models like the **Andhra Pradesh Community Managed Natural Farming (APCNF)** program.

Conclusion

Both **forest ecosystem restoration** and **natural farming** are pivotal for achieving sustainability and addressing climate and biodiversity challenges. Their success relies on **robust governance**, **increased investment**, and **community engagement**, paving the way for holistic environmental and economic growth.
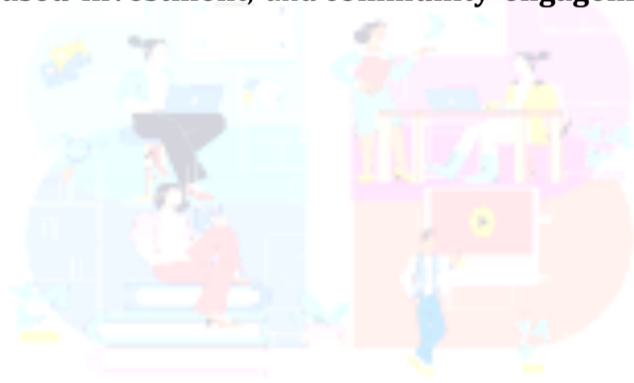
GEOGRAPHY

Glacial Lake Outburst Floods (GLOFs)

Why in the News?

A recent **Central Water Commission (CWC)** report highlighted a **33.7% increase in the surface area of glacial lakes** in India from 2011 to 2024, raising concerns about the growing risks of **Glacial Lake Outburst Floods (GLOFs).**

Key Findings of the Report

1. **Expansion of Glacial Lakes**:
   - **33.7% increase** in the surface area of glacial lakes in India (2011-2024).
   - **10.81% increase** in transboundary regions (e.g., Nepal, Bhutan, and China).
2. **High-Risk Glacial Lakes**:
   - **67 lakes** in India identified as high-risk, with over a 40% surface area increase.
   - Most expansions are in **Ladakh, Himachal Pradesh, Uttarakhand, Sikkim, and Arunachal Pradesh.**

What are GLOFs?

- **Definition**: Sudden release of meltwater from a **moraine** or **ice-dammed lake** due to dam failure.
- **Characteristics**:
  1. Rapid onset, lasting hours to days.
  2. High discharge rates causing downstream floods.
  3. Potentially devastating impacts on infrastructure and communities.
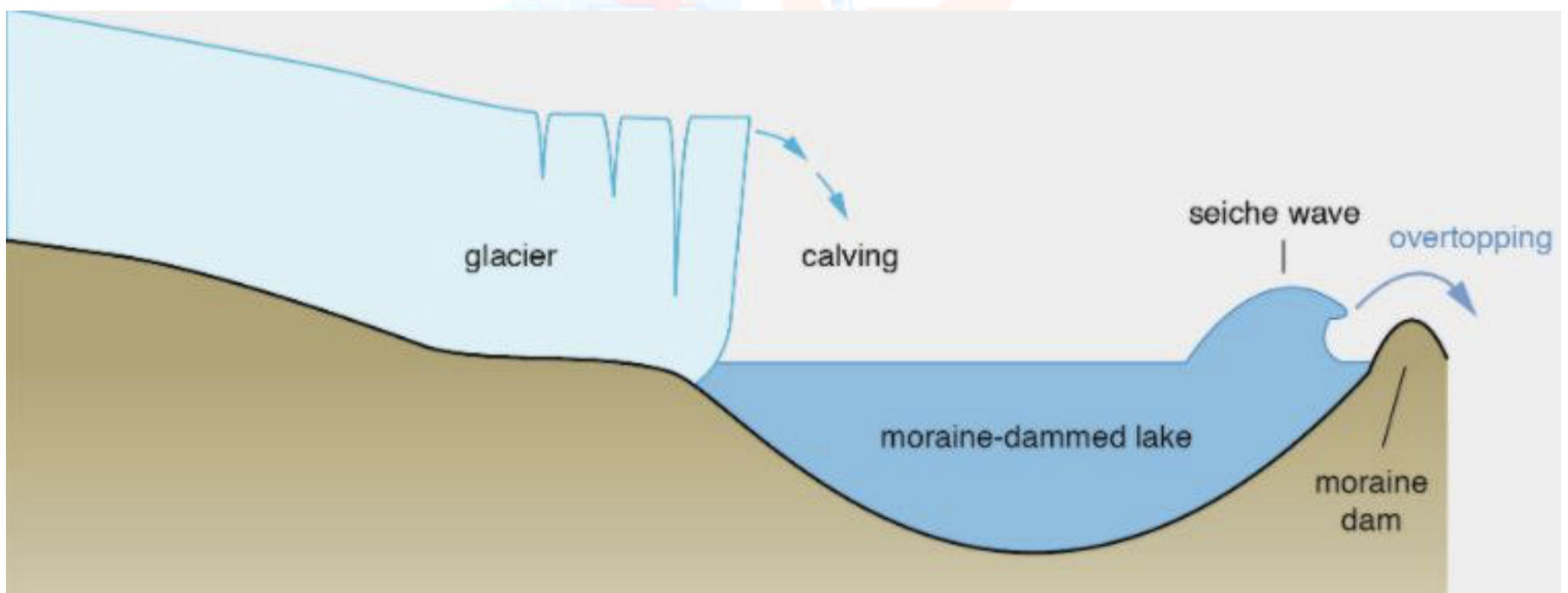
Causes of GLOFs

1. **Climate Change**:
   - Accelerated glacial melting due to rising temperatures.
   - Increased rainfall destabilizing moraines.
2. **Moraine Instability**:
   - Loose, unconsolidated moraines prone to collapse.
   - Example: **South Lhonak GLOF in Sikkim (2023).**
3. **Ice Dam Failure**: Triggered by thermal stress, water pressure, and internal melting.
4. **Seismic Activity**: Himalayan region's tectonic activity can destabilize glacial structures.
5. **Human Activities**: Deforestation, unregulated construction, mining, and hydropower projects.

Examples of GLOFs

1. **South Lhonak Lake, Sikkim (2023)**: Destroyed the **Teesta III Dam** and caused widespread devastation.
2. **Chorabari Lake, Uttarakhand (2013)**: Triggered floods in the **Mandakini River**, causing heavy casualties.

Government Initiatives to Manage GLOFs

1. **NDMA Guidelines**: Comprehensive framework for risk assessment and mitigation strategies.
2. **High-Risk Identification**: **67 high-risk lakes** identified in India for targeted mitigation.
3. **Dam Design Reviews**: **Central Water Commission (CWC)** mandates GLOF risk assessment for dams in glacier-fed regions.
4. **GLOF Risk Mitigation Projects**: Approved for **Himachal Pradesh, Uttarakhand, Sikkim, and Arunachal Pradesh**.
5. **National Mission on Himalayan Studies (NMHS)**: Glacial lake monitoring and status reports.

Global Initiatives for GLOF Management

1. **HKH Cryosphere Initiative**: Conducts glacial lake monitoring in the Hindu Kush Himalaya region.
2. **Sendai Framework**: Encourages international cooperation on disaster risk reduction.
3. **UNESCO Programmes**: Focus on minimizing human interference in vulnerable ecosystems.

Challenges in Managing GLOFs

1. **Inaccessible Terrain**: Difficult to conduct regular surveys in remote Himalayan regions.
2. **Lack of Early Warning Systems (EWS)**: Limited robust infrastructure for real-time alerts.
3. **Seismic Vulnerability**: Himalayan region's high seismic activity increases risks.
4. **Climate Change**:
   o Accelerating glacial melt exacerbates the frequency of GLOFs.
   o **ICIMOD Estimate**: Up to **80% of current glacier volume** in the HKH region may disappear by 2100 under high-emission scenarios.

Way Forward

1. **Strengthen Early Warning Systems (EWS)**:
   o Satellite-based remote sensing and **GIS technologies**.
   o Real-time data integration for community alerts.
2. **NDMA Recommendations**: Focus on structural (e.g., controlled breaching, outlet control) and non-structural (e.g., community awareness) mitigation strategies.
3. **Risk Assessment and Monitoring**: Regular assessments of lake stability and downstream impact risks.
4. **Policy Integration**: Include GLOF management in **national climate adaptation plans**.
5. **Community Engagement**: Empower local communities with training and awareness for disaster preparedness.

Conclusion

The increasing risk of **GLOFs** due to expanding glacial lakes necessitates immediate action. **Collaborative efforts**, robust **early warning systems**, and strong mitigation strategies are vital to protect vulnerable regions and communities in the Himalayas.

Tsunami Ready Villages in Odisha

Key Highlights

- **Recognition**: 24 coastal villages in Odisha have been recognized as 'Tsunami Ready' by the **Intergovernmental Oceanographic Commission of UNESCO (UNESCO-IOC)**.
- **Global Acknowledgment**: Recognized during the 2nd Global Tsunami Symposium in Indonesia.
- **Verification**: Conducted by the **National Tsunami Ready Recognition Board (NTRB)**, comprising:
  o Scientists from the **Indian National Centre for Ocean Information Services (INCOIS)**.
  o Officials from the **National Disaster Management Authority (NDMA)**.

How a tsunami forms

1. Tectonic — Tectonic upthrust in the form of earthquakes and ocean floor volcanoes cause vast quantities of water to be displaced in a very short space of time, generating a massive amount of energy.

2. Build — The energy from the quake or impulse causes a train of simple, progressive oscillatory waves to propagate over the ocean surface in ever-widening circles at speeds as fast as 500mph.

3. Travel — The wavelengths of the tsunami continue to grow, with the waves' periods (the lengths of time for successive crests or troughs to pass a single point) varying from five minutes to more than an hour.

4. Approach — As the tsunami waves approach the coastline of a landmass they are slowed dramatically by the friction of their collision with the rising seabed. As the velocity lessens, however, the wavelengths become shortened and amplitude increases.

5. Impact — Finally, with the wavelength compressed and heightened to large levels (often between five and ten metres), the giant waves collide with the shore causing massive damage. The succeeding outflow of water then continues the destruction, uprooting trees and washing away people and property.

About UNESCO-IOC Tsunami Ready Recognition Programme (TRRP)

- **Objective**:
  o Strengthen **community-based preparedness** to mitigate the risks of tsunamis.
  o Protect lives, property, and livelihoods in global coastal areas.
- **Indicators**: Uses **12 preparedness indicators** to assess community resilience.
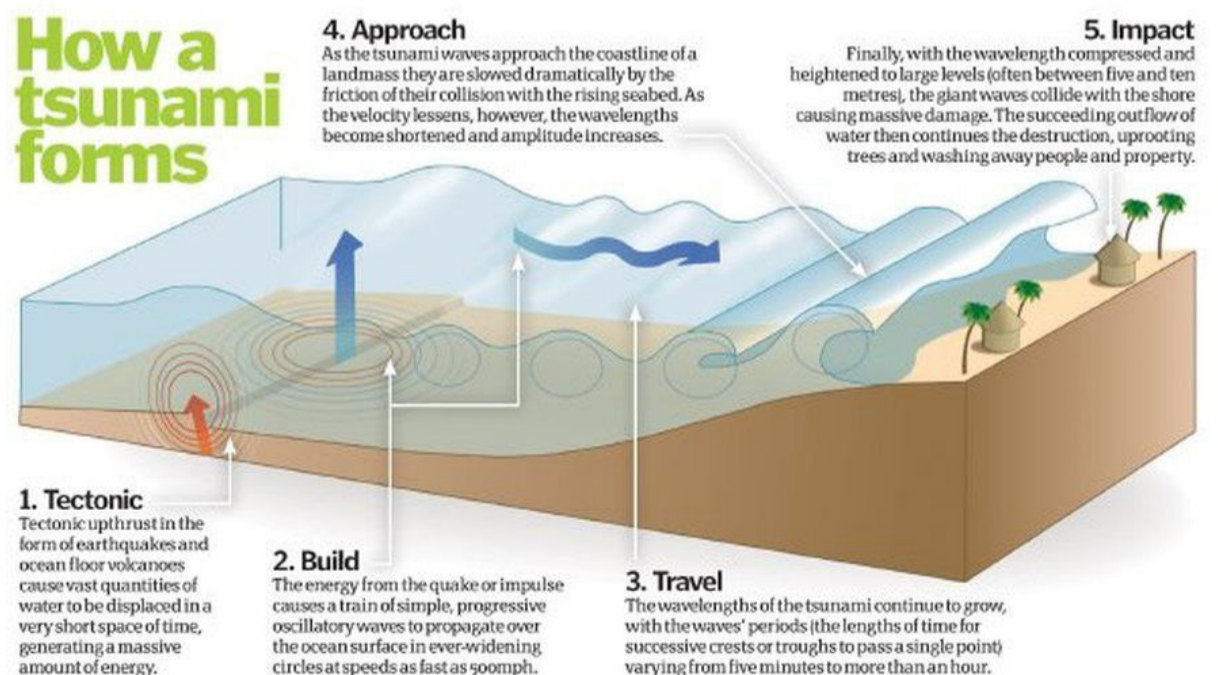
- **Renewal**: Recognition is **renewable every four years** to ensure sustained preparedness.

What is a Tsunami?

- **Definition**: A tsunami is a series of large ocean waves caused by underwater disturbances such as:
  - Earthquakes.
  - Volcanic eruptions.
  - Submarine landslides.
  - Coastal rock falls.
- **Origin**: Derived from the Japanese words:
  - **"Tsu"** meaning harbor.
  - **"Nami"** meaning wave.
- **Characteristics**:
  - **Speed**: Can exceed **500 mph** in deep ocean, slowing to **20-30 mph** in shallow waters.
  - **Wave Height**: Increases dramatically as the wave approaches the coast.
  - **Dependency**: Speed is determined by ocean depth, not distance from the disturbance.

Steps Taken by India

1. **Indian Tsunami Early Warning Centre (ITEWC)**:
   - Provides **tsunami advisories** to **25 Indian Ocean countries**.
   - Equipped with a **real-time network** of tsunami buoy systems for data transmission.
   - Operated by **INCOIS** with a network of **tide gauge stations** along the Indian coast.
2. **NDMA Guidelines on Tsunami Management**: Focus on **preparedness**, **early warning systems**, and **community awareness**.
3. **Modeling and Mapping**:
   - **Tsunami hazard maps** developed for coastal areas.
   - Integrated into the **early tsunami and storm surge warning system**.

Significance of Recognition

- **Global Leadership**: Strengthens India's role in disaster risk reduction and coastal management.
- **Community Resilience**: Enhances preparedness in vulnerable coastal villages.
- **Sustainability**: Ensures continuous capacity building and community engagement to mitigate future risks.

Conclusion

The recognition of Odisha's coastal villages as 'Tsunami Ready' showcases India's proactive efforts in disaster preparedness and risk reduction. This initiative aligns with the **Sendai Framework for Disaster Risk Reduction**, emphasizing **community engagement** and **early warning systems** to enhance coastal resilience globally.

State-Specific Disasters

Context

- The Tamil Nadu government has officially declared **heatwaves** as a **state-specific disaster**.
- The declaration allows the government to provide ex-gratia payments of **₹4 lakh** to the families of individuals who die of heat-related causes, including relief workers.

About Heatwaves

- **Definition**: A heatwave is a prolonged period of excessively hot weather that significantly exceeds the typical temperature for a region.
- **Criteria by Indian Meteorological Department (IMD)**:
  - **Plains**: Maximum temperature of at least **40°C**.
  - **Hilly regions**: Maximum temperature of at least **30°C**.
  - **Heatwave conditions**:
    - When the temperature deviation from normal is:
      - **5°C to 6°C**: Heatwave.
      - **7°C or more**: Severe heatwave.
    - When the actual maximum temperature is **45°C or more**, heatwaves are declared irrespective of normal temperatures.

Significance of Declaring Heatwave as a State-Specific Disaster

1. **Immediate Relief**: Enables timely financial and logistical support to victims and families.
2. **Utilization of SDRF**: Allows the state to use funds from the **State Disaster Response Fund (SDRF)** for heatwave relief operations.

3. **Inclusion of Additional Disasters**: Tamil Nadu also declared **sea erosion, lightning, thunder, whirlwinds, and gale winds** as state-specific disasters.

State-Specific Disasters

- **Definition**: Disasters specific to a state's unique geographical, environmental, or climatic conditions that are not listed as national disasters by the Ministry of Home Affairs.
- **Examples**:
  - Odisha declared **snakebite** a state-specific disaster in 2015.
  - Kerala declared **man-animal conflict** a state-specific disaster in 2024.

Disaster Management Framework in India

- **Legal Framework**: Governed by the **Disaster Management Act, 2005**.
  - Nodal Agency: **Ministry of Home Affairs**.
  - Institutions:
    - **NDMA**: Develops policies and ensures disaster preparedness.
    - **NIDM**: Builds disaster management capacities.
    - **NDRF**: Specialized disaster response units.
- **State-Level Mechanism**:
  - **SDMA**: State Disaster Management Authorities implement disaster management policies.
  - **SDRF**: Financial mechanism for disaster relief.

Factors Influencing State-Specific Disasters

1. **Geographical Features**:
   - Mountainous states (e.g., **Uttarakhand**, **Himachal Pradesh**) face earthquakes and landslides.
   - Coastal states (e.g., **Tamil Nadu**, **Odisha**) face cyclones and sea erosion.
2. **Climatic Conditions**:
   - Seasonal heatwaves and droughts in arid regions.
   - Cloudbursts in Himalayan states.
3. **Human Activities**:
   - Urban flooding due to poor drainage (e.g., **Chennai**, **Bengaluru**).
   - Deforestation and unplanned construction causing landslides.
4. **Biodiversity**:
   - Man-animal conflicts in regions like Kerala due to habitat loss.

Efforts for Local Disaster Management

1. **Hazard Mapping**:
   - Utilize **GIS** and remote sensing for risk identification.
   - Example: Landslide-prone zones mapped in **Uttarakhand**.
2. **Localized Research**:
   - Data collection on region-specific vulnerabilities.
   - Example: Study of river patterns in flood-prone **Bihar**.
3. **Early Warning Systems**: Establish robust systems for timely alerts using advanced technologies.
4. **Community Training**: Conduct mock drills and awareness campaigns for disaster preparedness.
5. **Urban Planning**: Increase green cover and design heat-resilient infrastructure to mitigate urban heatwaves.

Way Forward

1. **Policy Integration**: Align state-specific disaster policies with the national disaster management framework.
2. **Technology Utilization**: Leverage satellite data and AI for better forecasting and management.
3. **Capacity Building**: Strengthen institutions and train officials in disaster management techniques.
4. **Public-Private Collaboration**: Partner with private entities for resource mobilization and efficient implementation.
5. **Sustainable Development**: Ensure eco-friendly development practices to minimize disaster risks.

Conclusion

State-specific disasters necessitate tailored strategies to address localized vulnerabilities while aligning with national disaster management efforts. Strengthening preparedness and response mechanisms is vital for reducing the adverse impacts of such disasters.

DANA (Depresión Aislada en Niveles Altos)

Context

- Recent flash floods in Spain were caused by the weather phenomenon known as **DANA** (Depresión Aislada en Niveles Altos), or the "cold drop."

What is DANA?

1. **Definition**: DANA stands for **"Isolated Depression at High Altitudes"**, commonly referred to as the **"cold drop"** in Spanish.
2. **Mechanism**:
   - Occurs when a **pocket of cold air descends** from higher altitudes and interacts with **warmer waters** of the Mediterranean Sea.
   - This collision between **cold and warm air masses** leads to **atmospheric instability**, facilitating the rapid formation of **cumulonimbus clouds**.
3. **Role of Polar Jet Stream**:
   - The **polar jet stream**, a high-altitude, fast-moving air current at the boundary between polar and tropical air masses, can **detach pockets of cold air**.
   - These cold air pockets mix with warm Mediterranean air, triggering the DANA phenomenon.
4. **Seasonal Occurrence**: Most common in **autumn and spring**, particularly in **western Mediterranean regions**.
5. **Impact of Climate Change**:
   - **Global warming** has increased the **frequency and intensity** of DANA events.
   - Areas **inland**, such as **Madrid**, are now experiencing significant rainfall, unlike in the past.

Impact of DANA

1. **Intense Rainfall**:
   - DANA can lead to **extremely heavy rainfall** within a short duration.
   - Example: Certain regions in Spain have experienced **a month's worth of rain in a single day**, causing severe flash floods.
2. **Flooding and Infrastructure Damage**:
   - Leads to **widespread flooding**, submerging towns and cities.
   - Causes extensive damage to **roads**, **bridges**, and other critical **infrastructure**.
3. **Societal and Economic Impact**:
   - Strains **emergency services** and affects **livelihoods**.
   - Results in **economic losses** due to damage and disruption of activities.

