# VISIONIAS
## INSPIRING INNOVATION

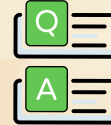## *Current Affairs*
# Workbook
### *November 2024*

**Progress Tracking Table**

**Mains Questions**

**Ethics Case Studies**

**MCQs**

**Quick facts**

**Self-Evaluation**

**Progress Tracking Table**

| Activity Type | Total Questions | Correct Answers | Attempted | Score/Percentage |
|---|---|---|---|---|
| MCQ's | | | | |
| True/False Statements | | | | |

**Monthly Learning Summary**

Top 3 Learnings/Insights

1.
2.
3.

**Progress Comparison**

Previous Month's Score
Current Month's Score
Areas of Improvement

**Reflection Section**

Strengths
Areas for Improvement
Goals for Next Month

**Comprehensive Summary**

**True/ False**

**"You are as strong as your Foundation"**

# FOUNDATION COURSE
# GENERAL STUDIES
## PRELIMS CUM MAINS
## 2026, 2027 & 2028

Approach is to build fundamental concepts and analytical ability in students to enable them to answer questions of **Preliminary** as well as **Mains Exam**

▶ Includes Pre Foundation Classes

▶ Includes comprehensive coverage of all the topics for all the four papers of GS Mains, GS Prelims & Essay

▶ Access to LIVE as well as Recorded Classes on your personal student platform Includes All India GS Mains, GS Prelims, CSAT & Essay Test Series

▶ Our Comprehensive Current Affairs classes of PT 365 and Mains 365 of year 2026, 2027 & 2028

**Live - online / Offline Classes**

**Scan the QR CODE** *to* **download VISION IAS app**

**DELHI: 17 DEC, 9 AM | 10 JAN, 9 AM | 21 JAN, 1 PM | 31 JAN, 5 PM**

**GTB Nagar Metro (Mukherjee Nagar): 27 DEC, 6 PM | 6 JAN, 8 AM**

**हिन्दी माध्यम** | **DELHI: 6 जनवरी, 11 AM | 13 दिसंबर, 8 AM**

| AHMEDABAD: 4 JAN | BENGALURU: 5 DEC | BHOPAL: 5 DEC | HYDERABAD: 9 DEC | JAIPUR: 20 JAN |

| JODHPUR: 3 DEC | LUCKNOW: 5 DEC | PUNE: 20 JAN | ADMISSION OPEN | CHANDIGARH |

# PERSONALITY
## DEVELOPMENT PROGRAMME

### CIVIL SERVICES EXAMINATION - 2024

## ADMISSION OPEN

**VISION IAS**

**Scan QR CODE to watch How to Prepare for UPSC Personality Test**

## FEATURES OF THE PERSONALITY DEVELOPMENT PROGRAM

**Pre-DAF Session:** For a nuanced understanding of DAF entries and how to fill it mindfully to reflect desired personality traits.

**Mock Interview Sessions:** With Senior Faculty, Ex-Bureaucrats and Educationists for enhanced Interview readiness and instilling confidence.

**Interaction with toppers and serving bureaucrats:** Interactive Session for facilitating query resolution, interactive learning, and motivation from the experience of Topper and serving bureaucrats.

**DAF Analysis Session:** Thorough DAF analysis and discussion with Senior Experts and Faculty Members on expected questions and their answers.

**Personalized Mentorship and Guidance:** Holistic Interview preparation management and performance maximization with a dedicated Senior Mentor.

**Performance Evaluation and Feedback:** Identification of strengths and growth areas coupled with positive recommendations for further enrichment and improvement

**Elocution Session:** For the development and refinement of communication skills and honing desirable personality traits through guided discussions and peer learning.

**Current Affairs Classes:** To develop a comprehensive and analytical view of important issues of current affairs.

**Recordings of Mock Interviews:** Video of Interview sessions for Self-evaluation

For queries regarding DAF analysis and Mock interview contact at

📞 7042413505, 9354559299
✉ interview@visionias.in

**Scan QR CODE to know more and Register**

# CONTENTS

## 10. GOVERNMENT SCHEMES

## 11. QUICK FACTS

## 12. ACTIVITIES

## 13. ANSWER & EXPLANATION

## 14. SELF- EVALUATION

# FAST TRACK COURSE 2025
# GENERAL STUDIES PRELIMS

**ARE YOU "PRE" CAUTIOUS?**

### PURPOSE OF THIS COURSE

The GS Prelims Course is designed to help aspirants prepare for & increase their score in General Studies Paper I. It will not only include discussion of the entire GS Paper I Prelims syllabus but also that of previous years' UPSC papers along with practice & discussion of Vision IAS classroom tests. Our goal is that the aspirants become better test takers and can see a visible improvement in their Prelims score on completion of the course.

Art & Culture

Geography

Polity

Indian History

International Relations

Science and Technology

Environment

Economics

**INCLUDES**

Access to recorded live classes at your personal student platform.

Comprehensive, relevant & updated Soft Copy of the study material for prelims syllabus.

PT 365 — Access to PT 365 classes

Sectional mini test and Comprehensive Current Affairs.

## ADMISSION OPEN

# From the Editor's Desk

*Dear Readers,*

This Workbook combines the power of thorough reading and hands-on practice to ensure you not only understand key concepts but also apply them effectively. By actively engaging with the Workbook after studying the Monthly Current Affairs Document, you will **reinforce your knowledge and develop the confidence** needed to excel in competitive examinations.

The Workbook offers a comprehensive summary of key events and news, presented in an easily digestible format for better understanding and retention. For example, in the **Polity and Governance** section, we highlight the Supreme Court's observations on socialism and secularism, emphasizing its stance that the Constitution is a living document.

Similarly, **International Relations** section highlights India's growing global influence through strategic partnerships with nations like Germany, Australia, and Italy, focusing on trade, defense, and technology.

Further, this format has been followed in the other sections like social issues, environment, science, culture, ethics and schemes.

## How the Workbook is Organized?

1. **Summary of the Monthly Magazine :** A concise overview of the month's major insights, key events, and trends. This section lays the foundation for understanding before delving into activities.

2. **Quick Facts Block :** A ready reference of essential facts, figures, and statistics— ideal for rapid revision and recall.

3. **Activities Block :**

**MCQ's :** Test comprehension of significant topics.

**True/False Statements :** Verify your understanding of key facts.

**Mains practice Questions :** Explore and articulate in-depth topics with clarity.

**Ethics Case Studies :** Apply current events to ethical dilemmas, refining decision making skills.

**Answers and Explanation :** Includes answers to MCQs and True/False questions for immediate feedback.

4. **Progress tracking table :** Monitor your progress with a dedicated section to record scores and reflect on areas for improvement.

Dedicate yourself to regular practice, embrace the process, and let this workbook be your trusted companion in your preparation. With focus, determination, and the right tools, you will not only master current affairs but also build the confidence to face any challenge.

**Warm regards,**
**Team Current Affairs,**
**VisionIAS**

*"The future depends on what you do today."*
*— Mahatma Gandhi*

# POLITY AND GOVERNANCE

## 1.1. 'Socialist', 'Secular' in the Preamble

### Why in the News?

The Supreme Court in **Dr Balram Singh Vs Union of India (2024)** dismissed challenges against the words "socialist" and "secular" added to the Preamble **under the 42nd Amendment Act.**

### Petitions' Arguments

➲ These words were **added during the Emergency (1975-1977),** thus not representing public will.
➲ As the date of adoption (26th November 1949), was mentioned in the Preamble, and no additional words could be inserted later to it.

### Supreme Court (SC) Observations

➲ **Dismissed retrospectivity:** The date of adoption doesn't limit Parliament's amendment rights under Article 368.
➲ **SC Defined:**
  ➜ **Secularism:** A facet of **right to equality** where the state neither has its own religion nor restricts religious freedom.
    ◇ Recognized as **a basic feature in 'Kesavananda Bharati' and 'SR Bommai' cases.**
  ➜ **Socialism:** Reflects state's commitment to welfare state and equality of opportunity.
➲ **Living Document:** The Constitution adapts to changing interpretations of terms like 'secular' and 'socialist'.

---

### Secularism & Socialism

➲ **Indian Secularism:** It follows the concept of **Neutrality and positive role** towards the religion.
  ➜ Contrasting with **Western non-interference.**
➲ **Indian Socialism:** It supports a **mixed economy,** welfare for the needy alongside private enterprise,
  ➜ Shaped by **Nehru and Gandhi.**
  ➜ **Differs from Marxist socialism** due to **non-violent reform, private property,** and **democratic processes** in India.

---

### Key changes under 42nd Amendment Act, 1976 (Mini Constitution)

➲ **Preamble:**
  ➜ Added **'Socialist' and 'Secular'.**
  ➜ Changed **'unity of nation'** to **'unity and integrity of the nation'.**
➲ **7th Schedule:** Transferred **Education, Forests, Wildlife, Weights and Measures, and Judiciary** (excluding Supreme and High Courts) **from State to Concurrent list.**
➲ **Emergency:** Amended Article 352 for emergency declarations in any part of the country.
➲ **New DPSPs:**
  ➜ **Article 39:** Healthy development of children.
  ➜ **Article 39A:** Equal justice and free legal aid.

➡ **Article 43A:** Participation of workers in management of industries.
➡ **Article 48A:** Environment and wildlife protection.
⊃ **New Parts:** Added **Part IV-A (Fundamental Duties)** and **Part XIV-A (Administrative Tribunals).**

### Preamble

⊃ **Gives a glimpse of Constitution's Philosophy:** Originally declared India as a sovereign, democratic, republic.
⊃ **Rights and Enforcement:** No substantive rights, not enforceable in courts, signify power vested in the people.
⊃ **Cases on Preamble's Status as part of the Constitution:**
  ➡ **Berubari Case (1960):** Preamble is not a part of the Constitution
  ➡ **Kesavananda Bharati Case (1973):** Preamble is part of the Constitution and can be amended
  ➡ **LIC of India Case (1995):** Reaffirmed that the Preamble is part of the Constitution.

## Conclusion

Constitutional values like **socialism and secularism adapt to modern challenges** like inequality and environmental issues, while upholding core principles of justice, liberty, and equality.

# 1.2. Property Rights in India

## Why in the News?

Supreme Court in a significant ruling in **Property Owners Association v State of Maharashtra,** limited state powers in acquiring private property.

## More in the News

⊃ **Overruled previous judgments:** suggesting private properties could be community resources in **Ranganatha Reddy case (1978) and Sanjeev Coke Manufacturing case (1983).**

## Key highlights of the judgement

⊃ **Article 39(b) Scope:** Private property isn't automatically a "material resource" for community use.
⊃ **State's Acquisition Authority:** Not from Article 39(b), but from eminent domain and Entry 42 of List III.
⊃ **Property Classification as Private:** Depends on nature, scarcity, impact, and concentration of resources in private hands.
⊃ **Flexibility in Economic Policies:** Constitution supports adaptable economic policies.
⊃ **Validity of Article 31C:** Still valid as held in Kesavananda Bharati case.
⊃ **Balancing Public Welfare with Private Property Rights:** It involves ensuring societal needs are met while respecting individual ownership (property rights under Article 300A) and rights (equality under Article 14).
  ➡ Also applied the **Public Trust Doctrine,** mandating responsible resource management for the public good.
⊃ **Limits of Eminent Domain:** Broader application of this doctrine in land acquisition was questioned.

### Evolution of Right to Property

⊃ **Originally:** Fundamental Right under **Articles 19(1)(f) and 31.**
⊃ 25th Amendment (1971): Introduced **Article 31C,** protecting laws under DPSP from fundamental rights challenges.
⊃ **Post-44th Amendment (1978):** Right to property became a **constitutional right under Article 300A.**

**Doctrine of Eminent Domain:** Allows government to take private property for public use with conditions:
⊃ **Public Use:** Must serve a public purpose.
⊃ **Just Compensation:** Fair payment required.
⊃ **Due Process:** Owners must be notified and have rights to contest.
⊃ **Government Authority:** Only government or authorized agencies can exercise this power.

**Public Trust Doctrine:** Ensures state manages natural resources responsibly
⊃ **State as Trustee:** Manages resources for public benefit (in **T.N. Godavarman v. Union of India,** the Supreme Court affirmed)
⊃ **Citizens as Beneficiaries:** Resources used sustainably for all, including future generations.

## Implications

- ➲ **Legislative Impact:** Could affect future property laws, land reforms, and welfare programs.
- ➲ **Economic Reforms:** Promotes market-oriented economy by restricting state acquisition powers.
- ➲ **Political Debates:** May affect political agendas on land and property rights.
- ➲ **Judicial Role:** Strengthens scrutiny over government actions concerning property rights.

## Conclusion

The ruling clarifies that **labeling private property as a "material resource" requires case-by-case analysis,** urging government actions to respect constitutional rights and resource management principles.

# 1.3. Internal Democracy in Political Parties

## Why in the News?

Discussions are ongoing about the **role of Election Commission of India (ECI)** in enforcing democratic functioning of political parties in India.

## Internal party democracy

- ➲ It refers to the internal structure and operations of political parties based on democratic principles, influencing candidate selection, leadership, policy formulation, and funding.

## Need for Internal Party Democracy

- ➲ **Decentralization:** Reduces top-down control, involving broader party participation in decision-making.
- ➲ **Prevent Criminalization:** Curbs selection of candidates based on "winnability", often linked to criminal influence.
  - ➡ 46% of new Lok Sabha members have criminal cases (ADR).
- ➲ **Representation:** Ensures equal political participation for all.
- ➲ **Youth Involvement:** Provides opportunities for new leaders.
- ➲ **Reduce Corruption:** Centralization leads to corruption, as noted by the **2008 ARC report.**
- ➲ **Transparency:** Promotes free flow of information and discussion, as argued by John Stuart Mill.

## Reasons for Lack of Internal-Party Democracy

- ➲ **No Statutory Backing:** Section 29A of RPA, 1951 deals with party registration, not internal democracy.
- ➲ **Lack of Penalties:** No power for ECI to deregister parties (SC ruling in Indian National Congress (1) v Institute of Social Welfare).
- ➲ **Structural Challenges:** Dynastic politics, centralized power, and Anti-Defection Law.
- ➲ **Other Issues:** Political unwillingness, weak party structures.

## Way Forward

- ➲ **Transparency:** Recommendations from **electoral reform committees (Tarkunde, Dinesh Goswami, Indrajit Gupta)** advocate for transparency.
- ➲ **Law Commission Report (255th):** Suggests adding Chapter IVC to RPA, 1951 for internal democracy, including party constitutions, elections, candidate selection, and ECI's de-registration powers.
- ➲ **National Commission to Review the Working of the Constitution (NCRWC):** Proposes legislation for comprehensive regulation of political party operations and alliances.
  - ➡ **No electoral reforms** possible without **reforms in 'political party system'.**
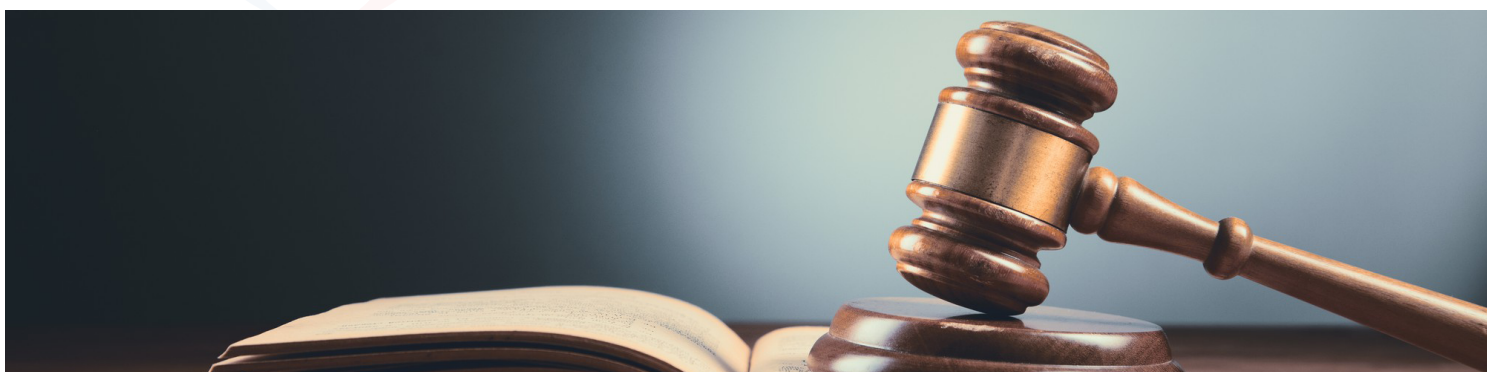
# 1.4. USA Presidential Election

## Why in the News?

Recently, U.S. Presidential election was conducted through the Electoral College system.

## Comparison of USA and Indian Presidential Elections

| Parameters | USA | India |
|---|---|---|
| Composition of Electoral Members | ➲ Electoral College with 538 electors<br>➲ Electors chosen by state voters, vary by state's Congressional representation.<br>➲ Requires 270 votes for presidency. | ➲ Electoral College includes elected members of both Houses of Parliament and State Legislative Assemblies (SLAs).<br>➲ Excludes nominated members from both House and SLAs |
| Governing Act/ Rules | ➲ Decentralized; each state has its own election rules | ➲ Governed by **the Presidential and Vice-Presidential Elections Act, 1952.** |
| Nomination Process | ➲ Candidates gain nominations via primaries and caucuses. | ➲ Nomination requires 50 electors as proposers and 50 as seconders |
| Election Methods | ➲ Mostly winner-take-all system, except in Maine and Nebraska.<br>➲ Presidency can be won without a popular vote majority (e.g., Trump, 2016). | ➲ Uses Proportional Representation by single transferable vote, secret ballot.<br>➲ Needs over 50% of votes to win. |
| Vote-Counting Process | ➲ Prolonged due to paper ballots and handling of mail-in votes. | ➲ Uses Electronic Voting Machines (EVMs). |
| Frequency of Election | ➲ Every 4 years on a fixed schedule. | ➲ Every 5 years, barring exceptions. |
| Running Mate | ➲ President chooses a Vice-Presidential running mate. | ➲ Separate election for Vice President. |

# 1.5. Municipal Corporations In India

## Why in the News?

The report titled **"Own Sources of Revenue Generation in Municipal Corporations: Opportunities and Challenges"** was released by the RBI.

## Key Findings of the RBI Report

➲ **Low Revenue Generation:** Municipalities generate only 0.6% of GDP (in 2023-24), much less than central and state governments.
  ➜ **Tax revenues:** 30% of municipal income, followed by significant dependence on grants, contribution, etc. (24.9%) and fees, user charges (20.2%).
  ➜ **Property tax collection efficiency:** low, at 56% of demand (CAG Report).
➲ **Reliance on Transfers:** Heavy reliance on Central and State government grants, which increased in 2022-23.
➲ **Municipal Borrowing:** Increased from 1.9% to 5.2% of receipts from 2019-20 to 2023-24.
➲ **Municipal Bonds:** Market is underdeveloped, with green bonds in early stages.

## Other Issues

➲ **Financial Challenges:**
  ➜ **Ad-hoc implementation o**f State Finance Commission (SFC) recommendation.
  ➜ **Low fund utilization** as 11 out of 18 states have utilized only 61% of the funds (CAG Report).
➲ **Governance Challenges:** Limited devolution of powers delayed municipal elections, high vacancy rates in staffing, and insufficient focus on urban development.

## Municipal Institutions in India

- ➲ Urban areas house over 400 million people, expected to double by 2050, contributing more than 60% to GDP despite occupying only 3% of land.
- ➲ **Revenue and Fiscal Powers:**
  - ➜ **Article 243X:** Allows states to authorize ULBs to levy taxes, duties, and fees.
  - ➜ **Article 243Y:** State Finance Commissions (SFCs) review tax devolution.

## Revenue Sources of Urban Local Bodies

- ➲ **Own Sources:**
  - ➜ **Tax Revenue:** Property tax, water benefit tax.
  - ➜ **Non-Tax Revenue:** User charges, developmental charges.
  - ➜ **Other Receipts:** Lease rent, sale of rubbish.
- ➲ **Assigned (Shared) Revenue:** Entertainment tax, professional tax.
- ➲ **Grants-in-aid:** From Central and State Finance Commissions, specific urban programs (SBM, AMRUT).
- ➲ **Borrowings:** From state/central governments and banks.

## Way Forward

- ➲ **Enhance Own-Source Revenue:** Improve property tax systems with technology, adjust non-tax revenues for cost recovery.
- ➲ **Timely Transfers:** Predictable state funding, regular SFC formation.
- ➲ **Diversify Funding:** Increase municipal bonds, explore climate finance for sustainable projects.
- ➲ **Transparent Financial Management:** Standardize accounting practices as per NMAM.
- ➲ **Human Resources:** Address staffing and training issues, promote specialized municipal cadres.

# 1.6. Non-Governmental Organizations (NGOs)

## Why in the News?

The Ministry of Home Affairs (MHA) has mandated NGOs under the Foreign Contribution (Regulation) Act (FCRA), 2010, to report changes in key office bearers, even if their FCRA license application is pending.

## More on the News

- ➲ NGOs can submit new applications to replace pending ones.
- ➲ Several NGOs lost registration due to FCRA violations.

## NGOs and their Regulation in India

- ➲ **Definition:** NGOs are non-profit organizations with humanitarian or development goals, operating independently from government.
- ➲ **Formed under:**
  - ➜ **Societies:** Under **Societies Registration Act, 1860.**
  - ➜ **Trusts:** Private under **Indian Trusts Act, 1882;** public under state legislation.
  - ➜ **Charitable Companies:** Under Section 8 of Companies Act, 2013.
- ➲ **FCRA Registration:** Mandatory under FCRA, 2010 for NGOs receiving foreign contributions.
  - ➜ **Regulation under FCRA, 2010:** Controls foreign funding to prevent misuse affecting national security or public interest. **2020 Amendments** include
    - ◇ Mandated specific bank accounts for foreign contributions.
    - ◇ Prohibited fund transfers to others.
    - ◇ Reduced admin expenditure from foreign funds to 20%.
    - ◇ Empowered government to restrict fund utilization after inquiries., requiring Aadhar number as identification, etc.

## Constitutional Provisions related to NGOs:

- ➲ **Seventh Schedule:** Trust and Charities/Charitable Institutions fall **under the Concurrent List.**
- ➲ **Article 19(1)(c):** Right to Form Associations or Unions

## Roles and Responsibilities of NGOs

- **Governance:** Enhancing democracy, supporting government initiatives.
- **Social Reforms:** Human rights, women's empowerment, poverty alleviation.
- **Human Development:** Education, health improvement.
- **Other Activities:** Research, cultural preservation, environmental advocacy.

## Government Support for NGOs:

- Funds for welfare schemes, cultural grants, and NGO (Swadhar, Ujjawala).
- **Darpan portal** for unique NGO identification.

## Challenges/Issues

- **Functional:** Donor-driven agendas, interference in national projects (E.g., Kudankulam atomic energy programme), security concerns.
- **Regulatory:** Strict FCRA rules, potential for financial mismanagement.
- **Operational:** Donor dependency, volunteer engagement, tech limitations.

## Recommendations for Improvement

- **Vijay Kumar Committee (2017):** Light regulation, modernized registration, nodal body for oversight, accreditation, database for transparency, promoting volunteerism.
- **2nd ARC Recommendations:** Decentralize FCRA implementation, balanced legislative interpretation.

# 1.7. Governance and AI

## Why in the News?

**India's first AI Data Bank** was launched to boost innovation by offering researchers, startups, and developers access to diverse datasets for scalable AI solutions.

## More on the News

- The Data Bank enhances **national security** by analyzing satellite, drone, and IoT data for AI applications in disaster management and cybersecurity.
- **India's AI Strategy** promotes innovation, ethical governance, and global partnerships, focusing on healthcare, agriculture, etc.

> **Participative AI (PAI):** Involves a broader range of stakeholders in AI system creation, based on participatory governance principles.
> - **Need:** Driven by AI's deployment in sensitive areas like law enforcement.
> - **Benefits:** Reduces top-down decision-making, mitigates bias, and enhances trustworthiness.
> - **Challenges:** Includes co-optation, limited non-expert participation, tokenism, and transparency paradoxes.

## Potential of AI to Transform Governance in India

- **Efficient Service Delivery:** AI automates public services, reducing government workload and improving service quality.
- **Education:** AI can personalize learning, create smart content, and automate grading and assessments.
  - For example, NCERT has listed 31 metadata elements for each resource in its NROER repository.
- **Healthcare:** AI improves delivery and accessibility, especially through telemedicine in remote areas.
  - NITI Aayog with DBT aims to build a database of cancer-related images for AI use in cancer management.
- **Agriculture:** AI offers predictive insights for weather, pest management, and resource use.
  - The National Pest Surveillance System uses AI and ML for timely crop intervention.
- **Inclusivity and Accessibility:** AI-powered DPI systems bridge linguistic and accessibility gaps.
  - For example, the Bhashini platform uses AI for regional language government services.
- **Data-Driven Policymaking:** AI analyzes large datasets for policy formulation, enhancing transparency.
  - The India Urban Data Exchange uses AI for urban service optimization.
- **Judicial Efficiency:** AI automates case management, predicts outcomes, and streamlines legal research.
  - SUVAS is an AI-based translation tool for legal proceedings.
- **Disaster Management:** AI systems like RAHAT provide early warnings and support emergency responses.

## Initiatives to Promote AI in India

- **National Strategy for AI (NSAI):** NITI Aayog's #AIforAll strategy focuses on sectors like healthcare, agriculture, and education.
- **India AI Program:** MeitY's initiative for AI innovation, skill development, and ethical practices.
- **Digital Personal Data Protection Act:** Strengthens data privacy concerning AI.
- **Global Partnership on AI (GPAI):** India collaborates to align AI strategies globally.
- **Skill Development:** Programs like **Responsible AI for Youth** and **Future Skills expand AI education.**
- **International Partnerships:** Such as the **US-India AI Initiative** for AI in healthcare and agriculture.

## Challenges in AI Integration for Governance

- **Fragmented Data:** The National Data Governance Framework Policy has not yet been implemented.
- **Infrastructure Gaps:** 45% of India's population lacks internet access as of 2023.
- **Regulatory Frameworks:** Lack of AI-specific laws compared to the EU's AI Act.
- **Skill Gaps:** A demand-supply gap of 140,000 AI professionals (NASSCOM Report).
- **Data Privacy:** Increased risk of data breaches with AI reliance on sensitive data.
- **Weak IP Regime:** India ranks 42nd in the 2024 IP Index.
- **Ethical Biases:** AI can produce discriminatory outcomes from biased training data.

## Way Forward

- **Risk Management and Ethical Oversight:** Dynamic assessment with human oversight to prevent biases.
- **Data Sovereignty and Privacy:** Ensure compliance with data protection laws.
- **Bias, Fairness, and Transparency:** Implement audits and use diverse datasets.
- **Education and Skill Development:** Expand AI education in underserved areas.
- **Public-Private Collaboration**: Initiatives like **IndiaAI Compute Capacity.**
- **Cybersecurity and Monitoring:** Use AI for real-time threat detection.

# 1.8. Digitization of Land Records

## Why in the News?

Union Minister of Rural Development recently notified that nearly 95% of the land records have been digitized in Rural India since 2016.

## More on the News

- This milestone is credited to the **Digital India Land Records Modernization Programme** (DILRMP).
- **Cadastral map digitization** stands at **68.02%** nationally.
- **87% of Sub-Registrar Offices (SROs)** are now linked with land records.

## About Digital India Land Records Modernization Programme (DILRMP)

- **Launched:** In 2016, by revamping the National Land Records Modernization Programme.
- **Ministry:** A Central Sector Scheme managed by the Department of Land Resources, Ministry of Rural Development.
- **Extended from 2021-22 to 2025-26, including new components:**
  - ➜ Computerization of Revenue Courts and their integration with land records.
  - ➜ Consent-based linking of Aadhaar with Records of Rights (RoR).
- **Aim:** To shift from a manual presumptive title system to a digital conclusive land titling system.

## Need for Digitization of Land Records

- **Socio-economic relevance:** Essential for the livelihood of vulnerable groups.
- **Land ownership disputes:** Over 60% of litigation in India involves land, exacerbated by forgery and Benami properties.
  - ➜ Conclusive land titling provides clear ownership, government granted.
- **Inefficient administrative processes:** Complex updates foster corruption and land grabbing.
- **Outdated mapping:** Records do not reflect current land possession and ownership.
- **Targeted public service delivery:** Improves access to schemes like PM-Kisan for farmers.
- **Strengthening revenue administration:** Enhances property tax collection and local government financing.
- **Infrastructure development:** Reduces delays caused by land disputes, discourages black market land transactions.

