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At **VisionIAS**, we recognize the multifaceted nature of this journey. To support our students comprehensively, we have established a dedicated Student Wellness Cell. Since April 2024, our highly professional psychologists and experienced professionals have provided confidential and mindful support as per student needs.

From Stress Management to Academic Excellence



Enhancing Academic Performance:

Effective stress management contributes to better academic outcomes.



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To support the larger student community, **VisionIAS** is now extending our counseling and wellness support to all students preparing for UPSC CSE, regardless of their coaching institute affiliation. Schedule a session by visiting our office at Apsara Arcade near Karol Bagh Metro Station or emailing student.wellness@visionias.in.

Remember, seeking help is a sign of strength, not weakness.

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NOTE:

Dear Students,

Memorisation and recollection of information in Current Affairs is as important as understanding the articles. In order to enhance the learning outcomes from the Monthly Current Affairs Magazine, we are introducing following additions:



A thematic based colors has been used in the document in the boxes, tables etc to enable easy identification and recollection of various concepts and topics.



Questions are an important tool to assess and retain information. To enable this we are adding a Smart Quiz at the end of each section in the document for practicing the questions.



A wide variety of infographics have been added to ensure smoother learning experience and enhanced retention of the information. This will also help in effective presentation of information in the answer writing as well.



Places and persons in news are being presented in an objective manner through Maps, Tables & Pictures. This will help in easier recollection of factual information.

फाउंडेशन कोर्स सामान्य अध्ययन प्रारंभिक एवं मुख्य परीक्षा 2026

इनोवेटिव क्लासरूम प्रोग्राम

- प्रारंभिक परीक्षा, मुख्य परीक्षा और निबंध के लिए महत्वपूर्ण सभी टॉपिक का विस्तृत कवरेज
- मौलिक अवधारणाओं की समझ के विकास एवं विश्लेषणात्मक क्षमता निर्माण पर विशेष ध्यान
- एनीमेशन, पॉवर प्वाइंट, वीडियो जैसी तकनीकी सुविधाओं का प्रयोग
- अंतर - विषयक समझ विकसित करने का प्रयास
- योजनाबद्ध तैयारी हेतु करेंट ओरिएंटेड अप्रोच
- नियमित क्लास टेस्ट एवं व्यक्तिगत मूल्यांकन
- प्री फाउंडेशन कक्षाएं
- सीसेट कक्षाएं
- PT 365 कक्षाएं
- MAINS 365 कक्षाएं
- PT टेस्ट सीरीज
- मुख्य परीक्षा टेस्ट सीरीज
- निबंध टेस्ट सीरीज
- सीसेट टेस्ट सीरीज
- निबंध लेखन - शैली की कक्षाएं
- करेंट अफेयर्स मैगजीन

नोट: ऑनलाइन छात्र हमारे पाठ्यक्रम की लाइव वीडियो कक्षाएं अपने घर पर ऑनलाइन प्लेटफॉर्म पर देख सकते हैं। छात्र लाइव चैट विकल्प के माध्यम से कक्षा के दौरान अपने संदेह और विषय संबंधी प्रश्न पूछ सकते हैं। वे अपने संदेह और प्रश्न नोट भी कर सकते हैं और दिल्ली केंद्र में हमारे कक्षा सलाहकार को बता सकते हैं और हम फोन/मेल के माध्यम से प्रश्नों का उत्तर देंगे।

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प्रवेश प्रारम्भ

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1. POLITY AND GOVERNANCE

1.1. 'SOCIALIST', 'SECULAR' IN THE PREAMBLE

Why in the News?

Recently, Supreme Court (SC) in **Dr Balram Singh Vs Union of India (2024)** dismissed petitions challenging the inclusion of the words "socialist" and "secular" in the Preamble through **42nd Amendment Act, 1976**.

More on the News

- Petitions against the inclusion of these words were filed on the ground that they were inserted during **times of Emergency (1975-1977)** and do not represent the people's will.
- Petitions also held that since the **date of adoption (26th November, 1949)** by the Constituent Assembly, was mentioned in the Preamble, and no additional words could be inserted later to it.