Key Takeaways

- DANA exemplifies the **complex interplay** between natural weather systems and **human-induced climate change**.
- Its growing intensity highlights the need for **climate adaptation strategies**, including improved **urban planning**, **flood management systems**, and global efforts to mitigate **climate change**.

DEFENCE & SECURITY

Indian Coast Guard

Why in the News?

The **Parliamentary Standing Committee on Defence** recently reviewed the **Indian Coast Guard's (ICG)** role in ensuring **coastal security** and its contributions to maritime safety and enforcement.

About the Indian Coast Guard (ICG)

- **Constituted:** Established in **August 1978** under the **Coast Guard Act 1978**.
- **Role:** Serves as the **National Coordinating Agency** for:
  - **Maritime Law Enforcement**
  - **Search and Rescue Operations**
  - **Marine Pollution Response**
- **Ministry:** Operates under the **Ministry of Defence**.
- **Maritime Security Framework:** Integral to India's **multi-tier arrangement** for **protection of maritime borders**.

Roles and Responsibilities

1. **Enforcement of Maritime Laws:** Implements maritime regulations and international treaties signed by India.
2. **Protection of Offshore Infrastructure:** Conducts patrols to safeguard **artificial islands**, **offshore terminals**, and **development areas** on both coasts.
3. **Safety of Life and Property:**
   - Provides aid to distressed mariners.
   - Safeguards fishermen and protects against natural and man-made disasters.
4. **Inter-Agency Coordination:**
   - Collaborates with customs and enforcement agencies.
   - Conducts **anti-smuggling operations** to prevent contraband movement.
5. **Environmental Protection:** Engages in **marine environment preservation** and monitors pollution.
6. **Scientific Contributions:** Collects **meteorological** and **oceanographic data** for research and planning.

Key Initiatives to Strengthen the ICG

1. **Inter-Agency Maritime Exercises:** Participates in and conducts operations like **SAREX-2024** and **Sagar Kavach** to enhance preparedness.
2. **Increased Responsibility (2009):** Designated as the authority for **coastal security** in **territorial waters**.
3. **Coastal Command:** The **Director General of ICG** acts as the **Commander Coastal Command** to ensure coordination between **central and state agencies** for coastal security.
4. **Modernization:** Equipped with advanced vessels, aircraft, and technology for effective surveillance and response.

Significance of the Indian Coast Guard

1. **Strengthening Maritime Security:** Acts as the **first line of defence** against maritime threats, including piracy and illegal fishing.
2. **Disaster Relief and Search Operations:** Played a critical role during cyclones and maritime disasters, ensuring safety and quick response.
3. **Economic Safeguard:** Protects India's maritime wealth, including **oil fields**, **minerals**, and **fisheries**.
4. **Regional Stability:** Contributes to India's vision of **SAGAR (Security and Growth for All in the Region)**, reinforcing maritime cooperation in the Indian Ocean Region.

Conclusion

The Indian Coast Guard plays a pivotal role in ensuring India's **maritime security**, **economic safety**, and **environmental preservation**. Through consistent modernization, inter-agency coordination, and collaborative exercises, the ICG is crucial to safeguarding India's coastline and contributing to regional maritime stability.

Armed Forces (Special Powers) Act (AFSPA)

Why in the News?

The **Ministry of Home Affairs** has reimposed **AFSPA 1958** in **"disturbed areas"** of **Manipur**, including **Jiribam**, to restore order amidst persistent unrest.

Key Highlights of AFSPA

1. **Declaration of Disturbed Areas:**
   o A **state or Union Territory** (partially or fully) can be declared "disturbed" by:
      ▪ The **Governor of the state**.
      ▪ **Administrator of a Union Territory**.
      ▪ The **Central Government**.
   o This declaration is made when armed forces' intervention is deemed necessary to aid civil power.
2. **Special Powers to Armed Forces:**
   o **Open Fire:** Armed forces can open fire on individuals violating the law or carrying weapons.
   o **Arrest Without Warrant:** Personnel can arrest and search premises without requiring a warrant.
   o **Seizure of Property:** They can seize property suspected of being used unlawfully.
3. **Immunity for Armed Forces Personnel:** No **legal proceedings** can be initiated against armed forces personnel for actions performed under AFSPA without prior **Central Government approval**.
4. **Treatment of Arrested Individuals:** Arrested persons must be handed over to the nearest **police station** with **minimum delay**.
5. **Applicability:**
   o Currently applicable in parts of:
      ▪ **Assam**, **Manipur**, **Nagaland**, **Arunachal Pradesh**.
   o In **Jammu & Kashmir**, the **AFSPA 1990** applies to disturbed areas.

Concerns and Criticism

1. **Abuse of Powers:** Reports of misuse of powers, including:
   o **Human rights violations.**
   o Cases of **extrajudicial killings**, **rape**, and **sexual assault**.
2. **Lack of Accountability:** Immunity provisions make it difficult to prosecute personnel for alleged excesses.

Judicial Perspectives

1. **Naga People's Movement for Human Rights Case (1997): Supreme Court Judgment:** Armed forces' powers to open fire and cause death must be exercised under well-defined circumstances.
2. **Extra Judicial Execution Victim Families Association Case (2016): Ruling:** Armed forces are not immune from **investigation** for excesses committed, even in "disturbed areas."

Recommendations from Committees

1. **Justice B.P. Jeevan Reddy Committee (2004):** Recommended **repealing AFSPA** and replacing it with a more humane law.
2. **Santosh Hegde Committee (2013):** Suggested a **six-month review** of AFSPA provisions and their necessity.
3. **Justice Verma Committee (2013):** Recommended subjecting cases of **sexual violence** by armed forces to **ordinary criminal law.**

Emerging Concerns

- **Public Sentiment:** There is growing demand for repealing or amending the act due to its draconian provisions.
- **Regional Stability:** AFSPA is viewed as an impediment to peace and reconciliation in affected areas.

Way Forward

1. **Periodic Review:** Conduct regular reviews of areas declared as disturbed to assess the necessity of AFSPA.
2. **Balancing Security and Rights:** Introduce safeguards to prevent misuse of power and address human rights violations.
3. **Civil Society Engagement:** Engage with stakeholders, including civil society and local communities, to ensure transparency and trust in security operations.
4. **Alternative Approaches:** Explore options for localized security solutions and better coordination between **civil police** and **armed forces**.

Conclusion

While AFSPA provides critical powers to address insurgency and maintain law and order, its potential for misuse raises significant concerns. A **balanced approach** that safeguards human rights while maintaining security is essential for its continued implementation.

Digital Arrest: Key Insights

Why in the News?

The **Computer Emergency Response Team of India (CERT-In)** has issued an advisory alerting citizens about **online scams**, including the rising threat of **digital arrests**.

What is Digital Arrest?

- **Definition:**
  Digital arrest is an **online scam** where fraudsters impersonate **law enforcement officials** such as the **CBI**, **Police**, or **Enforcement Directorate (ED)** through:
    - **Phone Calls**
    - **Video Calls**
    - **Fake Notices**
- Victims are **falsely accused** of criminal activities and extorted for money.

Key Facts

1. **Prevalence:** As per the **Indian Cyber Crime Coordination Centre (I4C)**, **₹120.30 crore** was lost by Indians to digital arrests between **January and April 2024**.
2. **International Fraud Centers:** Many fraudsters are based in **Myanmar**, **Laos**, and **Cambodia**.
3. **Techniques Used:**
    - **AI voices and videos** to simulate law enforcement.
    - Use of **professional logos** and **official-sounding scripts**.

Reasons for the Rise in Digital Arrests

1. **Increase in Digital Transactions:** Widespread adoption of digital payments has created more opportunities for cyber fraud.
2. **Lack of Awareness:** Many users lack the necessary **cybersecurity literacy** to identify scams.
3. **Advancement in Fraud Techniques:**
    - Fraudsters use sophisticated methods like:
        - **AI-powered impersonation.**
        - **Simulated video calls.**

Government Initiatives to Tackle Digital Arrest

1. **Indian Cyber Crime Coordination Centre (I4C):**
    - Established by the **Ministry of Home Affairs** to address all forms of cybercrime.
    - Includes the **Cyber Fraud Mitigation Centre (CFMC)** for collaborative work with:
        - Banks
        - Payment aggregators
        - Telecom service providers
2. **Blocking International Spoof Calls:** Collaboration between the **Central Government** and **Telecom Service Providers (TSPs)** to identify and block calls appearing to originate from India but originating internationally.
3. **Samanvaya Platform:**
    - A **Joint Management Information System** for analyzing:
        - Interstate cybercrime linkages.
        - Patterns in criminal activities.
4. **National Cyber Crime Reporting Portal:** A platform under I4C for citizens to **report cybercrimes** easily.
5. **CERT-In Best Practices:**
    - Verify the identity of callers claiming to be officials.
    - Avoid sharing personal or financial details over the phone.
    - Never install **remote access software** upon someone else's request.
    - Avoid clicking on **suspicious links** or downloading apps from unknown sources.

Way Forward

1. **Raising Awareness:**
   o Conduct **digital literacy campaigns** targeting vulnerable groups.
   o Include **cybersecurity education** in school and college curricula.
2. **Enhanced International Cooperation:** Collaborate with countries hosting fraud operations to **dismantle networks**.
3. **Strengthening Technology Solutions:**
   o Develop **AI-powered detection tools** for scam calls and fake identities.
   o Improve systems for **real-time fraud monitoring**.
4. **Quick Grievance Redressal:** Enhance mechanisms for victims to report scams and recover lost money.

Conclusion

The rise of **digital arrests** highlights the need for robust **cybersecurity frameworks**, **public awareness**, and proactive **government action** to safeguard citizens in an increasingly digital world.

Exercises and Operations in News

Exercise/Operation	Details
Antariksha Abhyas 2024	India's 1st Space Defense Exercise conducted by the Defense Space Agency (DSA). Aims to integrate space capabilities in military operations and secure strategic objectives in space. Focus areas: protecting space assets and countering kinetic, jamming, cyber, and other threats.
MAHASAGAR	3rd edition of high-level virtual interaction promoting maritime cooperation in the Indian Ocean Region (IOR). Participants: Bangladesh, Comoros, Kenya, Madagascar, Maldives, Mauritius, Mozambique, Seychelles, Sri Lanka, and Tanzania.
Garud Shakti	9th edition of India-Indonesia Joint Special Forces Exercise conducted at Cijantung, Jakarta, Indonesia.
VINBAX 2024	5th edition of Vietnam-India Bilateral Army Exercise at Ambala, Haryana. Includes Bi-Service level participation with personnel from the Army and Air Force of both countries.
SIMBEX-2024	31st edition of Singapore-India Maritime Bilateral Exercise conducted at Visakhapatnam, Andhra Pradesh.
SAREX-24	11th edition of National Maritime Search and Rescue Exercises and Workshop conducted by the Indian Coast Guard under the National Maritime Search and Rescue (NMSAR) Board at Kochi.
Poorvi Prahar	High-intensity tri-services exercise aimed at enhancing combat effectiveness in executing Integrated Joint Operations in mountainous terrain.
AUSTRAHIND	3rd edition of joint military exercise between India and Australia conducted in Pune. Alternates annually between the two countries.
Sanyukt Vimochan 2024	Multilateral Annual Joint Humanitarian Assistance and Disaster Relief (HADR) Exercise held in Gujarat. Attended by nine friendly foreign countries from the Gulf Cooperation Council, Indian Ocean Region, and Southeast Asia.
SEA VIGIL 24	4th edition of the Pan-India coastal defense exercise conducted by the Indian Navy.
Operation Sagar Manthan	Launched by Narcotics Control Bureau (NCB) in collaboration with the Indian Navy and Indian Coast Guard. **Objective:** Combat drug trafficking through maritime routes, enhance national security, and achieve the vision of a Nasha Mukt Bharat by 2047. 700 kg of Methamphetamine seized.

ETHICS, SOCIETY & SOCIAL ISSUES

Instant Justice

Introduction

Recently, the **Supreme Court (SC)** issued pan-India guidelines to prevent the **arbitrary demolition** of private properties without adhering to the principles of **natural justice** and **due process of law**. The Court emphasized that such acts, which depict **"instant justice"**, undermine the **constitutional ethos** and reflect **executive arbitrariness**.

Key Guidelines Issued by the Court

1. **Prior Notice**: No demolition should occur without serving a prior **show-cause notice** to the property owner.
2. **Opportunity of Being Heard**: The concerned person must receive a chance for a **personal hearing** by the designated authority.
3. **Demolition Procedure**: Demolition activities must be **video-graphed**, and recordings preserved for accountability.
4. **Safeguards Against Violations**: Any deviation from these guidelines would attract **contempt of court proceedings** and prosecution of the officials involved.
5. **Non-Applicability**: Guidelines are not applicable for cases of **unauthorized construction** or **court-ordered demolitions**.

Stakeholders and Their Interests in Instant Justice

Stakeholders	Interests
Victims and Families	Access to justice, right to a fair trial, dignity, and closure.
Law Enforcement and Judiciary	Upholding the **rule of law**, proportionality in crime and punishment, and ensuring fair justice.
Society at Large	Speedy justice, maintaining faith in the judicial system, and law and order.
Perpetrators (Alleged/Convicted)	Safeguarding rights, ensuring quick yet fair justice, and protection against mob actions.
Government	Balancing public sentiments, ensuring fairness in criminal justice, and maintaining societal harmony.

Concept of Justice

Justice is an **evolving principle** that ensures fairness, equity, and equality before the law. It embodies **moral, ethical, and legal** considerations and adapts to societal needs.

Theories on Justice

1. **Utilitarian Theory** (Jeremy Bentham): Justice is achieved by maximizing **happiness for the greatest number** of people.
2. **Rawls' Theory**: Equal basic liberties for all and allowances for inequalities that **benefit the least advantaged** in society.
3. **Amartya Sen's Capability Approach**: Justice focuses on providing individuals with **freedom to achieve capabilities** like education and health.

Types of Justice

Type	Concept	Ethical Issues
Distributive	Fair distribution of resources and opportunities.	Balancing **equality, equity, and need**.
Procedural	Impartial application of rules to ensure unbiased outcomes.	Transparency and fairness in decision-making.
Retributive	Punishment as a response to wrongdoing, focusing on proportionality.	Ensuring the punishment fits the crime.
Restorative	Repairing harm and addressing the needs of victims and offenders.	Applicability in cases of violent crimes.
Rehabilitative	Reforming offenders through education, counseling, and skill training.	Balancing leniency with public safety concerns.

Reasons Behind Growing Cases of Instant Justice

1. **Erosion of Trust in the Judicial System**:
   o **Delays** in trials and backlog of cases undermine public confidence in the justice delivery system.
   o **Law Commission (239th Report)**: Highlighted how delays lead to the belief that "justice delayed is justice denied."
2. **Ignorance of Legal Processes**: Many lack awareness of legal systems or believe **mob justice** ensures quicker results.
3. **Emotional Impulses**: Crimes like **rape** or **child abuse** trigger emotional responses, often leading to vigilante actions.
4. **Social Media Misinformation**: Viral content can **mobilize crowds** quickly, creating situations of instant justice without facts.
5. **Sensational Media**: **Sensationalized reporting** stokes public outrage, encouraging mob actions.
6. **Public Perception of Police Encounters**: Police actions like **extrajudicial killings** are often celebrated as justice, reinforcing the idea of instant punishment.

Ethical Issues in Instant Justice

1. **Violation of Rule of Law**: Instant justice undermines the principle of **equality before the law** and allows arbitrary judgment.
2. **Disregard for Due Process**: Denies individuals their right to a **fair trial**, violating **Article 21** of the Constitution.
3. **Arbitrary vs. Natural Justice**: Natural justice mandates **hearing all sides**, while instant justice bypasses this principle.
4. **Means vs. Ends Debate**: The ethical dilemma of whether **quick results** justify **compromising moral and legal principles**.
5. **Erosion of Judicial Institutions**: Instant justice undermines the judiciary's role, leading to chaos and lawlessness.

Way Forward

1. **Judicial Reforms**: Address backlog and delays by improving **efficiency and transparency** in the judicial system.
2. **Public Awareness Campaigns**: Educate citizens on **legal processes** and the consequences of vigilante actions.
3. **Promoting Restorative Justice**: Focus on **reparation and reconciliation** over retribution to restore societal harmony.
4. **Police Accountability**: Ensure law enforcement protects the accused's right to **prove innocence in court**.
5. **Media Responsibility**: Regulate **sensational journalism** to avoid triggering mob actions.
6. **Supreme Court Guidelines**: Implement precedents like **D.K. Basu vs. State of West Bengal (1996)** and **PUCL vs. State of Maharashtra (2014)** to curb instant justice.

Conclusion

The **protection of life and liberty** under **Article 21** is paramount. Instant justice undermines constitutional principles, fosters lawlessness, and erodes public faith in institutions. The focus must remain on building a **transparent, efficient, and accountable legal system**, ensuring that justice is **fair, timely, and equitable**, safeguarding the rights of all stakeholders.

Accessibility for Disabled Persons: A Fundamental and Human Right

Introduction

The **Supreme Court of India** in *Rajive Raturi vs. Union of India & Ors.* affirmed that accessibility for **Persons with Disabilities (PwDs)** is not only a **human right** but also a **fundamental right**. This judgment highlights the urgent need for addressing barriers that hinder PwDs' participation in society and ensuring their dignity and equality.

Key Highlights of the Supreme Court Judgment

1. **Disability as a Societal Responsibility**: Chief Justice D.Y. Chandrachud emphasized that **disability is a societal responsibility**, not an individual tragedy. Societal inaction makes it a tragedy.
2. **Accessibility as a Prerequisite**: Accessibility is essential for **equality, freedom, and dignity**, enabling PwDs to exercise their rights effectively.
3. **Mandatory Accessibility Standards**: Directed the Union Government to frame **mandatory rules** under **Section 40 of the RPwD Act, 2016** to ensure accessibility in public spaces and services.
4. **Universal Design**: Advocated for adopting **universal design** principles to make all public and private spaces accessible from inception.
5. **Addressing Emotional Needs**: Highlighted the overlooked **right to relationships** for PwDs, including their privacy and self-expression needs.

Barriers to Accessibility for PwDs

1. **Physical Barriers**:
    o Inaccessible buildings and public spaces due to a lack of **ramps, elevators**, and other features.
    o **Less than 40%** of schools have ramps, and only **17%** have accessible restrooms (NCPEDP data).
2. **Technological Barriers**:
    o Lack of **accessible digital platforms** and assistive technologies for visually, hearing, or cognitively impaired individuals.
    o The **WHO-UNICEF Report on Assistive Technology (2022)** highlighted that only **3% of PwDs in low-income countries** have access to assistive products.
3. **Economic Barriers**:
    o **High costs** of assistive devices, medical care, and transportation.
    o Lower labour force participation (**73.6% of PwDs** are outside the workforce, ILO Report 2011).
4. **Attitudinal Barriers**: Persistent **stigma, discrimination**, and misconceptions about the capabilities of PwDs.
5. **Communication Barriers**: Limited availability of materials in **Braille, sign language**, or accessible audio formats.
6. **Healthcare Barriers**:
    o Inadequate healthcare facilities and lack of trained professionals for PwDs.
    o PwDs are at **twice the risk** of developing health conditions such as depression, diabetes, and poor oral health.

Key Provisions of the RPwD Act, 2016

1. **Definition of PwDs**:
    o Includes individuals with **long-term physical, mental, intellectual, or sensory impairments**.

o   Recognizes **21 types of disabilities**, including visual impairment, cerebral palsy, dwarfism, and multiple disabilities.
2. **Accessibility Standards**: Mandates **barrier-free environments** in public buildings, transportation, and digital platforms.
3. **Rights and Entitlements**: Right to **inclusive education, non-discrimination**, and participation in cultural and recreational activities.
4. **Employment Provisions**: Reservation of **4% in government jobs** and incentives for private employers.

Steps to Ensure Accessibility for PwDs

1. **Early Identification and Intervention**: Implement programs like the **Comprehensive Newborn Screening (CNS) Handbook** for early detection and rehabilitation.
2. **Investment in Assistive Technologies**: Provide access to **screen readers, speech recognition software, and mobility aids** to enhance independence.
3. **Digitally Accessible Pedagogy (DAP)**: Adopt **inclusive education** models that integrate digital tools to empower students with disabilities.
4. **Awareness and Sensitization**: Promote sensitization campaigns to shift societal attitudes toward viewing PwDs as **equal participants**.
5. **Vocational Training and Employment**: Increase **opportunities and incentives** for skill development, self-employment, and formal employment for PwDs.
6. **Universal Design**: Ensure that public and private spaces adhere to **universal design principles** from the planning stage.