**Land Reforms in India:** Land reforms have been a focus in Five-Year Plans and by the **J. C. Kumarappa Committee (1949),** encompassing:

- ➲ **Abolition of intermediary tenures (Zamindari):** Land redistribution with 'land to the tiller' in the 1950s-1970s.
- ➲ **Tenancy reforms:** Preventing tenant evictions and ensuring fair rent, though with limited success.
- ➲ **Ceiling of land holdings:** Capping land ownership and redistributing surplus, with challenges in implementation.
- ➲ **Consolidation of holdings:** Merging fragmented lands for better farming practices, met with resistance.
- ➲ **Compilation and updating** of land records.

## Key initiatives under DILRMP

- ➲ **Bhu-Aadhar - Unique Land Parcel Identification Number (ULPIN):** A 14-digit alphanumeric code for each land parcel to streamline real estate transactions, resolve property disputes, etc.
- ➲ **National Generic Document Registration System (NGDRS):** E-Registration system for deeds/document registration for a uniform process.
- ➲ **E-Court Integration:** To aid faster dispute resolution and reduce land disputes.
- ➲ **Transliteration of Land Records: In 22 scheduled languages** to overcome language barriers.
- ➲ **Bhoomi Samman:** Awards (Platinum Grading) for districts achieving saturation of core components of DILRMP.

## Challenges in the Digitalisation of Land

- ➲ **Presumptive land titling:** Registration of sales deeds doesn't guarantee ownership.
- ➲ **Centre-State coordination:** Land being state-managed, cooperation is crucial but often lacking.
- ➲ **Silos approach of Departments:** Multiple documents across departments complicate access.
- ➲ **Legal provisions related to registration:** Non-mandatory registration of transactions leads to more litigation.
- ➲ **High Cost of registration:** High fees deter formal registration, causing discrepancies.
- ➲ **Others:** Legacy data, resistance to change, regional infrastructure gaps, procedural and technological issues.

## Way Forward

- ➲ **Conclusive land titling:** Towards transparency and accuracy with NITI Aayog's Model Act on Conclusive Land Tiling(2020).
- ➲ **Legal reforms**: Update laws for property title registration.
- ➲ **Technological integration**: Enhance GIS for better mapping, implement NGDRS.
- ➲ **Training and awareness generation**: Educate personnel and public for effective digital implementation.

# 1.9. Persons with Disability

## Why in the News?

In **Rajive Raturi vs Union of India &Ors**, the Supreme Court directed the Centre to frame mandatory rules under the Rights of Persons with Disabilities (RPwD) Act, 2016 to ensure accessibility in public places and services.

## Key highlights of the Judgment

- ➲ **Background**: Based on a report from NALSAR's Centre for Disability Studies, supporting the social model of disability for inclusion.
- ➲ **Legislative Gap**: Rule 15(1) of the RPWD Act was ruled ultra vires; a single enforceable accessibility framework is required.
- ➲ **Mandatory Accessibility Standards**: Section 40 mandates framing these standards within three months.
- ➲ **Principles of accessibility**: Includes universal design, comprehensive inclusion, assistive tech integration, and stakeholder consultation.
- ➲ **Two-pronged approach**: Accessibility in existing and future infrastructure.

**Status:** As per Census 2011, 2.21% of India's population is disabled: 56% male, 44% female, 69% rural, and 21% elderly (60+ years)

## Challenges faced by Persons with Disability

- ➲ **Attitudinal barriers**: Stereotyping, stigma, prejudice, discrimination.
- ➲ **Social barriers**: Reduced employment, education, and income levels.

➲ **Transportation barriers**: Inaccessible built environments and transport systems.

➲ **Physical barriers**: Structural obstacles in facilities.

➲ **Communication barriers**: For those with hearing, speaking, reading, writing disabilities.

➲ **Policy and programmatic barriers**: Inconvenient scheduling, lack of accessible equipment.

## Initiatives taken for welfare of Persons with Disability

➲ **RPwD Act, 2016:** Implements UNCRPD, defines disability, prohibits discrimination.

➡ Recognizes 21 disability categories, sets 'benchmark disability' at 40%.

➲ **Statutory Bodies:**

➡ **Rehabilitation Council of India (RCI):** Regulates professional training.

➡ **National Trust**: Promotes dignity, rights, and opportunities for specific disabilities.

➲ **Central Public Sector Enterprises**:

➡ **National Divyangjan Finance and Development Corporation**: Supports economic empowerment.

➡ **Artificial Limbs Manufacturing Corporation of India (ALIMCO)**: Manufactures aids and appliances.

➲ **Accessible India Campaign**: Aims for a barrier-free environment in various sectors.

➲ **National Policy for Persons with Disabilities, 2006**: Measures for rights protection and inclusion.

## Steps to be taken

➲ **Enable Access**: Ensure equal participation in mainstream policies and services.

➲ **Invest in Programs**: More support for rehabilitation, training.

➲ **Participatory Approach**: Involve PwDs in policy-making ('Nothing about us, without us').

➲ **Improve Human Resource Capacity**: Incorporate disability and rights in training.

➲ **Funding and Affordability**: Adequate funding for public services.

➲ **Awareness**: Confront negative perceptions, promote inclusivity in education.

➲ **Data Collection**: Better data for understanding barriers.

# 1.10. News in Shorts

## 1.10.1. Grievance Redressal Assessment Index (GRAI)

Recently, **Grievance Redressal Assessment and Index (GRAI) 2023** has been released by DARPG.

### About GRAI

➲ **Conceptualized:** By **Department of Administrative Reforms and Public Grievances** (DARPG)

➡ **Recommended:** By Parliamentary Standing Committee of Ministry of Personnel, Public Grievances and Pensions.

➲ **Index is based on**

➡ **4 Dimensions** (Efficiency, Feedback, Domain and Organizational Commitment)

➡ **11 Indicators** (Assessing Grievance Redressal Mechanism)

➲ **Objective:** Highlight strengths and areas of improvement regarding grievance redressal mechanisms.

➲ **Ranking:**

➡ **First:** Department of Agriculture and Farmers Welfare

➡ **Second:** Department of Posting Group A.

## 1.10.2. Civil Registration System (CRS)

Recently, Union Home Minister launched Civil Registration System (CRS) mobile application.

➲ **Developed:** By **Registrar General and Census Commissioner of India** (RGCCI)

➲ **Objective:** To **reduce the time** required for these registrations seamlessly.

### About CRS

➲ It is a unified system for continuous, mandatory, and permanent documentation of vital events, including births, deaths, and stillbirths, along with their associated details.

➡ **Under which Act:** Registration of Births and Deaths Act, 1969

➲ **Authority:** RGCCI

➲ **7th Schedule List:** Concurrent List

## 1.10.3. Prior Sanction Mandatory to Prosecute Public Servants

Supreme Court ruled that **prior sanction is mandatory to prosecute public servants** in **money laundering cases.**

⮕ Thus, adds **procedural safeguards** to PMLA prosecutions.

### Key Points from 'Directorate of Enforcement vs. Bibhu Prasad Acharya' Case:

⮕ PMLA doesn't override CrPC's sanction requirement (now Section 218, BNSS, 2023).

⮕ Section 197 CrPC protects public servants but allows prosecution with government sanction.

**Civil Servant Protections:** Articles 311 of Constitution, and Public Servants (Inquiries) Act, 1850 provide safeguards.

### About PMLA, 2002:

⮕ **Aims:** to prevent money laundering, confiscate crime proceeds.

⮕ **Implementing Authorities:** Enforcement Directorate (ED) and Financial Intelligence Unit- India (FIU-IND).

⮕ **Defines money laundering** as activities like concealing, possessing, or acquiring proceeds of crime to make illegally earned money appear legitimate.

## 1.10.4. Report on Prisons in India

Recently, President of India released report on **'Prisons in India: Mapping Prison Manuals and Measures for Reformation and Decongestion'.**

⮕ **Crafted:** by the **Supreme Court's (SC) Centre for Research & Planning**

### Key Findings of the Report:

⮕ **Stereotyping:** Sanitation jobs labeled as "menial" in prison manuals.

⮕ **Bail Rejection:** High rejection rates for bail (32.3% Sessions, 16.2% Magisterial).

⮕ **Slow Trials:** Over 52% of cases pending evidence after a year in custody.

⮕ **Other Issues:** Manual scavenging, caste-based work division, and underused open prisons.

### Technology in Prison Reforms

⮕ **E-prisons:** National Informatics Centre's system for prison management.

⮕ **Model Prison and Correctional Services Act, 2023:** Advocates for electronic monitoring for prison leaves.

⮕ **SC's FASTER (Fast and Secured Transmission of Electronic Records) System:** Improves bail order communication from courts to prisons.

⮕ **Interoperable Criminal Justice System (ICJS):** Aims to link courts, police, and prisons to reduce delays in custody.

## 1.10.5. 51st Chief Justice of India (CJI) Appointed

Recently, Justice Sanjiv Khanna took oath as 51st Chief Justice of India (CJI).

⮕ The oath was administered by the President.

### Appointment of CJI:

⮕ The **senior-most judge of the SC**, deemed fit, is traditionally appointed as CJI based **on the outgoing CJI's recommendation.**

  ➔ **Exceptions** occurred in 1964, 1973, and 1977.

⮕ **Process:** Law Minister receives this recommendation, which goes to the PM, who then advises the President.

⮕ **Article 124(2):** SC Judges are appointed by the President and serve until age 65.

### Key Roles of the CJI:

⮕ **First Among Equals:** Ruled by SC in **State of Rajasthan vs Prakash Chand (1997)** that CJI leads the judiciary but holds no superior judicial authority.

⮕ **Master of the Roster:** Exclusive power to form benches for case hearings.

⮕ **Head of Collegium:** Leads judicial appointments and transfers.

⮕ **Officer Appointments:** CJI or delegated judge appoints SC officers under Article 146.

### About the Collegium:

⮕ **Judicial Appointments:** SC and HC judges are recommended by the Collegium and appointed by the President under Articles 124 and 217.

⮕ **Supreme Court:** Collegium includes CJI and four senior SC judges.

⮕ **High Courts:** Involves recommendations from both the HC Collegium (Chief Justice and two senior judges) and SC Collegium (CJI and two senior SC judges).

## 1.10.6. Inter-State Council (ISC)

The Inter-State Council has been reconstituted.

### ISC

⮕ **About:** A forum for **Centre and states to co-ordinate and co-operate** with each other.

⮕ **Genesis: Article 263** through a Presidential Order in **1990,** on recommendation of **Sarkaria Commission.**

⮕ **Composition:**

  ➔ **Chairman:** Prime Minister

  ➔ **Members: CM of all States and UTs** (with Legislative Assembly), **Administrators of UTs** (not having a Legislative Assembly) and **6 Union Cabinet Ministers** (nominated by PM).

## 1.10.7. Aligarh Muslim University's (AMU) Status as Minority Institution

Recently, Supreme Court (SC) overturned its decision which denied AMU's status as a minority institution.

### Background:

➲ **Overturn of 1967 Ruling:** Reversed its 1967 decision that AMU wasn't a minority institution due to its statutory establishment.

➲ **Legal Contests:** An attempt to restore status via the 1981 amendment was voided by the Allahabad High Court in 2006, leading to a 2019 Supreme Court appeal.

➲ **Reconsideration:** The issue is now referred back to a bench for further review under this judgment's guidelines.

### Key Highlights of the Judgment:

➲ **Administration**: Not necessary for minorities to control administration.

➲ **Origin**: Focus on who established the institution.

➲ **Statutory Creation**: Doesn't cancel minority status.

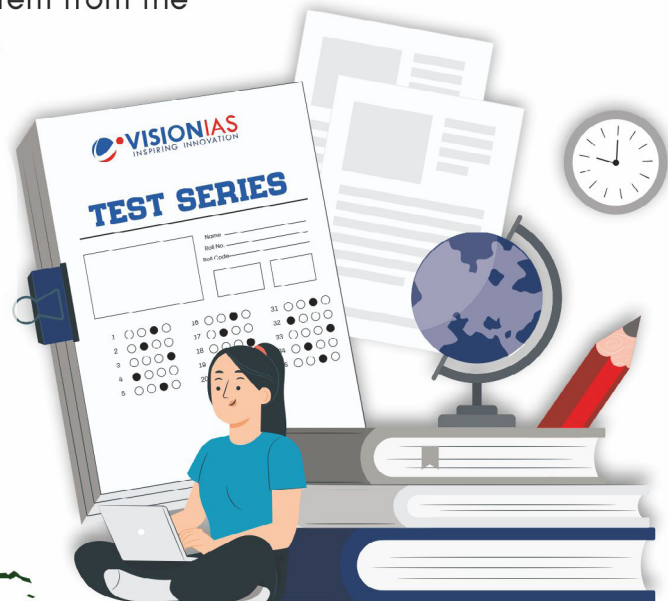➲ **Historical Rights**: Pre-independence institutions have Article 30(1) protections.

### Fundamental Rights under the Constitution:

➲ **Article 30(1):** Allows minorities to manage educational institutions.

➲ **National Commission for Minority Educational Institutions (NCMEI) Act**: Ensures minority educational rights under Article 30(1).

# INTERNATIONAL RELATIONS

## 2.1. India-Middle East-Europe Economic Corridor

### Why in the News?

The India-Middle East-Europe Economic Corridor (IMEC) has experienced both progress and challenges one year after its announcement.

### About IMEC

- Established through a MoU at the **2023 G20 Summit in New Delhi.**
- Aims to develop **multi-modal connectivity infrastructure.**
- **Consists of two corridors:** Eastern (India to Gulf) and Northern (Gulf to Europe).
- Part of the **Partnership for Global Infrastructure and Investment (PGII)**, a counter to China's BRI.
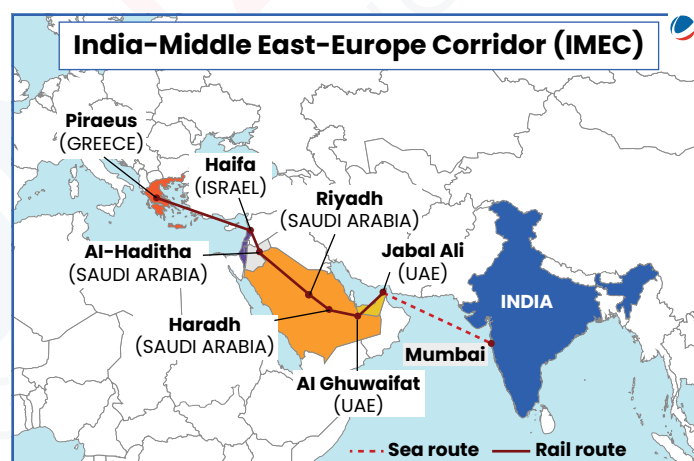
### Status of Implementation

- Progress in UAE-Israel railway network and **Haifa port expansion.**
- **Limited advancement** in clean energy, fiber-optic cables, and energy grid projects.
- Development of trade processes like **Virtual Trade Corridor (VTC).**
- **Open for expansion** to other regional countries.

### Global Significance

- **Provides alternative trade routes** and connectivity options.
- **Promotes economic prosperity** (combined GDP of $47 trillion).
- **Reduces reliance on maritime chokepoints, encourages peace** and **Offers alternative to China's BRI.**

### Significance for India

- **Strengthens Indo-Gulf relations.**
- **Promotes economic growt**h through trade and investment.
- **Reduces shipment time** to Europe by 40% and costs by 30%.
- Advances India's global power aspirations by **connecting EU and GCC.**

### Challenges

- **High costs** due to multi-modal nature and underdeveloped manufacturing
- **Limited geographical coverage** excluding key regional economies



**India-Middle East-Europe Corridor (IMEC)**

Piraeus (GREECE), Haifa (ISRAEL), Riyadh (SAUDI ARABIA), Al-Haditha (SAUDI ARABIA), Jabal Ali (UAE), INDIA, Haradh (SAUDI ARABIA), Mumbai, Al Ghuwaifat (UAE)

--- Sea route    — Rail route



**Other Global Trade Corridors**

**INSTC**
- International North-South Transport Corridor- initiated in 2000 by India, Russia, and Iran.
- 13 member countries- India, Iran, Russia, Azerbaijan, Armenia, Kazakhstan, Kyrgyzstan, Tajikistan, Turkey, Ukraine, Belarus, Oman, and Syria.

**BRI**
- China-led Belt and Road Initiative initiative connecting Asia, Africa, and Europe through land and sea routes.

**TITR**
- Trans-Caspian International Transport Route- Known as the 'Middle Corridor'.
- Launched in 2017, connects China to the EU via Central Asia, Caucasus, and Eastern Europe.

- **Competition** from existing established routes,
- **Regional instability** (Israel-Hamas war, Houthi rebels)
- Lack of clear **financial commitments and Arab-Israel relations** affecting development.

# 2.2. The Group of Twenty (G20) Summit

## Why in the News?

The 18th G20 Summit was held in **Rio de Janeiro, Brazil,** under the theme **Building a Just World and a Sustainable Planet.**

## About G20

- Founded in **1999**, following the **Asian financial crisis.**
- **Annual summit:** G20 Summit held **annually,** under the **leadership of a rotating Presidency**.
- **Members: G7** (France, Canada, Italy, Japan, Germany, United States of America, United Kingdom) **+** African Union, Argentina, Australia, Brazil, Russia, China, European Union, India, Indonesia, Mexico, Saudi Arabia, Turkey, South Korea, South Africa.

## About G20 Rio de Janeiro

- Historic first inclusion of African Union (AU) as full member.
- **Third consecutive Global South host:** Brazil (2024), following Indonesia (2022) and India (2023)
- **Future host:** South Africa, completing a significant Global South troika, Brazil, India & South Africa represents Global South and is part of both IBSA and BRICS.

## Key Takeaways from Rio Leaders' Declaration

- **Social Inclusion and Fight Against Hunger**
  → Launched **Global Alliance against Hunger and Poverty** with 148 members.
  → **Global Coalition for Local and Regional Production for vaccines, diagnostics, and health technologies** also **First-ever G20 commitments**.
- **Sustainable Development and Climate Action:** Established Task Force on Global Mobilization against Climate Change**.**
- **Global Governance and Taxation:** First-time consensus on super-rich taxation.

## G20 at a Crossroads: It reveals limitations as a global governance architecture

- **Representational Issues:** Controversy over "G21" naming after AU inclusion**,** Notable absences such as Russian President, Saudi Crown Prince**,** Diplomatic fragmentation affecting unity.
- **Policy Disagreements:** Argentina's opposition to sustainable development**,** Major economies resisting wealth tax **and** Progressive taxation proposals face resistance.
- **Structural Weaknesses:** Non-binding nature of decisions**,** Absence of formal charter**,** Growing competition from BRICS and SCO, Limited progress on climate goals despite COP29 timing.

## Enhancing the Effectiveness of G20 Summits

- Permanent Secretariat and Clear **Division of Labour between G7 and G20.**
- Empowering Middle-Income Members
- Accountability Framework and **Strategic Coordination with UN Agencies**
- Addressing Global South Priorities: **Advocate for equitable global governance.**

# 2.3. India-Australia Relations

## Why in the news?

Recently, **2nd India-Australia Annual Summit** was held on the sidelines of the G20 Summit in Rio de Janeiro.

## Key Highlights of Summit

- Launch of India-Australia Renewable Energy Partnership (REP).
- Extension of Australia-India Business Exchange (AIBX) programme for four more years.
- Agreement to renew Defence and Security Cooperation in 2025.

## Significance of India-Australia bilateral relations

- **Strategic Partnership:** Signed in 2020, focused on countering China's influence via Quad.
- **Economic and Trade Relations:** Trade exceeded $30 billion in 2023, with potential under ECTA.
- **Critical Minerals**, **Green Energy Cooperation**.
- **Defence Cooperation:** Defence exercises like AUSTRAHIND, AUSINDEX, Pitch Black.

## Issues in India-Australia relations

- Prolonged Comprehensive Economic Cooperation Agreement (CECA)
- Rise of Extremism
- Stalled Nuclear Energy Cooperation
- Visa Issue seen increased visa fees impacting Indian students.

## Way ahead

- Strengthen ECTA, finalize CECA, promote sector investments
- Focus on cybersecurity and maritime security
- Strengthening Cooperation in the Indo-Pacific.

# 2.4. India – Germany Relations

## Why in the news?

Recently, German Chancellor visited India to enhance bilateral relations between India and Germany.

## More on the news

- 2024 celebrates **25 years of the India-Germany strategic partnership** and **50 years of scientific cooperation.**
- The 7th IGC introduced the **'India-Germany Innovation and Technology Partnership Roadmap'.**

## Significance of India-German partnership

- **Trade and Investment:** Germany is India's top European trade partner.
- **Climate and Sustainability:** €10 billion commitment under the Green and Sustainable Development Partnership.
- **Technology and Innovation:** The IGSTC supports numerous projects, including WISER.
- **Defense and Security:** Cooperation under the 2006 agreement.
- **Diversification of Trade Partners.**

## Challenges in Bilateral Relations

- **Trade and Investment Barriers:** Non-tariff barriers and bureaucratic issues.
- **Strategic and Geopolitical Differences** and **Human Rights Criticism.**
- **China's Role:** Germany's economic ties with China limit support for India against China.

## Way Forward

- **Conclude India-EU FTA** to counter China's trade dominance with Germany.
- Increase Germany's **presence in Indo-Pacific region**
- **Collaborate on electric mobility**, green hydrogen, and renewable energy.

## 2.5. India-Italy Relations

### Why in the news?

Prime Ministers of India and Italy held a bilateral meeting on the sidelines of the G20 Summit in Rio de Janeiro, Brazil and announced a **Joint Strategic Action Plan 2025-2029**.

### Key Highlights of India-Italy Joint Strategic Action Plan 2025-2029

- ➲ **Economic Cooperation and Investments**
- ➲ **Connectivity:** Strengthen infrastructure links under IMEC.
- ➲ **Science and Technology,** Defense cooperation and Energy Transition**.**
- ➲ **Space Sector:** Enhance ASI-ISRO collaboration in various space sciences.

### About India – Italy Relations

- ➲ **Historical Connect:** Ancient trade routes and Marco Polo's travels.
- ➲ **Strategic**: Strategic partnership since 2023, with cooperation in key regions.
- ➲ **Defence and Security**, Environment and Climate, People-to-people ties and cooperation in space and blue economy.

### Challenges in India - Italy Relations

- ➲ **China Dependency:** Despite exiting BRI, Italy relies on China for imports.
- ➲ **Low Trade, Trust Issues** and Italy's military sales to Pakistan.

### Way Forward

- ➲ Implement **Joint Strategic Action Plan 2025-2029** in defence and space.
- ➲ **Align India's Act East Policy with EU's Indo-Pacific Strategy**.
- ➲ **Finalize EU-India FTA** and address non-tariff barriers like CBAM.
- ➲ **Leverage multilateral platforms** to address shared challenges such as terrorism, climate change.
- ➲ **Enhance cultural and people-to-people connections** to build trust.

## 2.6. India-Spain Relations

### Why in the news?

Recently, the President of Spain paid a bilateral visit to India along with a business delegation to enhance the bilateral cooperation between both the countries.

### Key outcomes of the visit

- ➲ **Defense manufacturing**: Inauguration of C295 aircraft line in Vadodara.
- ➲ **Investment Facilitation:** Fast Track Mechanism for investments.
- ➲ **Consular Expansion:** New consulates in Bengaluru and Barcelona.
- ➲ **Cultural Cooperation:** Cultural exchange program and 2026 cultural year.

### India–Spain Bilateral Relations

- ➲ **Diplomatic relations:** Enhanced since 1956 under APCI.
- ➲ **Multilateral Cooperation:** focus on India-Middle East-Europe Economic Corridor (IMEEC).
- ➲ **Trade and Economic Relations:** Spain ranks 6th in EU trade with India.
- ➲ **Defence and Security Cooperation:** Passage Exercises (PASSEX) with Indian Navy ships.

# 2.7. News in Shorts

## 2.7.1. First Trilateral Power Transaction

Inauguration of **first trilateral power transaction from Nepal to Bangladesh** through the Indian Grid took place.

➲ It **facilitates power transaction** from Nepal to Bangladesh, through Indian grid with an export of up to 40 MW of power.

## 2.7.2. Chennai-Vladivostok Eastern Maritime Corridor Operational

Also known as the **Eastern Maritime Corridor (EMC),** it is set to boost **maritime ties** between India and Russia.

### About EMC

➲ Envisioned during the **Eastern Economic Forum (2019)** in **Vladivostok, Russia.**

➲ Distance around **10, 300 km and** Passes through the **Sea of Japan, the South China Sea, Malacca Strait, etc.**

### Significance of the Corridor

➲ **Reduced Logistics cost: distance** (by around 40%).

➲ Boost India's maritime sector

➲ Address China's Dominance.



**Chennai-Vladivostok Eastern Maritime Corridor**

## 2.7.3. U.S., Japan and South Korea signed DiGi Framework

Digital Infrastructure Growth Initiative for India Framework (DiGi Framework) seeks to advance cooperation between the United States, Japan, and the Republic of Korea in partnership with **India.**

### Digital Public Infrastructure (DPI) in India

➲ India became the first country to build all three foundational DPIs through **India Stack**: (**Aadhaar**), (**UPI**) and (**Data Empowerment and Protection Architecture**).

➲ **India's Efforts at Globalizing DPIs:** US-India Global Digital Development Partnership, G20 Framework for Systems of DPI, Virtual Global DPI Repository.

## 2.7.4. 2nd India-CARICOM Summit concluded in Guyana

India proposed **seven key pillars** to strengthen ties between India and the **Caribbean Community (CARICOM).**

➲ The first-ever India-CARICOM Summit was held in 2019.

### About CARICOM

➲ A regional organization established in **1973** for **cooperation** in the **Caribbean.**

➲ Consists of 21 countries (fifteen Member States and six Associate Members).

### Significance of CARICOM for India:

➲ **Defence Export**: E.g. Recently, HAL delivered two Dornier 228 planes to Guyana.

➲ **Climate Action Collaboration**: E.g. Suriname joined **International Solar Alliance (ISA).**



**CARICOM**
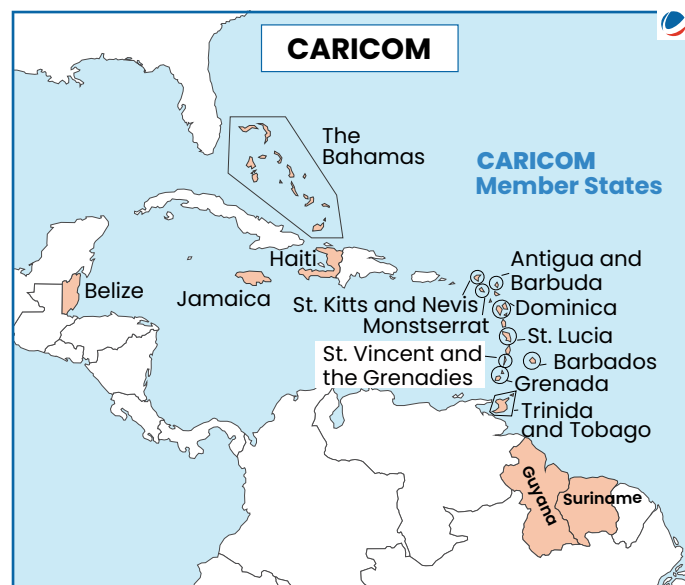
## 2.7.5. ASEAN Defence Ministers' Meeting-Plus (ADDM- Plus)

11th ADMM-Plus held recently at Vientiane, Lao PDR.

### About ADDM-Plus

➲ It comprises of **10 ASEAN Member States and 8 Dialogue Partners** (Australia, China, **India**, Japan, New Zealand, Republic of Korea, Russia and US).

➲ Inaugural ADMM-Plus was convened in **Hanoi, Vietnam in 2010.**

➲ Since 2017, **ADMM-Plus Ministers meet annually**.

## 2.7.6. Indian Chemical Council Wins OPCW-The Hague Award

The 2024 OPCW-The Hague Award was conferred upon the Indian Chemical Council (ICC)

➲ **The Organisation for the Prohibition of Chemical Weapons (OPCW) Hague award** acknowledges compliance with **Chemical Weapon Convention (CWC).**

➲ **This is the first time** that the Award recognises the efforts of a **chemical industry body.**

➲ **Hague Award** was established in 2014 to honor OPCW's contributions to **Chemical Weapons Conventions (CWC)** goals.