About 42nd Amendment Act, 1976

- **About:** It was referred to as the "mini-Constitution" as it amended the **Preamble, 40 articles, 7th Schedule and added 14 New Articles and two new parts to the Constitution.**
- **Major changes made were:**
 - **Preamble:** Inserted the words 'Socialist', 'Secular' and 'Integrity'.
 - > Changed the 'unity of nation' to 'unity and integrity of the nation'.
 - **Changes in the 7th Schedule:** The following categories were transferred from the State list to the Concurrent list:
 - > Education, forests, protection of wild animals and birds, weights and measures, administration of justice, constitution, and organisation of all courts-with the exception of the Supreme Court and the High Courts.
 - **Emergency:** Amended **Article 352** to authorize the President to declare Emergency not only throughout the country and but also in any part.
 - **Addition of New DPSPs:**
 - > **Article 39:** To secure opportunities for healthy development of children.
 - > **Article 39A:** Equal justice and free legal aid.
 - > **Article 43A:** Participation of workers in management of industries.
 - > **Article 48A:** Protection and improvement of environment and safeguarding of forests and wildlife and
 - > **Addition of new parts: Part IV-A (Fundamental duties), Part XIV-A (Establishment of administrative tribunals).**

Key Observations made by the SC

- **Dismissed retrospectivity:** The date of adoption does not curtail the **amending power** of the Parliament under **Article 368** of the Constitution.
 - **Article 368** states that Parliament may in the exercise of its **constituent power**, amend by way of addition, variation or repeal any provision in accordance with the procedure laid down in this article.
 - The Court held that this amending power **extends to the Preamble** and can be challenged on various grounds, including **violation of the basic structure**.
- **Defined Socialism and Secularism:** The court also defined the two terms as:
 - **Secularism** represents one of the facets of the **right to equality** as neither the State maintains its own religion nor restricts the freedom of conscience and right to freely profess, practice and propagate religion to citizens.
 - > In **Kesavananda Bharati v. State of Kerala** and **S R Bommai vs Union of India**, SC observed that secularism is a basic feature of the Constitution.
 - **Socialism** denotes the State's commitment to the **Welfare State**, and its commitment to ensuring equality of opportunity.
- **Constitution is a living document:** Over time, India has developed its own interpretation of these terms imparting an organic character to the Constitution.



Preamble and its Amendability

Preamble gives a glimpse of **Constitution's philosophy**. Originally, declared India a sovereign, democratic, republic.

Does not grant **substantive rights**; not enforceable in Courts; Signifies **power vested to the people**



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):
Again held that Preamble is part of the Constitution.

<p>Secularism</p>	<ul style="list-style-type: none"> • Indian Concept of Secularism follows the concept of Neutrality and positive role towards the religion. <ul style="list-style-type: none"> ○ In this, state enjoys the power to regulate the economic, financial, political and secular aspects associated with a religious practice. ○ It deals with religious freedom of individuals and minority communities. • It is different from the western concept based on the principle of non-interference in the matter of religion. In this, state and religion are strictly separated.
<p>Socialism</p>	<ul style="list-style-type: none"> • Socialism: It deals with principles which envisage the establishment of a society where all individuals enjoy equality in different walks of life – economic, political, social, etc. <ul style="list-style-type: none"> ○ The idea of socialism was largely popularised with Karl Marx, who gave the idea of scientific socialism. <ul style="list-style-type: none"> > He held that violent revolution by the working class could overthrow the exploitative capitalist. ○ Socialism in communist countries like Cuba, China, and North Korea, etc. provides for the strict control of industries by the government and a centrally planned economy. ○ There are many varieties of socialism like Democratic socialism, Evolutionary Socialism, Fabian Socialism, Guild Socialism etc • Idea of socialism in India <ul style="list-style-type: none"> ○ It is based on the mixed economy model where state ensures the welfare of the needy while private enterprise exists for increased employment and strong economic growth. ○ It was largely shaped by the ideas of leaders like Jawaharlal Nehru, Mahatma Gandhi, etc. ○ It is different from socialism practiced in other communist countries in the following ways: <ul style="list-style-type: none"> > Rejects the stark difference between Individual and Community: It is focussed on reforming both together. > Relevance to Private Property: It accorded greater emphasis to the powers of the State in bringing change along with the presence of private property. <ul style="list-style-type: none"> ✓ It does not believe in the elimination of capitalists but seeks to remove inequality. > Idea of Non-Violence: It seeks to eliminate violence from domestic politics. • Democratic Socialism <ul style="list-style-type: none"> ○ It is based on the idea coexistence of democratic principles with the ideas of socialism. ○ It differs from Marxism in its conception of state. <ul style="list-style-type: none"> > It believes that the state is not an instrument of exploitation of workers by the capitalists. Rather the state is an instrument of social welfare.