Way Forward

1. **Strengthening Legal Frameworks**: Ensure strict compliance with the **RPwD Act, 2016** and implement the Supreme Court's directions.
2. **Building Inclusive Infrastructure**: Invest in **accessible public transport, buildings, and digital platforms** to enable full participation of PwDs.
3. **Collaboration**: Foster partnerships between government, private sector, and civil society to develop innovative solutions for accessibility.
4. **Monitoring and Accountability**: Establish robust mechanisms to monitor compliance with accessibility standards and address violations.

Conclusion

Accessibility for PwDs is a **fundamental right** and a **societal responsibility**. By ensuring barrier-free environments, equal opportunities, and the dignity of PwDs, India can foster an **inclusive society** where every individual can participate and thrive. As Chief Justice Chandrachud highlighted, achieving **universal accessibility** is not merely an obligation but a moral imperative to uphold the principles of **justice, equality, and human dignity**.

Work From Home (WFH): An Overview

Why in News?

- The **Confederation of Indian Industry (CII)** and **Faculty of Management Studies (FMS), University of Delhi**, released a study titled **"Work-from-Home: Benefits and Costs; An Exploratory Study in the Indian Context."**

Key Findings

1. **Sustenance of WFH**: **68% of companies** continue WFH or hybrid practices post-COVID-19 pandemic.
2. **Hybrid Model**: Nearly **50% of companies** promote hybrid work, requiring employees to attend the office for a few days a week.
3. **Short-term Gains vs. Long-term Costs**: WFH offers **tangible benefits** in the short term but may undermine **social and human capital** in the long term.
4. **Collaborative Effectiveness**: Remote work may be less effective than traditional workplaces in fostering **communication** and **teamwork**.

The Evolution of WFH

1. **COVID-19 Pandemic**: Triggered widespread adoption of remote work due to movement restrictions.
2. **Technological Advancements**: Enabled seamless digital connectivity and efficient remote operations.
3. **Work from Anywhere**: Rising trend of **digital nomadism**, allowing employees to work from remote locations like villages or travel destinations.
4. **Global Trends**: Companies like **Google**, **Amazon**, and **Starbucks** have initiated rollbacks of WFH arrangements.

Benefits of WFH

For Employees

- **Reduced Costs**: Saves on commuting and accommodation near workplaces.
- **Work-life Balance**: Flexible schedules allow balancing professional and personal commitments.
- **Work Satisfaction**: Enhances job satisfaction by reducing stress and improving flexibility.
- **Inclusive Opportunities**: Allows women and persons with disabilities better access to professional opportunities.

For Employers

- **Cost Savings**: Reduction in office rentals and operational expenses.
- **Access to Global Talent**: Eliminates geographical hiring constraints.
- **Employee Retention**: Hybrid work reduces resignations by up to **33%** (Stanford Study).
- **Environmental Benefits**: Reduced carbon footprint due to less commuting.

For Society

- **Decentralized Development**: Reduces urban migration and supports rural economies.
- **Gender Equality**: Encourages equitable sharing of household responsibilities.

Challenges of WFH

For Employees

- **Blurring Boundaries**: Difficulty separating personal and professional spaces.
- **Workspace Constraints**: Inadequate infrastructure at home for focused work.
- **Mental Health**: Lack of social interaction and constant availability pressure increase stress.

For Employers

- **Reduced Collaboration**: Virtual platforms may hinder team bonding and innovation.
- **Privacy Concerns**: Increased vulnerability to data breaches and cybersecurity threats.
- **Management Challenges**: Difficulty in monitoring performance and maintaining organizational culture.

For Women

- **Double Burden**: Balancing work with traditional domestic roles.
- **Limited Visibility**: Remote arrangements may reduce opportunities for professional growth.
- **Patriarchal Bias**: Reinforces stereotypes that women prioritize family over work.

For Families

- **Strained Relationships**: Extended confinement can create tension within families.
- **Overlapping Duties**: Balancing work and caregiving responsibilities becomes challenging.

Way Forward

1. **Reformed Work Arrangements:** Update management practices and monitoring mechanisms to align with evolving work dynamics.
2. **Hybrid Work Ecosystem:** Adopt a balanced approach combining the benefits of traditional and remote work models.
3. **Policy Formulation:** Develop clear WFH policies addressing accountability, cybersecurity, and employee well-being.
4. **Infrastructure Development:** Strengthen digital connectivity in rural areas (e.g., **BharatNet** and **Smart Villages**).
5. **Workforce Upskilling:** Provide employees with digital training to adapt to remote work requirements.
6. **Focus on Inclusivity:** Promote policies ensuring equitable opportunities for women and other vulnerable groups.

Conclusion

Work-from-home has reshaped the workplace dynamics in India, offering flexibility and cost efficiency while presenting challenges in collaboration, inclusivity, and work-life balance. A hybrid ecosystem, supported by robust infrastructure and inclusive policies, can ensure that WFH becomes a sustainable part of modern work culture.

One Nation One Subscription Scheme (ONOS)

Why in News?

- The Union Cabinet has approved the **One Nation, One Subscription (ONOS)** scheme to provide **equitable access**to scholarly journals and databases across all public institutions in India.

About ONOS

1. **Objective**: To obtain **national licenses** for e-journals and databases across **STEM** and **social sciences** fields.
2. **Key Features**:
   o **Digital Access**: Managed by **INFLIBNET** (Information and Library Network, a UGC center) for seamless, digital access to institutions.

- o **Monitoring**: Periodic reviews by the **Anusandhan National Research Foundation (ANRF)** to track usage and contributions by Indian researchers.
- o **Content**: Access to **13,000 journals** from **30 leading publishers** like Oxford University Press, Elsevier, and Cambridge University Press.
- o **Funding**: **₹6,000 crore** allocated for 2025–2027 under a new **Central Sector Scheme**.
- o **Implementation**: The **Department of Higher Education (DHE)** will manage awareness campaigns and a unified portal for access.

Need for ONOS

1. **High Profit Margins in Academic Publishing**:
   - o The **academic publishing industry** generates **$19 billion** annually with profit margins of **up to 40%**.
   - o Public funds largely fuel these profits, benefitting private corporations.
2. **Countering Predatory Publishing**: Many researchers fall victim to **low-quality journals** that charge fees without proper peer reviews.
3. **Removing Access Barriers**:
   - o High subscription fees restrict access, especially for researchers from smaller institutions.
   - o Example: **Nature Communications** charges $6,790 per paper.
4. **Reducing Financial Burden**: Indian authors spent **₹380 crore** on Article Processing Charges (APCs) in 2021 alone.
5. **Favorable Licensing Agreements**: Existing agreements favor publishers, restricting **copyright control** for Indian researchers.

Challenges with ONOS

1. **Shift Toward Open Access (OA)**:
   - o With over **50% of global research** freely available, ONOS risks becoming outdated.
   - o Example: The US mandates **publicly funded research** to be freely accessible by 2026.
2. **Neglecting Niche Fields**: ONOS may prioritize popular journals, limiting access to resources in **specialized disciplines**.
3. **Support for Western Publishers**: ONOS risks reinforcing the dominance of **Western commercial publishers** with high-profit margins.
4. **Copyright Issues**:
   - o Researchers often lose control over their work due to restrictive copyright agreements.
   - o Example: **Taylor & Francis** allowed its journals to be used for AI training without author consent.
5. **Digital Content Preservation**: Reliance on publishers for content access poses risks, as seen when **Heterocycles Journal** became inaccessible after discontinuation in 2023.
6. **Connectivity Issues**: Limited internet access in **Tier-2 and Tier-3 cities** may hinder equitable implementation.

Way Forward

1. **Negotiating National Licenses**: Aim for significant reductions in subscription costs and secure **waivers on APCs** for Indian researchers.
2. **Model Licensing Agreements**: Develop agreements ensuring **fair terms** on intellectual property, pricing, and renewals.
3. **Infrastructure Development**: Strengthen digital libraries and internet connectivity for **remote access**.
4. **Promoting Open Access (OA)**:
   - o Encourage the use of OA journals and **fund APCs** for young researchers.
   - o Support initiatives like **IndiaRxiv**, a preprint repository for Indian research.
5. **Building Innovative Services**: Establish user-friendly platforms for access, monitor usage trends, and train stakeholders

Protection of Children from Sexual Offences (POCSO) Act, 2012

Why in News?

The **Supreme Court (SC)** has ruled that **sexual assault cases under POCSO cannot be quashed** based on a compromise between the parties. This judgment was delivered in the **Ramji Lal Bairwa & Anr vs State of Rajasthan & Ors** case.

Key Highlights of the Judgment

1. **Judicial Review of Compromise**:
   - o The SC overturned the Rajasthan High Court's decision to quash a **POCSO sexual assault case** on the basis of compromise.
   - o It emphasized that **compromise is not a valid ground** for quashing such offenses.
2. **Special Leave Petition**: The judgment was delivered under **Article 136** of the Constitution, which allows the SC to grant **special leave to appeal** against judgments/orders passed by any court or tribunal.
3. **Observations on the Nature of the Offense**:
   - o **Public Interest over Private Settlement**:
     - ▪ Sexual offenses under POCSO are not private disputes but crimes against **society as a whole**.
     - ▪ The SC relied on its precedent in **State of M.P. v. Laxmi Narayan (2019)**, which held that **offenses with societal implications** cannot be compromised.
   - o **Serious Societal Implications**:
     - ▪ Crimes under POCSO affect the **safety and dignity of children**, and their impact extends beyond individual victims.
4. **Endorsement of Earlier Judgments**: Referenced the **Delhi High Court judgment (Sunil Raikwar v. State)**, which declared that **POCSO offenses cannot be resolved through settlements**.

About the POCSO Act, 2012

1. **Objective**: Enacted to safeguard children against **sexual exploitation and abuse**, ensuring a **child-friendly judicial process**.
2. **Key Features**:
   o **Comprehensive Coverage**: Includes **penetrative sexual assault**, **sexual harassment**, and **child pornography**.
   o **Child-Centric Approach**: Mandates **in-camera trials**, **confidentiality of victims' identity**, and speedy redressal.
   o **Burden of Proof**: Shifts the burden of proof on the **accused**.
   o **Mandatory Reporting**: Obligation on individuals to report offenses; failure results in penalties.
3. **Amendments**: 2019 Amendment introduced **stricter punishments**, including the death penalty for aggravated sexual assault.

Significance of the Judgment

1. **Protects the Integrity of POCSO Act**: Prevents misuse of **compromise mechanisms** to escape accountability in cases of sexual crimes against children.
2. **Deterrence for Offenders**: Reinforces that such offenses are **non-compoundable**, ensuring perpetrators face the legal consequences.
3. **Societal Message**: Emphasizes the **non-negotiable nature** of child protection and sets a strong precedent for future cases.
4. **Strengthens Justice for Victims**: Ensures that **settlements** do not undermine the pursuit of justice for vulnerable victims.

Way Forward

1. **Awareness and Training**: Conduct training for judiciary and law enforcement to understand the **societal impact of POCSO cases**.
2. **Strengthen Prosecution**: Ensure robust prosecution strategies to prevent dismissal of cases on technical grounds.
3. **Public Sensitization**: Increase awareness about the **non-compoundable nature** of POCSO offenses and the importance of pursuing justice.
4. **Child-Centric Judicial Processes**: Focus on implementing **victim-sensitive trials** to protect children from secondary trauma.

Conclusion

The SC's judgment reaffirms the **sanctity of the POCSO Act**, emphasizing that child protection is paramount and cannot be compromised through settlements. It is a significant step towards ensuring accountability, justice, and societal deterrence against crimes targeting children.

Gender Equality and Empowerment

Introduction

The recent release of the report titled **"Charting New Paths for Gender Equality and Empowerment: Asia-Pacific Regional Report on Beijing+30 Review"** highlights both progress and challenges in achieving gender equality in the region, including India.

About the Beijing Declaration and Platform for Action (BPfA)

- **Adoption**: Established during the **Fourth World Conference on Women** in 1995 in Beijing, China, and unanimously adopted by 189 countries.
- **Objective**: Focuses on achieving **gender equality** and empowering women globally.
- **Review Mechanism**: Reviewed regionally and globally every five years to track progress.
   o **Upcoming Review**: 30-year review at the **69th session of the Commission on the Status of Women** in March 2025.

Key Highlights of the Asia-Pacific Regional Report on Beijing+30 Review

1. **Gender-Responsive Budgeting (GRB)**:
   o Countries like **India and the Philippines** have adopted GRB to allocate resources based on the needs of women and girls.
   o **India's Progress**:
      ▪ **218% increase** in gender budgeting over the last decade.
      ▪ Allocation of **$37 million** for GRB in the current financial year.
2. **India's Gender Equality Achievements**:
   o **Women's Leadership**: Notable advancements in governance through **33% reservation in Panchayati Raj Institutions (PRIs)** and Urban Local Bodies.
   o **Self-Help Groups (SHGs)**: A pivotal role in enhancing women's financial empowerment.
   o **Time Poverty Solutions**:
      ▪ Initiatives like **clean cooking fuels**, **tap water connections**, and **toilets construction** have significantly reduced women's time spent on household chores.
3. **Challenges Identified**:
   o **Lack of sex-disaggregated data** for monitoring GRB effectiveness.
   o Exclusion of certain key programs benefiting women.

Factors Affecting Gender Equality in India

1. **Entrenched Social Norms**: Patriarchal structures and practices like **child marriage** and **son preference** restrict women's mobility and education.
2. **Unpaid Care Work**: Women perform **five times more unpaid work** than men, limiting their professional opportunities.
3. **Gender Pay Gap**: India achieves only **36.7% parity** in economic participation (Global Gender Gap Index 2023).
4. **Property Ownership**: Disparities exist in property and land ownership, with **42.3% of women owning a house**, compared to **62.5% of men** (NFHS-5).
5. **Violence Against Women**: **29.3% of married Indian women** aged 18-49 face domestic or sexual violence (NFHS).
6. **Education Gap**: The **female literacy rate** stands at 63%, significantly lower than the **male literacy rate of 80%** (2011 Census).
7. **Political Underrepresentation**: Women comprise only **13.63% of the Lok Sabha**, far below the 33% reservation target.

Government Measures to Improve Gender Equality

1. **Legal Reforms**:
   - **Nari Shakti Vandana Adhiniyam, 2023**: Ensures 33% reservation for women in Parliament and State Assemblies.
   - **Hindu Succession Act, 2005**: Provides equal property inheritance rights.
2. **Women-Centric Schemes**:
   - **Beti Bachao Beti Padhao**: Promotes girls' education and combats declining child sex ratios.
   - **Pradhan Mantri Matru Vandana Yojana**: Offers maternity care incentives.
   - **Sukanya Samriddhi Yojana**: Encourages savings for girls' education and marriage.
3. **Economic Empowerment**: Self-Help Groups under **NRLM** and skilling initiatives like **Skill India** and **Mahila E-Haat**.
4. **Addressing Violence**: Enactment of laws such as **The Protection of Women from Domestic Violence Act, 2005**, and **The Sexual Harassment of Women at Workplace Act, 2013**.
5. **Education**: Initiatives like **Kasturba Gandhi Balika Vidyalaya** for free/subsidized education.
6. **Health and Nutrition**: **Janani Suraksha Yojana** and **POSHAN Abhiyaan** ensure maternal and child health.
7. **Awareness and Advocacy**: Programs like **Mahila Shakti Kendras** for grassroots gender equality advocacy.

Way Forward

1. **Policy and Legal Reforms**: Expedite the implementation of **33% reservation for women** in legislative bodies.
2. **Investment in Social Infrastructure**: Enhance funding for **health, education, and social protection systems**.
3. **Data and Accountability**: Strengthen **gender-disaggregated data collection** to monitor progress effectively.
4. **Societal Transformation**: Promote male participation in unpaid care work to reduce the burden on women.
5. **Digital Empowerment**: Address the **gender digital divide** through equitable access to technology and digital literacy programs.
6. **Gender-Sensitive Education**: Incorporate **gender equality** into school curricula and train teachers to address biases.

Conclusion

Achieving gender equality requires a multifaceted approach across **legal, social, and economic domains**. By addressing systemic barriers, fostering inclusivity, and ensuring women's participation across all spheres, India can create a truly equitable society. Empowering women is not just a moral imperative but also a critical step toward sustainable development and social progress.

Population Policy of India

Introduction

India's population policies aim at managing demographic growth, improving health and education, and ensuring sustainable development. Recent debates have arisen over restrictive measures like the **Two-Child Policy**, with several states rescinding it. With India achieving a **Total Fertility Rate (TFR) of 2.0**, the focus now shifts to stabilizing the population while addressing regional disparities and emerging challenges.

Context

- **Recent Development**: Andhra Pradesh scrapped its **Two-Child Policy**, allowing individuals with more than two children to contest local body elections.
- **TFR Context**: Andhra Pradesh's TFR is 1.5, much lower than India's national average of 2.1.
- **Historical Context**: States like Chhattisgarh, Haryana, Himachal Pradesh, and Madhya Pradesh rescinded similar policies in 2005.

Key Highlights of Population Policy in India

National Population Policy (NPP) 2000

- **Objective**: Population stabilization for sustainable development by linking it to education, sanitation, housing, transport, and women's empowerment.

- **Immediate Goals**:
  o Address unmet needs for **contraception and reproductive health services**.
  o Strengthen healthcare infrastructure.
- **Medium-Term Goal**: Achieve **replacement-level fertility (TFR of 2.1)** by 2010.
- **Long-Term Goal**: Stabilize India's population by 2045.

Progress in Fertility Transition

- **Rapid Fertility Decline**: Fertility rates dropped from six children per woman to **2.1**.
- **Contributing Factors**:
  o Family planning initiatives.
  o Socio-economic changes leading to smaller family sizes.
  o Improved healthcare and life expectancy.

Arguments for Population Stabilization

1. **Resource Management**: A growing population places immense pressure on natural resources like water, energy, and land.
2. **Economic Sustainability**: A rapidly growing population can hinder poverty alleviation and economic growth.
3. **Healthcare Improvements**: Stabilization enables better maternal and child health, reducing mortality rates.
4. **Environmental Protection**: A smaller population ensures sustainable development and lower environmental degradation.
5. **Governance Efficiency**: A stabilized population allows better public service delivery and law enforcement.

Challenges to Population Stabilization

1. **Cultural Resistance**:
   o **Son preference** and patriarchal norms continue to encourage larger families.
   o Example: **Son meta-preference**, where families keep having children until a male child is born.
2. **Limited Access to Family Planning**: Inadequate awareness, stigma, and poor healthcare infrastructure hinder family planning adoption, especially in rural areas.
3. **Gender Inequality**:
   o Limited decision-making power for women over reproductive health affects family planning.
   o **NFHS-5**: Only 10% of women make independent health decisions.
4. **Regional Disparities**: Southern states like Kerala face **aging populations**, while Uttar Pradesh and Bihar struggle with high fertility rates.
5. **Youth Demographics**: A large proportion of India's population is in the reproductive age group, complicating immediate stabilization efforts.

Key Measures Taken for Population Stabilization

1. **Family Planning Programs**:
   o **Mission Parivar Vikas**: Targets states with high TFR (e.g., UP, Bihar).
   o **National Family Planning Program**: Promotes voluntary, informed choices through a target-free approach.
2. **Healthcare Initiatives**:
   o **National Rural Health Mission (2005)**: Strengthens healthcare delivery.
   o **Pradhan Mantri Jan Arogya Yojana (PMJAY)**: Universal health coverage.
3. **Incentives and Awareness**:
   o **Prerna Strategy**: Encourages delayed marriage, spacing between children, and rewards couples adhering to small family norms.
4. **Empowerment of Women**:
   o **Beti Bachao Beti Padhao**: Improves child sex ratios and promotes girls' education.
   o **Sukanya Samriddhi Yojana**: Encourages savings for girl children's education.

Way Forward

1. **Promoting Female Education and Empowerment**: Education and awareness campaigns to enable women to make informed reproductive choices.
2. **Strengthening Healthcare Infrastructure**: Improve rural healthcare access and provide affordable contraceptive methods.
3. **Incentivizing Family Planning**: Offer tax benefits, cash rewards, and priority in welfare schemes for families with two or fewer children.
4. **Addressing Regional Disparities**: Customized strategies for high-TFR states and aging regions to balance demographic transitions.
5. **Leveraging India's Demographic Dividend**: Skilling youth and creating employment opportunities to capitalize on the **demographic advantage**.
6. **Promoting Behavioral Change**: Shifting societal attitudes through mass campaigns and gender-sensitive education.