### About Chemical Weapon Convention (CWC)

➲ **Genesis:** It came into force in **1997 and** presently has **193 States Parties.**

   → **India is an original signatory** to the Convention.

   → OPCW was awarded the **Nobel Peace Prize in 2013.**

➲ **Implementation in India: National Authority Chemical Weapons Convention (NACWC)**.

   → NACWC was established under the **Chemical Weapons Convention Act, 2000.**

## 2.7.7. Cairo Call to Action

World Urban Forum (WUF) concluded its twelfth edition, held in Cairo (Egypt), with the adoption of **10-point Cairo Call to Action**.

➲ WUF, established in 2001 by UN, is the premier **global conference on sustainable urbanization.**

### Cairo Call to Action calls for

➲ Urgent action to **address the global housing crisis**

➲ Achieving **global goals through local action, representation of local actors** at all levels

➲ **Unlocking finance for cities** and communities, and ensuring **equity and justice**

➲ **Leveraging local and grassroots data** for decision-making.

## 2.7.8. International Cooperative Alliance

**International Cooperative Alliance (ICA) Global Cooperative Conference** is being organised in India for the first time in the 130 year long history of ICA.

➲ Theme **"Cooperatives Build Prosperity for All"**

### About ICA

➲ **Founded: In 1895, London.**

➲ **Members: 306 member organizations** across **105 countries.**

➲ **It serves as the apex body** for the cooperative movement.

## 2.7.9. Triton island

Recent satellite imagery reveals a significant **military buildup by China on Triton Island**.

### About Triton Island

➲ **Located in the Paracels (South China Sea) is also** known as **Xisha Islands in China**.

➲ **controlled by China** but is also **claimed by Vietnam and Taiwan.**

➲ China **took control of the Paracels from South Vietnam**.



Tariton Island

# ECONOMICS

# 3.1. Importance of Large Trade Agreements

## Why in the news?

Recently, the **NITI Aayog CEO** suggested that **India** should be a part of the **large trade agreements**, the **Regional Comprehensive Economic Partnership (RCEP)** and **Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP)**.

## More on the news

- ➲ The **World Bank India Development Update** suggested reforms to reduce trade costs, lower trade barriers and re-strategizing participation in FTAs like the RCEP.
- ➲ On the contrary, the **Global Trade Research Initiative (GTRI)** negated the World Bank's suggestions for India to reconsider joining RCEP.
  - ➡ RCEP negotiations began in **2013**, it was signed in 2020.
  - ➡ **India pulled out** of negotiations in 2019.

## Significance of involvement in large trade agreements

- ➲ Integration into Global Value Chain
- ➲ Benefits the MSME Sector
- ➲ Trade Competitiveness capitalizing on the 'China Plus One' strategy
- ➲ Provides opportunities to **influence institutional policies of regional trade** like trade **liberalization, free movement of people, e-commerce** etc.

## Challenges

- ➲ **Trade Imbalance:** RCEP favors China, risking India's $85 billion trade deficit with China (FY2024).
- ➲ **Marginal Benefits:** India already has FTAs with 13 of 15 RCEP members, excluding New Zealand and China.
- ➲ **Divergent Approaches:** Trade agreements conflicts with India's taxation and investor protection approaches.
- ➲ **Stringent Competition:** Tariff reductions enable cheap imports, threatening industries like dairy.
- ➲ **Hinder Indigenous Enterprise:** Stringent provisions affect entrepreneurship, labor conditions, and environmental protection.



## Way forward

- ➲ **Revisiting FTAs:** Conduct inclusive discussions on cost-benefit analysis before joining large trade agreements.
- ➲ **Enhancing Competitiveness:** Reduce non-tariff barriers and diversify trade to integrate with Global Value Chains.
- ➲ **Continued Negotiations:** Secure favorable trade terms.
- ➲ **Prioritize Goals:** Focus on Atmanirbhar Bharat, manufacturing hub aspirations, and strategic autonomy.
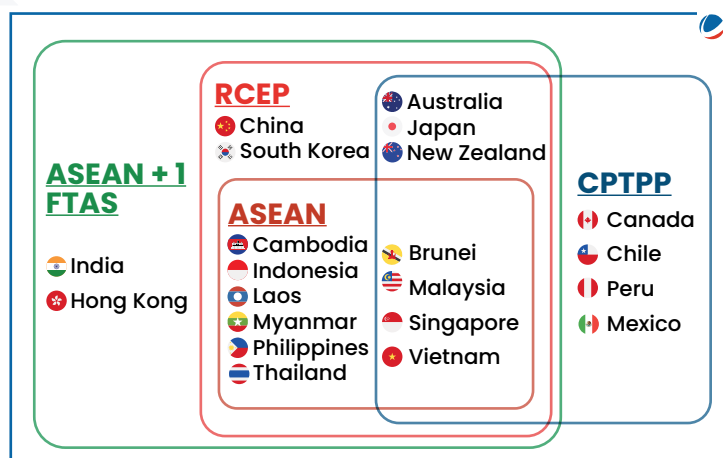
# 3.2. Direct Benefit Transfer (DBT)

## Why in the news?

As per a recent report by the State Bank of India, the **Direct Benefit Transfer (DBT) amount to women through various schemes has crossed ₹ 2 trillion mark across multiple states**.

## More about news

- Across eight states an estimated ₹ 2.11 lakh crore is being**.**
- Some of the schemes mentioned in the report: **'Gruha Lakshmi' of Karnataka, 'Mukhya Mantri Majhi Ladki Bahin Yojana' of Maharashtra, 'Mukhyamantri Ladli Behna Yojana' of Madhya Pradesh 'Subhadra Yojana' of Odisha**.

## About Direct Benefit Transfer (DBT)

- **Launched**: 2013.
- **Objective**: To ensure **reduction in leakages, faster delivery and elimination of delays.**
- **Scope of Support: Cash Transfers** and **In-Kind Support**.
- **Mechanism** (build on **India Stack**): **Public Financial Management System (PFMS)**, **JAM Trinity (Jan Dhan-Aadhaar-Mobile), Banking Infrastructure** Utilizes **Business Correspondents, Payment Banks** and **UPI Integration**s.

## How DBT ecosystem has transformed social welfare in India?

- **Effective implementation of schemes**: Since 2016, DBT has delivered over **450 schemes**.
- **During COVID-19**: Provided ₹27,442 crore to 11.42 crore beneficiaries.
- **Financial inclusion:** To enable DBT, over **53.13 crores bank accounts** have been opened.
- **Transparency and accountability**: Aadhaar-seeding eliminated over 90 million fake beneficiaries.
- **Socio-economic impact:** Promotes **social mobility,** Strengthened agricultural economies**, Enhanced women's economic independence**.
- **International recognition:** The **IMF praised India's DBT scheme as a "logistical marvel,**".

## Concerns and Criticisms

- **Over-reliance on efficiency:** Fails to address systemic issues like **education and healthcare**.
- **Nudging the poor towards private alternatives**.
- **Limited Accessibility:** Due to geographical Barriers and lack of Financial Literacy.
- **Identification of Beneficiaries:** Inclusion and exclusion errors in Enrollment.

## Way Forward

- With **DBT 2.0,** expand coverage and With **DBT 3.0,** building a **national-level social registry**
- **Targeted Outreach** and **Accessibility**
- **Single-window grievance redressal system**.

# 3.3 Rural Non-Farm Economy (RNFE)

## Why in the News?

The **"State of Rural Youth Employment 2024" report** reveals most rural youth see agriculture as unattractive and prefer non-farm jobs, including small businesses.

## About Rural Non-Farm Economy (RNFE)

- RNFE include value chain activities, such as **agro-processing, transport etc.**
- Although, agriculture has traditionally dominated the rural economy, but **two-thirds of rural income now comes from non-agricultural activities i.e., RNFE.**

## Significance of RNFE:

- Reducing disguised unemployment, Tilting wage dynamics in favour of labour, Income security & poverty reduction, Reduces migration, rural industrialization.

## Key Determinants of RNFE in India

- ⮌ **Government Policies: Dr. Ashok Dalwai Committee** recommended shifting surplus farm labor to non-farm jobs**.**
- ⮌ **Education and Skills and Family Size:** Larger families earn less from farm activities.
- ⮌ **Impact of Climate Change** and **Public Spending and Diversification**.
- ⮌ **Infrastructure Development** especially on infrastructure, promotes construction employment.

## Challenges in Rural Non-Farm Economy (RNFE) in India

- ⮌ **Limited Access to Credit** and **Low Worker Productivity**.
- ⮌ **Informal and Volatile Employment:** RNFE jobs often provide: Low and unstable incomes.
- ⮌ **Declining Income Levels of** rural non-agricultural households.

## Initiatives

- ⮌ **Formal Institutional Arrangements like** Khadi and Village Industries Commission (KVIC),
- ⮌ **Promotion of Traditional industries through** Scheme of Fund for Regeneration of Traditional Industries (SFURTI).
- ⮌ **Credit needs of small enterprises by** SHG Bank linkage programme under NABARD
- ⮌ **Development of skills through** Deen Dayal Upadhyaya Grameen Kaushalya Yojana (DDU-GKY), etc.
- ⮌ **Infrastructure development:** Pradhan Mantri Gramin Digital Saksharta Abhiyan, etc.

## Way ahead to promote sustainable RNFE:

- ⮌ Expand Credit Access, Diversify Employment Opportunities, Encourage Value Addition, Regulate Informal Employment, Cluster-Based Development.

# 3.4. Food Corporation of India (FCI)

## Why in the news?

Cabinet Committee on Economic Affairs (CCEA) has approved ₹10,700 crore equity infusion for FCI's working capital for 2024-25.

## More on news

- ⮌ The current equity infusion will: **Strengthens FCI's operational capacity** and **Reduces reliance on short-term borrowings**.

## What is Food Corporation of India?

- ⮌ **About**: FCI is **Public Sector Undertaking** under the **Ministry of Consumer Affairs, Food & Public Distribution**.
- ⮌ **Genesis:** FCI is a **statutory body** established under the **Food Corporation's Act 1964.**
- ⮌ **Finance:** FCI started its journey with an authorised capital of **Rs. 100 Crores and equity of Rs. 4 Crores**.
- ⮌ **Key objectives of FCI:**
  - ➡ Effective price support operations for safeguarding the interests of the farmers,
  - ➡ Distribution of food grains throughout the country for public distribution system (PDS)
  - ➡ Maintaining satisfactory level of operational and buffer stocks of foodgrains to ensure National Food Security.

## Working mechanism of Food Corporation of India (FCI)

- ⮌ **The FCI, along with state agencies, procures food grains** to ensure Minimum Support Price.
  - ➡ **Two types of procurement mechanisms:** Direct Procurement and Decentralized Procurement (DCP).

## Challenges faced by FCI

- ⮌ Refusal of procurement at centres due to technical reasons (e.g., moisture content) leading to distress sales
- ⮌ Limited adoption of DCP Scheme
- ⮌ Ministries and states owe FCI more than ₹2000 crore, adding financial strain
- ⮌ Damaged Food Grains due to pest attacks, rain, etc.

## Initiatives taken to improve the functioning of FCI

- ⮌ **Direct Benefit Transfer (DBT) Initiative** such as 'One Nation, One MSP'.
- ⮌ **Modernized Storage Solutions**: scientifically managed storage depots and silos.

- **Steel Silos:** Currently, 22.75 LMT of steel silos are operational, with an additional 41 LMT in development.
- **Digital reforms** such as **AI-Enabled Video Surveillance, ANNA DARPAN portal** etc.

# 3.5. News in Shorts

## 3.5.1. RBI Issues Framework for Reclassification of FPI to FDI

Under current regulations, **foreign portfolio investment (FPIs)** can hold a **maximum of 10%** of an Indian company's total **paid-up equity capital** (amount of money that a company receives from shareholders in exchange for shares).

- **Exceeding this 10% cap (**prescribed limit of FPI**)** had previously left FPIs with **two choices: Divesting** (selling off) the **surplus shares** or **reclassifying** them **as Foreign Direct Investment (FDI).**

### RBI'S New Operational Framework on reclassification of FPI to FDI

- The facility of reclassification **shall not be permitted in sectors prohibited for FDI. E.g., Chit funds, gambling, etc.**
- FPI investments **require government approvals.**
- FPI reclassification will be guided **by Foreign Exchange Management (Mode of Payment and Reporting of Non-Debt Instruments) Regulations, 2019.**

## 3.5.2. Domestic Systemically Important Banks (D-SIBs)

Reserve Bank of India (RBI) released 2024 list of Domestic Systemically Important Banks (D-SIBs)

### About D-SIBs

- **D-SIBs** are systemically important due to their **size, cross-jurisdictional activities, complexity** and **lack of substitute** and **interconnection.**

### Declaration of D-SIBs

- Based on the **D-SIBs Framework** of **RBI (2014).**
  - ➡ Framework is based on **Basel Committee on Banking Supervision's (BCBS's)** framework.
- Banks are placed in **5 buckets** on the basis of **Additional Common Equity Tier 1 (CET1)** requirement as a percentage of **Risk Weighted Assets (RWAs).**
  - ➡ **Bucket 1** banks have to maintain lowest **CET1** and **Bucket 5 banks** have to maintain highest**.**
- In case a **foreign bank** having branch presence in India is a **Global Systemically Important Bank (G-SIB)**, it has to maintain additional CET1 capital surcharge.
  - ➡ **Financial Stability Board (FSB)** releases the list of **G-SIBs.**

## 3.5.3. Venture Capital Fund for Space Sector

Union Cabinet recently approved **establishment of Rs.1,000 crore Venture Capital Fund** for Space Sector under aegis of Indian National Space Promotion and Authorisation Centre (IN-SPACe).

- IN-SPACe is a **single-window, independent, nodal agency** that functions as an autonomous agency in the Department of Space (DOS).
  - ➡ It acts as an **interface between ISRO and Non-Governmental Entities (NGEs)** to facilitate private sector participation.

### About VC Fund for Space sector:

- The proposed fund will **support startups across the entire space supply chain-upstream, midstream, and downstream.**
- **Investment per startup**: Range from Rs 10-60 crore.
- The Funds aims to **strategically position India as one of the leading space economies by Capital infusion, Accelerate private space industry's growth, Drive advancements.**

### India's Space sector

- India (ranks 5th) constitutes 2-3% of the global space economy.
- It's currently valued at $8.4 billion, with a target to reach $44 billion by 2033).

## 3.5.4. Scheme for Medical Device Industry

Scheme for Strengthening the Medical Device Industry launched by the **Ministry of Chemicals and Fertilizers.**

- It is a comprehensive scheme which targets critical areas of the medical device industry.
- India's medical device **market is** expected to **grow to $30 billion by 2030.**
- **Components of the Scheme**
  - ➡ Common Facilities for Medical Devices Clusters,
  - ➡ Marginal Investment Scheme for Reducing Import Dependence,
  - ➡ Capacity Building and Skill Development for Medical Devices,
  - ➡ Medical Device Clinical Studies Support Scheme,
  - ➡ Medical Device Promotion Scheme.

### Challenges faced by the Medical device Industry

- **Lack of infrastructures** like R&D labs, design and testing center
- **High import dependence** for high-end devices, low capital investment, inverted duty structure.

## 3.5.5. 'The State of Food and Agriculture 2024' report released by FAO

Report emphasizes on **value-driven transformation of agrifood systems** and builds on the estimates of the previous edition on global **hidden costs** of **agrifood systems** (journey of food from farm to table).

### Key findings of the report

- **Hidden Costs:** Dominated by health hidden costs linked to non-communicable diseases.
- **Other contributing factors include:** Social costs; environmental costs.

### Major Recommendations on transforming the Agrifood value chains:

- In industrial agrifood systems (Long value-chains with high urbanization)
- In traditional agrifood systems (Short value-chains with low urbanization).

## 3.5.6. 21st Livestock Census

**The Union Minister of Fisheries, Animal Husbandry and Dairying** launched **21st Livestock.**

### About 21st Livestock Census

- **Schedule:** To be conducted during October 2024-February, 2025.
- **Key Features**
  - **Fully digitized** (similar to **20th census**)
  - Data on **16 species of livestocks**
  - **Covers data on pastoralists** for the **first time.**
- Livestock census has been conducted **every five years since** 1919 (last being in 2019).

## 3.5.7. World Organisation for Animal Health (WOAH)

Indian Council of Agricultural Research-National Research Centre on Equines (**ICAR-NRC Equine**) in Haryana has been granted **WOAH Reference Laboratory status**.

- This recognition is specifically for its expertise in **Equine Piroplasmosis disease.**
  - Equine Piroplasmosis is caused by **tick-borne protozoan parasites**, affects horses, donkeys, mules, and zebras.

### About WOAH

- An **intergovernmental organization** founded in 1924 with 183 members including India.
- **HQ**: Paris, France.

## 3.5.8. Nano fertilizers

Indian Scientists have developed a **nanomaterial coating** (made of nanoclay) **for muriate of potash (MoP).** MoP serves **80% of potassium fertilizer needs.**

### About Nano Fertilizers

- Nano fertilizers are **nutrients that are encapsulated or coated within nanomaterial** (measuring 100 nanometres or less).
  - It enables **controlled release and its subsequent** into the soil.

## 3.5.9. Mormugao Port Authority

**Mormugao Port Authority** has been recognized globally as an **incentive provider** on the **Environmental Ship Index (ESI) platform.**

- ESI is published by the **International Association of Ports and Harbors (IAPH)** since **2011.**

### About Mormugao Port

- It's a **major port** of India located in **Goa** and **India's first port to introduce Green Ship Incentives (Harit Shrey scheme)** through the ESI.
  - **Harit Shrey scheme (2023)**: Incentivises ships with favourable ESI scores; and its aim towards **decarbonization and green shipping.**

## 3.5.10. Bihta Dry Port

Bihar's first dry port also known as **inland container depot** (ICD) inaugurated in **Bihta near Patna.**

- **Significance of Bihta Dry Port:** It boost exports, Improved Logistics, Benefits to adjoining states.
  - It is connected by rail to major gateway.

## 3.5.11. World Intellectual Property Indicators 2024 report

World Intellectual Property Indicators 2024 report released by the **World Intellectual Property Organization (WIPO).**

- According to report, India experienced **significant growth** in intellectual property filings**, with patents filings doubling between 2018 and 2023.**

### Other Key Findings related to India:

- **Patents:** India is **ranked 6th globally** with 64,500 Patent Filings.
- **Trademarks:** India's IP office hold the **second highest of active registrations globally**.
- **Industrial Design Filing:** Ranked **10th globally**.

## Regulation of Patents

- **Global:** World Intellectual Property Organization (WIPO), WTO TRIPS Agreement 1994, Conventions such as Patent Cooperation Treaty 1970, Budapest Treaty 1977 etc.
- **India:** The Patents Act, 1970 and Amendment of act in 2005.

## 3.5.12. PAN (Permanent Account Number) 2.0

The Cabinet Committee on Economic Affairs (CCEA) approved **PAN 2.0 Project** of the Income Tax (IT) Department.

### About PAN 2.0 Project

- An **e-Governance initiative** for re-engineering the business processes of taxpayer registration services through **technology driven transformation.**
  - PAN is **a ten-digit unique alphanumeric number** issued by the IT Department
  - **Issuing Agencies:** Protean (formerly known as NSDL e-governance) and UTI Infrastructure Technology and Services Ltd (UTIITSL).

## 3.5.13. Uniform Protection Protocol

**Central Electricity Authority approves the Uniform Protection Protocol** for users of Indian Grid for implementation on Pan India basis.

### About Uniform Protection Protocol

- **Aim:** To ensure Grid stability, reliability, security and support India's vision for integration of 450 GW Renewable Energy into the National Grid by 2030.
- It addresses the **protection requirements** for thermal and hydro generating units etc.

---

# ALL INDIA MAINS TEST SERIES

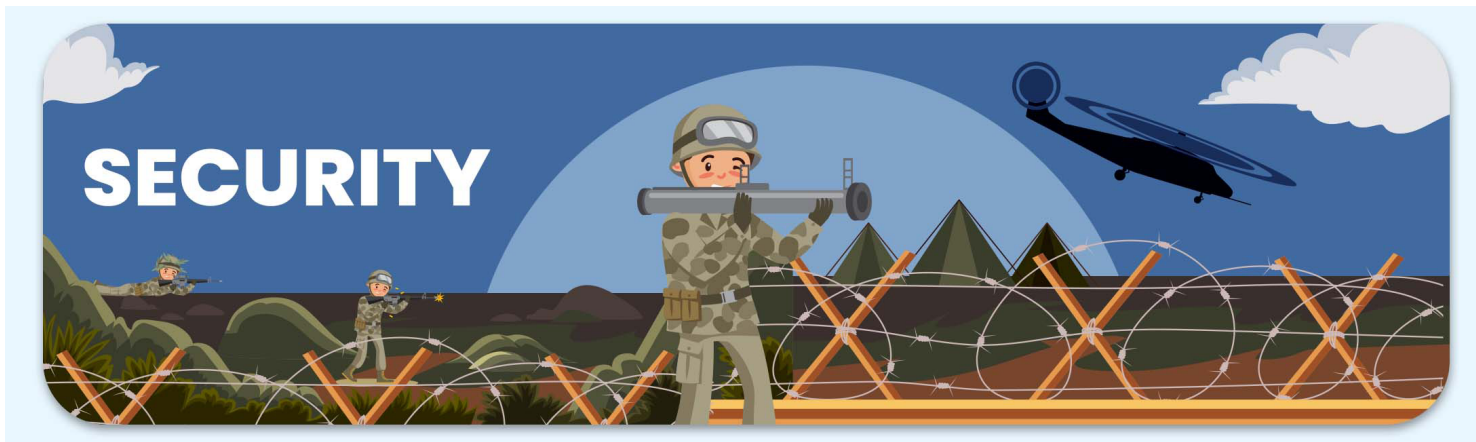Get the Benefit of Innovative Assessment System from the leader in the Test Series Program

- **General Studies** (हिन्दी माध्यम में भी उपलब्ध)
- **Essay** (हिन्दी माध्यम में भी उपलब्ध)
- **Philosophy** (हिन्दी माध्यम में भी उपलब्ध)
- **Sociology**
- **Political Science & IR**
- **Anthropology**
- **Geography**

**ENGLISH MEDIUM 2025: 22 DECEMBER**
**हिन्दी माध्यम 2025: 22 दिसंबर**

Scan **QR code** for instant personalized mentoring

**SECURITY**

# 4.1. Indian Coast Guard

## Why in the News?

Parliamentary standing committee reviewed ICG's role in coastal security.

## About the Indian Coast Guard

- ➲ **Established: August 1978** under **Coast Guard Act 1978**
- ➲ **Role: National Coordinating Agency** for Maritime Law Enforcement, Search & Rescue, and Marine Pollution Response
- ➲ Under **Ministry of Defence**
- ➲ It is part of a **multi-tiered system for maritime security:**
  - ➡ **High Seas/EEZ Surveillance**: Indian Navy and Coast Guard.
  - ➡ **Territorial Waters Surveillance**: Indian Coast Guard.
  - ➡ **Coastal Patrolling (Shallow Waters)**: State Marine Police, within 12 nautical miles.

## Key Functions

- ➲ Maritime law enforcement
- ➲ Protection of offshore terminals and artificial islands
- ➲ Safety of life and property at sea
- ➲ Inter-agency coordination for anti-smuggling
- ➲ Marine environment protection

## Initiatives taken to strengthen Indian Coast Guard

- ➲ ICG participates and conducts exercises like **SAREX-2024, Sagar Kavach.**
- ➲ Designated as coastal security authority in territorial waters (2009)
- ➲ Director General of ICG serves as Commander Coastal Command for Central-State coordination

# 4.2. News in Shorts

## 4.2.1. AFSPA

Recently MHA **reimposed Armed Forces (Special Powers) Act (AFSPA) 1958** in "disturbed areas" of **Manipur** including Jiribam

### Key highlight of AFSPA

- ➲ **Disturbed Areas**: Declared by the Governor, Administrator, or Centre for restoring order.
- ➲ **Special Powers**: Armed forces can fire, arrest, and search without warrants.
- ➲ **Immunity**: Legal action against armed forces requires Central Government sanction.
- ➲ **Arrested Persons**: Must be handed over to police promptly.
- ➲ **Applicability**: Parts of Assam, Manipur, Nagaland, Arunachal Pradesh,
  - ➡ J&K has **separate AFSPA 1990**
- ➲ **Concern**: Abuse of powers and human rights violations.

## Key Supreme Court Judgements:

- **Naga People's Movement (1997)**: Death power under AFSPA must be specific.
- **Extra Judicial Execution (2016)**: Armed forces not immune from investigation for excesses.

## Committee Recommendations:

- **Jeevan Reddy (2004):** Scrap AFSPA
- **Santosh Hegde (2013):** Six-monthly review
- **Justice Verma (2013):** Regular law for sexual violence cases

## 4.2.2. 'Adaptive Defense' Strategy

**Recently** Raksha Mantri emphasized need due to emerging technologies reshaping warfare

## Adaptive Defence:

- **Definition**: A strategy where military systems evolve to counter emerging threats.
- **Principle**: Anticipate, adapt, and innovate in unpredictable situations.
- **Capabilities**: Situational awareness, flexibility, resilience, agility, and tech integration.
- **Significance**: Addresses both traditional and non-traditional security challenges.

## Future Warfare Technologies:

- **Information warfare (IW):** Network-based operations for information advantage. **E.g.,** Cyberwarfare.
- **Lethal Autonomous weapon systems (LAWS)**: Autonomous weapon systems
- **Space weapons:** Lasers and electromagnetic railguns
- **Synthetic biology:** Gene-editing, bio-malware threats

## 4.2.3. Digital Arrest

Recently **CERT-In** issued **advisory** on **preventing digital arrest scams.**

## What is Digital Arrest?

- **Concept:** An online scam where fraudsters impersonate law enforcement to falsely accuse victims and extort money.
- **Loss**: Rs 120.30 crore (Jan-April 2024).
- **Fraud Sources**: Myanmar, Laos, Cambodia.
- **Reasons for Rise**: Increased digital transactions, lack of security awareness, and advanced techniques like AI voices and simulated video calls.

## Government Initiatives to Tackle Digital Arrest:

- **Indian Cyber Crime Coordination Centre**: set up by the **Ministry of Home Affairs.**
- **Cyber Fraud Mitigation Centre**: Collaboration with banks, telecom providers, and payment aggregators to combat cybercrime.
- **Spoofed Call Blocking System**: Mechanism to block fake calls showing Indian numbers.
- **Samanvaya Platform**: Analyzes interstate linkages of cybercrimes.
- **National Cyber Crime Reporting Portal**: Allows the public to report cybercrime incidents.
- **CERT-In Best Practices**: Recommendations like verifying caller identity and avoiding suspicious links or apps.

## 4.2.4. Asset Recovery Interagency Network-Asia Pacific (ARIN-AP)

**Recently India (Directorate of Enforcement) included in ARIN-AP Steering Committee**

## Key Updates:

- India to help in decision-making and administration
- Will assume presidency and host **Annual General Meeting in 2026**

## About ARIN-AP:

- Multi-agency network for tackling crime proceeds in Asia-Pacific
- **Part of Global CARIN Network** (informal law enforcement network)
- **Membership: 28 jurisdictions (including India) + 9 observers**
- **Focus:** Asset tracing, freezing, seizure, and confiscation

## 4.2.5. India's fourth Nuclear Submarine

**Recently** India launched its **fourth nuclear-powered ballistic missile submarine, S4*.**

## Current Fleet Status:

- Operational: **INS Arihant, INS Arighaat (S3)**
- In sea trials: **Aridhman (S4)**
- Just launched: **S4***

## *Key Features of S4:*

- 75% indigenous content
- Equipped with **K-4 ballistic missiles (3,500 km range)**
- Part of **nuclear deterrence strategy**
- **Global Context:** Only six nations operate SSBNs: US, Russia, China, UK, France, and India

## 4.2.6. India's First Long Range Hypersonic Missile

DRDO successfully tested its **first long-range hypersonic missile** (1500+ km range) off Odisha coast, **joining US, Russia & China in this capability.**

### Key Technologies:

- ➲ **Scramjet propulsion:** Air-breathing engine for hypersonic speeds
- ➲ Advanced aerodynamics for maneuverability
- ➲ Thermo-structural protection for extreme temperatures
- ➲ Separation mechanism at hypersonic speeds

### Hypersonic Missiles

- ➲ Speed: Exceeds **Mach 5 (5x speed of sound)**
  - ➡ **Speed Categories:**
    - ◇ Mach 1 = Speed of sound
    - ◇ Mach 1-5 = Supersonic speeds
    - ◇ Above Mach 5 = Hypersonic speeds
- ➲ Mid-flight maneuverability
- ➲ Difficult detection and interception

### India's Missile Arsenal:

- ➲ Inducted: **AKASH** (SAM), **BRAHMOS** (Cruise)
- ➲ Near Induction: **NAG** (Anti-Tank), **ASTRA** (Air-to-Air), **Agni** (Ballistic)

## 4.2.7. Long Range Land Attack Cruise Missile (LRLACM)

### Recently LRLACM Flight-Test by DRDO

- ➲ **Successor**: Nirbhay cruise missile
- ➲ **Range**: 1,000 km
- ➲ **Launch Platforms**: Mobile ground launchers and ships
- ➲ **Capabilities**: Long-range strikes, manoeuvres at multiple altitudes and speeds

## 4.2.8. Pantsir Air Defense system (PADS)

**Bharat Dynamics Limited** signed MoU with **Russia's Rosoboronexport for Pantsir variants**

### About PADS

- ➲ **Type:** Mobile, **short-range air defense**
- ➲ **Dual armament:** Missiles and guns
- ➲ **Protection**: Military, industrial, and administrative facilities
- ➲ **Targets:** Aircraft, helicopters, cruise missiles, precision weapons

## 4.2.9. Exercise Antariksha Abhyas 2024

**India's 1st Space Defense Exercise** Antariksha Abhyas 2024 held in **Delhi.**

### Key Aspects:

- ➲ Conducted by: **Defense Space Agency (DSA)**
- ➲ **Purpose:** Integrate space capabilities with military operations and secure space assets

### Space Defense Framework:

- ➲ **Threat Categories:**
  - ➡ Military: Cyber-attacks, ASAT weapons, proximity operations
  - ➡ Non-Military: Space debris, radiation affecting satellites
- ➲ **Protection Areas:**
  - ➡ Asset Security: Counter kinetic, energy, jamming, cyber threats
  - ➡ Surveillance: High-resolution imaging, radar systems
  - ➡ Border Security & Weapons Systems

### Challenges:

- ➲ Limited private sector investment
- ➲ Absence of national defense space strategy
- ➲ Poor stakeholder collaboration
- ➲ Lengthy procurement processes

### Recommendations:

- ➲ Passing draft **new Remote Sensing Policy** and the **new Satcom Policy.**
- ➲ Streamline defense procurement
- ➲ Enhance DSA-DSRO-ISRO collaboration
- ➲ Integrate satellite communications with military planning

### Steps taken by India for Space defense

- ➲ **Creation of Integrated Space Cell**: within headquarters of Integrated Defence Staff in 2010.
- ➲ **Defence Space Agency (DSA)** created in 2018.
- ➲ **Defence Space Research Organisation (DSRO)** in 2019.
- ➲ Test of an Anti-satellite (ASAT) missile-**Mission Shakti in 2019.**

## 4.2.10. Exercises in News

| Exercise | Details |
|---|---|
| MAHASAGAR | ⮑ Third **Edition of** MAHASAGAR **(Maritime Heads for Active Security And Growth for All in Region)** by the Indian Navy.<br>⮑ **Participants**: Bangladesh, Comoros, Kenya, Madagascar, Maldives, Mauritius, Mozambique, Seychelles, Sri Lanka, Tanzania. |
| Garud Shakti | ⮑ **India-Indonesia Joint Exercise** |
| VINBAX 2024 | ⮑ **Vietnam-India Bilateral Exercise** |
| SIMBEX- 2024 | ⮑ **Singapore India Maritime Bilateral Exercise (SIMBEX).** |
| SAREX-24 | ⮑ **11th Edition of National Maritime Search and Rescue Exercises & Workshop (SAREX-24)**<br>⮑ **Organizer**: Indian Coast Guard under the NMSAR Board. |
| Poorvi Prahar | ⮑ **Tri-services domestic exercise** |
| AUSTRAHIND | ⮑ India and Australia |
| Sanyukt Vimochan 2024 | ⮑ **Location**: Gujarat, India<br>⮑ **Type**: Multilateral Annual Joint **Humanitarian Assistance and Disaster Relief (HADR) Exercise**<br>⮑ **Participants**: Indian Army and nine friendly foreign countries from the Gulf Cooperation Council, Indian Ocean Region, and Southeast Asia |
| SEA VIGIL 24 | ⮑ 4th edition<br>⮑ **Pan-India coastal defense exercise**<br>⮑ Conducted by **Indian Navy.** |

## 4.2.11. Operation Sagar Manthan

**Seizure**: NCB seized 700 kg of **Methamphetamine** as part of **Operation Sagar-Manthan.**

### Operation Sagar-Manthan

- ⮑ **Launched by**: Narcotics Control Bureau (NCB), in coordination with the Indian Navy and Indian Coast Guard
- ⮑ **Objective**:
  - ➡ Target drug trafficking through maritime routes
  - ➡ Counter threats to national security
  - ➡ Contribute to the vision of a **Nasha Mukt Bharat** by 2047

# MONTHLY CURRENT AFFAIRS REVISION 2025

## GS PRELIMS MAINS

| ENGLISH MEDIUM | 21 DECEMBER 5 PM |
| हिन्दी माध्यम | 28 DECEMBER 5 PM |

**LIVE / ONLINE CLASSES AVAILABLE**

Scan the QR CODE to download VISION IAS app

- Detailed topic-wise up-to-date contextual understanding of all current issues.
- Opportunities for discussion and debate through "Talk to expert" and during offline presentations in class.
- Assessment of your understanding through MCQs and Mains oriented questions after each topic.
- Two to three classes will be held every fortnight.
- The Course plan (60 classes) covers important current issues from standard sources like The Hindu, Indian Express, Business Standard, PIB, PRS, AIR, RS/LSTV, Yojana etc.
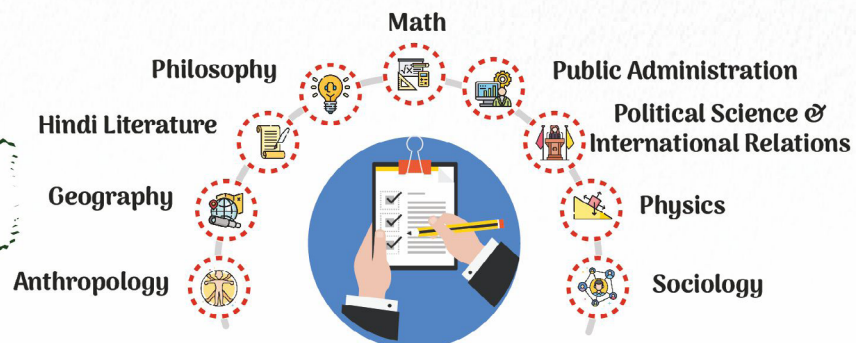
# ALL INDIA MAINS TEST SERIES

## GS Mains, Essay & Ethics

*Starts:* **22 DEC**

# OPTIONAL TEST SERIES

*Starts:* **22 DEC**

Math
Philosophy
Hindi Literature
Geography
Anthropology
Public Administration
Political Science & International Relations
Physics
Sociology

# ENVIRONMENT

# 5.1. UNFCCC COP29

## Why in the News?

COP29 in Baku, Azerbaijan, ended with the Baku Climate Unity Pact and various agreements.

## About Conference of the Parties (COP):

COP is the UNFCCC's highest decision-making body, where UNFCCC members annually review climate progress and negotiate commitments. COP30 will occur in Belém, Brazil, in November 2025.

## Key outcomes of COP29

| Theme | Details |
|---|---|
| Baku Finance Goal or New Collective Quantified Goal on Climate Finance (NCQG) | Triple the climate finance to USD 300 billion annually by 2035; mobilize $1.3 trillion per year. |
| Carbon Markets | Article 6 provides mechanisms for trading in carbon markets. |
| Transparency | Launched Biennial Transparency Reports (BTRs), Baku Declaration, and Global Transparency Platform. |
| Adaptation | Introduced Baku Adaptation Road Map and support for National Adaptation Plans (NAPs) for LDCs. |
| Indigenous Peoples and Communities | Adopted Baku Workplan for knowledge exchange, capacity building, and traditional knowledge use. |
| Gender and Climate Change | Extended the Lima Work Programme on Gender for an additional 10 years. |

## Issues persisting in climate negotiations

- ➲ **Inadequate climate finance:** NCQG falls short projected investment of **$2.3–2.5 trillion in emerging markets and developing countries** (EMDCs) other than China.
- ➲ **Deadlock on Mitigation Work Programme (MWP):** Divisions persist over fossil fuels' role, with the Global Stocktake assessment becoming a point of controversy in measuring climate progress.
- ➲ **Limited progress on climate targets:** Countries show stagnating ambition and action since initial NDCs, remaining off-track from meeting climate goals.
- ➲ **Other Issues:**
  - ➔ **Slow pace of operationalizing** the **Loss and Damage Fund (LDF)** .
  - ➔ Next round of NDCs has been **postponed** ahead of COP30.

## Way Forward

➲ **Enhance Climate Diplomacy**.

➲ **CBDR-RC:** Decisions should take into consideration of **Common but Differentiated Responsibilities and Respective Capabilities (CBDR-RC)**.

➲ **Prompt and effective operationalization of LDF**

## 5.1.1. Key Initiatives/Declarations Launched at COP29

| Initiative | Launched by | Aim and Other Details |
|---|---|---|
| **Reducing Methane from Organic Waste Declaration** | UNEP-convened Climate and Clean Air Coalition (CCAC) | Set sectoral targets to reduce methane emissions from organic waste. Signed by 35 countries (excluding India). |
| **Global Energy Storage and Grids Pledge** | COP29 Presidency | Targets for 2030: Deploying 1,500 GW of energy storage and refurbishing 25 million km of grid globally. |
| **Green Energy Pledge** | COP29 Presidency with UNIDO, UNECE, and UNESCAP | Promoting green energy zones for tackling climate change. |
| **Hydrogen Declaration** | COP29 Presidency | Accelerate hydrogen production; non-legally binding initiative. |
| **Baku Harmoniya Climate Initiative for Farmers** | COP29 Presidency with FAO | Acknowledges farmers' role in climate action; hosted by FAO under Agriculture for Sustainable Transformation Partnership (FAST). Supports agri-food systems. |
| **Climate Finance Action Fund (CFAF)** | Azerbaijan | Supports climate projects in developing countries to meet NDCs and address natural disaster consequences. |
| **Baku Initiative for Climate Finance, Investment, and Trade (BICFIT)** | COP29 Presidency, co-facilitated by UNCTAD and UNDP | Accelerates decarbonization through investment and trade while utilizing $1 billion fundraising pool. |
| **Global Matchmaking Platform (GMP)** | UNIDO and the Climate Club | Connects industries in developed and developing countries for innovative climate finance solutions. |
| **Green Digital Action Declaration** | COP29 Presidency with Climate Technology Centre & Network (CTCN) | Harnesses digital technologies for climate action, sustainable development, and bridging the digital divide. |
| **Continuity Coalition for Climate and Health** | Launched by COP29 Presidency with UAE, UK, Brazil, and WHO; | Focuses on integrating health into climate action. |
| **Baku Dialogue on Water for Climate Action** | Hosted by COP29 Presidency with UNEP, UNECE, and WMO; | Aims to address water-climate change interplays. |

## Other Initiatives:

| Initiative | Details |
|---|---|
| **COP29 Declaration on Climate in Tourism** | Mobilizes the tourism sector to reduce its carbon footprint. |
| **Global Energy Efficiency Alliance** | Launched by UAE to double global energy efficiency rates, significantly reducing emissions. |
| **Hydro4NetZero-LAC Initiative** | Develops sustainable hydropower infrastructure for energy system flexibility and resilience. |
| **Global Alliance for Pumped Storage (GAPS)** | Supported by over 30 governments and agencies to enhance energy storage and resilience. |

## Reports released around COP29

| Initiative | Published by | Key Findings |
|---|---|---|
| **Special report on climate change and health** | World Health Organization (WHO) | ➔ Climate change causes 85% of NCD deaths. <br> ➔ People faced 50 more days of extreme heat in 2023. <br> ➔ Impacted maternal and reproductive health, internally displaced 20.3M in 2023. |
| **Global Landscape of Climate Finance 2024** | Climate Policy Initiative (CPI) | ➔ Climate finance over USD 1.5tn in 2023, growth in renewables. <br> ➔ Fossil fuel investments and subsidies rising since 2020. |
| **Global Nitrous Oxide ($N_2O$) Assessment report** | Climate and Clean Air Coalition (CCAC) and FAO | ➔ N2O increase threatens 1.5ºC goal. <br> ➔ 40% rise in anthropogenic N2O emissions since 1980, mainly from agriculture. |
| **'Raising Ambition and Accelerating Delivery of Climate Finance' Report** | Independent High-Level Expert Group on Climate Finance | ➔ Climate action requires investment of $6.3–6.7 trillion/year by 2030. |

## 5.1.2. India at COP29

### Why in the News?

India clarified its climate negotiation stance at UNFCCC-COP29.

### India's stance on various aspects

➔ **New Collective Quantified Goal (NCQG): Proposed a goal of $1.3 trillion annually**, with $600 billion coming from grants or equivalent resources.

➔ **Mitigation: Opposed changes** to the scope of the **Mitigation Work Programme (MWP)** and attempts **to alter temperature goals** in the Paris Agreement.

➔ **Just Transition:** India asserted that **developed countries should provide financial and technological support** to developing countries for just transition.

➔ **Global Stocktake (GST):** Opposed follow-up mechanisms for GST outcomes, Criticized the UAE dialogue text for its lack of connection to finance, imbalance, and mitigation-centric language.

➔ **Adaptation:** India called **for clear indicators to measure progress** on adaptation, **Opposed the use of third-party databases**, **Supported the establishment of the Baku Road Map**

### India at COP29 Side-events

➔ **Disaster Resilient Infrastructure**: With CDRI, focused on climate-resilient infrastructure; $8M for 12 **Small Island Developing States** (SIDS) projects announced.

➔ **LeadIT Meet**: Co-hosted with Sweden, aimed at accelerating low-carbon industry transitions.

➔ **Energy Transitions with the Global south**: With ISA, spotlighted solar energy's role in developing nations' energy shift.

➔ **Others**: Included India-Sweden Industry Transition Partnership and similar events.

# 5.2. Carbon Trading and Market

### Why in the News?

After a decade of negotiations, the rules for carbon trading under Article 6 of the Paris Agreement have been finalized.

### About Article 6 of the Paris Agreement

➔ Provides mechanisms for countries to cooperate in achieving their Nationally Determined Contributions (NDCs) through carbon markets, **consisting of two market-based and one non-market-based approach.**

| Mechanisms under Article 6 | | |
|---|---|---|
| **Market based approaches** | | **Non-Market based approach** |
| **Article 6.2** | **Article 6.4** | **Article 6.8** |
| ⮞ **Decentralized approach** for **bilateral cooperation** <br> ⮞ Trading of **International Transferred Mitigation outcomes (ITMOs)** (emissions reductions that result from mitigation actions) <br> ⮞ **Corresponding adjustment in NDCs** are made on trade of ITMOs. | ⮞ **Centralized approach** termed as **Paris Agreement Crediting Mechanism (PACM).** <br> ⮞ **Establishes a global carbon market.** <br> ⮞ Uses **Baseline-and-crediting** mechanism | ⮞ Introduces **non-market approaches to promote mitigation and adaptation** <br> ⮞ **No trading of emission reductions** is involved. <br> ⮞ Involves **more than one participating Party.** |

| Difference between Carbon trading of Kyoto Protocol and Paris Agreement | | |
|---|---|---|
| **Aspect** | **Kyoto Protocol** | **Paris Agreement (Article 6)** |
| **Scope of Participation** | Limited to developed countries (Annex I) with project hosting by developing countries. | Inclusive of all countries. |
| **Adaptation Funding** | Share of proceeds from CDM projects directed to the Adaptation Fund. | 5% of proceeds from Article 6.4 transactions allocated to the Global Adaptation Fund. |
| **Market Scope** | Focused on project-based mechanisms like Clean Development Mechanism (CDM) and Joint Implementation (JI). | Combines market-based and non-market-based approaches. |
| **Legacy Credits** | Allowed use of older credits from inactive projects, causing oversupply concerns. | Restricts legacy credit use; only post-2013 credits |

## About Carbon Market

⮞ A trading system where entities purchase carbon credits to offset emissions, with one credit typically equating to one metric tonne of $CO_2$ equivalent reduced or sequestered.

## Significance of Carbon Trading

⮞ **Economic Efficiency:** Could reduce NDC implementation costs by over 50%, saving up to $250 billion annually by 2030.

⮞ **Support for Developing Countries:** Helps mobilize funds for climate efforts.

⮞ **Broader Impact:** Non-market approaches promote sustainable development.

⮞ **Revenue Generation:** Carbon pricing generated $104 billion in 2023.

## Issues Related to Carbon Markets

⮞ **Double Counting:** Inconsistencies in emission reduction calculations.

⮞ **Limited Scope:** Only 24% of global emissions are currently covered by carbon pricing mechanisms.



Carbon Credits Trading Scheme (CCTS) — Compliance Mechanism, Offset Mechanism

Carbon Market and Trading Mechanisms

Green Credit Program — Tree Planting, Sustainable Agriculture

Other Instruments — Perform, Achieve and Trade (PAT) Scheme, Renewable Energy Certificates (REC) Scheme

⮞ **Quantification Standards:** Lack of monitoring for carbon sequestration reversals.

⮞ **Operational Delays:** Article 6.4 expected to be operational by 2025-2026.

⮞ **Carbon Colonialism:** Potential exploitation of indigenous and local communities.

⮞ **National Interests:** Conflicting views on transparency, access, and rule flexibility.
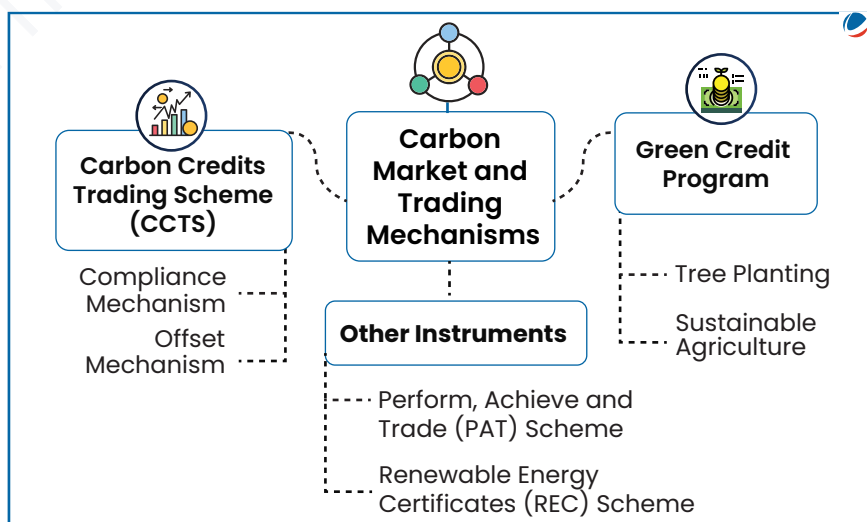
## Way Forward

➲ Implement uniform and binding guidelines
➲ Independent third-party verification to ensure credits are genuine.
➲ Establish safeguards to protect the interests of indigenous and local communities.
➲ Implement measures to prevent market oversaturation

# 5.3. Climate Finance

## Why in the News?

Developing countries are disappointed with the enhanced **New Collective Quantified Goal (NCQG)** on climate finance.

## About NCQG

➲ Proposed at COP21 for setting a new climate finance goal post-2025, following the unmet $100 billion annual target set in 2009.
➲ Article 9 of the Paris Agreement mandates developed countries to provide financial support to developing nations.

## Issues Associated with Current Climate Financing:

➲ **Distributional imbalance:** Advanced economies accounted for 45% of climate finance, and least developed countries (LDCs) for only 3%. (GLCF 2024)
➲ **Adaptation Funding Gap**: Developing countries require US$215-387 billion annually.
➲ **Mitigation and Adaptation imbalance**: 90% of climate finance goes to mitigation actions (UNDP).
➲ **Debt Burden:** Climate finance often **comes in the form of loans, increasing the debt** burden of developing countries and potentially hindering their ability to invest in sustainable development.
➲ **Inadequate finance:** Fivefold increase needed to reach required USD 7.4tn each year.
➲ **Other issues:**
  ➡ **Lack of Transparency and Accountability**
  ➡ **Many developing nations struggle to access climate funds**
  ➡ **Inadequate Private Sector Involvement**.

| Global Financial mechanisms under UNFCCC | |
|---|---|
| **Financial Mechanism** | **Details** |
| **Loss and Damage Fund (LDF)** | Established at COP27 (Egypt), operationalized at COP28 (Dubai); supports countries vulnerable to climate impacts. |
| **Green Climate Fund (GCF)** | Least Developed Countries Fund (LDCF) |
| **Adaptation Fund** | Established in 2001 for adaptation projects under the Kyoto Protocol; funded through a 5% share of proceeds from market-based mechanisms. |
| **Adaptation Fund** | Established at COP7 (2001); finances adaptation, technology transfer, capacity building, and energy/transport projects; administered by GEF. |
| **Least Developed Countries Fund (LDCF)** | Established at COP7 (2001); supports Least Developed Countries with climate work programs; administered by GEF. |

## Climate finance in India

➲ **India needs around USD 10 trillion to achieve net-zero by 2070.**
  ➡ **Steps Taken:**
    ◇ **National Adaptation Fund for Climate Change (NAFCC)**, 2015.
    ◇ **Priority Sector lending to renewable energy projects**.
    ◇ India's first green bond was **issued by Yes Bank in 2015**.
    ◇ **Sustainable Finance Group (SFG) was set up under RBI**.
    ◇ **RBI joined the Network for Greening of Financial System (NGFS)**.
    ◇ **Union Budget 2022-23** announced **sovereign green bonds for green infrastructural investments.**

## Way Forward

- **Address the Mitigation and Adaptation** imbalance.
- **Explore innovative financing mechanisms** like green bonds.
- **Adopt an Integrated approach like Public Funding** and private investment.
- **Provide technical assistance to developing** countries to enhance their capacity.
- **Multilateral Development Banks** should work to triple lending capacity by 2030 as part of NCQG.

# 5.4. Just Transition

## Why in the News?

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

## About Just Transition

- **Definition**: As Per the International Labour Organization (ILO), **it involves greening the economy in a way that is equitable, inclusive, and fair, creating decent work opportunities and ensuring no one is left behind.**
- **Recognition**: Acknowledged by the Just Transition Declaration at COP26 in Scotland.

## Key Elements

- **Equity:** Protecting workers and communities in fossil fuel-dependent sectors.
- **Inclusion:** Involving all stakeholders in decision processes.
- **Sustainability**: Aligning economic and social systems with climate goals.

## Need of Just Transition

- **Impact on Workers:** ILO estimates that while **24 million new green jobs** could be created, **6 million jobs in carbon-intensive industries might be lost.**
- **Climate Change Mitigation:** Essential for meeting the Paris Agreement's 1.5°C target with a 43% emissions reduction by 2030.
- **Energy Security:** Diversifying energy sources reduces reliance on volatile fossil fuels.
- **Avoiding social unrest: E.g., Yellow Vest protests in France (2018)**

## Challenges in Just Transition

- **High Costs:** India needs over a trillion dollars for transition in the next three decades.
- **Regional Disparities:** Areas like Jharkhand (India) and Mpumalanga (South Africa) lack resources for economic diversification.
- **Energy Security:** Coal-based power remains crucial in developing countries.
- **Other Issues:** Grid infrastructure upgrades, inadequate technology transfer, etc.

## Initiatives Taken for Just Transition

- **India**
  - **Pradhan Mantri Khanij Kshetra Kalyan Yojana (PMKKKY):** To ensure certain **minimum provisions for development programme** by all **District Mineral Foundations (DMFs).**
  - **DMFs (non-profit trust):** Established under **Mines and Minerals (Development and Regulation) Amendment (MMDRA) Act 2015** set up by the State Governments in **all mining-affected districts.**
  - **PLI Scheme: National Programme on High Efficiency Solar PV Modules**
  - **National Clean Energy Fund (NCEF)**
- **Global**
  - **Just Energy Transition Partnership (JETP)**
  - **ILO Guidelines for a Just Transition towards Environmentally Sustainable Economies and Societies for All Just Transition for All' initiative:** Initiative by the World Bank emphasizes a **people-centric approach** to transitioning away from coal, a major and carbon-intensive energy source.

## Way Forward

➲ Set up National Just Transition body
➲ Explore sustainable financing
➲ Banks and multilateral institutions should raise commitments
➲ Maintain and enhance social infrastructure.
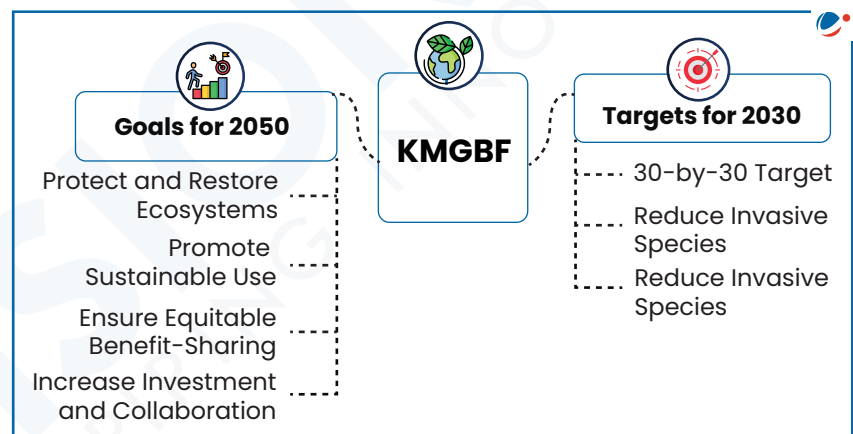
# 5.5. CoP-16 to the UNCBD

## Why in the News?

The 16th Conference of Parties (CoP-16) to the UN Convention on Biological Diversity (UNCBD) recently **concluded in Cali, Colombia.**

## More on the News

➲ **Theme: 'Peace with Nature'.**
➲ **First CoP since the adoption of the Kunming-Montreal Global Biodiversity Framework (KMGBF)**, aimed at reviewing progress and tackling challenges related to the framework.
  ➜ KMGBF is a non-binding agreement from CoP-15 in Montreal, 2022, replacing the 'Strategic Plan for Biodiversity 2011-2020' and Aichi Targets.

## Major Outcomes of CoP-16

➲ **Financial Mechanism for Digital Sequence Information (DSI)**: Cali Fund for equitable sharing of **DSI benefits from profit-making** companies.
➲ **Indigenous Rights**: Permanent body under Article 8(j) and allocation from Cali Fund for indigenous communities.
➲ **Finance Mobilization**: Kunming Biodiversity Fund launched under GEF to support KMGBF.
➲ **EBSAs**: Mechanisms to identify Ecologically or Biologically **Significant Marine Areas (EBSAs).**
➲ **Thematic Action Plan**: Capacity-building and technology transfer in synthetic biology.
➲ **Invasive Species**: Guidelines for managing invasive alien species.
➲ **Biodiversity and Health**: Approved Global Action Plan under a **'One Health'** approach.
➲ **Other Highlights**: **'Plant4Mother' Campaign, International Big Cat Alliance,** and **increase in Ramsar sites.**



KMGBF

**Goals for 2050**
Protect and Restore Ecosystems
Promote Sustainable Use
Ensure Equitable Benefit-Sharing
Increase Investment and Collaboration

**Targets for 2030**
30-by-30 Target
Reduce Invasive Species
Reduce Invasive Species

## India's commitment at CoP-16

➲ **Updated National Biodiversity Strategy and Action Plan (NBSAP)**: Comprising of **23 targets**, it adopts a **'Whole of Government' and 'Whole of Society' approach** aligning itself with KMGBF.
➲ **Budgetary Allocation**: Around **₹81,664 crore on biodiversity** and conservation efforts for the **period 2025-30**.
➲ **Call for resource mobilization**: Stressed the **need for cooperation in mobilizing international financial** resources, as laid down **under KMGBF's Target 19** for implementation of NBSAP.

## Shortcomings of CoP-16

➲ Developed countries have **not met the commitment to provide $20 billion annually** for biodiversity by 2025.
➲ The decision to **update the Monitoring Framework for KMGBF** implementation remains **unresolved**.
➲ **Mechanisms for Planning, Monitoring, Reporting, and Review (PMRR)** of KMGBF progress are **delayed**.
➲ **Only 44 out of 196 countries have submitted updated NBSAPs** aligned with KMGBF, with 119 reporting National Targets.
➲ **The Cali Fund for DSI is operational but lacks agreement** on contributions and resource allocation.
➲ **There are ongoing disagreements** regarding **biodiversity credits and offsets** as 'innovative schemes' for funding.