Gotti Koya Tribals

Context

The **National Commission for Scheduled Tribes** has sought detailed reports from the Union Home Ministry and the states of Chhattisgarh, Maharashtra, Andhra Pradesh, and Odisha regarding the **Gotti Koya tribals**. These tribals, displaced due to **Maoist violence**, are reportedly living in challenging conditions in neighboring states and face exclusion from social security benefits.

Key Facts about Gotti Koya Tribals

1. Origins

- **Indigenous Identity**: The Gotti Koya, also known as **Gutte Koya** or **Gotte Koya**, are an **Adivasi tribe** primarily from **Chhattisgarh**.
- They are part of the **larger Koya tribe**, one of the prominent tribal communities in central and southern India.

2. Displacement

- **Cause**: Displaced due to violent conflicts involving **Maoist insurgents** and **Salwa Judum** (a government-backed militia formed to counter Maoists, later banned).
- **Migration**:
  - Many fled to **Andhra Pradesh** (now **Telangana**) during the mid-2000s.
  - Approx. **30,000 Gotti Koya members** settled in forested areas of Telangana, especially in:
    - **Bhadradri Kothagudem**
    - **Mulugu**
    - **Jayashankar Bhupalpally** districts.

3. Culture and Livelihood

- **Language**: Speak **Koya**, a **Dravidian language**.
- **Primary Occupation**:
  - Practice **Podu cultivation** (shifting cultivation on forest lands).
  - Engage in **animal husbandry**.
  - Depend on **minor forest produce** for sustenance.
- **Rituals**: Celebrate the **Sammakka Saralamma Jatra**, one of the most significant fairs for the Koya community.

4. Current Challenges

- **Exclusion from Social Security**: Lack access to basic rights and benefits such as ration cards, health services, and education.
- **Living Conditions**: Reside in forest areas under difficult circumstances without formal land ownership or recognition.
- **Legal Status**: Face issues with recognition as Scheduled Tribes in Telangana, as their origins are tied to Chhattisgarh.
- **Conflict with Forest Authorities**: Often face eviction threats due to **Podu cultivation** practices deemed encroachments by forest officials.

Way Forward

1. **Recognition and Inclusion**:
   - Ensure recognition of Gotti Koya tribals as Scheduled Tribes in their new states of residence.
   - Extend social security benefits, including healthcare, education, and housing.
2. **Policy Interventions**: Design targeted policies for displaced tribals to address issues of land ownership and livelihood security.
3. **Legal Protections**: Implement provisions under the **Forest Rights Act (FRA), 2006** to grant forest-dwelling tribals their rightful claims to land.
4. **Livelihood Support**: Promote sustainable farming practices and alternate livelihoods to reduce dependence on shifting cultivation.
5. **Cultural Preservation**: Recognize and preserve the unique culture, language, and rituals of the Gotti Koya tribals.

Conclusion

The plight of Gotti Koya tribals highlights the vulnerabilities of displaced communities. A holistic approach involving recognition, livelihood support, and cultural preservation is essential to ensure their well-being and integration into mainstream society. Addressing their challenges will also reflect India's commitment to **inclusive development** and **tribal welfare**.

State of the World's Children 2024 Report

Context

The **UNICEF** released its annual **'State of the World's Children 2024'** report on **November 20**, focusing on the disproportionate effects of climate crises on children's health, education, and essential resources access, especially in rural and low-income communities.

Key Highlights

1. Impact on Health and Education

- **Climate Crisis and Vulnerabilities**: Children are particularly vulnerable to the impacts of climate change, such as extreme weather events, floods, and droughts.
  - Increased exposure to malnutrition, waterborne diseases, and respiratory illnesses.
  - Disruption of education systems, particularly in rural areas and low-income communities.
- **Inequalities in Access**: Rural and low-income children face severe inequalities in accessing clean water, healthcare, and sanitation facilities.

2. Urbanization and Climate Resilience

- **Projection**: Nearly **half of India's population** is expected to live in urban areas by **2050**, leading to increased pressure on urban infrastructure.
- **Need for Action**: Urgent investments in **child-friendly and climate-resilient urban planning** are required to ensure:
  - Equitable access to healthcare, education, and clean water.
  - Infrastructure designed to withstand climate shocks.

Recommendations from the Report

1. **Child-Centric Climate Policies**: Governments must prioritize children in climate adaptation and resilience strategies.
2. **Education on Climate Awareness**: Integrating climate education into school curricula to prepare children for future challenges.
3. **Focus on Rural Development**: Enhance access to essential services in rural areas to bridge disparities.
4. **Urban Resilience**: Develop smart urban planning that considers the needs of children and vulnerable groups.

About UNICEF (United Nations Children's Fund)

Overview

- **Foundation**: Established in **1946** as the **United Nations International Children's Emergency Fund**.
- **Focus**: Provides **humanitarian and developmental aid** to children globally.
- **Presence**: Operates in **192 countries and territories**.

Key Features

- **Funding**: Supported by **government contributions** and **individual voluntary donations**.
- **Guiding Framework**: The **Convention on the Rights of the Child (1989)**.
- **Awards**: Received the **Nobel Peace Prize (1965)** for promoting international brotherhood.

Flagship Reports

1. **The State of the World's Children** (Annual).
2. **UNICEF Annual Report**.

Way Forward

To address the challenges highlighted in the report, policymakers must adopt an integrated approach focusing on **climate resilience**, **sustainable development**, and **child-centric strategies**. This will ensure that children, especially in vulnerable communities, have access to a secure, equitable, and sustainable future

Reang Tribe: An Overview

Context

The Reang tribe, recognized as one of the **75 Particularly Vulnerable Tribal Groups (PVTGs)**, has requested official recognition for their language, **Kaubru**.

Key Features of the Reang Tribe

1. Demographics and Distribution

- The **Reang tribe**, also known as **Bru**, is the **second-largest tribal community** in **Tripura**, following the old Tripuri clan.
- Found in **Tripura**, with communities also residing in **Mizoram** and **Assam**.

2. Ethnicity and Language

- **Ethnic Origin**: They belong to the **Indo-Mongoloid racial stock**.
- **Language**: Speak **Kaubru**, part of the **Kok-Borok dialect** under the **Tibeto-Burmese linguistic family**.

3. Social Structure

- **Clans**: The community is divided into two major clans:
    1. **Meska**
    2. **Molsoi**

4. Economic Practices: Traditionally an **agricultural tribe**, practicing **Huk/Jhum cultivation**—a form of **shifting agriculture**.

5. Religious Beliefs

- Predominantly follow **Hinduism**.
- Worship a diverse set of deities, including:
    o **Buraha**
    o **Bonirao**
    o **Songragma**
    o **Jampira**
    o **Lampra**

6. Cultural Contributions: Known for the **Hojagiri Folk Dance**, a vibrant cultural expression performed during festivals and celebrations.

Significance of Kaubru Language Recognition

- Language recognition would **preserve their cultural heritage**.
- **Empower the community** by giving official status to their linguistic identity.
- Aid in the **promotion of tribal rights** and **inclusive development**.

Way Forward

The recognition of Kaubru would align with India's efforts to **preserve and promote tribal languages** under the National Education Policy (NEP) 2020. Ensuring linguistic and cultural inclusion would empower the **Reang tribe** while contributing to India's rich diversity.

SCHEMES & INITIATIVES

PM-Vidyalaxmi Scheme: Financial Support for Higher Education

Why in News?

The Union Cabinet has approved the **PM-Vidyalaxmi Scheme**, a **Central Sector scheme**, to provide financial support to meritorious students for pursuing **higher education**, aligned with the **National Education Policy, 2020**.

Salient Features of PM-Vidyalaxmi Scheme

1. **Objective**: To offer **collateral-free, guarantor-free loans** for covering tuition fees and related expenses for higher education.
2. **Eligibility**: Any student who secures admission in **Quality Higher Education Institutions (QHEIs)**.
3. **Coverage**: **860 QHEIs** based on **NIRF ranking**, covering more than **22 lakh students**.
4. **Loan Features**:
   o **Loan Amount**: Up to ₹7.5 lakhs with **75% credit guarantee** by the Government of India.
   o **Interest Subvention**: **3% subvention** for loans up to ₹10 lakhs during the **moratorium period**.
5. **Digital Implementation**:
   o Unified portal **"PM-Vidyalaxmi"** for:
      ▪ **Education loan applications**.
      ▪ **Disbursement requests** for interest subvention.
   o Payments of interest subvention will be facilitated via:
      ▪ **E-vouchers**.
      ▪ **Central Bank Digital Currency (CBDC) wallets**.
6. **Supplementary Scheme**: PM-Vidyalaxmi will supplement the **Pradhan Mantri Uchchatar Shiksha Protsahan (PM-USP) Scheme**.

About Pradhan Mantri Uchchatar Shiksha Protsahan (PM-USP) Scheme

1. **Objective**: To provide financial assistance to **meritorious students from economically weaker sections** for meeting **day-to-day expenses** during higher studies.
2. **Eligibility**: Based on **Class 12th Board Examination results**.
3. **Coverage**: A maximum of **82,000 scholarships** awarded annually.
4. **Components**:
   o **Central Sector Interest Subsidy (CSIS)**.
   o **Credit Guarantee Fund Scheme for Education Loans (CGFSEL)**.

Key Highlights of PM-Vidyalaxmi and PM-USP Integration

1. **Accessibility**: Reduces financial barriers for economically weaker but meritorious students.
2. **Comprehensive Coverage**: Ensures inclusion of both **public and private higher education institutions**, as recommended by **NEP 2020**.
3. **Digital Transformation**: Simplified and transparent processes through a **unified digital system**.
4. **Promotes Quality Education**: Encourages enrollment in top-ranking institutions, fostering **academic excellence**.

Significance

- **Inclusive Education**: Ensures financial support for students from disadvantaged backgrounds.
- **Ease of Access**: Digital platform streamlines loan and subsidy processes.
- **Boost to Higher Education**: Encourages enrollment in **Quality Higher Education Institutions** (QHEIs).
- **Alignment with NEP 2020**: Supports recommendations for **merit-based financial assistance**.

Way Forward

- **Outreach Programs**: Raise awareness about the scheme in **rural and semi-urban areas**.
- **Monitoring Mechanism**: Ensure proper utilization of loans and interest subsidies.
- **Skill Development Integration**: Link financial support with skill-oriented programs for enhanced employability.
- **Periodic Reviews**: Assess the impact and coverage to make necessary improvements.

Pradhan Mantri Mudra Yojana (PMMY)

Why in the News?

- The **loan limit under PMMY** has been increased from the existing ₹10 lakhs to **₹20 lakhs**, marking a significant enhancement in the support provided to micro-enterprises.

Objective of PMMY

1. **Collateral-Free Credit**: Provide seamless access to credit without collateral for micro-enterprises.
2. **Funding the Unfunded**: Bring non-corporate, non-farming small and micro-enterprises into the **formal financial system**.
3. **Financial Inclusion**: Support marginalized and socio-economically neglected groups with affordable credit options.

Key Features of PMMY

1. **Ministry**: Ministry of Finance.
2. **Launch Year**: 2015.
3. **Purpose**: To provide **MUDRA loans** to eligible micro-enterprises.
4. **Implementing Agency**:
    - **Micro Units Development and Refinance Agency Ltd (MUDRA)** serves as a refinance agency, supporting **Banks**, **MFIs**, and **NBFCs**.
    - MUDRA does not lend directly to borrowers.
5. **Loan Categories**:
    - **Shishu**: Loans up to ₹50,000.
    - **Kishor**: Loans between ₹50,000 and ₹5 lakhs.
    - **Tarun**: Loans between ₹5 lakhs and ₹20 lakhs.
6. **Sectors Eligible**:
    - **Manufacturing**.
    - **Trading and Services**.
    - **Agriculture-Allied Activities**.

Means of Accessing Mudra Loans

1. **Banks, NBFCs, MFIs**.
2. **Udyamimitra Portal**.

Nature of Assistance

1. **Types of Loans**:
    - **Term Loans**.
    - **Working Capital Loans**.
    - **Overdraft Limits**.
    - **Composite Loans** (for capital acquisition).
2. **No Collateral Requirement**: Guaranteed by the **Credit Guarantee Fund for Micro Units (CGFMU)**.
3. **Interest Rates**:
    - **Deregulated**, but 2% **interest subvention** on Shishu loans for prompt repayment.
    - 25 bps **reduction in interest rates** for loans to **women entrepreneurs** via MFIs/NBFCs.
4. **Mudra Card**: A working capital overdraft facility for borrowers.
5. **Mudra Mitra App**: Guides borrowers to approach banks and other financial institutions for loans under PMMY.

Significance of PMMY

1. **Boosts Entrepreneurship**: Encourages the development of small-scale industries.
2. **Economic Growth**: Strengthens the **MSME sector**, which is a key contributor to GDP and employment.
3. **Employment Generation**: Enables self-employment and small business expansion.
4. **Women Empowerment**: Special interest rate reductions incentivize loans to women entrepreneurs.
5. **Financial Inclusion**: Brings underserved and unbanked sections of society into the financial mainstream.

Challenges

1. **Low Awareness**: Limited understanding of the scheme among potential beneficiaries.
2. **Risk of Defaults**: Especially among first-time borrowers with limited financial literacy.
3. **Bank Reluctance**: Hesitation in lending due to lack of collateral and recovery issues.
4. **Limited Reach**: Accessibility remains a challenge in remote areas.

Way Forward

1. **Enhanced Awareness**: Conduct mass campaigns to promote knowledge about PMMY.
2. **Capacity Building**: Train borrowers in financial and business management skills.
3. **Increased Digitization**: Simplify application processes using digital platforms like **Mudra Mitra App**.
4. **Stronger Monitoring Mechanisms**: Ensure proper loan utilization and repayment tracking.
5. **Support for Women Entrepreneurs**: Provide additional incentives and dedicated schemes for women borrowers.

By increasing the loan limit to ₹20 lakhs, **PMMY** reaffirms its commitment to empowering micro-enterprises, fostering entrepreneurship, and strengthening the **MSME sector**, which is vital for India's inclusive economic growth.

Atal Innovation Mission 2.0 (AIM 2.0)

Why in the News?

- The **Union Cabinet** has approved the continuation of **Atal Innovation Mission (AIM 2.0)** with an **allocated budget of ₹2,750 crore** and an enhanced scope of work.

Objectives

1. **Fostering a Culture of Innovation and Entrepreneurship**: Promote innovation across sectors of the economy.
2. **Strengthening India's Innovation Ecosystem**: Develop new programs and policies to bridge gaps in the innovation framework.
3. **Enhancing Global Competitiveness**: Position India as a leading global innovator.

Salient Features

1. **Implementing Agency**: NITI Aayog.
2. **Implementation Period**: Till **March 31, 2028**.
3. **Enhanced Scope**:
   o AIM 2.0 builds on AIM 1.0 (launched in **2016**) which focused on creating foundational infrastructure like **Atal Tinkering Labs (ATLs)**, **Atal Incubation Centres (AICs)**, and **New India Challenges**.
   o Introduces new initiatives targeting **regional and sectoral gaps** in the innovation ecosystem.
4. **Key Components**:
   o **Atal Tinkering Labs (ATLs)**: Promote innovation and critical thinking among school students.
   o **Atal Incubation Centres (AICs)**: Support startups and entrepreneurs in various sectors.
   o **Atal New India Challenges & Grand Challenges**: Encourage solutions to pressing social and industry problems.
   o **Mentor India Program**: Connect mentors with budding entrepreneurs.

Initiatives under AIM 2.0

Increasing Inputs (Inclusion of Innovators and Entrepreneurs)

1. **Language Inclusive Program of Innovation (LIPI)**:
   o Ecosystem development in **22 scheduled languages**.
   o **30 Vernacular Innovation Centers** in existing incubators.
2. **The Frontier Program**:
   o Customized innovation templates for **Jammu & Kashmir**, **Ladakh**, **Northeastern states**, and aspirational districts.
   o Establishment of **2500 new ATLs**.

Improving Success Rates (Support for Startups)

1. **Human Capital Development Program**: Build a trained workforce (teachers, managers, trainers) to sustain the innovation ecosystem.
2. **Deep Tech Reactor**: Research sandbox for startups focusing on **deep tech innovations** requiring long-term investments.
3. **State Innovation Mission (SIM)**: Assist States/UTs in creating innovation ecosystems aligned with local strengths.
4. **International Innovation Collaborations Program**:
   o Host an **Annual Global Tinkering Olympiad**.
   o Engage in bilateral and multilateral innovation programs.
   o Serve as a **knowledge partner** for the **United Nations' WIPO** in spreading AIM models to global south nations.

Improving Output (Better Jobs, Products, and Services)

1. **Industrial Accelerator Program**:
   o Industry partnership to scale advanced startups.
   o **10 Industry Accelerators** to be set up in **Public-Private Partnership (PPP)** mode.

2. **Atal Sectoral Innovation Launchpads (ASIL)**:
   - Build platforms like iDEX for startups to collaborate with **central ministries**.
   - **10 sectoral launchpads** across key ministries.

Significance of AIM 2.0

1. **Strengthens Ecosystem**: Fills critical gaps in innovation infrastructure, creating a more inclusive and robust innovation framework.
2. **Promotes Local and Regional Innovation**: Focus on vernacular languages and regional needs ensures widespread participation.
3. **International Collaboration**: Takes India's innovation ecosystem to a global level, fostering partnerships with advanced nations.
4. **Job Creation and Economic Growth**: Enhances employment opportunities and contributes to economic development through innovation-driven startups.
5. **Future-Ready India**: Encourages deep tech and advanced research, positioning India as a global leader in innovation.

Way Forward

1. **Inclusive Outreach**: Raise awareness about AIM initiatives, especially in remote and underserved areas.
2. **Skilling and Training**: Focus on capacity building for professionals to sustain the innovation ecosystem.
3. **Continuous Monitoring**: Establish mechanisms to track and evaluate the success of AIM programs.
4. **Enhanced Private Participation**: Strengthen public-private partnerships for funding and scaling innovations.
5. **Leverage International Expertise**: Learn from global best practices to refine India's innovation strategy.

Pradhan Mantri Vanbandhu Kalyan Yojana (PMVKY)

Why in the News?

- **The Pradhan Mantri Vanbandhu Kalyan Yojana (PMVKY)** recently completed **10 years** of its launch.
- The government approved the continuation of the scheme till **2025-26** with a total allocation of **₹26,135.46 crores**.

Objectives

1. **Improving Quality of Life**: Focus on raising the living standards in tribal areas.
2. **Enhancing Education**: Improving the quality and accessibility of education for tribal children.
3. **Sustainable Employment**: Generating qualitative and sustainable employment opportunities for tribal families.
4. **Bridging Infrastructure Gaps**: Addressing infrastructure deficits in tribal regions, with an emphasis on quality.
5. **Cultural Preservation**: Safeguarding tribal heritage and culture.

Salient Features

1. **Ministry**: Ministry of Tribal Affairs.
2. **Launch Year**: 2014.
3. **Coverage**: All tribal communities and regions with significant tribal populations across India.

Key Components

1. **Pradhan Mantri Adi Adarsh Gram Yojana**:
   - Focuses on **integrated village development** in **36,428 villages** with significant tribal populations.
   - Targets key sectors like:
     - **Road and telecom connectivity**.
     - **Education and health services**.
     - **Sanitation and housing**.
2. **Development of Particularly Vulnerable Tribal Groups (PVTGs)**:
   - Designed for the **socio-economic upliftment** of the most marginalized tribal communities.
   - Preserves their cultural heritage while providing financial support for housing, health, and education.
3. **Support to Tribal Research Institutes (TRIs)**: Financial assistance to states and UTs for strengthening research and knowledge on tribal cultures and challenges.
4. **Scholarships**:
   - **Pre-Matric Scholarships**: For students in grades IX and X.
     - Parental annual income should not exceed **₹2.50 lakhs**.
   - **Post Matric Scholarships**: For Scheduled Tribe students pursuing education beyond grade 10.
5. **Administrative Assistance for Project Management Units**:
   - Funds for establishing project management units in state governments to monitor and implement tribal welfare schemes effectively.

Significance

- **Economic Upliftment**: Helps reduce economic disparities among tribal populations.
- **Education Access**: Improves literacy and education rates among Scheduled Tribes.
- **Cultural Preservation**: Safeguards tribal traditions, language, and heritage.
- **Infrastructure Development**: Strengthens basic amenities like roads, schools, and healthcare in tribal areas.
- **Empowerment**: Promotes self-reliance and sustainable livelihoods for tribal communities.