**Digital Sequence Information:**

| Aspect | Details |
|---|---|
| Overview | Digital Sequence Information (DSI) includes genomic and digital data like DNA, RNA, and proteins used in agriculture, pharmaceuticals, and biodiversity. |
| Significance | Enhances genetic research (e.g., COVID-19 diagnostics), develops climate-resilient crops, and preserves traditional knowledge. |
| Benefits from CoP-16 to CBD | The Cali Fund ensures fair and equitable sharing of DSI benefits, aligning with the third objective of the CBD. |
| Challenges | Issues include equitable benefit sharing, intellectual property rights, privacy, data security, accountability, and technological limitations. |
| Key Initiatives | **KMGBF:** Focuses on Goal C and Target 13 for DSI benefit sharing. <br> **'One Day One Genome' (India):** Releases annotated microbial genomes daily to enhance research and innovation. |

## 5.5.1. National Biodiversity Strategy and Action Plan (NBSAP)

### Why in the News?

India launched its updated **National Biodiversity Strategy and Action Plan (NBSAP) for 2024-30** at CoP-16 to the **UN Convention on Biological Diversity (UNCBD),** strengthening its commitment to biodiversity conservation.

### About NBSAP

- ➲ **Mandate:** Required by Article 6 of the UNCBD for all signatories to develop NBSAPs.
- ➲ **Purpose**: Acts as the main instrument for integrating biodiversity into national policy, focusing on conservation, sustainable use, and equitable benefit-sharing.

### Key Highlights of the Updated NBSAP 2024-30

- ➲ **Approach:** Employs a 'Whole of Government' and 'Whole of Society' method.
- ➲ **National Biodiversity Targets (NBTs):** Includes 23 targets centered around three themes:
  - ➡ Reducing threats to biodiversity.
  - ➡ Ensuring sustainable resource use.
  - ➡ Enhancing implementation tools.
- ➲ **Acknowledge Environmental Challenges:** Strategies include ecosystem restoration, species recovery, and community-led conservation.
- ➲ **Implementation framework**: Ministry of Environment, Forest and Climate Change (**MoEFCC**) serves as the central agency **advocating a collaborative governance model, promoting a bottom-up approach** engaging local communities and various sectors.
- ➲ **Resource Mobilization:** India is a leader in the Biodiversity Finance Initiative (BIOFIN): a UNDP and European Commission-backed effort for better financial management of biodiversity.
- ➲ **Other features**: Emphasized upon adoption of **transformative approach focusing on ecosystem-management based bottoms-up approach**



**Architecture for the implementation of NBSAP**

**National Level** → National Biodiversity Authority

**State Level** → State Biodiversity Boards & Union Territory Biodiversity Councils

**Local Level** → Biodiversity Management Committees

**NOTE: Ministry of Envirenment, Forest and Climate Change (MoEFCC)** serves as the central agency responsible for coordinating biodiversity conservation efforts across India

## Biological Diversity Act, 2002 (last amended in 2023)

| Aspect | Details |
|---|---|
| Aim | Implement UNCBD provisions |
| Goals | Protect biodiversity; sustainable use of resources; equitable benefit sharing. |
| Key Provisions | ➲ Approval from NBA for foreign access to biological resources.<br>➲ Approval for knowledge transfer abroad by Indian individuals/nationals.<br>➲ prior approval from NBA before applying any kind of IPR |
| 2023 Amendments | ➲ Exempts AYUSH practitioners and Traditional Knowledge holders from Access and Benefit sharing<br>➲ Removes criminal penalties; introduces fines. |

## Biological Diversity Rules, 2024:

| Aspect | Details |
|---|---|
| Purpose | ➲ Replace 2004 rules; implement 2023 amendment |
| Key Highlights | ➲ Defines NBA's functions including fund management, approvals, and database.<br>➲ IPR approval required before grant. |
| National Biodiversity Authority (NBA) | ➲ Chairperson appointed by Central Government for 3-year term, re-appointment possible.<br>➲ Functions include managing NBF, granting approvals, providing technical support. |
| Penalties for Contraventions | ➲ Penalties from ₹1 lakh to ₹50 lakh; fines for repeat violations; collected penalties go to NBF or state funds. |

## 5.5.2. World Coalition for Peace with Nature

### Why in the News?

At the UN COP16 biodiversity conference, the **"World Coalition for Peace with Nature: A call for Life"** was launched.

### More about the Coalition:

➲ **Members:** Includes countries from four continents such as Mexico, Sweden, Uganda, and Chile, but none from the Asia-Pacific region.
➲ **Nature:** Voluntary.
➲ **Whole of government approach** combines the expertise and resources of government institutions
➲ **Whole of society approach** involves civil society as well as public and private sectors

### Objectives:

➲ To **alter the relationship between humans and nature** to tackle environmental challenges holistically.
➲ To support and reaffirm the **rights-based approach** of the Kunming-Montreal Global Biodiversity Framework.
➲ To **direct funds towards conservation and sustainable development** for nature preservation.
➲ To engage entire governments and societies in **collective action, empowering local initiatives** to achieve peace with nature.

# 5.6. Forest Ecosystem Restoration

### Why in the News?

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

## About Forest Ecosystem Restoration Initiative (FERI):

➲ **Origins:** Launched in 2014 by The Korea Forest Service in collaboration with the CBD's Executive Secretary.
➲ **Mandate:** Aims to support developing countries in implementing the Kunming-Montreal Global Biodiversity Framework (KMGBF), which includes 23 targets for halting and reversing biodiversity loss by 2030.
➲ **Restoration Interventions**: rehabilitation, reconstruction, reclamation, replacement.

## FERI's Initiatives:

➲ **Short-Term Action Plan on Ecosystem Restoration (STAPER).**
➲ **WePlan – Forests:** A decision support platform for optimizing tropical forest ecosystem restoration.

## Major Global Initiatives:

➲ **IUCN's Forest Conservation Programme:** Focuses on sustainable forest management.
➲ **WWF's Forests For Life Programme:** Dedicated to conserving biological diversity.
➲ **REDD+ Framework by UN:** Aimed at sustainable forest management, conservation, and enhancement of forest carbon stocks.
➲ **The Forest and Landscape Restoration Mechanism (FLRM) by FAO**: Promotes forest and landscape restoration.

# 5.7. Natural Farming

## Why in the News?

The Union Cabinet has recently approved the launch of the **National Mission on Natural Farming (NMNF)** as a standalone Centrally Sponsored Scheme under the **Ministry of Agriculture & Farmers' Welfare.**

## More on News:

➲ Earlier, Zero Budget Natural Farming (ZBNF) was renamed **Bhartiya Prakritik Krishi Padhati (BPKP)** and integrated into **Paramparagat Krishi Vikas Yojna (PKVY) in 2019.** PKVY was launched in 2015 to promote chemical-free agriculture.
➲ BPKP was renamed NMNF from 2023-24 for nationwide implementation.

## About National Mission on Natural Farming:

➲ **Implementation:** Will cover 15,000 clusters in willing Gram Panchayats, reaching 1 crore farmers over 7.5 lakh hectares in the next two years.

## Components:

➲ Bio-input Resource Centres (BRCs) for easy access to natural farming inputs.
➲ Model Demonstration Farms for farmer training.
➲ Krishi Sakhi for awareness, mobilization, and support.

## Objectives of National mission on natural farming:

➲ Promote natural farming (NF)
➲ Support farmers to reduce the input cost of cultivation
➲ Create standards, certificate procedure and branding
➲ Popularize integrated agriculture animal husbandry models
➲ Collect, validate and document NF practices being practiced

## About Natural Farming:

➲ A chemical-free, low-input, climate-resilient farming system using livestock and local resources, practiced in states like Andhra Pradesh, Chhattisgarh, Kerala, Gujarat, Himachal Pradesh, Jharkhand, etc.
➲ **Components:** beejamrit, jivamrit, mulching, whapasa, plant protection

## Organic vs. Natural Farming Systems

➲ **Similarities:** Both are **non-chemical systems** of farming largely relying on biomass management, rejuvenation of natural nutrient recycling, crop rotation and multiple cropping.

## Difference Between Organic and Natural Farming

| Parameter | Organic Farming | Natural Farming |
|---|---|---|
| Input | ➲ Uses off-farm purchased organic and biological inputs. | ➲ Relies solely on on-farm inputs, particularly from Desi Cow. |
| Soil Correction | ➲ Employs natural mined minerals for soil correction as needed. | ➲ No use of compost, vermi-compost, or minerals; natural processes preferred. |
| Agro Practices | ➲ Involves plowing, tilling, manure mixing, and weeding. | ➲ Encourages microbial and earthworm activity on the soil surface. |
| Cost | ➲ Generally more expensive due to the cost of organic manures. | ➲ Low cost, leveraging local biodiversity and resources. |

## Significance of Natural Farming:

➲ **Improved Yield:** By optimizing natural resources and avoiding synthetic inputs.

➲ **Enhanced Income:** Reduces reliance on expensive chemicals, making farming sustainable.

➲ **Better Health:** Eliminates health risks from chemicals, providing nutrient-rich food.

➲ **Employment Generation:** Opportunities across the agricultural value chain.

➲ **Environment Conservation:** Enhances soil biology, biodiversity, water use efficiency, and reduces carbon and nitrogen footprints.

➲ **Rejuvenates Soil Health**: Improves soil microbiota and nutrient availability.

## Other initiatives to promote natural farming:

➲ National centre for management of agriculture extension

➲ National centre for organic and natural farming

➲ **State initiatives**
  ➡ Prakritik kheti khushhal kisaan yojana, hp
  ➡ Gujarat atma nirbhar package

## Issues associated with Natural Farming

➲ **Low Yield** compared to traditional methods.

➲ **Input Supply Issues** like unavailability of bio-fertilizers.

➲ **Knowledge and Skill Gap**

➲ **Market Challenges** like lack of dedicated supply chains.

➲ **Policy Gaps** like lack of clear guidelines on quality regulations

➲ **Climate Change** and Pest Attacks

# 5.8. Glacial Lake Outburst Floods (GLOFs)

## Why in the News?

A recent report by the Central Water Commission (CWC) highlights the expansion of Himalayan glacial lakes and water bodies.

## Key Findings of the Report:

➲ **Increase in area of glacial lakes in India:** A 33.7% increase from 2011 to 2024.

➲ **Transboundary risks**: A 10.81% increase in the area of glacial lakes and other water bodies in the Himalayan region, impacting Bhutan, Nepal, and China, due to climate change.

➲ **Lakes in High-risk category for GLOFs:** 67 lakes in India have seen over a 40% increase in surface area, particularly in regions like Ladakh, Himachal Pradesh, Uttarakhand, Sikkim, and Arunachal Pradesh.

## About Glacial Lake and Glacial Lake Outburst Flood (GLOFs):

➲ **Glacial Lakes**: Formed by melting glacial ice in depressions carved by glacier movement, categorized into four types: Moraine-dammed, Ice-dammed, Erosion, and others.

- **GLOFs**: Sudden releases of meltwater due to the failure of moraine or ice dams, characterized by Sudden and sometimes cyclic water releases.

## Major Causes of GLOFs:

- **Glacial Surging**: Rapid glacier movement, e.g., Gilkey Glacier, Alaska.
- **Moraine Dam Instability**: Collapse of inherently unstable moraines, e.g., South Lhonak, Sikkim.
- **Ice Dam Failure:** Due to thermal stress, water pressure, and internal melting.
- **Seismic Activity:** Tectonic movements causing structural changes.
- **Human Activity**: Unregulated urbanization, mining, deforestation, hydropower projects, and GHG emissions affecting drainage and slope stability.

## Initiatives taken in India for GLOFs management

- **National Disaster Management Authority Guidelines** for Management of Glacial Lake Outburst Floods (GLOFs)
- **Review of the design flood of all the existing and under construction dams** vulnerable to GLOFs by CWC.
- **GLOF risk mitigation project** approved by **High-Level Committee**
- **National Mission on Himalayan Studies (NMHS)**

## Global initiatives for GLOFs management

- **HKH cryosphere initiative** by **International Centre for Integrated Mountain Development (ICIMOD)**
- **Global Climate Observing System**
- **UNESCO Climate Change and Mountain Ecosystem Programme**
- **Sendai Framework for Disaster risk reduction**

## Way Forward: NDMA guidelines

- **Comprehensive understanding of GLOF dynamics**: Delve into the causes, triggers, and processes of GLOFs, with a focus on the latest scientific research.
- **Enhance Technical Expertise and Build Capacity**: Develop greater understanding to enhance technical expertise at the National and State level.

# 5.9. News in Shorts

## 5.9.1. Global Carbon Budget Report

The **Global Carbon Budget report, published by the Global Carbon Project** during the UNFCCC's COP29 summit, provides critical insights into global CO2 emissions and their impacts:

- **Emissions Outlook**: A 50% chance of exceeding 1.5°C warming in six years, possibly this year.
- **Fossil Emissions:** CO2 emissions Set to hit 37.4 billion tonnes, with China (31%), USA (13%), India (8%), and EU (7%) contributing 59% of global emissions.
- **Land-Use:** Deforestation emissions down 20% in 10 years; reforestation offsets half of these emissions.
- **CO2 Absorption**: Land and ocean sinks absorb about half of global CO2 emissions.

## About Global Carbon Project:

- **Established in 2001,** it is a global research project of future earth. Aim is to track the trends of Global emissions and sinks.
- Publications include global budgets for CO2, methane and nitrous oxide.

## 5.9.2. Adaptation Gap Report 2024

**The United Nations Environment Programme (UNEP)** released the Adaptation Gap Report 2024, which assesses the progress in **adaptation planning, implementation, and finance.**

### Key Findings of Report:

- **Adaptation Gap:** The gap between implemented adaptation and societal goals is estimated at US$187-359 billion per year.
- **Adaptation Progress:** In 2022, international public adaptation finance flows to developing countries increased to US$27.5 billion, showing progress towards the Glasgow Climate Pact's goal of doubling adaptation finance from US$19 billion (2019 levels) by 2025.
- **Significance of Adaptation:** Ambitious adaptation measures could halve global climate risk.

### Key initiatives for adaptation:

- **Global:** Paris agreement, UAE framework for Global climate Resilience, adaptation fund
- **India:** NAPCC, NAFCC

## 5.9.3. UN Environment Programme Releases Emissions Gap Report 2024

The report provides insights into global emission trends, future projections, and the necessary actions for the next **Nationally Determined Contributions (NDCs)** to meet the Paris Agreement's long-term temperature goals.

### Key Observations:

- **Emission Levels:** Global greenhouse gas (GHG) emissions reached a new peak of 57 gigatons (Gt) of $CO_2$ equivalent in 2023, marking a 1.3% increase from 2022.
- **Top Emitters:** India is the third-largest emitter, behind China and the U.S
  - → The six largest emitters account for 63% of global emissions, while least developed countries contribute only 3%.
- **Historical Emissions:** India's historical $CO_2$ emissions from 1850 to 2022 are significantly lower than those of China and the U.S.
- **NDC Shortfalls**: There's a need for more stringent policies to meet 2030 NDC targets across nations.

### Recommendations for Limiting Global Warming to 1.5°C:

- **Emission Reductions:** Nations must commit to reducing GHG emissions by 42% by 2030 and 57% by 2035 through updated NDCs.
- **Comprehensive NDCs:** New NDCs should cover all gases listed in the Kyoto Protocol, all sectors, and include specific, measurable targets.
- **Renewable Energy:** A significant increase in solar photovoltaic and wind energy could contribute 38% of the potential for emission reductions by 2035.

## 5.9.4. Protected Planet Report 2024

UN Environment Programme World Conservation Monitoring Centre (UNEP-WCMC) and **IUCN** released **Protected Planet Report 2024.**

### About Protected Planet Report 2024:

This report is the first to evaluate the global status of Protected and Conserved Areas (PCAs) in relation to Target 3 of the Kunming-Montreal Global Biodiversity Framework (GBF).

- **Target 3:** Aims to expand the global network of PCAs to cover 30% of the planet by 2030, ensuring it is equitable and respects the rights of Indigenous Peoples and Local Communities (IPLC).

### Key Findings:

- **Coverage:** PCAs currently cover 17.6% of terrestrial and inland waters and 8.4% of marine and coastal areas globally.

- **Biodiversity Areas:** More than two-thirds of Key Biodiversity Areas are covered by PCAs, yet 32% remain unprotected.
- **Connectivity:** Only 8.5% of land is both protected and connected.
- **Management Effectiveness:** Data on how well these areas are managed is limited, with only 4% of protected areas governed by Indigenous Peoples and Local Communities.

### Initiatives promoting protected and conserved areas

- Five types of protected areas under WPA, 1972
- Biodiversity Beyond National Jurisdiction Agreement
- Climate Adaptation and Protected Areas initiative

## 5.9.5. 4th 'An Eye on Methane: Invisible but not unseen' Report by UNEP's International Methane Emissions Observatory (IMEO)

### About IMEO

- IMEO supports the Global Methane Pledge by providing open, reliable methane emissions data through Industry reporting (OGMP 2.0), Methane alert and response systems (MARS), Global methane studies and National emission inventories.

### Key Findings

- **Global Warming**: Human-caused methane emissions contribute one-third to current global warming.
- **Oil and Gas emission**: OGMP 2.0 covers only 42% of global production with mandatory emissions reporting.
- **Emission from Steel Production:** Methane from metallurgical coal for steel is 10% of energy sector emissions, mitigable at low cost.
- **Poor response to emissions:** Only 1% of MARS emissions notifications lead to action.

### Initiatives for Methane Reduction

- **Global:** Includes Global Methane Pledge, Climate and Clean Air Coalition, Global Methane Alliance.
- **India:** NICRA project, National Livestock Mission, Gobar-Dhan Scheme, New National Biogas Program.

## 5.9.6. World Energy Employment Report, 2024 by IEA

### Report highlights:

- Global energy sector employment in **2023 surpassed general labor market trends.**
- Clean energy sectors are the main drivers of job growth within the energy industry.

## India-Specific Findings:

- In 2023, India's energy sector employment **represents 1.5% of the country's total workforce**.
- The sector heavily depends on **informal labor.**
- With supportive government policies, **India's clean energy workforce is expected to expand further.**

## 5.9.7. CO₂ to Methanol Plant

World's First $CO_2$ to Methanol Plant launched by NTPC at Vindhyachal

- NTPC has successfully converted **$CO_2$ from flue gas** into methanol using hydrogen from a Proton **Exchange Membrane (PEM) electrolyzer**, marking a significant advancement in carbon management and sustainable fuel production.

### About Methanol ($CH_3OH$):

- Methanol, also called **methyl or wood alcohol**, is the simplest alcohol, fully miscible with water.
- It appears as **a clear, colorless, flammable liquid** with an odor akin to ethanol.

## 5.9.8. EV-as-a-Service Programme

- The Union Minister of Power, Housing & Urban Affairs has launched the **'EV as a Service' Programme by Convergence Energy Services Limited (CESL)**, following the PM E-DRIVE Scheme to accelerate India's electric mobility transition.
- **EV-as-a-Service:** This model provides subscription-based access **to electric vehicles, reducing the need for high initial purchase costs.**

### Program Goals:

- Aims to deploy 5,000 electric cars in government departments over the next two years.
- Supports India's target of reaching net zero emissions by 2070.

## 5.9.9. Guru Ghasidas-Tamor Pingla Notified as 56th Tiger Reserve

- **Notification:** TR is notified by State Governments under the Wildlife (Protection) Act, 1972 on advice of NTCA.
- **Other Chhattisgarh's Tiger Reserves:** Indravati, Udanti-Sitanadi, Achanakmar.
- **Size & Ranking:** It is **the third largest tiger reserve in India**, after **Nagarjunasagar-Srisailam (Andhra Pradesh) and Manas (Assam).**

### Structure of a TR:

- **Core/Critical Area:** Maintained as inviolate while respecting the rights of Scheduled Tribes and forest dwellers under the Forest Rights Act, 2006.
- **Buffer/Peripheral Area:** Encourages human-wildlife coexistence with less stringent protection, acknowledging local rights through Gram Sabha.

### Geography & Ecology:

- Located in **the Chota Nagpur and Baghelkhand plateaus.**
- Home to leopards, hyenas, jackals, wolves, sloth bears, among other fauna.
- Significant rivers include **Hasdeo Gopad and Baranga.**
- **Conservation Strategy:** Follows a landscape approach for conservation, connecting with Sanjay Dubri TR (Madhya Pradesh), Bandhavgarh TR (Madhya Pradesh), and Palamau TR (Jharkhand).

## 5.9.10. Coral Triangle

Report **'Coral Triangle at Risk: Fossil Fuel Threats and Impact'** Released at COP16 to CBD.

### About the Report:

- Released by **Earth Insight and SkyTruth**, it addresses fossil fuel threats to the Coral Triangle, spanning **seven Southeast Asian and Melanesian countries**, known for its exceptional marine biodiversity.

### Significance of Coral Triangle:

- Home to **76% of the world's coral species, over 2,000 fish species, and six of seven marine turtle species**, supporting 120 million people, hence dubbed **"the Amazon of the seas."**
- **Threats: Oil and Gas Exploration and noise pollution**.
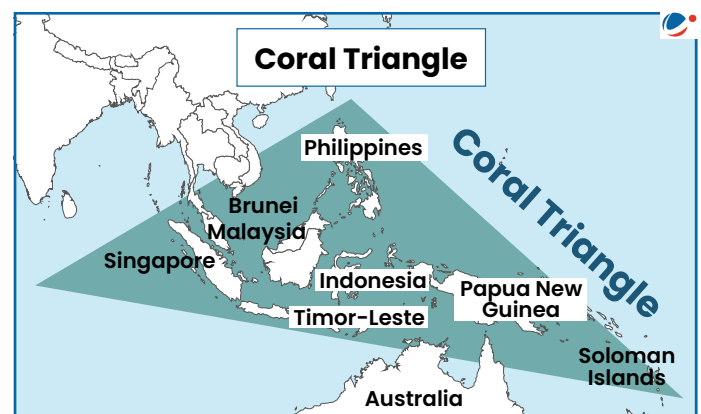


## 5.9.11. 'Tsunami Ready' Villages

**Villages in Odisha Recognized by Intergovernmental Oceanographic Commission** of UNESCO (UNESCO-IOC) as 'Tsunami Ready'.

### UNESCO-IOC as 'Tsunami Ready'

- **Recognition:** 24 coastal villages in Odisha were acknowledged as 'Tsunami Ready' at the 2nd Global Tsunami Symposium in Indonesia, verified by the

National Tsunami Ready Recognition Board (NTRB), which includes members **from INCOIS and NDMA.**

## UNESCO-IOC Tsunami Ready Recognition Programme (TRRP)

- ⮊ **Overview:** A voluntary, global, community-based initiative for enhancing tsunami risk prevention and mitigation.
- ⮊ **Goals:** Aims to increase resilience via awareness and preparedness.
- ⮊ **Methodology**: Uses 12 indicators for assessment, with recognition renewable every four years.

## Steps taken by India

- ⮊ **Indian Tsunami Early Warning Centre (ITEWC).**
- ⮊ **NDMA Guidelines.**
- ⮊ **Modeling and Mapping of Tsunami**

## 5.9.12. Depresión Aislada en Niveles Altos (DANA) caused floods in Spain

### About DANA:

- ⮊ DANA involves a **mass of cold polar air detaching from the polar jet stream**, circulating at high altitudes (5-9 km).
- ⮊ It's distinct as it forms **independently of jet streams**, leading **to intense storms** when it meets **warmer, humid Mediterranean air**, primarily late summer to early autumn.
- ⮊ Unlike typical storms that move eastward, **a DANA can stay in one place or move westward.**

## 5.9.13. Bomb Cyclone

A bomb cyclone recently hit the **North-western US and western Canada.**

- ⮊ **Definition:** Known as bombogenesis, it's a mid-latitude cyclone that undergoes rapid intensification, dropping its central air pressure **by at least 24 millibars in 24 hours.**
- ⮊ **Location:** Most commonly occur over oceans, can be either **tropical or non-tropical**.
- ⮊ **Weather Impact:** Associated with various severe weather conditions like **blizzards, thunderstorms, and heavy precipitation.**

## 5.9.14. Lake Kariba

A **severe drought has reduced Lake Kariba** to near-record low levels, leading to power shortages in the region.

### About Lake Kariba:

- ⮊ **Largest artificial lake** and reservoir by volume globally.
- ⮊ Situated in **Central Africa within the Zambezi** River basin, between Zambia and Zimbabwe.
- ⮊ Construction began in the **1950s under British rule in Northern and Southern Rhodesia.**
- ⮊ The Kariba Dam supplies **electricity to Zambia and Zimbabwe** and boosts a significant commercial fishing industry in Africa.

SOCIAL ISSUES

# 6.1. Work from Home

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

## Key Findings:

- ⮞ **Current Work Status:** 68% organizations continue WFH/remote working post-pandemic
  - ➡ About half adopted hybrid model with limited office attendance
  - ➡ Many companies now requiring partial office presence
- ⮞ **Benefits and Challenges**
  - ➡ Short-term Benefits: Clear advantages for both employers and employees
  - ➡ Long-term Concerns: Issues with social connections, human capital, and team dynamics
  - ➡ Collaboration Impact: Less effective for teamwork and communication compared to office work

## Evolving nature of Work: Advent of WFH

- ⮞ **Work Culture Evolution:** COVID-19 triggered widespread WFH adoption
  - ➡ Technological advancement enabled remote work possibilities
  - ➡ Rise of "work from anywhere" and digital nomad culture
  - ➡ Growing infrastructure supporting remote work
- ⮞ **Global Corporate Trends:** Major companies like Starbucks, Google, and Amazon reversing WFH policies
  - ➡ Implementation of return-to-office schedules
  - ➡ Shift towards balanced hybrid approaches

| Benefits connected to WFH | |
|---|---|
| **For Employees** | **For Employers** |
| ⮞ Cost savings on commuting and housing near workplace <br> ⮞ Enhanced productivity through flexible scheduling <br> ⮞ Better work-life balance management | ⮞ Reduced operational costs (office rent, compensation) <br> ⮞ Global talent access without geographic limits <br> ⮞ Higher employee retention (33% fewer resignations in hybrid model) |
| **Environmental & Social Impact** | **Family Benefits** |
| ⮞ Lower carbon footprint through reduced commuting <br> ⮞ Support for ESG goals <br> ⮞ Promotes decentralized development <br> ⮞ Helps mitigate urban migration issues | ⮞ Better work-life integration <br> ⮞ More family time helps manage work stress <br> ⮞ Promotes gender equality in household responsibility <br> ⮞ Particularly beneficial for parents of young children |
| **Women's Empowerment** <br> ⮞ Easier management of dual responsibilities <br> ⮞ Increased labor force participation <br> ⮞ Potential to reduce motherhood pay gap <br> ⮞ Better career opportunities and job retention | |

| Challenges arising from WFH | |
|---|---|
| **Employee Challenges** | **Employer Challenges** |
| ⟳ Work-life boundary blur causing stress and reduced productivity<br>⟳ 33% reduction in daily physical activity noted<br>⟳ Workspace limitations at home<br>⟳ Always-on culture leading to burnout<br>⟳ Limited physical activity and leisure time | ⟳ Reduced team bonding and collaborative problem-solving<br>⟳ Difficulties in training and mentoring<br>⟳ Traditional supervision methods becoming ineffective<br>⟳ Data security and privacy concerns<br>⟳ Equity issues between remote and on-site workers |
| **Family Impact** | **Women-Specific Issues** |
| ⟳ Increased familial stress during extended indoor periods<br>⟳ Rise in domestic violence cases during pandemic<br>⟳ Challenges managing childcare/elderly care with work<br>⟳ Mental health impacts affecting family relationships | ⟳ Lower earnings and reduced company visibility<br>⟳ Double burden of work and domestic responsibilities<br>⟳ Gender-based stigma for choosing flexible work<br>⟳ Reinforcement of traditional gender roles |

## Solutions & Way Forward

⟳ Modernize management practices and systems
⟳ Implement balanced hybrid work models
⟳ Develop clear organizational policies
⟳ Strengthen digital infrastructure **(Smart Villages, Bharatnet)**
⟳ Focus on employee well-being and support systems

# 6.2. One Nation One Subscription Scheme

Union Cabinet approved the **'One Nation, One Subscription' (ONOS) scheme**

## About One Nation One Subscription Scheme

⟳ **Objective**: National licenses for e-journals across STEM and social sciences.

## Key Features:

⟳ **Digital Access**: Managed by INFLIBNET (UGC center)
⟳ **Monitored by:** Anusandhan National Research Foundation (ANRF)
⟳ **International Journals**: Access to 13,000 journals from 30 top publishers (e.g., Oxford, Elsevier).
⟳ **Budget:** ₹6,000 crore (2025-2027)
⟳ **Implementation Strategy**: Department of Higher Education (DHE) will launch a unified portal and IEC campaigns for ONOS awareness.

## Need for ONOS:

⟳ **Profits from Public Funds**: Academic publishing earns billions, yet is controlled by a few private entities.
⟳ **Counter Predatory Publishing**: Addresses low-quality journals exploiting researchers.
⟳ **Removing Access Barriers**: High subscription costs limit collaboration.
⟳ **Favorable Agreements**: Indian institutions often face restrictive publishing terms.
⟳ **Financial Burden**: ₹380 crore spent on Article Processing Charges (APCs) in 2021.

## Significance of ONOS:

⟳ **National Alignment**: Supports Viksitbharat@2047, NEP 2020, and ANRF.
⟳ **Interdisciplinary Research**: Encourages core and interdisciplinary studies, benefiting all regions.
⟳ **Collective Bargaining and Cost Efficiency**: Leverages 6,300+ institutions for better resource access.
⟳ **Research Productivity**: Boosts India's scientific output, narrowing the gap with global leaders.

## Issues with ONOS:

⟳ **Open Access Shift**: Over 50% of research is freely available, raising doubts about ONOS's relevance.
⟳ **Subscription Limitations**: Focus on popular journals may neglect niche fields.

- **Commercial Publisher Dominance**: Risks supporting high-profit Western publishers.
- **Copyright Issues**: Authors lose control, as seen with Microsoft using journals for AI.
- **Digital Preservation Risks**: Relying on publishers is risky (e.g., Heterocycles journal discontinuation).
- **Other Issues**: Lack of support for Indian journals, transparency concerns, and internet issues in smaller cities.

## Way Ahead:

- **Negotiate Licenses**: Aim for significant cost reduction and APC waivers.
- **Agreement Clauses**: Develop fair license agreements protecting IP and pricing.
- **Innovative Services**: Build infrastructure for usage, access, and sustainability.
- **Promote Open Access (OA)**: Encourage OA, support OA journals, and fund APCs for young researchers.

# 6.3. News in Shorts

## 6.3.1. Union Cabinet Approved PM-Vidyalaxmi scheme

### Key Features:

- **Type: Central Sector scheme**
- **Purpose**: Financial support for higher education
- **Alignment**: National Education Policy 2020
- **Loan Details:** Collateral-free, guarantor-free loans
- 75% credit guarantee by Government for loans up to ₹7.5 lakhs
- 3% interest subvention on loans up to ₹10 lakhs during moratorium

### Coverage:

- 860 Quality Higher Education Institutions (QHEIs)
- Based on NIRF ranking
- Benefits over 22 lakh students

### Implementation:

- Unified digital portal "PM-Vidyalaxmi"
- Interest subvention through:
  - E-vouchers
  - CBDC wallets
- Supplements PM-USP Scheme that provides financial aid for meritorious students from poor families.
  - Based on Class 12th Board results

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

**SC Ruling on POCSO Cases and Compromise**

### Background:

- **Case: Ramji Lal Bairwa & Anr vs State of Rajasthan & Ors**
- **Context:** Review of Rajasthan HC's decision to quash sexual assault case
- **Legal Mechanism:** Special Leave Petition **(Article 136)**

### Key Observations:

- **No Compromise Allowed Because:**
  - POCSO offenses are **not private matters**
  - Sexual assault has serious societal implications
  - **Cannot be settled** through party **compromise**

### Legal Precedents Cited:

- **State of M.P. v. Laxmi Narayan (2019):** Offense against society can't be compromised
- **Sunil Raikwar v. State (Delhi HC)**: POCSO offense not settleable

### About The Protection of Children from Sexual Offences (POCSO) Act 2012

- **Core Features:**
  - Gender-neutral law protecting **children under 18**
  - **Focus:** Child safety and abuse prevention
  - **Year:** Enacted 2012, Amended 2019
- **Punishable Offenses:**
  - Sexual assault
  - Sexual harassment
  - Child pornography
- **2019 Amendment:**
  - Introduced death penalty
  - Enhanced punishment severity for sexual crimes against children

## 6.3.3. 10 Years of Polio Eradication in India

### India's Polio-Free Journey

### Key Achievement:

- WHO declared India polio-free in **2014**
- **Criteria:** No wild poliovirus for 3 years
- **Partners:** Global Polio Eradication Initiative

## Universal Immunization Programme: Started:

1985 (renamed from Expanded Programme)
- **Coverage:** 12 vaccine-preventable diseases
- **Scope:** Free vaccines nationwide

## India's Polio Prevention Strategy

- **Annual Polio Campaigns:** National Immunization Days (NID)
  - → Sub-National Immunization Days (SNID)
  - → Goal: Maximum coverage, no missed children
- **Border Protection:** International border vaccination
  - → Prevents re-importation from endemic regions
- **Vaccination Approach:** Inactivated Polio Vaccine (IPV) since 2015
  - → Specifically targets type 2 poliovirus
- **Mission Indradhanush (2014):** Target: 90% immunization coverage
  - → Focus: Hard-to-reach areas
  - → Priority: Low immunization regions

## About Poliomyelitis (Polio) Overview

- **Disease Profile:**
  - → Type: Highly infectious viral disease
  - → Target: Children under 5 years
  - → Transmission: Fecal-oral route, contaminated food/water
  - → Impact: Can cause nervous system paralysis
- **Wild Poliovirus Status:**
  - → Type 1: Endemic in Pakistan and Afghanistan (2022)
  - → Type 2: Eradicated in 1999
  - → Type 3: Eradicated in 2020
- **Vaccine-derived Polio:**
  - → Cause: Mutation of weakened vaccine strain
  - → Risk: Affects under-vaccinated populations
  - → Result: Can cause paralysis

## 6.3.4. Children Lacking Minimum Dietary Diversity

A study revealed that 77% children in India aged 6-23 months lacking minimum dietary diversity.
- **Minimum dietary diversity (MDD)** requires consuming 5+ of 8 food groups: breast milk, grains, legumes, dairy, flesh foods, eggs, fruits & vegetables
- Food intake from less than 5 food groups is considered **minimum dietary diversity failure (MDDF).**

## Major Findings (For Year 2019-21):

- **Regional Crisis**
  - → Central India worst affected (>80% deficiency)
  - → **Key states:** UP, Rajasthan, Gujarat, Maharashtra, MP

- **High-Risk Groups**
  - → Age 6-11 months (87% deficiency)
  - → OBC children (79%) followed by SCs (77%) and STs (76%).
  - → Children of illiterate mothers (81%)
  - → Rural areas with limited media exposure
- **Core Issues**
  - → Limited consumption of fruits, vegetables & animal products
  - → Education gap: illiterate mothers (81%) vs educated mothers (75%)
  - → Rural-urban divide in food access

## Recommended Actions

- Target pregnant women, especially high-risk cases
- Engage local governance in nutrition activities
- Focus on Central region
- Prioritize education and awareness programs

## Initiatives taken:

- **POSHAN Abhiyan**: Promotes nutrition awareness through Jan Andolans.
- **Rashtriya Poshan Mah**: Highlights collaboration among ministries to engage communities.
- **Integrated child development services (ICDS) Scheme**- Benefits children aged 0-6 years, pregnant women, and lactating mothers.

## 6.3.5. UNESCO released 'Global Education Monitoring Report 2024'

## Global Education Status Report 2024: Key Insights

## Meeting Context

- Released at **UNESCO's Global Education Meeting**
- Hosted by **Brazil (G20 President) in Fortaleza**

## Critical Findings

- **Leadership & Governance**
  - → Education leaders must drive social influence for collective goals
  - → Need to balance learning outcomes with equity and inclusion
  - → Principals require more autonomy in school management
- **Financial Challenges**
  - → 40% of countries invest less than 4% GDP in education
  - → Significant funding gaps persist
- **Access Issues**
  - → **Global out-of-school children**: 251 million
  - → **Minimal improvement:** only 1% reduction since 2015

➡️ **Major concerns in South Asia:**
- ◈ Afghanistan, Bangladesh, India, Pakistan have highest out-of-school populations
- ◈ Despite region's overall progress in education access

## Key Recommendations

➲ **Leadership Development**
- ➡️ Enhance school principals' autonomy
- ➡️ Strengthen education officials as system leaders

➲ **Curriculum Enhancement**
- ➡️ Integrate climate change education earlier
- ➡️ Expand beyond science subjects

## India's Initiatives to develop School Leadership

➲ **National Education Policy 2020:** School principals to engage students in workshops.

➲ **National Initiative for School Heads' and Teachers' Holistic Advancement (NISHTHA)**

# SCIENCE AND TECHNOLOGY

## 7.1. One Day One Genome

### Why in the news?

The Department of Biotechnology (DBT) and Biotechnology Research and Innovation Council (BRIC) launched the 'One Day One Genome' initiative.

### About One Day One Genome

- **Aim**: An **annotated microbial genome to be released every day** for researchers to study species and critical roles in the environment, agriculture, and human health.
- **Significance of the initiative:** Help in implementing India's **Biotechnology for Economy, Environment, and Employment (BioE3) policy**; spur innovation in **microbial genomics** etc.
  - **Microbial genomics** is the scientific field that studies the complete genetic material of microorganisms to understand their structure, function, evolution, and interactions with other organisms.

### Significance of studying Microbes

- **Advancing biotech applications**: E.g. biofuel production, bio-manufacturing, bio-pharmaceuticals etc.
- **Understanding** microbial diversity.
- **For Environmental sustainability**: E.g. **Bioremediation**
- **Human health** and **disease management**:
  - **Manipulate gut microbiota** to treat **chronic gastrointestinal diseases.**
  - Detect **drug-resistant strains** of Mycobacterium tuberculosis.
- **Agriculture**: Nutrient cycling, maintaining soil fertility, etc. **E.g., Rhizobium bacteria** fixing nitrogen

## 7.1.1. Heritable Human Genome Editing (HHGE)

### Why in the news?

South Africa becomes first country to allow Heritable Human Genome Editing (HHGE)

### More on the news

- **Explicitly permit use of genome editing** to create genetically modified children.

### About HHGE:

- HHGE introduces **changes in germline cells (sperm, eggs, or embryos),** with changes inherited by offsprings **unlike somatic cell editing.**
  - **Tools used:** Zinc-finger nucleases (ZFNs), CRISPR/Cas9 and Meganucleases.
- **Potential Applications:** Disease Prevention (E.g. sickle cell anemia), Advancement of Genetic Research, Assisted reproductive technology (improving technologies, such as in vitro fertilization (IVF) etc.)
- **Concerns:**
  - **Unforeseen consequences:** Heritable with multigenerational effects;

➔ **Ethical issues**: Dignity of humans, religious and moral beliefs;

➔ **Societal Impact**: Creation of "designer babies" affects social inequality.

# 7.2. Satyendra Nath Bose (S. N. Bose)

## Why in the News?

The **Centenary celebrations** of iconic **'Bose-Einstein' (B-E) Statistics** were recently inaugurated **by Ministry of Science and Technology.**

## Scientific Contributions of S. N. Bose

⟳ **Bose-Einstein Statistics:** A **framework for particle distribution at** different energy levels, particularly at low temperatures.

➔ Einstein extended this to gas molecules and Particles which obey **B–E statistics** principle referred as **"Bosons".**

◇ Bosons are **fundamental particles** that have integer values of spin (0, 1, 2, etc.). E.g. Photon, Gluon, etc.

⟳ **Bose-Einstein Condensates (BEC):** At extremely low temperatures, a large fraction of bosons can occupy the same lowest-energy quantum state, forming a unique 5th state of matter (e.g., superfluid helium).

➔ All the atoms become a single entity at this point wherein each particle together functions as a wave of matter.

➔ **Properties of BEC: Super fluidity** (Zero viscosity without resistance), **Super conductivity**, **Coherence; Super solid**, etc.

⟳ **Organic chemistry: X-ray diffraction methods**, **differential thermal analysis** to understand common clay minerals atomic structure.

⟳ **Thermoluminescence:** Designed a **rapid scanning spectrophotometer of comparatively high sensitivity**.

⟳ **Discovery of Higgs Boson** (**GOD Particle**)**:** Discovered using scientific principles rooted in **(B-E) Statistics** and BEC.

➔ He is referred as "**Father of the God Particle**" along with Peter Higgs.

➔ The fundamental particle **'Bosons'** were named after him



**Atoms acting as Single Unit at 0 K**

Gas of Low Density

BEC at 0 K
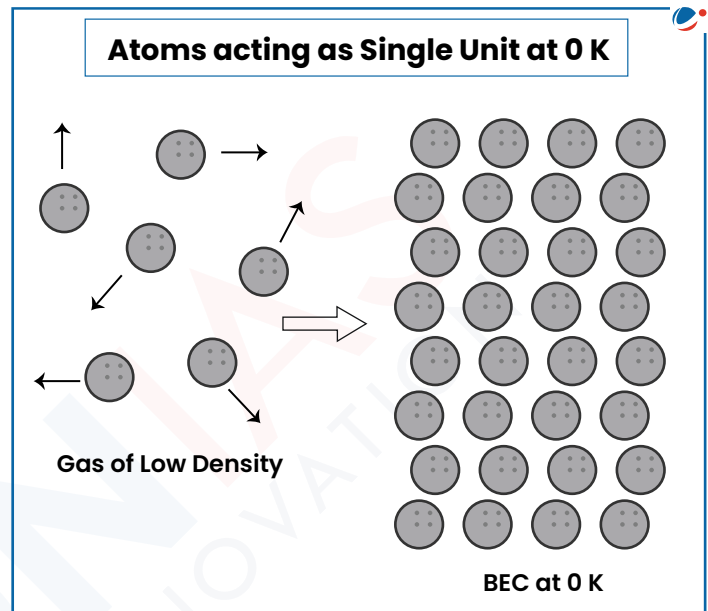
# 7.3. Oral Rehydration Therapy (ORT)

## Why in the News?

**Richard Cash**, physician and global health scholar, died who was **instrumental** in the development of **Oral Rehydration Therapy (ORT).**

## About ORT

⟳ **ORT** is the **administration of appropriate solutions** (glucose, sodium chloride, sodium bicarbonate, and potassium chloride or citrate) by mouth to prevent or correct **dehydration**.

⟳ **ORT consists of**:

➔ **Rehydration**—water and electrolytes are administered to replace losses.

➔ **Maintenance fluid therapy** to take care of ongoing losses once rehydration is achieved (along with appropriate nutrition).

⟳ **Potent** in treatment of **Diarrhea and Cholera.**

⟳ **Working:** The cells that make up the lining of the gut have **special receptors** on their surfaces that allow them to actively **absorb sugar molecules** which increase absorption of water and chloride ions.
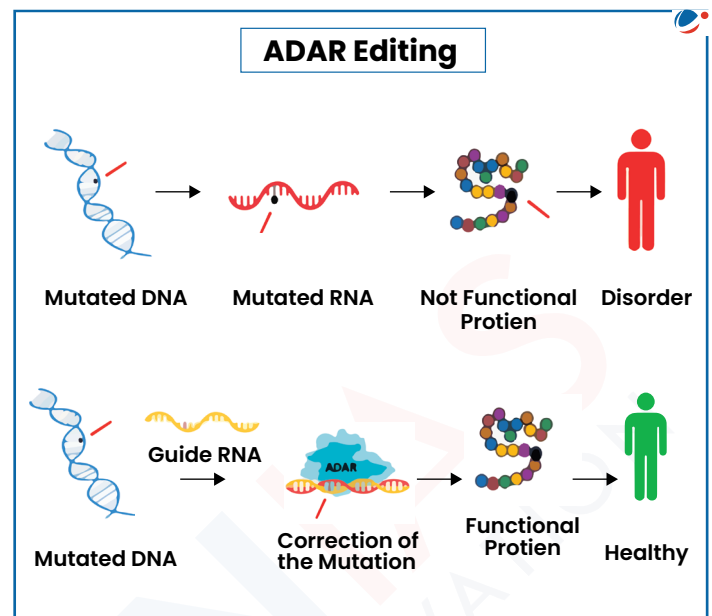
# 7.4. RNA Editing

## Why in the news?

**The first successful clinical demonstration** of **RNA editing** in humans was conducted.

## More on the news

- **RNA editing** was used to treat alpha-1 **antitrypsin deficiency** (AATD, an inherited disorder) which **affect liver and lungs**.

## About RNA (Ribonucleic acid) Editing

- **Modifies genetic information on RNA sequences** through insertion, deletion or substitution.
- Scientists used technique called '**Adenosine Deaminase Acting on RNA (ADAR)**' with guide RNA (gRNA).
  - **gRNA** are **small RNA molecules** that **direct editing machinery by base-pairing with mRNA** in specific regions for modification.
- **Challenges in RNA Editing:** Lack of Specificity and Transient nature and nascent stage of development



**ADAR Editing**

Mutated DNA → Mutated RNA → Not Functional Protien → Disorder

Mutated DNA → Guide RNA → Correction of the Mutation (ADAR) → Functional Protien → Healthy

### Comparison between RNA and DNA editing

- **Form of change: DNA editing** makes **permanent changes** while **RNA editing** makes **temporary changes** which may **fade over time.**
- **Allergic and immune reactions: DNA editing** has **higher risk** of **undesirable reactions** compared to RNA editing.
  - DNA editing tools use **proteins** from **certain bacteria** to perform **cutting functions** while RNA editing relies on **ADAR enzymes,** already occurring in **human body.**

# 7.5. News in Shorts

## 7.5.1. Space Biotechnology

ISRO and Department of Biotechnology (DBT) join forces to advance Space Biotechnology research.

- The key challenges in space missions are the lack of **continuous availability of nutrients, waste management, preservation of food, microgravity, radiation, health hazards** etc.
- **Space biotechnology** would study how living organisms adapt, function to these.

## Space biotechnology applications and their Significance:

- **Microgravity Research: Enables** better-quality **protein crystal growth,** understanding of structures for precise drug development.
- **Radiation Research:** E.g., BioSentinel (a NASA programme) will predict effect of radiation on human cell.
- **Environmental Monitoring: E.g.** Using bioremediation to convert Mars and Moon regolith into soil capable of plant Growth.
- **Other:** Disease Modelling, Bioregenerative Life Support Systems**,** etc.

**Initiatives: Indian:** Axiom-4 mission, Gaganyaan mission; **Global: Space Biology Program** (NASA); **Biolab (**European Space Agency**)**

## 7.5.2. Analog Space Mission

ISRO has launched **India's first analog space mission** in Leh (Ladakh) **to plan lunar mission experiments**.

- Developed by **Joint collaboration** of ISRO's Human Spaceflight Center, AAKA space studio, university of Ladakh and IIT Bombay.

## About Analog Space Mission:

- Analog space missions are **field tests** done in extreme space environments.
- **Include testing of new technologies, robotic equipment, vehicles, and study of behavioral effects (isolation and confinement).**
- Ladakh chosen for Dry and cold climate, barren land, high-altitude terrain and extreme isolation
- **Other analog missions**: NEEMO (NASA), SIRIUS Program (UAE)

## 7.5.3. GSAT-N2

Recently **SpaceX's Falcon-9** deployed **India's GSAT-N2 satellite** into orbit.

### About GSAT-N2 (Geostationary Satellite-20)

- Communication satellite of NewSpace India Limited (NSIL), commercial arm of the **Indian Space Research Organisation (ISRO).**
- **Features**: Geosynchronous transfer orbit; Life span – 14 years; **Mass around** 4,700 kg.
- **Significance:** Promotes broadband services and in-flight connectivity across the Indian region offering pan-India coverage.

## 7.5.4. LignoSat

The world's **first wooden satellite**, developed by Japan, has been launched.

### About LignoSat

- A small, palm-sized satellite made from **honoki wood**, a type of magnolia tree native to Japan.
- **Significance: Renewable materials** for space structures, **better withstand space conditions,** Burn up **without releasing harmful pollutants after decommissioning,** etc.

## 7.5.5. Operation Dronagiri

Ministry of Science and Technology launched **Operation Dronagiri and Integrated Geospatial Data Sharing Interface (GDI).**

### About Operation Dronagiri

- A pilot project under **National Geospatial Policy 2022.**
- **Purpose:** Demonstrate the **applications of geospatial technologies** and innovations.
- **First Phase Implementation**: In the states of UP, Haryana, Assam, Andhra Pradesh & Maharashtra, in 3 sectors, namely, **Agriculture, Livelihoods, Logistics** and **Transport**.

### About Integrated Geospatial Data Sharing Interface (GDI)

- Interface is being built for **making spatial data accessible** with **advanced data exchange protocols and privacy-preserving features.**
- **Significance:** Enabling seamless data sharing, enabling data-driven decisions for public good, fostering responsible use of geospatial data.

## 7.5.6. Direct-to-Device (D2D) Satellite connectivity

BSNL launched India's first **Direct-to-Device(D2D) Satellite connectivity.**

- Global initiatives such as **Constellation Global, SpaceX- Starlink etc** uses D2D technology.

### Working of Direct-to-Device Satellite Technology

- **Principle**: Satellites act as cell towers in space, transmit signals directly to devices on the ground.
- **Non-Terrestrial Network (NTN) technology**: Allows for seamless two-way communication between devices and satellites.
  - ➡ BSNL uses **Viasat's Geostationary L-band satellites** positioned at 36,000 kms.
- **Significance**
  - ➡ **Reliable connectivity**
  - ➡ **High-speed internet** and **wider coverage** even in the **remotest areas**
  - ➡ **Support UPI payments, Emergency calls** and **SOS messaging,** etc.
- **Challenges:** Latency, **Regulatory Challenges** (may cross geographical borders), **Spectrum allocation** (Obtaining sufficient bandwidth), **Device compatibility,** and **Propagation challenges** (Overcoming signal loss and interference).

## 7.5.7. Gravity Energy Storage (GES)

GES is emerging as an alternative to battery energy storage for solar and wind power.

### About GES:

- Mechanical energy storage system that **uses gravitational potential energy to store and generate electricity**.
  - ➡ Involves **lifting different heavy masses during excess energy** generation and **releasing it to produce electricity** when demand rises or solar energy is unavailable.
- **Advantages**: High efficiency, large storage capacity, low environmental impact, longevity etc.
- **Limitations**: High initial cost and space requirement, complexity etc.
- **Applications**: Renewable energy integration, grid stabilization etc.

## 7.5.8. BRIC-National Agri-Food Bio-Manufacturing Institute (BRIC-NABI)

Recently, a new complex of India's first Biomanufacturing Institute, named **BRIC-NABI,** was inaugurated at Mohali (Punjab).

## About BRIC-NABI

- Formed through the strategic merger of National Agri-Food Biotechnology Institute (**NABI)** and the **Centre of Innovative and Applied Bioprocessing (CIAB)**.
- **Funded by:** Department of Biotechnology

## 7.5.9. First Indigenous Antibiotic

Recently, Union Minister of Science and Technology launched the first indigenous antibiotic **"Nafithromycin"** for resistant infections.

### About Antibiotics

- **Chemical substances** (produced artificially and naturally) used as **drugs** to kill or stop the growth of **disease-causing microorganisms, in humans and animals**.
- Work against **bacterial and not viral infections** (like common cold, flue).
    - Viruses **lack cell wall** that is attacked by antibiotics.
- **Common Examples:** Streptomycin, tetracycline and erythromycin.

## 7.5.10. Adoption of Jeddah Commitments

Jeddah Commitments adopted at Fourth **Global High-Level Ministerial Conference on Antimicrobial Resistance (AMR)**

- It is a **comprehensive framework** for global action **to combat AMR** through a **One Health approach.**
    - **AMR** occurs when germs like bacteria, viruses, etc. **develop the ability to defeat the drugs designed to kill them**.
    - **One Health Approach** is an integrated, unified approach aimed to sustainably balance and optimize health of people, animals and ecosystems.

### Key highlights of Jeddah commitments (Non-legally binding instrument)

- **One Health AMR learning hub:** Focused on sharing best practices and building capabilities for implementing multi sectoral National Action Plans(NAPs) on AMR.
- **National AMR coordinating mechanism:** To implement and ensure sustainable financing and monitoring of NAPs.
- **Other:**
    - **Promotes global data sharing**
    - Adherence to **Codex Alimentarius Commission guidelines**
    - Supports **Quadripartite organizations (FAO, WHO, WOAH, UNEP)**

## 7.5.11. Pandemic Fund Project Launched

Fund focuses on "Animal Health Security Strengthening in India for Pandemic Preparedness and Response".

### About Pandemic Fund Project

- A **$25 Million initiative funded** by the **G20 Pandemic Fund**.
- **Aim:** Enhance **low- and middle-income country's financing** capacity to respond to animal health threats and pandemic
- **Implementing Entities:** Asian Development Bank (ADB), World Bank, Food and Agriculture Organization (FAO).
- **Need to focus on animal disease outbreaks**: Prevent Zoonotic Diseases, **Minimize socio-economic impacts (**E.g. SARS economic loss of $50 B), etc.
- **Major Interventions under the Project includes**
    - **Upgradation and expansion of animal health laboratories** and **vaccine manufacturing facilities.**
    - **Enhancing early warning** and **surveillance mechanisms.**
    - **Upgrading Data Management** and **Analytical systems**.
    - **Disaster management framework** for the livestock sector.

### India's Key Initiatives for the Animal Health

- National Animal Disease Control Program (NADCP)
- Rashtriya Gokul Mission

## 7.5.12. Global Health Emergency Corps (GHEC)

WHO and its partners **activated the GHEC for the first time** in response to a recent Mpox outbreak.

### About GHEC

- **Genesis:** WHO founded the GHEC in **2023** after the response to **COVID-19 pandemic**
- **Objective:** Strengthening the **response to health emergencies**, and a **collaboration platform** for countries and health emergency networks.
- **Role:** It supports countries on their health emergency workforce, the surge deployment of experts and the networking of technical leaders.

# THE PLANET VISION

In a world facing unprecedented environmental challenges, staying informed and empowered is more crucial than ever. VisionIAS brings you **'The Planet Vision'**, a simplified, informative, and interactive magazine to delve into the complexities of the environment.

With the belief, that individual efforts and awareness are the key to a sustainable future, the magazine seeks to inspire and educate people to **develop a deeper understanding and appreciation for the environment, nature & planet.**
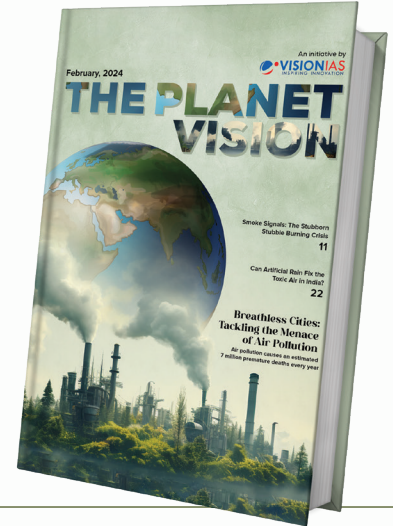
## Objectives of 'The Planet Vision'

**Sensitise the young generation:** Highlighting pressing environmental issues and their multifaceted impacts.

**Inspire Action and Promote Sustainable Lifestyle:** Inspiring stories and case studies to motivate readers to make environmentally conscious choices.

**Bridge Environmental Science and Public Understanding:** Presenting complex scientific concepts in a simple and interactive manner.

**Showcase Solutions:** Spotlight innovative technologies, projects, and initiatives that offer solutions to environmental challenges.

**Highlight Local Efforts:** Showcase local conservation efforts, community initiatives, and grassroots projects that make a positive impact on the environment.

## Who is the magazine for?

The Magazine is designed for students, eco-conscious individuals, educators, environmentalists, and anyone who cares about the health of our planet.

## Key elements of the 'The Planet Vision'

**Cover Stories:** Thought-provoking articles about a critical ongoing environmental issue, along with the mitigation strategies adopted at the national and international levels.