Way Forward

1. **Efficient Monitoring**: Strengthen project management units for better implementation and evaluation of the scheme.
2. **Awareness Campaigns**: Conduct campaigns to spread awareness about benefits and initiatives under PMVKY.
3. **Targeted Interventions**: Focus on addressing specific challenges faced by PVTGs and other marginalized groups.
4. **Cultural Integration**: Ensure that infrastructure development respects tribal heritage and traditions.
5. **Community Participation**: Enhance involvement of tribal communities in decision-making processes to align with their needs and priorities.

PMVKY reflects the government's commitment to tribal welfare by addressing systemic issues and promoting holistic development in tribal regions.

SCIENCE & TECHNOLOGY

Satyendra Nath Bose (S.N. Bose) and His Legacy

Why in the News?

The **Centenary Celebrations of Bose-Einstein (B-E) Statistics** were recently inaugurated by the **Ministry of Science and Technology** to commemorate S. N. Bose's contributions to theoretical physics.

About Satyendra Nath Bose (1894-1974)

1. **Early Life and Education**:
   o Born in **Nadia district**, West Bengal.
   o Studied at **Presidency College, Kolkata**, under renowned teachers like **Prafulla Chandra Ray** and **Jagadish Chandra Bose**.
2. **Academic Career**: Worked in the Physics Departments of **University of Calcutta** and **Dacca University**.
3. **Key Achievements**:
   o **Padma Vibhushan** recipient in 1954.
   o Elected as **Fellow of the Royal Society (FRS)**.

Scientific Contributions

1. Bose-Einstein Statistics:

- **Significance**:
   o Describes the statistical behavior of indistinguishable particles (e.g., photons, bosons) at **thermodynamic equilibrium**.
   o Explains how particles distribute among quantum states, especially at **low temperatures**.
- **Collaboration with Einstein**:
   o Extended to gas molecules, leading to the classification of particles into **Fermions** and **Bosons**.
   o **Bosons**: Fundamental particles with **integer spin values** (e.g., photons, gluons).
- **Applications**:
   o Predicted **Bose-Einstein Condensates (BEC)**, a unique quantum state of matter.
   o Enabled technologies like **lasers**, **transistors**, **MRI**, and **semiconductors** during the **first quantum revolution**.

2. Bose-Einstein Condensates (BEC):

- **What is BEC?**
   o A **fifth state of matter** observed when particles are cooled to near **absolute zero**.
   o All particles occupy the same **quantum state**, acting as a single entity.
- **Properties**:
   o **Superfluidity**: Flows without viscosity or resistance.
   o **Superconductivity**: Zero electrical resistance, enabling optimal conductivity.
   o **Coherence**: All particles behave in a synchronized quantum state.
   o **Macroscopic Occupation**: Large numbers of particles occupy the same quantum state.
- **Applications**: Basis for **quantum computing** and **quantum sensing** in the **second quantum revolution**.

3. Contributions to Other Fields:

- **Organic Chemistry**: Used **X-ray diffraction** to study atomic structures in clay minerals.
- **Thermoluminescence**: Developed high-sensitivity spectrophotometers for experimental analysis.
- **Higgs Boson (God Particle)**: Discovery rooted in principles of **Bose-Einstein statistics** and BEC.

Impact and Legacy

1. **Scientific Advancements**: Bose's work laid the foundation for quantum mechanics and inspired the discovery of **Higgs Boson**.
2. **Recognition**: **Bosons** were named after S.N. Bose, immortalizing his contributions to particle physics.
3. **Institutions Honoring Bose**: **S.N. Bose National Centre for Basic Sciences** established to promote research in basic sciences.

Conclusion

Satyendra Nath Bose's revolutionary contributions to physics, particularly in **quantum mechanics**, have had a profound impact on modern science. The centenary of **Bose-Einstein Statistics** is a fitting tribute to his legacy, celebrating his work that continues to influence **cutting-edge technologies** like quantum computing and nanotechnology.

Space Biotechnology

Why in the News?

- **ISRO** and the **Department of Biotechnology (DBT)** have collaborated to advance **Space Biotechnology research**, addressing key challenges for long-duration space missions and enhancing human survival in space.

Key Challenges in Space Missions

1. **Nutritional Scarcity**: Limited availability of fresh nutrients in long-term missions.
2. **Waste Management**: Efficient recycling of waste for sustainability.
3. **Health Hazards**:
   - Exposure to microgravity leading to **muscle and bone loss**.
   - **Radiation hazards**, increasing risks of cancers and cataracts.
4. **Food Preservation**: Long-term storage of food while retaining nutritional value.
5. **Microbial Control**: Risk of microbial contamination in closed environments.

Space Biotechnology Applications and Significance

1. Microgravity Research

- **Significance**:
  - Microgravity enables the growth of high-quality **protein crystals**, aiding in **drug discovery**.
  - Offers insights into cellular and molecular mechanisms.
- **Examples**: Space-based protein crystal growth experiments enhance the precision of medicines for diseases like **Alzheimer's** and **cancer**.

2. Radiation Research

- **Significance**:
  - Predicts cellular repair mechanisms in response to **ionizing radiation**.
  - Improves astronaut safety and long-term survival.
- **Example**: **BioSentinel Program** (NASA): Focuses on double-strand DNA break repair under radiation conditions in space. Launched with **Artemis I** in 2022.

3. Environmental Monitoring

- **Significance**:
  - Study of **microbial bioremediation** techniques for transforming **Martian and Lunar regolith** into soil for plant growth.
  - Promotes **self-sufficiency** in extraterrestrial colonies.

4. Disease Modeling

- **Significance**:
  - Simulates space-induced diseases like **osteoporosis** and **muscle atrophy** to develop treatments.
  - Advances knowledge for both space missions and Earth-based healthcare.

5. Bioregenerative Life Support Systems (BLSS)

- **Significance**:
  - Develops **self-sustaining systems** for oxygen regeneration, food production, and waste recycling.
  - Benefits **Earth's resource management** through sustainability solutions.

Space Biotechnology Initiatives

India

- **Axiom-4 Mission**: Aims to carry Indian experiments to the International Space Station.
- **Gaganyaan Mission**: Includes research on the impact of microgravity on human physiology.

Global Initiatives

- **NASA Space Biology Program**: Focuses on understanding the fundamental biological effects of space environments.
- **Biolab (European Space Agency)**: Facilitates biological experiments on the International Space Station.
- **Space Breeding Programs (CNSA)**: Develops new plant varieties by leveraging radiation and microgravity to induce mutations.

Significance of Space Biotechnology Research

1. **Enhances Space Exploration**: Provides solutions to sustain life and health in long-term missions to Mars and beyond.
2. **Advances Healthcare**: Offers breakthroughs in medicine through disease modeling and drug development.
3. **Promotes Sustainability**: Pioneers waste recycling and environmental management techniques.
4. **Economic Potential**: Opens avenues for private investment in space-based biotechnology applications.

Conclusion

Space Biotechnology integrates **life sciences** with **space exploration**, fostering advancements in **sustainability**, **healthcare**, and **extraterrestrial colonization**. Collaborative initiatives like those between ISRO and DBT pave the way for **scientific innovation** and future **human habitation in space**, offering spillover benefits for Earth's challenges.

Analog Space Mission

Why in the News?

- **ISRO** has launched India's first **Analog Space Mission** in **Leh, Ladakh**, aimed at planning experiments for future **lunar missions**.

About Analog Space Missions

- **Definition**: Analog space missions are **field tests** conducted in environments on Earth that mimic the extreme conditions of space.
- **Purpose**:
  - Testing new **technologies**, **robotic equipment**, and **vehicles**.
  - Studying **human behavioral effects**, such as **isolation** and **confinement**.
  - Evaluating mission logistics and **scientific experiments**.
- **Leh, Ladakh – The Chosen Site**:
  - **Geographic Features**:
    - Dry, cold climate, barren landscapes, and **high-altitude terrain**.
    - These conditions resemble **Martian** and **lunar landscapes**.
  - **Isolation**: Provides a perfect setting to simulate space missions.

Other Analog Space Missions

1. **NEEMO (NASA Extreme Environment Mission Operations)**: Conducts underwater missions to simulate space environments.
2. **SIRIUS Program (UAE)**: Focuses on understanding the psychological and physiological effects of isolation during space travel.

Significance

- Supports planning for **future lunar missions**.
- Advances India's capabilities in **human space exploration**.
- Provides insights into operational challenges and **technological reliability**.

GSAT-N2

Why in the News?

- SpaceX's **Falcon-9 rocket** successfully launched India's **GSAT-N2** satellite.

About GSAT-N2

- **Developer**: Built by **NewSpace India Limited (NSIL)**, the commercial arm of ISRO.
- **Features**:
  - Geosynchronous Transfer Orbit (GTO).
  - Life span: **14 years**.
  - Mass: **~4,700 kg**.

- **Launch Details**: Falcon-9 was used due to its **payload capacity**, exceeding ISRO's LVM-3 limit of 4,000 kg.
- **Significance**:
  - Enhances **broadband services** and **in-flight connectivity**.
  - Provides pan-India coverage, including **Andaman & Nicobar** and **Lakshadweep islands**.

LignoSat

Why in the News?

- **Japan** has launched the world's first **wooden satellite**, **LignoSat**, to study the behavior of wood in space.

About LignoSat

- **Material**:
  - Made from **Honoki wood** (Magnolia tree native to Japan).
  - Combines **wooden structures** with traditional aluminum and electronic components.
- **Significance**:
  - Explores **renewable materials** for space applications.
  - Wood in space:
    - Resists decay due to the absence of **water** and **oxygen**.
    - Burns up completely during re-entry, avoiding harmful pollutants.
  - Supports **sustainability** in space technologies.

Conclusion

These developments showcase the growing emphasis on **innovative technologies** and **sustainability** in space exploration, marking significant progress in India's and global space capabilities.

Operation Dronagiri and Integrated Geospatial Data Sharing Interface (GDI)

Why in the News?

The Ministry of Science and Technology has launched **Operation Dronagiri** and the **Integrated Geospatial Data Sharing Interface (GDI)** as part of efforts to **liberalize geospatial data** and foster innovation in geospatial technologies.

Geospatial Data Overview

- **Definition**: Information describing objects, events, or other features with a location on or near the Earth's surface.
- **Examples**:
  - Satellite imagery
  - Census data
  - Social media data with location tags
- **Significance**:
  - Critical for **national infrastructure** and as an information resource.
  - Applications include agriculture, urban planning, disaster management, logistics, and public services.

Operation Dronagiri

- **Objective**: To demonstrate the **applications of geospatial technologies** in improving the quality of life and enabling ease of doing business.
- **Alignment**: A pilot project under the **National Geospatial Policy 2022**.
- **Implementation**:
  - Led by the **Geospatial Innovation Cell**, Department of Science and Technology.
  - First phase involves **pilot projects** in **Uttar Pradesh, Haryana, Assam, Andhra Pradesh, and Maharashtra**.
- **Focus Areas**:
  - **Agriculture**: Enhancing crop monitoring, precision farming, and land-use optimization.
  - **Livelihoods**: Supporting employment generation, skill development, and local entrepreneurship.
  - **Logistics and Transport**: Improving transportation efficiency, route optimization, and supply chain management.

Integrated Geospatial Data Sharing Interface (GDI)

- **Objective**: To create an **accessible platform for spatial data** with advanced exchange protocols and privacy-preserving features.
- **Key Features**:
  o Seamless **data sharing** across government departments, businesses, and researchers.
  o Enabling **data-driven decision-making** for public benefit.
  o Ensuring **responsible use of geospatial data** through privacy and security measures.

Significance

1. **Improved Governance**: Facilitates better planning, monitoring, and resource allocation in sectors like agriculture and urban development.
2. **Economic Growth**: Promotes innovation in geospatial technology, encouraging investments and creating job opportunities.
3. **Data Integration**: Ensures that geospatial data from various sources is combined effectively to deliver actionable insights.
4. **Ease of Doing Business**: Simplifies regulatory and logistical challenges through accurate, real-time geospatial information.
5. **Sustainable Development**: Supports efforts in climate change mitigation, disaster management, and natural resource management.

Conclusion

Operation Dronagiri and **GDI** are transformative initiatives aimed at **harnessing geospatial technology** for socio-economic growth and sustainable development. By integrating cutting-edge data-sharing protocols and real-world applications, these projects pave the way for more effective governance and innovation across multiple sectors.

Direct-to-Device (D2D) Satellite Connectivity

Why in the News?

BSNL launched India's first **Direct-to-Device (D2D) Satellite Connectivity**, a significant milestone in bringing satellite-based communication to everyday users, particularly in underserved and remote areas.

Working of D2D Satellite Technology

1. **Principle**:
   o Satellites function as **cell towers in space**, eliminating the need for traditional ground-based cellular towers.
   o Signals are transmitted directly to devices on the ground using orbiting satellites.
2. **Technology**:
   o **Non-Terrestrial Network (NTN)**: Facilitates two-way seamless communication between satellites and devices.
   o **BSNL's Implementation**:
     ▪ Utilizes **Viasat's Geostationary L-band satellites**, positioned 36,000 kilometers above Earth.
     ▪ Bypasses ground-based towers, ensuring reliable coverage for remote regions.

Significance of D2D Connectivity

1. **Reliable Connectivity**: Provides **uninterrupted internet services**, irrespective of adverse weather or lack of terrestrial infrastructure.
2. **Wider Coverage**: Extends high-speed connectivity to **remote and rural areas** where cellular and Wi-Fi networks are unavailable.
3. **Digital Empowerment**: Enables **UPI payments** and digital transactions in underserved regions, fostering financial inclusion.
4. **Emergency Services**: Facilitates **emergency calls and SOS messaging** in areas without network coverage, benefiting adventurers, travelers, and disaster-prone regions.
5. **Support for Remote Communities**: Boosts education, healthcare, and communication services in **isolated areas**.

Global Initiatives in D2D Technology

- **SpaceX Starlink**: Focuses on high-speed internet through low-Earth orbit (LEO) satellites.
- **AST SpaceMobile and Lynk Global**: Specialize in enabling satellite-to-smartphone connectivity.
- **Constellation Global**: Aims to bridge the connectivity gap worldwide through satellite technology.

Challenges in D2D Satellite Connectivity

1. **Latency**: Delay in signal transmission may affect **real-time applications** like video calls and streaming.
2. **Regulatory Issues**: Cross-border data transmission may lead to jurisdictional and licensing challenges.
3. **Spectrum Allocation**: Acquiring adequate **bandwidth** for satellite-to-ground communication.
4. **Device Compatibility**: Ensuring technology is **compatible with a variety of smartphones** and operating systems.
5. **Propagation Challenges**: Overcoming **signal interference** and loss in diverse environmental conditions.

Way Forward

1. **Policy Development**: Governments should frame regulations for **spectrum allocation** and manage cross-border connectivity.
2. **Technological Enhancements**: Improve satellite designs to reduce **latency** and enhance signal quality.
3. **Collaboration with Device Manufacturers**: Work with manufacturers to ensure **seamless integration** of D2D technology.
4. **Awareness Campaigns**: Educate users about the **benefits and functionalities** of D2D connectivity.
5. **Global Partnerships**: Encourage international collaboration to standardize **D2D communication protocols**.

Conclusion

D2D satellite connectivity represents a transformative step in bridging the digital divide, ensuring **inclusive connectivity** and empowering underserved regions. While challenges persist, technological advancements and supportive policies can help harness the full potential of this innovative solution.

Gravity Energy Storage (GES)

Overview

Gravity Energy Storage (GES) is an innovative **mechanical energy storage system** leveraging gravitational potential energy for electricity generation. It is considered an alternative to battery storage for managing intermittent solar and wind energy.

How GES Works

1. **Energy Storage**: Excess energy from renewable sources (solar/wind) is used to **lift heavy masses**, such as:
   - **Water reservoirs** (traditional pumped storage).
   - **Concrete blocks**.
   - **Compressed earth blocks**.
2. **Energy Generation**: When energy demand rises or renewable supply declines, the mass is **lowered**, converting potential energy into electricity through a generator.

Advantages

1. **High Efficiency**: GES systems can achieve **80–90% energy efficiency**.
2. **Large Storage Capacity**: Suitable for grid-scale energy needs.
3. **Environmental Benefits**: No harmful emissions or chemical waste as seen in traditional batteries.
4. **Longevity**: GES systems have a lifespan of **decades**, unlike batteries that degrade over time.
5. **Integration with Renewables**: Smoothens power supply variability from solar and wind energy.

Limitations

1. **High Initial Cost**: Expensive infrastructure for lifting and lowering systems.
2. **Space Requirement**: Needs **large areas** for operation, especially for pumped storage.
3. **Complexity**: Design and operation can be technically challenging.

Applications

1. **Renewable Energy Integration**: Manages the **intermittency** of renewable energy sources.
2. **Grid Stabilization**: Helps in balancing energy supply and demand during peak hours.
3. **Energy Resilience**: Provides reliable backup power for **remote areas**.

BRIC-National Agri-Food Bio-Manufacturing Institute (BRIC-NABI)

Overview

Recently inaugurated in Mohali, Punjab, BRIC-NABI is **India's first biomanufacturing institute** designed to bridge the gap in the country's **biomanufacturing capabilities**.

Key Details

1. **Formation**: Created by merging the **National Agri-Food Biotechnology Institute (NABI)** and the **Centre of Innovative and Applied Bioprocessing (CIAB)**.
2. **Funding**: Sponsored by the **Department of Biotechnology**.

Objectives

1. **Cutting-Edge Research**:
   - Promote research in:
     - **Genetic manipulation**.
     - **Metabolic pathways** for better crop yield and food processing.
2. **Biomanufacturing**:
   - Develop **large-scale production facilities** for bio-based products like:
     - Biofuels.
     - Biodegradable plastics.
     - Nutritional supplements.
3. **Startup Support**: Nurture **startups** in the biomanufacturing sector by providing **technical and financial aid**.

Significance

- **Food Security**: Advances in agri-biotechnology can ensure **sustainable food production**.
- **Economic Growth**: Boosts India's bioeconomy by reducing dependence on imports.
- **Environmental Sustainability**: Encourages the use of **green bioprocessing methods**.

ENVIRONMENT & ECOLOGY

Global Soil Conference 2024

UPSC Syllabus: Environment and Ecology – Soil Conservation, Climate Change Mitigation

Context

The **Global Soil Conference 2024** was recently inaugurated in **PUSA, New Delhi**. The event focused on **sustainable soil management** to address challenges like **climate change mitigation** and **ecosystem resilience**.

About the Global Soil Conference 2024

- **Organised by**:
  - Indian Society of Soil Science (ISSS), New Delhi
  - Under the aegis of the **International Union of Soil Sciences (IUSS)**, Italy
  - Collaborators: Indian Council of Agricultural Research (ICAR) and the National Academy of Agricultural Sciences (NAAS).
- **Venue**: PUSA, New Delhi
- **Theme**: **"Caring Soils Beyond Food Security: Climate Change Mitigation & Ecosystem Services"**

Key Objectives

1. **Improving Soil Health and Fertility**: Focus on **farmer-centric solutions** to enhance soil fertility, ensuring sustainable agricultural productivity.
2. **Aligning with Climate Change Goals**: Integrating **soil health initiatives** with global **climate mitigation strategies** and **Sustainable Development Goals (SDGs)**.
3. **Highlighting Ecosystem Services**
   - Emphasizing soil's role in:
     - Supporting **biodiversity**
     - Regulating **water cycles**
     - Acting as a **carbon sink** to mitigate greenhouse gas emissions.
4. **International Cooperation**: Promoting collaboration between nations, institutions, and scientists to advance **soil research** and implement **sustainable policies**.

Significance of the Conference

1. **Climate Change Mitigation**: Healthy soils contribute to **carbon sequestration**, reducing the carbon footprint and mitigating climate change impacts.
2. **Biodiversity Conservation**: Sustainable soil practices support **microbial diversity** and **ecosystem health**, benefiting agriculture and natural habitats.
3. **Water Management**: Improving soil structure enhances **water retention** and reduces runoff, ensuring water availability for crops.

4. **Farmer Resilience**: Actionable policies to improve soil resilience help farmers combat soil degradation and adapt to climate variability.

India's Initiatives for Soil Health

1. **Soil Health Card Scheme (SHCS)**: Provides farmers with detailed information on soil health to optimize nutrient use.
2. **National Mission for Sustainable Agriculture (NMSA)**: Focuses on soil conservation and improving productivity.
3. **PM PRANAM Scheme**: Aims to promote **balanced fertilization** and reduce excessive chemical fertilizer usage.
4. **Organic and Natural Farming**: Promoted under **Paramparagat Krishi Vikas Yojana (PKVY)** and other schemes.
5. **Carbon Sequestration Goals**: India promotes soil-based **natural climate solutions** as part of its climate targets under the **Paris Agreement**.

Challenges to Soil Management

1. **Soil Degradation**: Unsustainable agricultural practices, **overgrazing**, and industrial pollution degrade soil health.
2. **Excessive Chemical Use**: Overuse of fertilizers and pesticides depletes soil nutrients and affects biodiversity.
3. **Climate Variability**: Increasing frequency of **droughts, floods**, and extreme events accelerate soil erosion.
4. **Low Awareness**: Limited awareness among farmers about the importance of sustainable soil management practices.

Way Forward

1. **Policy Integration**: Align soil health policies with national climate action plans and global goals (SDGs).
2. **Research and Innovation**: Promote **precision agriculture**, soil testing, and technological solutions for better soil management.
3. **International Partnerships**: Collaborate with international organizations for knowledge sharing and implementation of best practices.
4. **Farmer Awareness Programs**: Educate farmers on sustainable practices like **crop rotation**, organic farming, and water conservation.
5. **Public-Private Partnerships**: Encourage private sector investment in soil conservation technologies and tools.

Conclusion

The **Global Soil Conference 2024** reinforces the role of **healthy soils** in achieving food security, biodiversity conservation, and climate change mitigation. By focusing on actionable solutions and global cooperation, it paves the way for sustainable soil management to ensure long-term environmental and agricultural resilience.

"Bhu-Neer" Portal

UPSC Syllabus: Environment – Water Management, E-Governance Initiatives

Context

The Ministry of **Jal Shakti** launched the **"Bhu-Neer" Portal** during the concluding ceremony of **India Water Week 2024**, aimed at improving **groundwater management** and regulatory compliance.

About Bhu-Neer Portal

- **Developed By**: **Central Ground Water Authority (CGWA)** in collaboration with the **National Informatics Centre (NIC)**.
- **Purpose**: To streamline **groundwater withdrawal permits** and ensure better compliance with regulatory frameworks.

Key Features

1. **Centralised Database**
   o Provides a **one-stop platform** for:
     ▪ Information on **groundwater policies**, compliance norms, and regulations.
     ▪ Covers **state and national-level legal frameworks**.
2. **User-Friendly Interface**
   o Designed for **project proponents** seeking **permits** for groundwater withdrawal.
   o Simplified navigation for improved user experience.
3. **PAN-Based Single ID System**: Ensures **unique identification** for users, simplifying registration and compliance processes.
4. **NOC with QR Code**: No Objection Certificates (NOCs) will include a **QR code** for easy verification and enhanced compliance monitoring.
5. **Advanced Features**: **Significant Upgrade**: The portal replaces the earlier **NOCAP (NOC Application System)**, offering improved transparency and efficiency.

Significance of the Bhu-Neer Portal

1. **Enhanced Governance**: Facilitates transparent and real-time processing of groundwater withdrawal permits.
2. **Improved Compliance**: Ensures better monitoring of **groundwater extraction**, helping reduce illegal withdrawals.
3. **Data Centralization**: Serves as a repository for state-wise and national groundwater regulations, ensuring easy access for stakeholders.
4. **Technology Integration**: PAN-based ID and QR-enabled NOCs improve tracking, verification, and accountability.
5. **Environmental Sustainability**: Promotes responsible and sustainable use of groundwater resources by ensuring regulatory oversight.

Conclusion

The **Bhu-Neer Portal** is a landmark initiative integrating technology for effective **groundwater governance** and sustainable water resource management. By streamlining compliance and offering a centralized platform, it sets a benchmark in water conservation efforts aligned with **Sustainable Development Goals (SDG-6)** on water and sanitation.

UNFCCC COP29 - Key Outcomes and Way Forward

About COP

- **Conference of the Parties (COP):** Supreme decision-making body of the UNFCCC.
- **Functions:**
  - Assesses progress, negotiates agreements, and refines commitments to combat climate change.
  - Reviews submissions like Nationally Determined Contributions (NDCs).
- **Next COP:** COP30 to be held in **Belém, Brazil (November 2025).**

Key Outcomes of COP29

Themes	Details
New Climate Finance Goal	- *Baku Finance Goal* targets **$300 billion annually by 2035** and mobilizes **$1.3 trillion/year** from public and private sources.
Carbon Markets (Article 6)	- Finalized rules for international carbon credit trading under Article 6 of the Paris Agreement.
Transparency	- Enhanced Transparency Framework (ETF) established for standardized reporting on emissions and climate actions. - Launched **Baku Declaration on Global Climate Transparency.**
Adaptation	- Introduced **Baku Adaptation Road Map** to boost global climate resilience. - Support program for National Adaptation Plans (NAPs) for LDCs.
Indigenous Participation	- Adopted **Baku Workplan** for operationalizing the Local Communities and Indigenous Peoples Platform (LCIPP).
Gender and Climate	- Extended **Lima Work Programme on Gender** for another 10 years to integrate gender considerations into climate policies.

Issues Persisting in Climate Negotiations

1. **Inadequate Climate Finance:**
   - Current targets under the NCQG fall short of the projected **$2.3–2.5 trillion** required for climate action in emerging markets and developing countries (excluding China).
   - Climate finance deal rejected by developing nations due to insufficient funding commitments.
2. **Deadlock on Mitigation Work Programme (MWP):**
   - Divergent views on the role of fossil fuels and slow progress in mitigation efforts.
   - Global Stocktake raised debates on inadequate global progress.
3. **Stagnation on Climate Targets:**
   - Plateauing of ambition and actions since initial NDCs.
   - Record greenhouse gas emissions in 2023 (**1.3% increase** from 2022 levels, as per UNEP's Emissions Gap Report).
4. **Operational Challenges:**
   - Slow pace in operationalizing the **Loss and Damage Fund (LDF).**
   - Postponement of the next NDC updates until COP30.
5. **Disparities and Influences:**
   - G20 nations account for **77% of emissions**, highlighting global inequality.
   - Alleged influence of fossil fuel lobbyists on negotiations.

Way Forward

1. **Strengthen Climate Diplomacy:** Regular dialogue to address developing nations' concerns on climate finance and equitable mitigation targets.
2. **Adherence to CBDR-RC Principles:** Developed nations should fulfill their obligations under **Common but Differentiated Responsibilities and Respective Capabilities (CBDR-RC).**
3. **Operationalizing Key Mechanisms:**
   - Expedite funding and governance frameworks for the **Loss and Damage Fund.**
   - Ensure efficient implementation of the **Baku Adaptation Road Map** and ETF.

4. **Promote Inclusivity:** Enhance participation of Indigenous Peoples, women, and local communities in climate policies and action.
5. **Boost Mitigation Efforts:**
   o Facilitate technology transfer and innovation to align with long-term decarbonization pathways.
   o Strengthen NDC ambitions with clear, actionable, and verifiable commitments.

Conclusion

COP29 laid a foundation for advancing climate finance, transparency, and adaptation goals. However, significant gaps persist in mitigation efforts, equity, and funding. As COP30 approaches, collaborative and inclusive approaches will be crucial for achieving meaningful climate progress aligned with the Paris Agreement goals.

Key Initiatives and Declarations Launched at COP29

Initiative	Launched By	Aim and Details
Reducing Methane from Organic Waste Declaration	UNEP and Climate and Clean Air Coalition (CCAC)	- Sets sectoral targets to reduce methane from organic waste. - Supports the Global Methane Pledge (GMP). - Signatories: 35 countries (excluding India).
Global Energy Storage and Grids Pledge	COP29 Presidency	- Target: **1,500 GW of energy storage** and **25 million km of grid expansion/refurbishment** by 2030.
Green Energy Pledge: Green Energy Zones and Corridors	COP29 Presidency with UNIDO, UNECE, UNESCAP	- Promotes **green energy zones** to tackle climate change and improve energy security and community quality of life.
Hydrogen Declaration	COP29 Presidency	- Accelerates production and use of **clean hydrogen**. - Non-legally binding, does not alter national laws.
Baku Harmoniya Climate Initiative for Farmers	COP29 Presidency and FAO	- Recognizes farmers as climate action agents. - Integrated with **Food and Agriculture for Sustainable Transformation (FAST)** partnership established at COP27.
Climate Finance Action Fund (CFAF)	Azerbaijan	- Supports climate projects in developing nations. - Operational with **$1 billion initial fundraising**. - Headquarters: Baku, Azerbaijan.
Baku Initiative for Climate Finance, Investment, and Trade (BICFIT)	COP29 Presidency with UNCTAD and UNDP	- Synergizes **climate finance**, investment, and trade to advance climate ambitions aligned with the UNFCCC and Paris Agreement.
Global Matchmaking Platform (GMP)	UNIDO and Climate Club	- Connects heavy-emitting industries in developing countries with technical and financial solutions for decarbonization.
Declaration on Green Digital Action	COP29 Presidency	- Uses **digital technologies** to accelerate climate action and bridge the digital divide.
Baku Dialogue on Water for Climate Action	COP29 Presidency with UNEP, UNECE, WMO	- Focuses on **water management** and its interplay with climate change, biodiversity loss, and pollution.

Additional Initiatives at COP29

1. **COP29 Declaration on Enhanced Climate Action in Tourism:** Aims to reduce tourism's carbon footprint, enhance resilience, and promote sustainability.
2. **Global Energy Efficiency Alliance:** Launched by UAE to double global energy efficiency rates by 2030.
3. **Hydro4NetZero-LAC Initiative:** Develops sustainable hydropower infrastructure to increase energy system flexibility and resilience.
4. **Global Alliance for Pumped Storage (GAPS):** Supported by over 30 governments and agencies to promote pumped storage solutions.

Reports Released at COP29

Report	Publisher	Key Findings
Special Report on Climate Change and Health	WHO	- Climate change and air pollution cause **85% of non-communicable disease deaths**. - In 2023, **20.3 million people displaced** due to climate disasters.
Global Landscape of Climate Finance 2024	Climate Policy Initiative (CPI)	- Climate flows surpassed **$1.5 trillion** in 2023. - Continued rise in **fossil fuel investments and subsidies** since 2020.
Global Nitrous Oxide (N_2O) Assessment Report	CCAC and FAO	- N_2O emissions threaten the **1.5°C target**. - 75% of emissions originate from **agriculture** (fertilizers and manure).
Raising Ambition and Accelerating Delivery of Climate Finance	Independent High-Level Expert Group	- Estimated global investment need: **$6.3–6.7 trillion per year** by 2030.

India's Participation at COP29

1. **Stance on Negotiations:**
   o Proposed **$1.3 trillion annually** as the NCQG climate finance target.
   o Highlighted the **mitigation gap of Annex I Parties** and emphasized the **just transition principle**.
2. **Key Side Events:**

- o **Integrating Disaster Resilient Infrastructure into Adaptation Strategies:** $8 million committed for Small Island Developing States (SIDS).
- o **Energy Transitions for the Global South:** Focused on **solar energy** through the International Solar Alliance.
- o **LeadIT Member Meet:** Jointly organized by India and Sweden to foster **low-carbon industry transition**.

Conclusion

COP29 in Baku marked significant milestones in global climate governance through declarations, pledges, and new frameworks. However, challenges like inadequate finance and slow mitigation progress demand collaborative and innovative solutions leading up to COP30 in Brazil.

Carbon Trading and Market

Why in the News?

The rules for **carbon trading under Article 6 of the Paris Agreement** were finalized after a decade of negotiations, enhancing the framework for international cooperation on reducing greenhouse gas emissions.

About Article 6 of the Paris Agreement

- **Objective:** Provides mechanisms for countries to voluntarily cooperate in achieving their Nationally Determined Contributions (NDCs) through carbon markets.
- **Mechanisms:**
    1. **Article 6.2**: Internationally Transferred Mitigation Outcomes (ITMOs) – allows bilateral or multilateral trading of carbon credits between countries.
    2. **Article 6.4**: A centralized carbon credit trading mechanism supervised by a UN body to facilitate global market-based mitigation.
    3. **Article 6.8**: Non-market approaches (e.g., capacity-building and technology transfer).

About Carbon Markets

- **Definition:** Trading systems where entities buy carbon credits to offset greenhouse gas emissions.
    - o **1 Carbon Credit = 1 Metric Tonne of CO_2 reduced, sequestered, or avoided.**
- **Types:**
    - o **Compliance-based markets**: Regulated by law (e.g., Emission Trading Systems).
    - o **Voluntary markets**: Organizations voluntarily offset their emissions.

Key Differences Between Kyoto Protocol and Paris Agreement Carbon Trading

Aspect	Kyoto Protocol	Paris Agreement
Scope of Participation	Limited to developed countries (Annex I).	Inclusive of all countries.
Market Mechanisms	Clean Development Mechanism (CDM) and JI.	ITMOs and centralized trading under Article 6.4.
Adaptation Funding	CDM funded Adaptation Fund.	5% of proceeds from Article 6.4 for Adaptation.
Legacy Credits	Allowed, causing oversupply.	Restricts use of post-2013 credits only.

Significance of Carbon Trading

1. **Economic Efficiency**: Reduces costs of achieving NDCs by over 50%, potentially saving **$250 billion annually by 2030** (World Bank).
2. **Support for Developing Countries**: Mobilizes financial resources for climate mitigation projects.
3. **Revenue Generation**: Global carbon pricing revenues reached **$104 billion in 2023**.
4. **Sustainability**: Encourages innovation and deployment of low-carbon technologies.

Challenges in Carbon Markets

1. **Double Counting**: Risk of the same emissions reductions being claimed by more than one country.
2. **Limited Coverage**: Only 24% of global emissions are currently covered by carbon taxes or trading systems.
3. **Inadequate Standards**: Lack of monitoring for reversals (e.g., failed sequestration projects releasing CO_2 back into the atmosphere).
4. **Delayed Implementation**: Centralized mechanism under Article 6.4 unlikely to operationalize before **2025-2026**.
5. **Carbon Colonialism**: Risk of exploiting indigenous communities without adequate safeguards.
6. **Greenwashing**: Misrepresentation of environmental benefits by projects to appear eco-friendly.
7. **Market Oversaturation**: Oversupply of carbon credits affects market prices and effectiveness.

Way Forward

1. **Improved Accountability**: **Uniform reporting guidelines** to ensure transparent carbon accounting and avoid double counting.
2. **Third-party Verification**: Independent validation of carbon credit projects to maintain quality and credibility.
3. **Safeguards for Communities**: Protect indigenous and local community rights in carbon market projects.

4. **Enhance Standards**: Strengthen rules to address risks like reversals and project failures.
5. **Regulate Supply**: Control issuance of carbon credits based on verified demand and quality to prevent market saturation.

Carbon Trading Mechanisms in India

1. **Carbon Credit Trading Scheme (CCTS), 2023**:
   - Established under the **Energy Conservation (Amendment) Act, 2022**.
   - Two mechanisms:
     - **Compliance Mechanism**: Mandatory for energy-intensive industries (e.g., steel, cement, fertilizers).
     - **Offset Mechanism**: Voluntary for entities outside the compliance scope.
2. **Green Credit Program**: Encourages environment-positive actions like tree plantations and sustainable agriculture through a voluntary market mechanism.
3. **Other Instruments**:
   - **Perform, Achieve and Trade (PAT) Scheme**: Targets energy-intensive industries to reduce specific energy consumption.
   - **Renewable Energy Certificates (REC)**: Promotes renewable energy by allowing entities to meet their Renewable Purchase Obligations (RPO).

Conclusion

Carbon trading under the Paris Agreement marks a transformative approach to achieving global climate goals. With robust mechanisms like Article 6, it paves the way for international cooperation in mitigating climate change. India's proactive initiatives, including the Carbon Credit Trading Scheme, position the country to leverage carbon markets for sustainable development while addressing domestic and global challenges.

Climate Finance

Why in the News?

Developing countries have expressed disappointment with the enhanced **New Collective Quantified Goal (NCQG)** on climate finance due to unmet promises and inadequate funding mechanisms.

About NCQG

- **Establishment**: Proposed at **COP21 (Paris Agreement)** to set post-2025 climate finance goals.
- **Predecessor**: At COP15 (2009), developed countries pledged to mobilize **$100 billion annually by 2020**, extended to 2025.
- **Shortfall**: The $100 billion target remains unmet, reflecting persistent challenges in mobilizing adequate funds.

What is Climate Finance?

- **Definition**: According to the **UNFCCC**, it refers to local, national, or transnational funding from public, private, and alternative sources aimed at supporting **mitigation** and **adaptation** actions, particularly in vulnerable developing countries.

Global Financial Mechanisms under UNFCCC

Mechanism	Year of Establishment	Purpose
Loss and Damage Fund (LDF)	COP27 (2022)	Financial assistance to vulnerable countries for losses caused by climate impacts.
Green Climate Fund (GCF)	COP16 (2010)	Support developing nations in raising and realizing NDC ambitions with $100 billion annually.
Adaptation Fund	COP7 (2001)	Finance adaptation projects in developing countries.
Special Climate Change Fund (SCCF)	COP7 (2001)	Adaptation, technology transfer, capacity building, and energy transition projects.
Least Developed Countries Fund (LDCF)	COP7 (2001)	Support preparation and implementation of National Adaptation Plans of Action (NAPAs).

Issues with Current Climate Finance

1. **Distributional Imbalance**: Advanced economies received **45%** of global climate finance (2018–2022), while **Least Developed Countries (LDCs)** received only **3%**.
2. **Adaptation Funding Gap**: Developing countries need **$215–387 billion annually** for adaptation, but only **$28 billion** was available in 2022.
3. **Mitigation vs. Adaptation**: **90%** of climate finance is directed toward mitigation, leaving adaptation underfunded.
4. **Debt Burden**: **94%** of climate finance comes as debt or equity, increasing financial strain on developing nations.
5. **Inadequate Financing**: An estimated **$7.4 trillion annually** is required through 2030 to meet the **1.5°C scenario**.
6. **Access Barriers**: Developing countries face **complex procedures**, **technical capacity issues**, and **institutional weaknesses** in accessing funds.
7. **Private Sector Involvement**: Lack of adequate engagement and investment from private entities.

Climate Finance in India

India's Climate Finance Needs

- **2015–2030**: Requires **$6–8 trillion** to transition energy systems.
- **Net-Zero by 2070**: Estimated cost of **$10 trillion**.

Steps Taken by India

1. **National Adaptation Fund for Climate Change (NAFCC)**: Established in 2015 for adaptation projects.
2. **Green Bonds**: India's first green bond issued in 2015.
3. **Sovereign Green Bonds**: Announced in Union Budget 2022-23 for green infrastructure investments.
4. **Priority Lending**: Renewable energy projects included under priority sector lending.
5. **Regulatory Support**: **RBI's Sustainable Finance Group** and membership in the **Network for Greening the Financial System (NGFS)**.

Way Forward

1. **Addressing Imbalances**

   - Equitably allocate resources for both **mitigation** and **adaptation**.
   - Enhance focus on **adaptation** for vulnerable communities.

2. **Innovative Financing Mechanisms**

   - **Green Bonds and Deposits**: Mobilize private capital.
   - **Debt-for-Climate Swaps**: Convert debt relief into investments in climate actions.
   - **Carbon Markets**: Utilize market mechanisms to fund low-carbon projects.

3. **Capacity Building:** Provide technical and institutional support to help developing nations access and effectively utilize climate funds.
4. **Strengthening Multilateral Development Banks (MDBs):** Triple MDB lending capacity by 2030 to align with NCQG.
5. **Ensuring Equity and Justice:** Uphold **Common but Differentiated Responsibilities and Respective Capabilities (CBDR-RC)** in global negotiations.
6. **Leveraging Insurance Models:** Introduce insurance-based solutions for climate resilience and disaster recovery.

Conclusion

Climate finance is pivotal for achieving global climate goals. While the NCQG and mechanisms like the Loss and Damage Fund aim to bridge financial gaps, the challenges of accessibility, transparency, and inadequate funding need urgent resolution. By leveraging innovative mechanisms, strengthening global cooperation, and ensuring equitable distribution, climate finance can support sustainable and inclusive development, especially for vulnerable nations.

Just Transition

Why in the News?

India highlighted the importance of **global climate justice** and equitable action during the **Second Annual High-Level Ministerial Round Table** on Just Transition at **COP29**.

What is Just Transition?