**Briefing and Developments:** Stay informed about the latest environmental news, trends, and solutions.

**Protect and Preserve:** Inspirational stories of local conversation efforts.

**Environment and You:** Illustrating ways to make environmentally conscious choices in everyday life.

**Green Tech:** New and emerging technologies in the field of environment.

**Interactive elements:**
- **Snapshot:** Telling a story through capturing images.
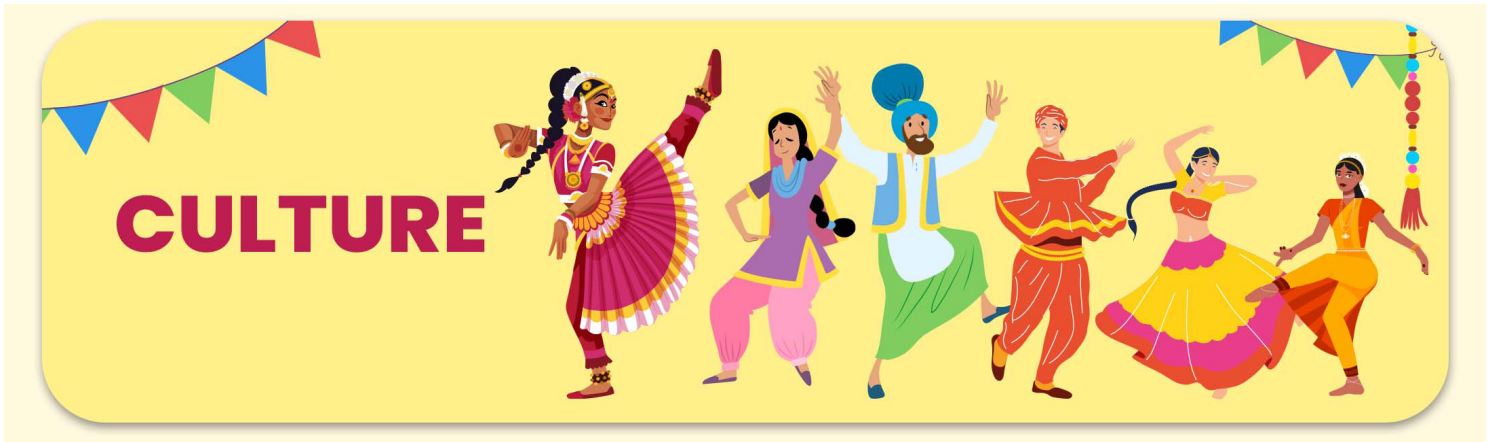- **Quizzes and crosswords:** To test your understanding and knowledge as a reader.

> Look deep into nature, and then you will understand everything better.
> –Albert Einstein

Scan the QR code, to download and read the Magazine:

# CULTURE

## 8.1. Birsa Munda

### Why in News?

**Janjatiya Gaurav Divas (15th November)** was celebrated pan-India, marking the **150th birth anniversary of Bhagwan Birsa Munda**.

### More on the News

➲ Diwas marks the birth anniversary of **Bhagwan Birsa Munda** and **honors the contributions of tribal communities, especially in India's freedom struggle.**

### About Birsa Munda (Birth name Daud Munda)

➲ **Early life**
  ➜ Belonged to the **Munda tribe** of the **Chhotanagpur plateau area** in Jharkhand.
  ➜ He spent some time in the company of a **prominent Vaishnav preacher Anand Panre**.

➲ **Key Contributions:**
  ➜ **Founded a new sect** known as the **Birsait,** believed in one God and aimed for social reforms.
  ➜ **Launched campaign** against alcoholism, witchcraft etc. and spread awareness about cleanliness, land rights, **awared the tribal's** about British atrocities.
  ➜ **Provided leadership to** the **Munda rebellion** (**Ulgulan (Great Tumult)** movement)
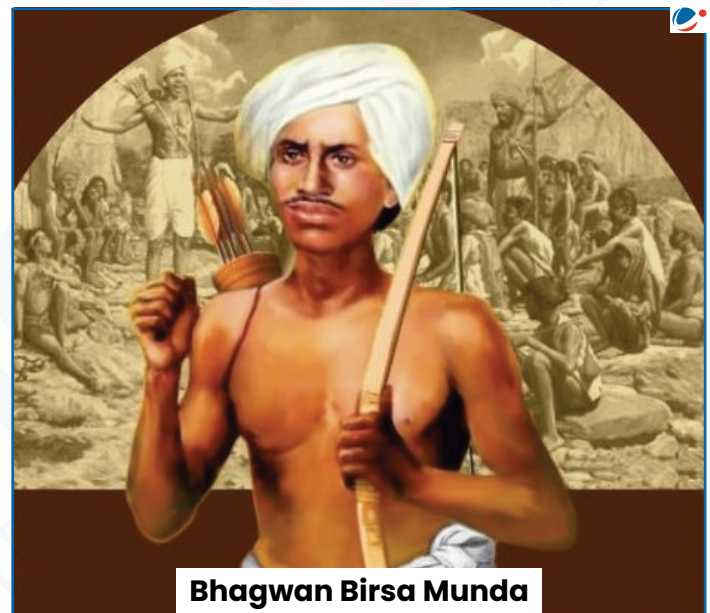
**Bhagwan Birsa Munda**

### About Munda Rebellion

➲ Mobilized tribes belonging to **Chhotanagpur, Bengal and Odisha** revolted against the **Dikus** (outsiders) and **Europeans** (referred to as **Ravanas**).

➲ **Major Reasons for the revolt:**
  ➜ **Introduction of Zamindari system:** Traditional systems like **Mundari Khuntkatti (community land ownership)** were replaced; reducing **tribals from landowners to landless labourers:**
    ◇ Change led to **Veth begari (forced labour) and Bandhua Majdoori (bonded labour)** conditions for tribals.
  ➜ **Exploitation by the Dikus:** E.g. excise controls, and other levies
  ➜ **Missionaries** criticising their traditional culture.

➲ **Methodology:** Guerrilla warfare technique, etc.

➲ **Outcomes of the Movement**

### Role of Tribal communities in India's National Movement

| | |
|---|---|
| 🔳 | **Safeguarding ancestral lands, traditions** and **culture identities** |
| 📍 | **Mobilizing people** and contributing to anti-colonial struggle |
| 📜 | **Exposing exploitative British Policies.** |
| 🏗️ | **Development works** like construction of roads, building bridges etc. |
| 📱 | **Leading social campaigns** against superstitions and drinking. |

➜ **1908 Chhotanagpur Tenancy Act**: Prohibited tribal land transfer to non-tribals.
➜ Forced labor called the **"Veth Bigari"** system abolished.

## Other Key Tribal Movements in India

⮑ **Santhal Hul, 1855-57:** Led by Sidhu and Kanhu Murmu
⮑ **Tana Bhagat Movement, 1920-1921:** led by Jatra Bhagat
⮑ **Koya Revolt, 1862 and 1922-1924**: Key leader- Thamman-Dora and Alluri Seetharama Raju.

# 8.2. News in Shorts

## 8.2.1. Sohrai painting

Prime Minister gifted Sohrai Painting to Russia's President Vladimir Putin during BRICS summit in Kazan, Russia.

## About Sohrai painting

⮑ Practiced as a mural art form in **Hazaribagh district, Jharkhand**.
⮑ Made by tribal women on the **walls of their mud houses** during the Sohrai festival
⮑ **Features:** Use of natural pigments and simple tools, brushes made from twigs, rice straw, or even fingers, and depiction of animals, birds, and nature
⮑ Sohrai-Khovar Paintings have also been awarded **GI tag**.

# ETHICS

## 9.1. Instant Justice

### SC Guidelines on Property Demolition: Key Points

- ➲ **Fundamental Principle:** No demolition without following due process and natural justice
  - ➡ Court condemns "might is right" approach in demolitions
- ➲ **Mandatory Requirements:** Prior show cause notice to property owner
  - ➡ Personal hearing opportunity with designated authority
  - ➡ Video recording of entire demolition process
- ➲ **Enforcement Mechanism:** Violations will attract contempt proceedings
- ➲ **Exceptions:** Guidelines don't apply to unauthorized constructions
  - ➡ Court-ordered demolitions are exempt

### Fundamental Constitutional and Legal principles impacted by demolition

- ➲ **Separation of Power**: Executive takes up Judicial role
- ➲ **Erodes Public Trust:** Executive acts as trustee of the Citizens
- ➲ **Collective Punishment:** Punishing entire family with one accused
- ➲ **Infringes Right to Shelter:** Under Article 21
- ➲ **Violates Principle of Criminal Law:** Accused is innocent unless proven guilty

### Stakeholders and their Interest in Instant justice

| Stakeholders | Interest |
|---|---|
| **Victims and Their Families** | Access to Justice, Right to Fair Trial, Human Right Protection, Dignity, To make amends for their crime |
| **Law Enforcement and Judiciary** | Rule of law, Criminal Justice System, Proportionality in crime and Punishment, Delivering fair and impartial punishment |
| **Society at Large** | Speedy justice, Faith in Judicial System, Law and Order, Public Safety |
| **Perpetrators (Alleged or Convicted)** | Quick Justice Delivery, Protecting the vulnerable, Popular Public narrative on crime |
| **Government** | Fair Criminal Justice System, Balancing individual rights with collective security, Public sentiments and outcry |

### Understanding Theories of Justice

- ➲ **Core Concept:** Justice means fair and equal treatment under law
  - ➡ Dynamic concept that evolves with society
- ➲ **Bentham's Utilitarian Theory:** Focuses on maximum satisfaction for maximum people
  - ➡ Justice measured by collective societal benefit
- ➲ **Rawls's Two Principles: Equal Basic Liberties:** Guarantees fundamental rights for all

➡ **Difference Principle:** Accepts inequalities only if they help society's poorest
⟳ **Amartya Sen's Theory of Justice (Capability Approach):** Justice through freedom to develop capabilities
➡ Emphasizes access to opportunities (health, education)
➡ Focuses on actual ability to achieve well-being
⟳ **Comparative Analysis**
➡ **Utilitarianism:** Collective good
➡ **Rawls:** Fairness and equality with protected rights
➡ **Sen:** Development of human potential

## Reasons behind growing cases of instant justice:

⟳ **Delayed Justice**: Erodes public trust in the system - **Law Commission** (239th report)
⟳ **Legal Ignorance**: Lack of awareness about due processes.
⟳ **Emotional Outbursts**: Revenge-driven reactions in sensitive cases.
⟳ **Misinformation**: Viral content mobilizes uninformed crowds.
⟳ **Media Sensationalism**: Fuels mob mentality.
⟳ **Public Support**: Police encounters often seen as justice.

## Ethical Issues in Instant Justice

⟳ **Rule of Law vs. Arbitrary Actions**: Undermines equality before the law, replacing it with biased judgment.
⟳ **Due Process vs. Swift Punishment**: Denies fair trial rights (Article 21), ignoring "innocent until proven guilty."
⟳ **Retributive vs. Reformative Justice**: Promotes vengeance over proportional or justified punishment.
⟳ **Natural vs. Arbitrary Justice**: Violates principles like audi alteram partem (right to be heard).
⟳ **Means vs. Ends**: Pursuit of deterrence at the cost of legal and ethical principles disrupts societal order.

## Way Forward

⟳ **Balance Retributive and Restorative Justice**: Focus on repairing harm while ensuring visible and impartial justice.
⟳ **Public Sensitization**: Conduct awareness campaigns on legal rights and the consequences of vigilante actions.
⟳ **Judicial Reforms**: Enhance transparency, efficiency, and accountability to restore public trust; implement Supreme Court guidelines **(e.g.,** D.K. Basu vs. State of West Bengal**).**
⟳ **Institutional Accountability**: Ensure police uphold the accused's right to a fair trial as mandated by the Constitution.
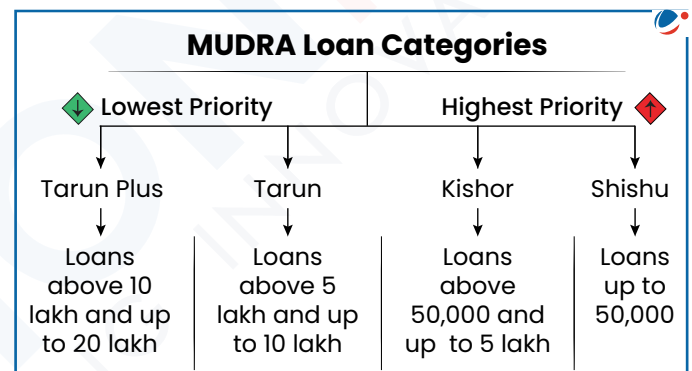
# GOVERNMENT SCHEMES
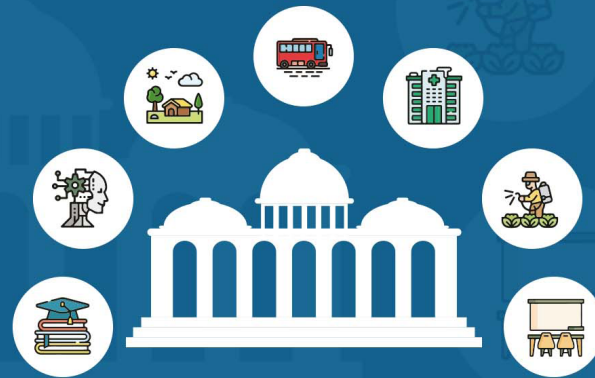
## 10.1. Pradhan Mantri Mudra Yojana (PMMY)

The limit of **Mudra loans** under the **PMMY** has been enhanced from **Rs. 10 lakhs to Rs. 20 lakhs**.

### About PMMY

- **Ministry: Ministry of finance**
- **Launch year:** 2015
- **Purpose:** MUDRA **loans to the non-corporate, non-farming small & micro enterprises.**
- **MUDRA**: Micro Units Development and Refinance Agency Ltd (MUDRA) is a refinance agency. It provides **refinance support to its intermediaries viz.** Banks, Micro Finance Institutions (MFIs) and NBFCs.
- **Key Features**:
  - ➔ **Means for availing Mudra loans: Bank, NBFC, MFIs, etc., or through the Udyamimitra portal**
  - ➔ **No Need for Collaterals: Credit Guarantee Fund for Micro Units (CGFMU)** provides guarantee.
  - ➔ **Interest rate is deregulated:** Interest Subvention of 2% on prompt repayment of Shishu loans and 25bps reduction for MFIs/NBFCs lending to women entrepreneurs.

**MUDRA Loan Categories**

| ⬇ Lowest Priority | | Highest Priority ⬆ | |
|---|---|---|---|
| Tarun Plus | Tarun | Kishor | Shishu |
| Loans above 10 lakh and up to 20 lakh | Loans above 5 lakh and up to 10 lakh | Loans above 50,000 and up to 5 lakh | Loans up to 50,000 |

## 10.2. Atal Innovation Mission 2.0

Union Cabinet has approved the continuation of its **flagship initiative, the Atal Innovation Mission (AIM 2.0).**

### About AIM 2.0

- **Objective**: To **create and promote a culture of innovation** and entrepreneurship
- **Implementing agency:** NITI Aayog
- **Implementation period:** Till March 31, 2028.
- **Key Features:** AIM 2.0 involves piloting new initiatives **designed to fill gaps in the ecosystem and scaling successes** through central and state governments, industry, academia and community.
- **Mechanism to improve the entrepreneurship ecosystem under the scheme**
  - ➔ **Increasing input** (i.e., ushering more innovators and entrepreneurs) through
    - ◇ **The Language Inclusive Program of Innovation (LIPI)**
    - ◇ **The Frontier Program** (support for innovations in Jammu and Kashmir (J&K), Ladakh, the Northeastern states (NE), Aspirational Districts and Blocks)
  - ➔ **Improving the success rate or 'throughput'** (i.e., helping more startups succeed) through Human Capital Development Program, State Innovation Mission (SIM), **International Innovation Collaborations program,** etc.
  - ➔ **Improving the quality of 'output'** (i.e., producing better jobs, products, and services) through the **Industrial Accelerator program, Atal Sectoral Innovation Launch Pads (ASIL) program**, etc.

## 10.3. Pradhan Mantri Vanbandhu Kalyan Yojana

The **Pradhan Mantri Vanbandhu Kalyan Yojana (PMVKY)** completed **10 years.**

### About PMVKY

- **Ministry**: Ministry of Tribal Affairs
- **Launched**: **in 2014, Till 2025-26**
- **Objective:** Improving the quality of life in tribal areas
- **Key Features**:
  - → It covers **all tribal people and all areas** with tribal populations across the country.
  - → PMVKY is **an umbrella scheme,** that has several components:
    - ◇ **Pradhan Mantri Adi Adarsh Gram Yojana,**
    - ◇ Development of **Particularly Vulnerable Tribes (PVTGs)** Support to Tribal Research Institute (TRI),
    - ◇ Pre-Matric Scholarships, Post-Matric Scholarship, etc.

# QUICK FACTS

| Topics | Key facts/Data |
|---|---|
| **Property Rights in India** | ➲ **Constitutional Provisions**: Article 19(1)(f) and Article 31 (originally), Article 300A (post-44th Amendment)<br>➲ **Key Judgements**:<br>➜ Property Owners Association v State of Maharashtra (recent), Sanjeev Coke Manufacturing Company vs. Bharat Coking Coal Ltd. and Anr. (1983)<br>➜ **Doctrine of Eminent domain:** Sudharsan Charitable Trust v. Government of Tamil Nadu (2018),<br>➜ **Public Trust Doctrine:** Th. Majra Singh v. Indian Oil Corporation, M.I. Builders v. Radley Shyam Sahu<br>➲ **Important Amendments**: 25th Amendment Act (1971) and 44th Amendment Act (1978) |
| **Internal Democracy in Political Parties** | ➲ **Statutory Provisions**: Section 29A of the Representation of the Peoples' Act (RPA)<br>➲ **Key Judgements**: Indian National Congress (I) v Institute of Social Welfare<br>➲ **Important Amendments**: 52nd Amendment to the Constitution (1985)<br>➲ **Committees/Commissions:** Tarkunde Committee (1975), Dinesh Goswami Committee (1990), Indrajit Gupta Committee (1998), Law Commission's 255th Report on "Electoral Reforms", National Commission to Review the Working of the Constitution (NCRWC) |
| **Municipal Corporations in India** | ➲ **Constitutional Provisions**: Article 243X and Article 243Y<br>➜ 12th Schedule of the Constitution lists 18 functions<br>➲ **Important Amendments**: 74th Constitutional Amendment Act, 1992<br>➲ **Government Schemes/Initiatives**: Swachh Bharat Mission (SBM) and Atal Mission for Rejuvenation and Urban Transformation (AMRUT) |
| **Non-Governmental Organizations (NGOs)** | ➲ **Constitutional Provisions**: Article 19(1)(c).<br>➲ **Statutory Provisions**: Foreign Contribution (Regulation) Act (FCRA), 2010, Societies Registration Act, 1860, Indian Trusts Act, 1882, Companies Act, 2013<br>➲ **Key Judgements**: Naz Foundation v. Govt. of NCT of Delhi<br>➲ **Important Amendments**: Foreign Contribution (Regulation) Amendment Act, 2020<br>➲ **Government Schemes/Initiatives**: NGO Darpan Portal, Financial Assistance to Cultural organizations<br>➲ **Committees/Commissions**: Vijay Kumar Committee (2017), 2nd Administrative Reforms Commission (ARC) |
| **Governance and AI** | ➲ **Constitutional Provisions**: Privacy under Articles 14, 19, and 21 can be linked to AI applications.<br>➲ **Statutory Provisions**: Digital Personal Data Protection Act<br>➲ **Government Schemes/Initiatives**: National Strategy for AI (#AIforAll) by NITI Aayog, Responsible AI for Youth and Future Skills, Bhashini platform |

| | |
|---|---|
| **Digitization of Land Records** | ⮕ **Constitutional Provisions**: Seventh Schedule, List II (State List), Entry 18 and 45 – (Land under state jurisdiction)<br>⮕ **Statutory Provisions**: Transfer of Property Act, 1882; Registration Act, 1908<br>⮕ **Government Schemes/Initiatives**: Digital India Land Records Modernization Programme (DILRMP) |
| **Persons with Disability** | ⮕ **Constitutional Provisions**: Article 14, Article 19 Article 21, Article 41, Article 243-G (XIth Schedule), Article 243-W (XIIth Schedule)<br>⮕ **Preamble** - Ensures justice, liberty, and equality for all citizens, implicitly including PwDs.<br>⮕ **Statutory Provisions**: Rights of Persons with Disabilities (RPwD) Act, 2016; Rehabilitation Council of India (RCI) Act, 1992<br>⮕ **Government Schemes/Initiatives**: Accessible India Campaign (Sugamya Bharat Abhiyan), Artificial Limbs Manufacturing Corporation of India (ALIMCO) |
| **India-Middle East-Europe Economic Corridor (IMEC)** | ⮕ **Genesis:** Established through a MoU at the 2023 G20 Summit; includes Eastern (India to Gulf) and Northern (Gulf to Europe) corridors.<br>⮕ **Significance for India:** Reduces shipment time to Europe by **40% and costs by 30%.**<br>⮕ **Consists of two corridors:** Eastern (India to Gulf) and Northern (Gulf to Europe).<br>⮕ **Part of the Partnership for Global Infrastructure and Investment (PGII**). |
| **G20 Rio de Janeiro Summit** | ⮕ **Key outcomes:** Global Alliance against Hunger and Poverty, super-rich taxation consensus, and climate change task force formation.<br>⮕ **Third consecutive Global South host:** Brazil (2024), following Indonesia (2022) and India (2023). |
| **India-Australia Relations** | ⮕ **Key Highlights of the Summit:**<br>  ➜ Launch of India-Australia Renewable Energy Partnership.<br>  ➜ Extension of the AIBX programme.<br>  ➜ Agreement to renew Defence and Security Cooperation in 2025.<br>⮕ **Economic and Trade Relations:** Trade exceeded $30 billion in 2023, with potential under ECTA.<br>⮕ **Defence Cooperation**: Defence exercises like AUSTRAHIND, AUSINDEX, Pitch Black. |
| **India-Germany Relations** | ⮕ 2024 marks 25 years of the India-Germany strategic partnership and 50 years of scientific cooperation.<br>⮕ **Joint exercises**: Ex MILAN, PASSEX, Ex TARANG SHAKTI-1, etc.<br>⮕ **Trade**: Germany is India's largest trade partner in Europe, with bilateral trade reaching US$ 33.33 billion in 2023.<br>⮕ **Investment**: Germany is the 9th largest foreign direct investor in India. |
| **India-Italy Relations** | ⮕ **Joint Strategic Action Plan 2025-2029:** Focuses on trade, critical technologies, energy transition, and defense industrial roadmap.<br>⮕ **Italy exited China's BRI**, aligning with **India-led IMEC and IPOI** initiatives.<br>⮕ **Trade**: **$14.56 billion (2023-24),** with Italy as India's **4th largest EU** trading partner. |
| **India-Spain Relations** | ⮕ **C295 Aircraft** Final Assembly Line launched in Vadodara; 40 aircraft to be made in India.<br>⮕ **Trade**: $9.9 billion (2023); Spain is **India's 6th largest EU** trade partner.<br>⮕ **Cultural Exchange Programme** (2024-2028) **and India-Spain Year of Culture** declared for 2026. |
| **Importance Of Large Trade Agreements** | ⮕ **Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP)**: CPTPP is a free trade agreement between Canada, Mexico, Peru, Chile, New Zealand, Australia, Brunei, Singapore, Malaysia, Vietnam, and Japan.<br>⮕ UK will officially join CPTPP by 15 December 2024. |
| **Direct Benefit Transfer (DBT)** | ⮕ **Launched**: 2013.<br>⮕ **Objective**: To ensure **reduction in leakages, faster delivery and elimination of delays.**<br>⮕ **Scope of Support: Cash Transfers** and **In-Kind Support**. |

| | |
|---|---|
| **Food Corporation of India (FCI)** | ➲ About: FCI is Public Sector Undertaking under the Ministry of Consumer Affairs, Food & Public Distribution. <br> ➲ **Genesis:** FCI is a **statutory body** established under the **Food Corporation's Act 1964.** |
| **Venture Capital Fund for Space Sector** | ➲ IN-SPACe is a **single-window, independent, nodal agency** that functions as an autonomous agency in the Department of Space (DOS). <br> ➲ It acts as an interface between ISRO and Non-Governmental Entities (NGEs) to facilitate private sector participation. |
| **21st Livestock Census** | ➲ **Schedule:** To be conducted during October 2024- February, 2025. <br> ➲ **Key Features: Fully digitized** (similar to **20th census**); Data on **16 species of livestocks, Covers data on pastoralists** for the **first time.** <br> ➲ Livestock census has been conducted **every five years since** 1919 (last being in 2019). |
| **Nano fertilizers** | ➲ Nano fertilizers are **nutrients that are encapsulated or coated within nanomaterial** (measuring 100 nanometres or less). |
| **Indian Coast Guard** | ➲ **Established**: 1978 under the Coast Guard Act, for maritime law enforcement, rescue, and pollution response. <br> ➲ **Structure**: Part of a multi-tiered security system with the Navy and State Police. <br> ➲ **Functions**: Protects offshore terminals, sea safety, and marine environment. <br> ➲ **Initiatives**: Conducts exercises like SAREX-2024, coastal security authority since 2009. |
| **Digital Arrest** | ➲ **Concept**: An online scam where fraudsters impersonate law enforcement to falsely accuse and extort money from victims. <br> ➲ **Government Initiatives**: <br> ➡ **Indian Cyber Crime Coordination Centre** <br> ➡ **Spoofed Call Blocking System and Samanvaya platform** <br> ➲ **National Cyber Crime Reporting Portal** |
| **India's Fourth Nuclear Submarine (S4*)** | ➲ **SSBN**: India joins US, Russia, China, UK, and France in operating nuclear-powered ballistic missile submarines. <br> ➲ **Current Fleet**: Includes INS Arihant, INS Arighaat (S3), and INS Aridhman (S4) in sea trials. |
| **Digital Sequence Information (DSI)** | ➲ **DSI includes genomic and digital data** like DNA, RNA, and proteins used in agriculture, pharmaceuticals, and biodiversity. <br> ➲ Cali Fund for equitable sharing of DSI benefits, with contributions from profit-making companies with the DSI was launched at the cop 16 to the UNCBD. |
| **Coral triangle** | ➲ It is home to **76% of the world's coral species, over 2,000 fish species, and six of seven marine turtle species**, supporting 120 million people, hence dubbed **"the Amazon of the seas"** |
| **World Energy Employment Report** | ➲ launched by IEA <br> ➲ In 2023, India's energy sector employment **represents 1.5% of the country's total workforce**. <br> ➲ The sector heavily depends on **informal labor.** |
| **Emission Gap Report** | ➲ Released by **UNEP** <br> ➲ **Key observations:** <br> ➡ Global greenhouse has emission marked 1.3% increase from 2022 levels. <br> ➡ India is the third-largest emitter, behind China and the U.S <br> ➲ India's historical CO2 emissions from 1850 to 2022 are significantly lower than those of China and the U.S. |
| **One Nation, One Subscription (ONOS) Scheme** | ➲ **Objective**: Provide national licenses for e-journals across STEM and social sciences, ensuring accessible and affordable digital access to 13,000 international journals. |

| | |
|---|---|
| **Heritable Human Genome Editing (HHGE)** | ➲ HHGE introduces **changes in germline cells** (sperm, eggs, or embryos), with changes inherited by offspring **unlike somatic cell editing.**<br>➲ **Tools** used in HHGE include **Zinc-finger nucleases (ZFNs), CRISPR/Cas9,** and **Meganucleases** |
| **Satyendra Nath Bose** | ➲ **Satyendra Nath Bose's** main contribution includes **Bose-Einstein Statistics** and **Bose-Einstein Condensates (BEC).**<br>➲ He is referred to as "**Father of the God Particle**" along with Peter Higgs.<br>➲ The fundamental particle **'Bosons'** were named after him. |
| **Oral rehydration therapy (ORT)** | ➲ **ORT** is the **administration of appropriate solutions** (glucose, sodium chloride, sodium bicarbonate, and potassium chloride or citrate) by mouth to prevent or correct **dehydration.** |
| **RNA Editing** | ➲ Modifies genetic information on RNA sequences through insertion, deletion or substitution.<br>➲ **DNA editing** makes **permanent changes** while **RNA editing** makes **temporary changes** which may **fade over time.** |
| **Jeddah Commitments** | ➲ **One Health Approach** is an integrated, unified approach aimed to sustainably balancing and optimizing the health of people, animals, and ecosystems. |
| **Gravity Energy Storage (GES)** | ➲ **Gravity Energy Storage** uses a **Mechanical energy storage system** that uses gravitational potential energy to store and generate electricity. |
| **Birsa Munda** | ➲ **Founded a new sect** known as the **Birsait,** believed in one God and aimed for social reforms.<br>➲ **Provided leadership to** the **Munda rebellion** (**Ulgulan (Great Tumult)** movement) |
| **Sohrai Painting** | ➲ Practiced as a mural art form in **Jharkhand** by tribal women on the **walls of their mud houses** during the Sohrai festival.<br>➲ Received **GI Tag** |
| **Pradhan Mantri Mudra Yojana (PMMY)** | ➲ **Micro Units Development and Refinance Agency Ltd (MUDRA)** is its refinancing agency.<br>➲ Includes loan categories **Tarun**, **Tarun Plus**, **Kishor,** and **Shishu.** |

# ACTIVITIES

## 12.1. MCQS

1. **With reference to Indian secularism, consider the following statements:**
   1. It ensures complete separation of religion and state.
   2. It aligns closely with Western secularism in its approach to religious freedom.