- **Definition**: As per the **International Labour Organization (ILO)**, it refers to the shift from high-carbon systems to low-carbon sustainable economies in a **fair, inclusive**, and **equitable** manner, ensuring no one is left behind.
- **Recognition**: Included in the **Just Transition Declaration** adopted at COP26 in Scotland.
- **Key Elements**:
    1. **Equity**: Safeguarding workers' rights and livelihoods, especially those in carbon-intensive industries.
    2. **Inclusion**: Involving all stakeholders—workers, governments, industries, and civil society.
    3. **Sustainability**: Aligning economic and social systems with climate goals and conserving ecosystems.

Need for Just Transition

1. **Impact on Workers**:
    o **ILO Estimate**: By 2030, 24 million green jobs could be created, but 6 million jobs in carbon-intensive sectors may be lost.
2. **Climate Change Mitigation**:
    o Emission reductions in energy sectors are critical for meeting the **Paris Agreement's** 1.5°C target.

      o GHG emissions must peak by 2025 and decline by 43% by 2030.
3. **Energy Security**: Reducing reliance on volatile fossil fuel markets by diversifying into renewables.
4. **Avoiding Public Discontent**:
      o **Example**: Yellow Vest protests in France (2018) over climate measures disproportionately affecting low-income groups.

Challenges in Just Transition

1. **High Costs**: **India** requires over $1 trillion in the next 30 years for transitioning coal mining and thermal power sectors.
2. **Regional Disparities**: Coal-dependent regions like **Jharkhand** in India or **Mpumalanga** in South Africa lack resources for economic diversification.
3. **Energy Accessibility**: Coal accounts for 55% of India's commercial energy needs and generates over 70% of electricity.
4. **Economic Losses**: Stranded fossil fuel assets could lead to substantial losses for economies like **Saudi Arabia**, where oil accounts for 68% of budget revenue.
5. **Inequitable Impact**: **UN Women (2023)** highlights limited opportunities for women in green sectors due to their overrepresentation in informal, low-paying jobs.
6. **Other Issues**: Infrastructure challenges, lack of technology transfer, and slow grid modernization.

Initiatives Supporting Just Transition

India

1. **Pradhan Mantri Khanij Kshetra Kalyan Yojana (PMKKKY)**: Utilizes District Mineral Foundations (DMFs) for developing mining-affected regions.
2. **PLI Scheme for Solar PV Modules**: Focuses on developing an ecosystem for high-efficiency solar manufacturing.
3. **National Clean Energy Fund (NCEF)**: Financed through coal cess for clean energy initiatives.
4. **Global Collaborations**: Partnership with the **Asian Development Bank** for Just Transition Worker Support Facility.
5. **Other Initiatives**: National Green Hydrogen Mission, Solar Parks, Green Energy Corridors.

Global

1. **Just Energy Transition Partnership (JETP)**: Financial and technical support from developed countries for energy transitions in developing nations.
2. **ILO Guidelines**: Provide frameworks for achieving environmentally sustainable economies.
3. **World Bank Initiative**: Emphasizes a people-centric approach to phasing out coal.

Way Forward

1. **National-Level Coordination**: Establish a **National Just Transition Body** to monitor coal closure and ensure fair distribution of transition benefits.
2. **Sustainable Financing**: Leverage mechanisms like **JETP**, **green bonds**, and concessional loans.
3. **Support Workers**: Introduce severance pay and voluntary retirement schemes for impacted workers.
4. **Skill Development**: Provide reskilling programs and create new sustainable jobs.
5. **Inclusive Participation**: Foster active involvement of marginalized communities in decision-making.
6. **Infrastructure Modernization**: Upgrade grid infrastructure to support renewable energy transitions.
7. **Strengthen Global Advocacy**: Promote **Common but Differentiated Responsibilities (CBDR)** to ensure equitable action in climate negotiations.

Conclusion

A **Just Transition** is critical to achieving sustainable climate goals while ensuring social equity. Through collaborative global efforts, innovative financing, and inclusive planning, a fair shift toward a green economy can uplift vulnerable communities and secure a sustainable future.

COP-16 to the UNCBD

Why in the News?

The **16th Conference of Parties (CoP-16)** to the **UN Convention on Biological Diversity (UNCBD)** concluded in **Cali, Colombia**, under the theme **"Peace with Nature."** This was the first CoP since adopting the **Kunming-Montreal Global Biodiversity Framework (KMGBF)**.

About the UNCBD

- **Establishment**: Adopted at the **Earth Summit (1992)** in Rio de Janeiro, entered into force in **1993**.
- **Objectives**:
  1. Conservation of biodiversity.

2. Sustainable use of biodiversity components.
3. Fair and equitable sharing of benefits arising from the utilization of genetic resources.
- **Members**: 196 Parties (India joined in **1994**; **USA** is not a party).
- **Secretariat**: Montreal, Canada.

Kunming-Montreal Global Biodiversity Framework (KMGBF)

- **Adopted**: COP-15 (2022).
- **Aim**: Halt and reverse biodiversity loss by **2030**.
- **Goals by 2050**:
    1. Protect and restore ecosystems.
    2. Promote sustainable use.
    3. Ensure equitable benefit-sharing.
    4. Mobilize biodiversity finance to close the $700 billion annual gap.
- **Targets by 2030**:
    o **30x30 Target**: Conserve 30% of land, sea, and inland water and restore 30% of degraded ecosystems.
    o Reduce invasive alien species introduction by 50%.
    o Develop mechanisms for equitable benefit-sharing of **Digital Sequence Information (DSI)**.

Key Outcomes of COP-16

1. **Cali Fund for Digital Sequence Information (DSI)**:
    o Operationalized for equitable benefit-sharing from DSI utilization.
    o Companies to contribute **1% of profits** or **0.1% of revenues** to benefit **Indigenous Peoples and Local Communities (IPLCs)**.
2. **Indigenous Rights**:
    o Permanent **Subsidiary Body on Article 8(j)** established to enhance IPLC participation.
    o At least **50% of Cali Fund** allocated to IPLC needs, including those of women and youth.
3. **Financial Mobilization**:
    o **Kunming Biodiversity Fund (KBF)** launched under **Global Environment Facility (GEF)** to support KMGBF goals.
    o Earlier, **Global Biodiversity Framework Fund (GBFF)** was also established.
4. **Ecologically or Biologically Significant Marine Areas (EBSAs)**: Agreement to update mechanisms for identifying EBSAs, crucial for achieving the **30x30 Target** and implementing the **BBNJ Agreement**.
5. **Invasive Alien Species**: New guidelines and databases to align management efforts with KMGBF goals.
6. **Biodiversity and Health**: Approved **Global Action Plan on Biodiversity and Health**, embracing the **One Health** approach to curb zoonotic diseases and prevent non-communicable diseases.
7. **Capacity-Building**: Thematic Action Plan addressing inequity in technology transfer and capacity-building for synthetic biology.

India's Commitments at COP-16

1. **Updated National Biodiversity Strategy and Action Plan (NBSAP)**: Aligns with KMGBF, adopting a **Whole of Government** and **Whole of Society** approach.
2. **Budget Allocation**: Announced ₹81,664 crore for biodiversity efforts (2025–30).
3. **Resource Mobilization**: Advocated for **$200 billion/year** in global biodiversity funding (Target 19 of KMGBF).
4. **Key Initiatives**:
    o **Plant4Mother Campaign** for conservation.
    o Establishment of the **International Big Cat Alliance (IBCA)**.
    o Increase in **Ramsar Sites** from 26 (2014) to 85.

Challenges and Shortcomings

1. **Resource Mobilization**: Developed countries failed to meet the **$20 billion annual pledge** for international biodiversity financing by 2025.
2. **Monitoring Framework**: Lack of finalization of indicators to track KMGBF progress.
3. **Submission Delays**: Only 44 of 196 parties submitted updated NBSAPs aligned with KMGBF.
4. **Cali Fund**: Operationalized but lacks consensus on contribution mechanisms and allocation frameworks.
5. **Biodiversity Offsets**: Disagreements over "biodiversity credits" as an innovative financing mechanism.

Digital Sequence Information (DSI)

What is DSI?

- Refers to **genomic and related digital data** derived from genetic resources.
- Enables biodiversity research without requiring physical samples, driving advancements in conservation and agriculture.

Challenges with DSI:

- Inequitable benefit-sharing.
- Intellectual Property Rights (IPR) issues.
- Data security risks and technological barriers.

Key Initiatives:

- **KMGBF Goal C and Target 13**: Promotes equitable benefit-sharing.
- **One Day One Genome Initiative (India)**: Public release of annotated bacteriological genomes.

Way Forward

1. **Strengthen Financial Mechanisms**:
   - Address funding shortfalls in **Cali Fund** and **GBFF**.
   - Mobilize innovative resources, including biodiversity credits and private sector contributions.
2. **Enhance Monitoring and Reporting**: Finalize the **KMGBF Monitoring Framework** for accountability.
3. **Capacity Building**: Focus on technology transfer and financial support for developing countries.
4. **Inclusive Partnerships**: Foster IPLC participation in global biodiversity conservation.
5. **Global Cooperation**: Strengthen ties between developed and developing nations for resource mobilization and capacity-building.

National Biodiversity Strategy and Action Plan (NBSAP)

Why in the News?

India unveiled its updated **NBSAP for 2024-30** at **CoP-16 to the UN Convention on Biological Diversity (UNCBD)**, reaffirming its commitment to biodiversity conservation and sustainable development.

What is NBSAP?

- **Mandate**: Article 6 of the **UNCBD** requires all member countries to prepare and implement NBSAPs.
- **Purpose**: Acts as the primary framework for:
  1. **Mainstreaming biodiversity conservation**.
  2. Promoting the **sustainable use of biological resources**.
  3. Ensuring **fair and equitable sharing of benefits** derived from genetic resources.

Key Features of the Updated NBSAP (2024–30)

1. **Integrated Approach**:
   - Adopts a **'Whole of Government'** and **'Whole of Society'** strategy.
   - Aligns with the **Kunming-Montreal Global Biodiversity Framework (KMGBF)** to halt biodiversity loss by **2030**.
2. **National Biodiversity Targets (NBTs)**:
   - Includes **23 targets** under three themes:
     - **Reducing threats to biodiversity** (e.g., controlling invasive species).
     - **Sustainable use of resources** (e.g., promoting eco-friendly practices).
     - **Enhancing governance tools** (e.g., monitoring biodiversity data).
3. **Addressing Environmental Challenges**: Focus on ecosystem restoration, species recovery programs, and community-driven conservation efforts.
4. **Implementation Framework**:
   - The **Ministry of Environment, Forest and Climate Change (MoEFCC)** is the central agency.
   - Advocates **collaborative governance** engaging local communities, private stakeholders, and governments.
5. **Capacity Building**: Includes gap assessments, stakeholder training, and targeted skill-building for effective biodiversity management.
6. **Resource Mobilization**:
   - Recognizes India's leadership in implementing the **Biodiversity Finance Initiative (BIOFIN)** for efficient financial management.
   - Promotes mobilizing domestic and international resources.
7. **Other Features**:
   - Encourages ecosystem-based approaches for biodiversity mainstreaming.
   - Strengthens monitoring and evaluation mechanisms.

Institutional Structure Under the Biological Diversity Act, 2002

The Act facilitates a **three-tier governance system**:

Level	Institution	Function
National	**National Biodiversity Authority (NBA)**	Regulates use of biological resources and ensures fair benefit-sharing.
State	**State Biodiversity Boards (SBBs)**	Advise state governments on biodiversity conservation policies.
Local	**Biodiversity Management Committees (BMCs)**	Document and preserve biodiversity within local jurisdictions.

Biological Diversity Act, 2002

- **Aim**: Enacted to implement UNCBD provisions in India.
- **Goals**:
    1. Conservation of biological diversity.
    2. Sustainable use of biodiversity resources.
    3. Equitable sharing of benefits arising from their utilization.

Amendments in 2023

1. **Exemptions**: **AYUSH practitioners and traditional knowledge holders** are exempt from paying Access and Benefit Sharing (ABS) obligations.
2. **Decriminalization**: Replaced criminal penalties with fines to fast-track research and commercialization.
3. **Simplified Approvals**: Streamlined the process for intellectual property rights (IPR) approvals.

Biological Diversity Rules, 2024

- Replace **Biological Diversity Rules, 2004**.
- Key Provisions:
    1. **National Biodiversity Authority (NBA)**:
        - Appointed chairperson with a three-year term.
        - Maintains biodiversity databases and administers the **National Biodiversity Fund (NBF)**.
    2. **IPR Management**: Mandatory NBA approval before granting biodiversity-related IPRs.
    3. **Penalties**: Fines ranging from **₹1 lakh to ₹50 lakh** for violations, allocated to the NBF for biodiversity initiatives.

Conclusion

India's updated NBSAP reflects a comprehensive and inclusive approach to biodiversity conservation. It integrates traditional practices with modern governance strategies, addressing challenges like invasive species, habitat loss, and climate change. However, achieving the **23 NBTs** requires:

- Robust capacity-building mechanisms.
- Effective resource mobilization.
- Enhanced monitoring frameworks.

This updated framework aligns India with global biodiversity goals, reinforcing its commitment to **sustainable development** and **global conservation efforts**.

Forest Ecosystem Restoration

Why in the News?

The **10th anniversary** of the launch of the **Forest Ecosystem Restoration Initiative (FERI)** was marked by the Secretariat of the Convention on Biological Diversity (CBD) in 2024.

About Forest Ecosystem Restoration Initiative (FERI)

- **Launched**: 2014 by the Korea Forest Service in collaboration with the CBD Secretariat.
- **Mandate**: Supports developing countries in achieving the **Kunming-Montreal Global Biodiversity Framework (KMGBF)** targets.
- **Associated Projects**:
    - **Short-Term Action Plan on Ecosystem Restoration (STAPER)**.
    - **WePlan – Forests**: A decision-making tool for tropical forest restoration.

What is Forest Ecosystem Restoration?

- **Definition**: Involves restoring forests by:
    - Returning trees to degraded lands.

- o Conserving native species, soils, and water resources.
- o Enhancing forest biodiversity and resilience.
- **Key Objectives**:
  - o Improve biodiversity.
  - o Enhance carbon sequestration.
  - o Protect ecosystems against climate change and degradation.

Global Initiatives for Forest Restoration

- **IUCN's Forest Conservation Programme**: Sustainable management of forests.
- **WWF's Forests for Life Programme**: Conservation of forest biodiversity.
- **REDD+ Framework (UN)**: Focuses on sustainable forest management and carbon conservation.
- **Forest and Landscape Restoration Mechanism (FAO)**: Promotes integrated forest and landscape restoration.

Adaptation Gap Report 2024

About the Report

- Released by the **United Nations Environment Programme (UNEP)**.
- Provides an **annual assessment** on the progress in **adaptation planning, implementation, and finance** globally.
- Defines **Adaptation Gap** as the **difference between implemented adaptation measures and a societally set goal**, highlighting resource limitations and competing priorities.

Key Findings

1. **Adaptation Gap**:
   - o Estimated at **$187–359 billion per year** globally.
   - o Significant resource and implementation gaps persist.
2. **Progress in Adaptation Finance**:
   - o International public adaptation finance to developing countries increased to **$27.5 billion in 2022**.
   - o Reflects progress towards the **Glasgow Climate Pact**, which aimed to double adaptation finance from **$19 billion (2019)** by 2025.
3. **Significance of Adaptation**:
   - o Effective adaptation could **halve global climate risks**.
   - o Example: An annual **$16 billion investment in agriculture** could prevent **78 million people** from suffering climate-induced starvation or chronic hunger.

Recommendations for Bridging the Adaptation Gap

1. **Set Ambitious Climate Finance Goals**: Adopt a robust **New Collective Quantified Goal (NCQG)** at global platforms like COP29.
2. **Strategic Financing**: Shift from **reactive, incremental, project-based financing** to **anticipatory, strategic, and transformational adaptation finance**.
3. **Enabling Factors**: Strengthen capacity-building, technology transfer, and governance frameworks to support adaptation efforts.
4. **Holistic Planning**: Integrate adaptation into **national development plans** and **sectoral strategies**.

Significance

The **Adaptation Gap Report 2024** emphasizes the need for a **strategic and collective global effort** to address climate adaptation challenges, especially in **developing countries** that remain highly vulnerable. **Innovative financing, governance, and international cooperation** are critical to achieving global adaptation goals.

Coral Triangle at Risk: Fossil Fuel Threats and Impact

About the Coral Triangle

- **Geographic Span**: Covers **seven countries**—Indonesia, Malaysia, Papua New Guinea, Philippines, Singapore, Timor-Leste, and Solomon Islands.
- **Biodiversity Hotspot**: Known as the **"Amazon of the Seas"** due to its unparalleled marine biodiversity.

Significance of the Coral Triangle

1. **Biodiversity**:
   - o Home to **76% of the world's coral species** and over **2,000 coral fish species**.
   - o Habitat for **six of seven marine turtle species**.

2. **Human Dependency**: Supports **120 million people** who depend on its ecosystems for food, livelihood, and cultural practices.
3. **Marine Ecosystem Services**: Critical for **fisheries, tourism, and climate regulation**.

Threats to the Coral Triangle

1. **Oil and Gas Exploration**:
   o Over **100 offshore oil and gas blocks** operating in the region.
   o Poses risks to coral reefs, mangroves, and seagrass beds due to potential **spills and habitat destruction**.
2. **Noise Pollution**:
   o Increased shipping and exploration activities generate noise, disrupting marine life behaviors.
   o Examples: **Hearing damage** and interference with marine animal communication and navigation.
3. **Climate Change**: Rising **sea temperatures** and ocean acidification are exacerbating coral bleaching and ecosystem degradation.
4. **Overfishing**: Unsustainable fishing practices threaten fish populations and damage coral habitats.

Recommendations by the Report

1. **Moratorium on Oil and Gas Development**: **Phase out existing fossil fuel operations** and halt new development to protect fragile ecosystems.
2. **Particularly Sensitive Sea Area (PSSA) Designation**: Recognize the Coral Triangle as a **PSSA** under the **International Maritime Organization (IMO)** for special protection from harmful maritime activities.
3. **Enhanced Regional Cooperation**: Promote collaboration among the **seven countries** to establish comprehensive **marine protected areas (MPAs)**.
4. **Sustainable Alternatives**: Encourage renewable energy initiatives to replace fossil fuel dependency in the region.
5. **Community Engagement**: Work with local communities for **awareness programs** and **capacity-building** to support marine conservation.

Conclusion

The **Coral Triangle** is an irreplaceable global marine biodiversity hotspot. Protecting it requires **urgent action** against fossil fuel exploration, enhanced **international cooperation**, and sustainable development practices. A **moratorium on harmful activities** and the adoption of **PSSA status** can ensure long-term preservation of this critical ecosystem.

BIOTECHNOLOGY & HEALTH

One Day One Genome Initiative

Why in the News?

The **Department of Biotechnology (DBT)** and **Biotechnology Research and Innovation Council (BRIC)** launched the **'One Day One Genome' initiative** on the 1st foundation day of BRIC.

About Biotechnology Research and Innovation Council (BRIC)

1. **Establishment**:
   o An **apex autonomous society** under the **Department of Biotechnology (DBT), Ministry of Science and Technology**.
   o Formed by subsuming 14 autonomous institutions.
2. **Objectives**:
   o Promote **cutting-edge research** in biotechnology aligned with **national priorities**.
   o Foster **innovation** and **collaboration** across institutional boundaries.
   o Develop **indigenous technologies** and capabilities.
3. **Governance**:
   o Centralized governance via **intra-mural core grants**.
   o Supports scientific collaborations among institutions and researchers.

About 'One Day One Genome' Initiative

1. **Objective**: Publicly release **one annotated microbial genome daily**, making microbial genomic data accessible to researchers.
2. **Focus**:
   o Highlight **unique bacterial species** found in India.
   o Showcase their roles in the **environment, agriculture**, and **human health**.
3. **Significance**:
   o Drives employment and boosts the **startup economy** in the biotech sector.
   o Aids in implementing **India's Biotechnology for Economy, Environment, and Employment (BioE3) policy**.

o Unlocks microbial potential by identifying unknown microbes.
o Spurs **innovation in microbial genomics**.

About Microbial Genomics

1. **Definition**: Study of the **complete genetic material of microorganisms** to understand their **structure, function, evolution**, and interactions.
2. **Examples of Microbes**: **Bacteria**, **archaea**, **protozoa**, and **microscopic animals**.
3. **Applications**:
   o Understanding disease-causing bacteria and genetic makeup for **pathogen surveillance**.
   o Advancing **biotech applications** such as biofuels and bio-manufacturing.
   o Supporting **environmental sustainability** via bioremediation and nutrient cycling.

Key Benefits of the Initiative

1. **For Human Health**:
   o Enables identification of **drug-resistant pathogens**.
   o Supports **personalized medicine** through detailed microbial analysis.
2. **For Environment**:
   o Facilitates **bioremediation** by leveraging microbes for pollution mitigation.
   o Helps in conserving biodiversity.
3. **For Agriculture**:
   o Promotes sustainable farming by identifying **nitrogen-fixing bacteria** like **Rhizobium**.
   o Enhances soil fertility and pest control.
4. **Economic Growth**:
   o Creates **employment opportunities**.
   o Fuels biotech startups and strengthens India's position in **global genomics research**.

Way Forward

1. **Capacity Building**: Train researchers in microbial genomics to accelerate **data utilization**.
2. **Infrastructure**: Develop advanced labs for **sequencing and analysis**.
3. **Public-Private Partnerships**: Encourage collaboration between **academic institutions** and **industry** to translate research into applications.
4. **Global Collaboration**: Foster partnerships with international agencies to ensure global accessibility of microbial data.

Conclusion

The **'One Day One Genome' initiative** is a transformative step in harnessing India's **microbial diversity** for advancements in health, agriculture, and the environment. By enabling **data accessibility** and fostering innovation, it aligns with the nation's vision for a sustainable **bio-economy**.

Oral Rehydration Therapy (ORT)

Why in the News?

- Renowned global health scholar **Richard Cash**, instrumental in the development of **Oral Rehydration Therapy (ORT)**, recently passed away.
- His pioneering work in the **late 1960s** in Bangladesh revolutionized the treatment of diarrheal diseases and cholera.

About ORT

- **Definition**: ORT is the administration of oral solutions containing **glucose, sodium chloride, potassium chloride, and sodium bicarbonate** to **prevent or treat dehydration**.
- **Key Components**:
  o **Rehydration**: Replacement of lost fluids and electrolytes.
  o **Maintenance Fluid Therapy**: Sustains fluid balance during recovery, paired with proper nutrition.

Pioneers of ORT

- **Richard Cash**:
  o Conducted the first clinical trials on **cholera patients** in Bangladesh.
  o Demonstrated that ORT could **reduce intravenous fluid needs** significantly.
- **Dilip Mahalanabis** (India):
  o Introduced ORT during a cholera epidemic in a refugee camp, saving thousands of lives.
  o Popularized **oral rehydration solutions (ORS)** for treating diarrhea globally.

Effectiveness of ORT

1. Diarrhea:

- **Reduction in Child Mortality**: ORT has contributed to a **two-thirds decline in child deaths from diarrhea since 1990**.
- **Nutritional Preservation**: Prevents nutritional deficiencies caused by diarrhea, supporting children's growth.

2. Cholera:

- ORT reduced mortality rates from **50% to less than 0.2%** in cholera patients.
- Decreased dependence on intravenous fluids by **80%** in patients treated with ORT.

3. Mechanism:

- **Molecular Action**:
  - ORT exploits the gut's **sugar-sodium absorption mechanism**.
  - Sugar facilitates sodium absorption, which draws water and chloride ions into cells, rehydrating the body efficiently.

Indian Initiatives

1. **National Oral Rehydration Therapy Programme (1985)**:
   - Promoted ORT to combat child mortality from diarrhea.
   - Focused on awareness campaigns and healthcare training.
2. **National Health Mission (NHM)**: Incorporates ORT to address childhood illnesses like diarrhea and dehydration.
3. **STOP Diarrhoea Campaign**: Targets prevention and effective treatment of diarrheal diseases.

Global Initiatives

1. **WHO and UNICEF Recommendations**: Advocate the combined use of **ORS and zinc** for treating diarrhea.
2. **Global Task Force on Cholera Control (GTFCC)**: **Roadmap 2030**: Aims to reduce cholera deaths by 90% and eliminate outbreaks in 20 countries.
3. **GAVI, the Vaccine Alliance**: Supports initiatives to prevent and treat diarrheal diseases, including ORT promotion.

Significance of ORT

1. **Health Impact**:
   - Cost-effective and highly efficient in saving lives during diarrheal and cholera outbreaks.
   - Essential for disaster-prone regions where access to healthcare facilities is limited.
2. **Economic Benefits**: Reduces healthcare costs by minimizing the need for **intravenous treatments**.
3. **Global Adoption**: ORT is a cornerstone of child survival strategies in developing countries.

Conclusion

ORT, a **simple yet transformative innovation**, has saved millions of lives globally. Its pioneering application by **Richard Cash** and **Dilip Mahalanabis** underscores its importance as a **public health intervention**. Continued awareness, accessibility, and integration into health systems can further reduce mortality from diarrheal diseases.

RNA Editing

Why in the News?

- **Wave Life Sciences**, a U.S.-based biotechnology company, has demonstrated the first successful clinical application of **RNA editing** in humans to treat **alpha-1 antitrypsin deficiency (AATD)**, a genetic disorder affecting the liver and lungs.

About RNA Editing

- **Definition**: RNA editing is a post-transcriptional process where RNA sequences are modified through **insertion, deletion, or substitution** of nucleotides without altering the underlying DNA.
- **Technique Used**:
  - Scientists used **Adenosine Deaminase Acting on RNA (ADAR)** enzymes in combination with **guide RNA (gRNA)**.
  - **Guide RNA (gRNA)**: Small RNA molecules that direct the RNA editing machinery to specific sites on **mRNA** for targeted modification.
- **Process**:
  1. RNA is composed of four nucleotides: **Adenine (A), Guanine (G), Uracil (U), and Cytosine (C)**.
  2. **ADAR enzymes** convert **Adenosine (A)** to **Inosine (I)**, which mimics the function of **Guanosine (G)**.

3. The cell recognizes **Inosine** in place of **Adenosine**, initiating a cellular response to correct the mismatch.
4. This process restores the original function of the **mRNA**, enabling the production of **normal proteins**.

Significance of RNA Editing

1. **Treatment of Genetic Disorders**: Provides a method to **correct mRNA errors** that cause diseases such as **AATD**, **cystic fibrosis**, and **neurological disorders**.
2. **Reversible and Flexible**: **Temporary modifications** allow safer intervention without permanent alteration to the genome, reducing the risk of irreversible errors.
3. **Immune Compatibility**: RNA editing uses **ADAR enzymes**, naturally present in the human body, minimizing the risk of **immune reactions**.
4. **Precision Medicine**: Enables highly **targeted treatments**, addressing specific mutations in mRNA sequences.

Comparison Between RNA and DNA Editing

Aspect	RNA Editing	DNA Editing
Form of Change	Temporary; changes fade over time.	Permanent; alters the genome irreversibly.
Risk	Safer with lower risk of off-target effects.	Higher risk of unwanted immune reactions or errors.
Mechanism	Utilizes ADAR enzymes already present in humans.	Uses bacterial proteins (e.g., CRISPR-Cas9).
Application Flexibility	More flexible and adaptable for short-term needs.	Suitable for long-term genetic corrections.

Challenges in RNA Editing

1. **Lack of Specificity**: Difficulty in ensuring precise targeting of specific RNA sequences.
2. **Transient Nature**: Effects of RNA editing are temporary and may require repeated interventions.
3. **Development Stage**: RNA editing is still in its **nascent stage**, needing extensive clinical trials for broader applications.

Applications of RNA Editing

1. **Genetic Diseases**: Correction of **mRNA errors** in inherited conditions like **AATD** and **cystic fibrosis**.
2. **Cancer Therapy**: Modify mRNA of tumor suppressor genes to restore their function.
3. **Neurological Disorders**: Targeting **mutated RNA** in conditions like **Huntington's disease**.
4. **Infectious Diseases**: Potential to disrupt **viral mRNA** (e.g., HIV or SARS-CoV-2).

Conclusion

RNA editing represents a groundbreaking advancement in **genetic medicine**, offering **reversible**, **targeted**, and **immune-compatible** solutions for a variety of diseases. Continued research and development could revolutionize the treatment of **genetic and acquired conditions**, heralding a new era of **precision therapeutics**.

First Indigenous Antibiotic: Nafithromycin

Why in the News?

The Union Minister of Science and Technology recently launched **Nafithromycin**, **India's first indigenous antibiotic**, developed to combat **antibiotic-resistant infections**.

About Antibiotics

1. **Definition**: Antibiotics are **chemical substances** produced either synthetically or naturally by microbes to **kill** or **inhibit** the growth of disease-causing microorganisms.
2. **Characteristics**:
   o **Low Toxicity**: Safe for humans and animals.
   o **Limited to Bacterial Infections**: Antibiotics target bacteria, not viruses (e.g., common cold or flu), as viruses lack the **cell wall** or structures targeted by antibiotics.
3. **Common Examples**:
   o **Streptomycin**: Used against tuberculosis.
   o **Tetracycline**: Effective against a broad range of bacterial infections.
   o **Erythromycin**: Targets respiratory infections.

Nafithromycin: Key Details

1. **Development**: It is the **first antibiotic developed indigenously** in India, addressing the growing concern of **antibiotic resistance**.
2. **Target**: Specifically designed to combat **multi-drug resistant (MDR) bacteria**, which are becoming a significant threat to public health globally.

3. **Working Mechanism**: Nafithromycin belongs to a class of **macrolide antibiotics** and functions by inhibiting bacterial protein synthesis, ultimately stopping bacterial growth.
4. **Applications**: Treatment of **respiratory tract infections**, **skin infections**, and infections caused by **MDR bacteria**.

Significance of Nafithromycin

1. **Combating Antibiotic Resistance**: Antibiotic resistance is recognized as a **global health crisis**. Nafithromycin represents a crucial tool in addressing this challenge.
2. **Boost to Indigenous R&D**: Promotes **self-reliance** in healthcare and biotechnology, reducing dependency on imports for critical medications.
3. **Global Implications**: India's contribution to the fight against **antimicrobial resistance (AMR)** strengthens its position as a global leader in **pharmaceutical innovation**.
4. **Affordable Healthcare**: As an indigenous product, it ensures **cost-effective** treatment options for patients, especially in resource-constrained settings.

Conclusion

The development of **Nafithromycin** marks a significant milestone in India's efforts to combat **antimicrobial resistance** and enhance healthcare access. By investing in indigenous research, India is positioning itself as a pioneer in addressing global health challenges.

HISTORY, ART & CULTURE

Birsa Munda and His Legacy

Why in News?

- **Janjatiya Gaurav Divas** was celebrated across India to mark the **150th birth anniversary of Bhagwan Birsa Munda**.
- The event underscores the **contributions of tribal communities** in India's history, particularly during the freedom struggle.

About Birsa Munda

1. **Early Life**:
   - Born on **November 15, 1875**, in **Ulihatu**, Khunti district, Jharkhand.
   - Belonged to the **Munda tribe** of the Chhotanagpur plateau.
   - Influenced by **Vaishnav preacher Anand Panre**, which shaped his reformist vision.
2. **Contributions**:
   - **Founded the Birsait Sect**:
     - Advocated **monotheism** and tribal unity.
     - Promoted **cleanliness** and condemned practices like **witchcraft**, **sorcery**, and **alcoholism**.
   - **Reformed Tribal Society**:
     - Educated tribes about **British exploitation** and their cultural heritage.
     - Mobilized them to protect **community land ownership**.
   - **Leader of Munda Rebellion (Ulgulan)**:
     - Fought against the **Zamindari system**, **colonial exploitation**, and **missionary criticism** of tribal traditions.
     - Advocated the establishment of an independent **Munda Raj**.
3. **Titles**:
   - Referred to as **"Bhagwan" (God)** for his divine leadership.
   - Known as **"Dharti Aaba" (Father of the Earth)** for his efforts to protect tribal lands.

Munda Rebellion (Ulgulan)

1. **Causes**:
   - **Introduction of Zamindari System**: Replaced **Mundari Khuntkatti** (community land ownership) with **intermediary landlords**, leading to **forced labor**.
   - **Exploitation by Dikus** (outsiders): High taxation, bonded labor, and loss of tribal autonomy.
   - **Cultural Suppression**: Missionaries undermined tribal customs and traditions.
2. **Methods**:
   - **Guerrilla Warfare**: Attacked **symbols of British power**, such as police stations and government buildings.
   - **Symbolism**:
     - White flag represented **freedom**.
     - Slogan: **"Abua Raj Setarjana, Maharani Raj Tundujana"** (Let the Queen's rule end, and our rule begin).
3. **Key Events**:
   - **1895**: Birsa Munda was arrested for rioting and jailed for two years.
   - **1900**: Captured in Chakradharpur forest and died of **cholera** in custody.
4. **Outcomes**:
   - **Chhotanagpur Tenancy Act, 1908**: Prevented tribal land transfer to non-tribals.
   - **Abolition of Forced Labor**: Systems like **Veth Bigari** were ended.

Janjatiya Gaurav Divas

1. **Declared**: Announced in 2021 during **Azadi Ka Amrit Mahotsav**.
2. **Significance**:
   - Celebrates the **contributions of tribal communities** in India's history.
   - Honors **Birsa Munda's legacy**.
3. **Key Developments**:
   - Commemorative **coins** and **stamps** issued.
   - Development projects worth ₹6,640 crore launched for tribal welfare.
   - Promotion of schemes like:
     - **PM-JANMAN** (Pradhan Mantri Janjati Adivasi Nyaya Maha Abhiyan).
     - **Van Dhan Vikas Kendras**.

Conclusion

Birsa Munda's legacy transcends his time, symbolizing **tribal resistance**, **self-reliance**, and **cultural pride**. His leadership and sacrifices remain a beacon for movements against exploitation and for the **rights of marginalized communities**. **Janjatiya Gaurav Divas** amplifies his contributions, fostering national awareness about the invaluable role of **tribal communities** in India's history.

Sohrai Painting

Why in News?

- **Prime Minister Narendra Modi** presented **Sohrai Painting** to Russian President Vladimir Putin during the **BRICS Summit** in Kazan, Russia.

About Sohrai Painting

1. **Origins**:
   - Practiced predominantly in the **Hazaribagh district of Jharkhand**.
   - Associated with **Sohrai**, a local festival celebrating **harvest and cattle**.
2. **Art Form**:
   - **Mural Art**: Created on the walls of **mud houses** by **tribal women** during the festival.
   - **Symbolism**:
     - Reflects **agrarian lifestyles**, **wildlife reverence**, and **nature's harmony**.
     - Common depictions include **animals**, **birds**, and **natural elements**.
3. **Features**:
   - **Natural Pigments**: Derived from local sources like **clay**, **charcoal**, and **soil**.
   - **Tools**: Brushes made from **twigs**, **rice straw**, or even **fingers**.
   - **Designs**: Intricate geometric patterns with vivid, earthy tones.
4. **Geographical Indication (GI) Tag**: **Sohrai-Khovar Paintings** received the **GI tag** in **2020**, recognizing their cultural and historical significance.

SOHARAI Painting

Tribal paintings from Jharkhand – especially the Hazaribagh region

Cultural Significance

- **Preservation of Tribal Art**: Represents the rich cultural heritage of **Jharkhand's tribal communities**.
- **Connection to Nature**: Highlights the **symbiotic relationship** between humans, animals, and the environment.

Global Recognition

- **Prime Minister Modi's Gift**: The presentation of this artwork to a global leader underscores India's effort to **showcase its rich cultural heritage** on the international stage.

Conclusion

The **Sohrai painting** exemplifies India's diverse artistic traditions and underscores the importance of preserving **indigenous cultural expressions**. Its inclusion in global diplomacy fosters international appreciation of **tribal art** and reinforces cultural ties.

National Mission for Manuscripts (NMM)

Context

- The Government is set to **revive and relaunch** the National Mission for Manuscripts (NMM), likely to be renamed as the **National Manuscripts Authority**, under the **Ministry of Culture**.

About National Mission for Manuscripts (NMM)

1. **Establishment**:
   - Launched in **2003** by the Ministry of Tourism and Culture.
   - Currently part of the **Indira Gandhi National Centre for the Arts (IGNCA)**.
2. **Mandate**: **Identification**, **documentation**, **conservation**, and **accessibility** of India's manuscript heritage.
3. **Scope**: Covers themes including **scripts**, **languages**, **calligraphy**, **illuminations**, and **illustrations**.
4. **Motto**: **"Conserving the past for the future."**

Key Achievements of NMM

1. **Manuscript Documentation**:
   - Prepared **52 lakh manuscripts**.
   - Digitized **over 3 lakh titles**, though only one-third has been uploaded.
2. **Conservation**: Conserved **9 crore folios** using **preventive** and **curative** measures over the past 21 years.
3. **Publications**: Published over **100 books** since inception.
4. **Infrastructure**: Established **100+ Manuscripts Resource and Conservation Centres (MRCCs)** across India.

Significance of Manuscripts

1. **Cultural Heritage**: Manuscripts are a repository of India's **civilizational knowledge** in fields such as **philosophy**, **medicine**, **arts**, and **sciences**.
2. **Historical Importance**: Provide insights into **historical events**, **local governance**, and **societal practices** of various periods.
3. **Linguistic and Calligraphic Diversity**: Highlight India's **multilingual and multi-script** tradition.
4. **Global Recognition**: Manuscripts are of interest to **researchers** globally for their historical, cultural, and literary value.

Way Forward

1. **Revival**: Strengthen the **National Manuscripts Authority** with better resources, technology, and governance.
2. **Digitization**: Accelerate **digitization** and **online access** of manuscripts to ensure global reach and conservation.
3. **Collaboration**: Partner with **institutions**, **private collectors**, and **global repositories** to document scattered manuscript collections.
4. **Awareness and Education**: Promote awareness of manuscripts through **workshops**, **exhibitions**, and **academic programs**.
5. **Conservation Infrastructure**: Enhance **manuscript conservation laboratories** and ensure the training of professionals in **preservation techniques**.

Conclusion

The revival of the **National Mission for Manuscripts** is a significant step toward preserving India's rich and diverse **manuscript heritage**, enabling **future generations** and researchers worldwide to access and appreciate India's civilizational wealth.

ICCR Organises Conference on Pali as Classical Language

Context

- The Indian Council for Cultural Relations (ICCR) organized a conference in **Colombo, Sri Lanka**, focusing on **Pali** as a classical language, aiming to grant it **classical language status** in India.
- Recently, the Indian government added **Pali**, **Prakrit**, **Marathi**, **Bengali**, and **Assamese** to the list of **Classical Languages**, bringing the total to **11**.

Key Highlights

1. **Classical Languages of India (11)**:
   - Recognized in different years:
     - **Tamil** (2004)
     - **Sanskrit** (2005)
     - **Telugu** (2008)
     - **Kannada** (2008)
     - **Malayalam** (2013)
     - **Odia** (2014)
     - **Marathi** (2024)
     - **Pali** (2024)
     - **Prakrit** (2024)
     - **Assamese** (2024)
     - **Bengali** (2024)
2. **Why Pali?**
   - **Historical Importance**:
     - Language of early **Buddhist scriptures** such as the **Tripitaka**.
     - Widely used in **Buddhist philosophy**, meditation techniques, and Theravada traditions.
   - **Cultural Significance**: Integral to the spread of Buddhism in **India**, **Sri Lanka**, and **Southeast Asia**.
   - **Academic Relevance**: Encourages research in ancient texts and promotes India's cultural heritage globally.

Indian Council for Cultural Relations (ICCR)

1. **Nodal Ministry**: Ministry of External Affairs.
2. **Establishment**: Founded in **1950** by **Maulana Abul Kalam Azad**, India's first Education Minister.
3. **Objectives**:
   - Promote **Indian culture and values** internationally.
   - Foster **cultural exchanges** between India and other nations.
   - Organize conferences, seminars, and festivals to highlight India's **rich cultural heritage**.
4. **Key Initiatives**:
   - Facilitating **International Day of Yoga** celebrations abroad since 2015.
   - Organizing scholarships for foreign students to study in India.
5. **Awards**:
   - **Indologist Award**: For scholars contributing to the study of India.
   - **World Sanskrit Award**: Promotes Sanskrit studies globally.
   - **Gisela Bonn Award**: For contributions to Indo-German cultural ties.

Significance of Recognizing Classical Languages

1. **Preservation of Heritage**: Protects ancient languages from extinction and ensures their continued study.
2. **Promotion of Research**: Encourages deeper exploration into ancient literature, philosophy, and traditions.
3. **Cultural Identity**: Enhances the global awareness of India's diverse linguistic and cultural heritage.
4. **Tourism and Diplomacy**: Boosts cultural tourism and strengthens ties with countries sharing linguistic and cultural links.