   Which of the statements given above is/are correct?
   (a) 1 only
   (b) 2 only
   (c) Both 1 and 2
   (d) Neither 1 nor 2

2. **Consider the following features regarding NGOs under the Foreign Contribution (Regulation) Act (FCRA), 2010:**
   1. NGOs must open a specific bank account for receiving foreign contributions.
   2. Administrative expenses from foreign contributions are capped at 20%.
   3. FCRA applies to both private and public trusts.

   Which of the statements given above is/are correct?
   (a) 1 only
   (b) 1 and 2 only
   (c) 1, 2, and 3
   (d) 2 and 3 only

3. **Which of the following statements about the Digital India Land Records Modernization Programme (DILRMP) is/are not correct?**
   1. The DILRMP has led to the creation of a 6-digit Unique Land Parcel Identification Number (ULPIN).
   2. The program aims to shift from a digital presumptive title system to a manual conclusive land titling system.

   Select the correct answer using the code below:
   (a) 1 only
   (b) 2 only
   (c) Both 1 and 2
   (d) Neither 1 nor 2

4. **Which of the following statements is correct about the Inter State Council (ISC)?**
   (a) It is chaired by the President of India.
   (b) It includes the Chief Ministers of all states and Union Territories with Legislature.
   (c) It exclusively focuses on inter-state conflicts and does not involve Union Ministers.
   (d) It is a non-constitutional body that only operates at the discretion of the Union Government.

5. **Which of the following Ministry/bodies conceptualized the Grievance Redressal Assessment and Index (GRAI)?**
   (a) Ministry of Finance
   (b) Department of Administrative Reforms and Public Grievances (DARPG)
   (c) Election Commission of India
   (d) NITI Aayog

6. **Consider the following statements about the Eastern Maritime Corridor (EMC) between India and Russia:**
   1. The Eastern Maritime Corridor (EMC) was envisioned during the Eastern Economic Forum in 2019 and aims to develop a sea route between Chennai and Vladivostok.
   2. The EMC covers a distance of approximately 10,300 km and reduces transportation time by around 16 days compared to traditional routes.

   Which of the above statements is/are correct?
   (a) 1 only
   (b) 2 only
   (c) Both 1 and 2
   (d) Neither 1 nor 2

7. **The 2024 OPCW-The Hague Award was conferred upon the Indian Chemical Council (ICC) for its contributions to chemical safety and compliance with the Chemical Weapons Convention (CWC).**

   Which of the following statements is correct?
   (a) This is the first time a chemical industry body received the award.

(b) The award was established in 2010.

(c) The ICC was awarded for its contributions to nuclear safety.

(d) The Hague Award is given every year to individuals only.

8. **The Reserve Bank of India (RBI) released its 2024 list of Domestic Systemically Important Banks (D-SIBs), in this regard,**

1. State Bank of India, HDFC Bank, and ICICI Bank have been identified as D-SIBs in the RBI's 2024 list.
2. D-SIBs are considered "too big to fail" due to their size and interconnectedness within the financial system.

Which of the above statements is/are correct?

(a) 1 only

(b) 2 only

(c) Both 1 and 2

(d) Neither 1 nor 2

9. **In the World Intellectual Property Indicators 2024 report, which country ranks first in global patent filings?**

(a) India

(b) United States

(c) China

(d) Japan

10. **What does "Digital Arrest" refer to in the context of cybercrimes in India?**

(a) A formal procedure for prosecuting cybercriminals

(b) A scam where criminals pose as law enforcement officers to extort money from victims

(c) A government program aimed at reducing cyber fraud

(d) A digital platform used to track and prevent cybercrime incidents

11. **What is the primary objective of Operation Sagar Manthan?**

(a) To target drug trafficking through maritime routes

(b) To conduct joint military exercises

(c) To enhance international maritime cooperation

(d) To develop coastal infrastructure

12. **Which of the following submarines is not currently part of India's nuclear-powered submarine fleet?**

(a) INS Arihant

(b) INS Arighaat

(c) INS S4*

(d) INS Chakra

13. **Consider the following statements regarding COP 29**

1. India is party to the Reducing Methane from Organic waste Declaration launched at the COP29 Platform.
2. It was launched by Climate and Clean Air coalition.
3. It sets sectoral Targets to reduce methane emissions from organic waste.

How many of the given statements are correct?

(a) Only one

(b) Only two

(c) All three

(d) None

14. **Consider the following statements regarding Forest Ecosystem Restoration Initiative (FERI)**

1. It was Launched in 2014 by The Korea Forest Service in collaboration with the CBD's Executive Secretary.
2. It Aims to support developing countries in implementing the Kunming-Montreal Global Biodiversity Framework (KMGBF), which includes 23 targets for halting and reversing biodiversity loss by 2030.

Which of the above statements is/are correct?

(a) 1 Only

(b) 2 Only

(c) Both 1 and 2

(d) Neither 1 nor 2

15. **Consider the following statements regarding Heritable Human Genome Editing (HHGE)?**

1. It introduces changes in germline cells.
2. In it, CRISPR/Cas9 and Meganucleases are used as tools.
3. It helps in disease prevention.
4. It can used for creation of designer babies.

How many of the given statement(s) is/are correct?

(a) All four

(b) Only One

(c) Only two

(d) None

16. **Operation Dronagiri was recently launched. It is associated with**

(a) Artificial Intelligence

(b) Coaching of sportspersons

(c) Assisted Reproductive Technologies

(d) Geospatial technologies

17. **Non-Terrestrial Network (NTN) technology has been in the news recently, it is associated with**

(a) Direct-to-Device(D2D) Satellite connectivity

(b) Artificial Intelligence

(c) Blockchain Technology

(d) 3D Printing

18. **Which of the statements about Sohrai Painting is/ are correct?**
    1. It is a Mural art form of Jharkhand.
    2. It depicts the agrarian culture and wildlife.

    Select the correct answer from the given codes.
    (a) 1 only
    (b) 2 only
    (c) Both 1 and 2
    (d) Neither 1 nor 2

19. **Alluri Seetharama Raju was associated with which one of the following movements?**
    (a) Munda Rebellion
    (b) Santhal Hul
    (c) Tana Bhagat Movement
    (d) Koya Revolt

20. **Which of the statements is/are correct regarding Pradhan Mantri Vanbandhu Kalyan Yojana?**
    1. It is implemented by the Ministry of Tribal Affairs.
    2. It covers only specific tribes and specific areas of North East India.

    Select the correct answer from the given codes.
    (a) 1 only
    (b) 2 only
    (c) Both 1 and 2
    (d) Neither 1 nor 2

# 12.2. True/False Statements

1. The words "Socialist" and "Secular" were part of the original Preamble of the Indian Constitution when it was adopted. (T/F)

2. The Right to Property is a fundamental right in India. (T/F)

3. The Election Commission of India has the power to de-register a political party if it fails to conduct internal elections. (T/F)

4. The Rights of Persons with Disabilities Act, 2016, increases the types of disabilities recognized from 7 to 21. (T/F)

5. International Cooperative Alliance (ICA) Global Cooperative Conference has 185 members. (T/F)

6. China took control of the Paracels from South Vietnam following a 1974 naval clash. (T/F)

7. National Authority Chemical Weapons Convention (NACWC) was established under the Chemical Weapons Convention Act, 2000. (T/F)

8. PAN is a nine-digit unique alphanumeric number issued by the IT Department to identify/ link transactions (tax payments, etc.) of the holder with the department. (T/F)

9. Uniform Protection Protocol aim to ensure Grid stability, reliability, security and support India's vision for integration of 450 GW Renewable Energy into the National Grid by 2030. (T/F)

10. Equine Piroplasmosis disease is caused by tick-borne protozoan parasites, affects horses, donkeys, mules, and zebras. (T/F)

11. The United Nations Environment Programme (UNEP) releases the Adaptation Gap Report. (T/F)

12. Protected Planet Report released by World Wide Fund for nature (WWF). (T/F)

13. Guru Ghasidas-Tamor Pingla is the Largest Tiger reserve in India. (T/F)

14. The "Adaptive Defense" strategy is aimed at evolving military systems to counter emerging threats. (T/F)

15. The Armed Forces (Special Powers) Act allows the armed forces to fire, arrest, and search without a warrant in "disturbed areas." (T/F)

16. Heritable Human Genome Editing (HHGE) introduces changes in the somatic cell. (T/F)

17. Bose-Einstein Condensates (BEC) is considered a fifth state of matter. (T/F)

18. Direct-to-Device Satellite Technology uses Non-Terrestrial Network (NTN) technology. (T/F)

19. Munda Rebellion was led by Sidhu and Kanhu Murmu. (T/F)

20. Atal Innovation Mission has been initiated by the Ministry of Finance. (T/F)

## 12.3. Mains Practice Questions

1. Examine the challenges in implementing internal democracy within political parties in India. How can these challenges be addressed? (150 words, 10 marks)

2. Examine the challenges and advantages of using Electronic Voting Machines (EVMs) in India compared to the traditional paper ballot system in the USA, particularly in the context of election integrity and public trust. (150 words, 10 marks)

3. Critically analyze the financial challenges faced by Municipal Corporations in India. Suggest measures to enhance their revenue generation capabilities. (150 words, 10 marks)

4. What are the potential benefits for India if it decides to join RCEP and CPTPP? (150 words, 10 marks)

5. How has DBT contributed to financial inclusion in India? What concerns have been raised regarding the effectiveness of DBT programs? (150 words, 10 marks)

6. What are the objectives of the Global Alliance against Hunger and Poverty launched during the G20 Summit, and how does it aim to address global poverty issues? (150 words, 10 marks)

7. What is the One Day One Genome Initiative? Discuss its significance. (150 words, 10 marks)

8. Discuss how Bose-Einstein Statistics revolutionized the field of Physics. (150 words, 10 marks)

9. Discuss the reasons behind the Munda Rebellion and the role played by Birsa Munda. Also, mention its key outcome (150 words, 10 marks)

10. What is Atal Innovation Mission 2.0? Explain the objectives and salient features. (150 words, 10 marks)

11. Discuss the impact of the 2020 amendments to the Foreign Contribution (Regulation) Act (FCRA) on the functioning of NGOs in India. How do these changes affect their operational freedom and financial management? (250 words, 15 marks)

12. Examine the concept of Participative AI (PAI) in the context of Indian governance. What are the potential benefits and challenges in implementing AI for policymaking and public service delivery? (250 words, 15 marks)

13. Analyze the significance of the Digital India Land Records Modernization Programme (DILRMP). How effective has it been in achieving its objectives? (250 words, 15 marks)

14. Discuss the major challenges in India-Australia bilateral relations and suggest measures to strengthen this strategic partnership. (250 words, 15 marks)

15. Examine the significance of India-Germany strategic partnership and analyze its role in shaping bilateral cooperation." (250 words, 15 marks)

16. Elaborate how does the care economy relate to job creation in the context of RNFE, and why is it significant for India's demographic profile? (250 words, 15 marks)

17. The outcomes of COP29 demonstrate the persistent gap between climate ambition and implementation, particularly in climate finance and carbon markets." Critically analyze this statement while suggesting ways to bridge these gaps. (250 words, 15 marks)

18. Examine the challenges and opportunities in achieving a 'Just Transition' in developing countries like India. How can international cooperation and domestic policies be leveraged to ensure an equitable transition? (250 words, 15 marks)

19. Analyze the role of the Indian Coast Guard in strengthening India's maritime security. Discuss its key functions and initiatives. How does the ICG contribute to the broader SAGAR vision for regional stability and growth? (250 words, 15 marks)

20. Discuss the concept of digital arrest scams in India. What are the reasons behind their rise, and what measures has the government taken to combat such cybercrimes? (250 words, 15 marks)

## 12.4. Ethics Case Studies

You have been appointed Superintendent of Police in a city where crime against women have risen significantly in the past few years. You arrive at a scene where a crowd has gathered, demanding immediate action against a man accused of sexually assaulting a woman. Officers in your department are seen publicly beating the accused as a form of "instant justice." While this act receives cheers from the crowd, it starkly contradicts the principles of due process and the rule of law. As you assess the situation, you notice a divide within your department: some officers justify these actions as a necessary response to public outcry, while others express concern about the ethical implications and potential legal consequences.

**On the basis of the above case study, answer the following questions:**

1. Identify the key stakeholders involved in this situation and discuss the ethical dilemmas they face.

2. What steps should you take to address the extrajudicial actions occurring within your department and promote adherence to ethical standards?

# ANSWERS AND EXPLANATION

## 13.1. MCQs Answer and Explanation

**1. Answer (d)**

**Explanation:**

➲ **Statement 1 is incorrect:** Indian secularism does not ensure complete separation; rather, it involves the state's involvement in religious matters to promote social welfare and equality.

➲ **Statement 2 is incorrect:** Indian secularism differs from Western secularism in that it allows for state intervention in religious affairs for public good, unlike the strict separation in many Western models.

**2. Answer (c)**

**Explanation:**

➲ **Statement 1 is correct:** Under FCRA, NGOs are required to have a designated bank account for receiving foreign contributions.

➲ **Statement 2 is correct:** The act limits administrative expenses from foreign contributions to 20%.

➲ **Statement 3 is correct:** FCRA governs both private and public trusts that receive foreign funding.

**3. Answer (c)**

**Explanation:**

➲ **Statement 1 is incorrect:** The ULPIN under DILRMP is a 14-digit number.

➲ **Statement 2 is incorrect:** The goal of DILRMP is to move towards a conclusive, digital land titling system, not to revert to a manual one.

**4. Answer (b)**

**Explanation:**

➲ **Statement (a) is incorrect:** The ISC is chaired by the Prime Minister, not the President.

➲ **Statement (b) is correct:** The ISC indeed includes the Chief Ministers of all states and Union Territories with legislatures.

➲ **Statement (c) is incorrect:** The ISC also involves six Union Cabinet Ministers and does not solely focus on conflicts.

➲ **Statement (d) is incorrect:** The ISC is a constitutional body under Article 263.

**5. Answer (b)**

➲ **Department of Administrative Reforms and Public Grievances (DARPG)** conceptualized the Grievance Redressal Assessment and Index (GRAI).

**6. Answer (c)**

➲ **Statement 1 is correct:** The Eastern Maritime Corridor (EMC) was envisioned during the Eastern Economic Forum in 2019 and aims to develop a sea route between Chennai and Vladivostok.

➲ **Statement 2 is correct:** The EMC covers a distance of approximately 10,300 km and reduces transportation time by around 16 days compared to traditional routes.

**7. Answer (a)**

**Explanation**

➲ The Organisation for the Prohibition of Chemical Weapons (OPCW) Hague award acknowledges ICC contributions to chemical safety, compliance with Chemical Weapon Convention (CWC).

➲ This is the first time that the Award recognises the efforts of a chemical industry body.

➲ Hague Award was established in 2014 to honor OPCW's contributions to Chemical Weapons Conventions (CWC) goals.

➲ The 2024 OPCW-The Hague Award was conferred upon the Indian Chemical Council (ICC).

**8. Answer (c)**

**Explanation:**

➲ **Statement 1 is correct:** State Bank of India, HDFC Bank, and ICICI Bank have been identified as D-SIBs in the RBI's 2024 list.

➲ **Statement 2 is correct:** D-SIBs are considered "too big to fail" due to their size and interconnectedness within the financial system.

**9. Answer (c)**

**Explanation**

➲ India is ranked 6th globally with 64,500 Patent

Filings and country's Patent-to-GDP ratio surged to 381 from 144 (2013 to 2023). China has highest patent fillings.

10. **Answer (b)**

    **Explanation**

    ➲ Recently, CERT-In issues advisory on preventing digital arrest scams

    ➲ Digital Arrest is an online scam where fraudsters impersonate law enforcement to falsely accuse victims and extort money.

11. **Answer (a)**

    **Explanation**

    ➲ Operation Sagar-Manthan launched by Narcotics Control Bureau (NCB)

    **Objective:**

    ➲ Target drug trafficking through maritime routes

    ➲ Counter threats to national security

    ➲ Contribute to the vision of a Nasha Mukt Bharat by 2047

12. **Answer (d)**

    **Explanation**

    ➲ India launched its fourth nuclear-powered ballistic missile submarine, S4*.

    ➲ Operational: INS Arihant, INS Arighaat (S3)

    ➲ In sea trials: Aridhman (S4)

13. **Answer (b)**

    **Explanation:**

    ➲ Reducing Methane from Organic waste Declaration launched at the COP29 by Climate and clean air coalition. It is signed by 35 countries excluding India. It sets sectoral targets to reduce methane emissions.

14. **Answer (c)**

    **Explanation:**

    ➲ The Secretariat of the Convention on Biological Diversity (CBD) celebrated the 10th anniversary of the Forest Ecosystem Restoration Initiative (FERI) in 2024.

    ➲ **About Forest Ecosystem Restoration Initiative**

    ➜ **Origins:** Launched in 2014 by The Korea Forest Service in collaboration with the CBD's Executive Secretary.

    ➜ **Mandate:** Aims to support developing countries in implementing the Kunming-Montreal Global Biodiversity Framework (KMGBF), which includes 23 targets for halting and reversing biodiversity loss by 2030.

15. **Answer (a)**

    **Explanation:**

    ➲ **Statement 1 is correct:** Heritable Human Genome Editing (HHGE) Introduces changes in germline cells.

    ➲ **Statement 2 is correct:** HHGE uses CRISPR/Cas9

and Meganucleases as tools.

➲ **Statement 3 is correct:** HHGE helps in disease prevention.

➲ **Statement 4 is correct:** HHGE helps in the creation of designer babies.

16. **Answer (d)**

    **Explanation:**

    **About Operation Dronagiri**

    ➲ It is a pilot project under National Geospatial Policy 2022

    ➲ Its Purpose is to Demonstrate the applications of geospatial technologies and innovations.

    ➲ First Phase Implementation is in the states of UP, Haryana, Assam, Andhra Pradesh & Maharashtra.

17. **Answer (a)**

    **Explanation:**

    ➲ Non-Terrestrial Network (NTN) technology is mainly used Direct-to-Device(D2D) Satellite connectivity

    ➲ It allows for seamless two-way communication between devices and satellites.

18. **Answer (c)**

    **Explanation:**

    ➲ **Statement 1 is correct:** Sohrai Painting is Mural art form of Jharkhand having GI Tag.

    ➲ **Statement 2 is correct:** It depicts the agrarian culture and wildlife.

19. **Answer (d)**

    **Explanation:**

    ➲ The Koya revolt started against the 'Muttadars' (zamindars) who formed a chain of rent collectors fro the colonial rulers in the year 1862.

    ➲ In 1922-24, this movement synchronized with the Non-Cooperation and Civil Disobedience Movement launched by Gandhiji under the leadership of Alluri Seetharama Raju.

20. **Answer (a)**

    **Explanation:**

    ➲ **Statement 1 is correct** as PMVKY is Implemented by the Ministry of Tribal Affairs.

    ➲ **Statement 2 is incorrect** as PMVKY covers all tribes in all areas.

## 13.2. True/False Answers

**Answers**

| | | | | |
|---|---|---|---|---|
| 1. F | 2. F | 3. F | 4. T | 5. F |
| 6. T | 7. T | 8. F | 9. T | 10. T |
| 11. T | 12. F | 13. F | 14. T | 15. T |
| 16. F | 17. T | 18. T | 19. F | 20. F |

# 13.3. Approach to the Mains Practice Questions

1. **Introduction**: Define internal democracy in political parties.

   **Main Body:** Highlighting the challenges, propose reforms and solutions for promoting internal democracy.

   **Conclusion**: Discuss the potential positive impact on India's democratic health.

2. **Introduction**: Briefly compare the use of EVMs in India with paper ballots in the USA.

   **Main Body**: Discuss advantages and disadvantages of each system concerning integrity and trust.

   **Conclusion**: Suggest ways to enhance trust in India's systems.

3. **Introduction**: Outline the role of Municipal Corporations in urban governance.

   **Main Body**: Explore financial constraints like low revenue and dependency on grants. Suggest innovative revenue generation and management strategies.

   **Conclusion**: Emphasize the need for financial autonomy and efficiency.

4. **Introduction:** Please write about the RCEP and CPTPP briefly.

   **Main body:** write benefits for India if it decides to join RCEP and CPTPP such as integration in global value chain, boost to MSMEs etc.

   **Conclusion:** Please highlight some of the challenges in joining for India to conclude.

5. **Introduction:** Please write about the DBT and related information briefly.

   **Main body:** write DBT contribution in financial inclusion in India and concerns regarding the effectiveness of DBT programs.

   **Conclusion:** Please mention benefits of DBT in overall governance.

6. **Introduction:** Write about the Global Alliance against Hunger and Poverty launched during the G20 Summit.

   **Main body:** Write the objectives of Global Alliance against Hunger and Poverty and its aim to address global poverty issues such as Reach 500 million people with cash transfer programs.

   **Conclusion:** Highlight some of the challenges in front of Global Alliance against Hunger and Poverty.

7. **Introduction**: Start with a brief about the One Day One Genome Initiative.

   **Main Body**: Cover its significance: Advancing biotech application, Environmental sustainability, Human health and disease management, etc. with examples.

**Conclusion**: Conclude by mentioning how it will transform different sphere.

8. **Introduction**: Start with a brief about Bose-Einstein Statistics.

   **Main Body**: Cover how it revolutionized the field of Physics with the help of the Bose-Einstein Condensate, God particle discovery.

   **Conclusion**: Mention that his contribution has laid the foundation of different technological developments.

9. **Introduction**: Briefly cover the Munda rebellion

   **Main Body**: Enlist reasons behind the Munda rebellion and its outcome

   **Conclusion**: Conclude by mentioning the significance of the movement

10. **Introduction**: Write in brief about Atal Innovation Mission 2.0.

    **Main Body**: Explain the objectives and its various features.

    **Conclusion**: Briefly highlight its significance and importance for India.

11. **Introduction**: Introduce FCRA and its objectives.

    **Main Body**: Detail the 2020 amendments and their direct effects on NGO operations. Also, discuss freedom of operation versus regulatory oversight.

    **Conclusion**: Balance between regulation and operational freedom for NGOs.

12. **Introduction**: Briefly define Participative AI (PAI) and mention its potential in modern governance.

    **Main Body:** Explore how AI can enhance policy-making and service delivery. Also, address ethical and other challenges.

    **Conclusion**: Summarize the transformative potential with necessary safeguards.

13. **Introduction**: Briefly explain the objectives of DILRMP.

    **Main Body**: Discuss the programme's components and their significance. Also, evaluate progress, successes, and hurdles.

    **Conclusion**: Reflect on its contribution to land governance reform and future steps.

14. **Introduction:** Brief overview of India-Australia relations post-2020 Comprehensive Strategic Partnership.

    **Main body:**
    ➲ Current partnership status across trade, defense, technology
    ➲ Key challenges (trade barriers, extremism, nuclear cooperation)
    ➲ way forward

**Conclusion:** Need for stronger partnership through dialogue and cooperation.

15. **Introduction**: Recent visit of German Chancellor marking 25 years of strategic partnership.

    **Main body:**
    ➲ Trade and economic significance
    ➲ Climate and tech cooperation importance
    ➲ Strategic and defense relevance

    **Conclusion:** Partnership potential for mutual growth and global challenges.

16. **Introduction:** Please write about the the care economy or RNFE.

    **Main body:** write importance of care economy to job creation in the context of RNFE, and significance of it for India's demographic profile.

    **Conclusion:** Please mention some of the concerns regarding care economy.

17. **Introduction:** Start with Recent COP29.

    **Main Body:** While briefly highlighting the outcomes, discuss the challenges associated with it.

    **Conclusion:** Conclude with Way forward.

18. **Introduction:** Start with the concept of Just Transition.

    **Main Body:** Discuss the challenges and opportunities of it in developing countries like India.Mention the role of international co-operation and domestic policies.

    **Conclusion**: Conclude with CBDR principle.

19. **Introduction:** Briefly introduce the ICG's importance in maritime security and its alignment with India's strategic goals.

    **Main Body:**
    ➲ Outline the ICG's functions like law enforcement, search and rescue. Highlight key initiatives and challenges faced by the organization.
    ➲ Cover the ICG's role in India's SAGAR vision.

    **Conclusion:** Emphasizing overall ICG contribution to regional security and growth.

20. **Introduction:** Define digital arrest scams and their impact.

    **Body:** Discuss reasons for the rise of scams and highlight government measures like the Cyber Crime Coordination Centre and spoofed call blocking.

    **Conclusion:** Stress the need for continued government efforts and public awareness to combat such cybercrimes.

# 13.4. Approach to Case Studies

➲ **Introduction:** Briefly describe the situation involving the public demand for "instant justice" and the conflicting actions within the department.

➲ **Body:**
  ➡ **Key Stakeholders & Ethical Dilemmas:**
    ◇ **Officers**: Conflict between duty to uphold the law vs. responding to public pressure.
    ◇ **Accused**: Denial of due process and human rights.
    ◇ **Victim**: Desire for justice but potential harm from extrajudicial actions.
    ◇ **Public**: Their perception of justice vs. legal rights.
  ➡ **Steps to Address Extrajudicial Actions:**
    ◇ **Immediate Action**: Intervene to stop the beating and ensure the accused is handed over to legal authorities.
    ◇ **Short-term Action**: Investigate the officers involved and issue disciplinary actions if necessary.
    ◇ **Long-term Action**: Conduct training on ethics, rule of law, and human rights for all personnel; establish clear protocols for handling public pressure.

➲ **Conclusion:** Emphasize the importance of upholding ethical standards, due process, and the rule of law in maintaining public trust and justice.

# 14. Self-Evaluation

## Progress Tracking Table

| Activity Type | Total Questions | Correct Answers | Attempted | Score/Percentage |
|---|---|---|---|---|
| MCQ's | | | | |
| True/False Statements | | | | |

## Monthly Learning Summary

### Top 3 Learnings/Insights

1.

2.

3.

## Progress Comparison

Previous Month's Score

Current Month's Score

Areas of Improvement

## Reflection Section

Strengths

Areas for Improvement

Goals for Next Month

**VISION**IAS
INSPIRING INNOVATION

# SANDHAN

## A VisionIAS Personalised Test Series

(An **All India GS Prelims Test Series** feature
for **Smart Revision, Practice and Holistic Preparation**
for **UPSC Prelims**)

◉ **Extensive Question Bank:**
Access 20,000+ VisionIAS and UPSC PYQ questions.

◉ **Current Affairs Integration:**
Practice with current affairs questions.

◉ **Personalized Test Creation:**
Customize tests by subjects and topics.

◉ **Timed Assessments:**
Enhance time management with timed tests.

◉ **Detailed Performance Analysis:**
Track overall, subject, and topic–level progress.

◉ **Targeted Recommendations:**
Receive personalized insights for specific improvement areas.

## Admission Open

Scan to know more

# Heartiest Congratulations
### to all Successful Candidates

**16** in **TOP 20** Selections in **CSE 2023**
from various programs of **Vision IAS**

**1 AIR**
## Aditya Srivastava

**2 AIR**
**Animesh Pradhan**

**5 AIR**
**Ruhani**

**6 AIR**
**Srishti Dabas**

**7 AIR**
**Anmol**

**9 AIR**
**Nausheen**

**10 AIR**
**Aishwaryam Prajapati**

**39** Selections in **TOP 50** in **CSE 2022**

**1 AIR**
**Ishita Kishore**

**2 AIR**
**Garima Lohia**

**3 AIR**
**Uma Harathi N**

**1 AIR**
## SHUBHAM KUMAR
### CIVIL SERVICES EXAMINATION 2020

AHMEDABAD   BENGALURU   BHOPAL   CHANDIGARH   GUWAHATI   HYDERABAD   JAIPUR   JODHPUR   LUCKNOW   PRAYAGRAJ   PUNE   RANCHI