- > All classes in society **own the state**.
- It advocates **peaceful and evolutionary means** for social change through ballot box.
- Despite differences from the Marxist idea of socialism, it shares the common goals of ending the **exploitation of workers and promoting equality among people**.

Conclusion

The current SC ruling stresses on the idea that **Constitutional values** have shown continuous evolution to suit the needs of the country. The ideas like **socialism, and secularism** are now well accepted and understood by the people. Hence, **vigilance, dedication, and willingness** to adapt to new challenges while remaining true to the **core values of Constitution like justice, liberty, and equality** would go a long way in dealing with contemporary challenges like persistent inequalities, environmental degradation, etc.

Scan the QR code to know more about **Constitutional Ethos of Secularism**

Weekly Focus #93- Constitutional Ethos II: Unity in Diversity - Secularism



1.2. PROPERTY RIGHTS IN INDIA

Why in the News?

A nine-judge Constitution Bench of the Supreme Court delivered a landmark ruling in **Property Owners Association v State of Maharashtra**, restricting the powers of the state to acquire private property.

More on the News

- The recent judgment has overruled the earlier rulings in **State of Karnataka v. Ranganatha Reddy (1978)** and **Sanjeev Coke Manufacturing Company vs. Bharat Coking Coal Ltd. and Anr. (1983)**.
 - Both the cases had declared private properties could be considered community resources.
- This shift marks a significant development in **the legal understanding of property rights** in India.

Evolution of Right to Property

- **Original Status:** Initially, the right to property and compensation for acquisition were protected as **Fundamental Rights** under Articles 19(1)(f) and 31 of the Constitution.
- **25th Amendment (1971):** Introduced Article 31C, which protected laws designed to fulfil the Directive Principles of State Policy (specifically **Articles 39(b) and 39(c)**) from being challenged for violating Fundamental Rights, including those under Articles 14 and 19.
- **Revised Status of the Right to Property:** The **44th Constitution Amendment** in 1978 removed the right to property from the list of Fundamental Rights, making it a constitutional right under Article 300A.

Key highlights of the recent judgement (Property Owners Association v State of Maharashtra)

- **Scope of Article 39(b):** The Court emphasized that private property cannot automatically be classified as a "**material resource of the community**" under Article 39(b). It clarified that not all privately owned resources meet the conditions to be treated as such.
 - **Article 39B** provides that ownership and control of the material resources of the community are so distributed as best to subserve the common good.
- **Authority for Property Acquisition:** Article 39(b) does not grant legislative power to the state to acquire private property.
 - The Court clarified that it comes from the sovereign power of **eminent domain and Entry 42 of List III in the Seventh Schedule**.
- **Criteria for Classification:** The inclusion of private property as a "material resource" depends on **its nature, scarcity, impact on community welfare, and concentration in private hands**.

- **Flexibility in Economic Policies:** The court stressed that the framers of the Constitution intended for economic policies to be flexible, allowing governments to adapt to changing needs, rather than being tied to a **fixed economic doctrine**.
- **Validity of Article 31C:** The Court unanimously ruled that Article 31C, upheld in the Kesavananda Bharati case, is still valid.
- **Balancing Public Welfare with Private Property Rights:** The Court balanced public welfare with private property rights, ensuring government actions align with constitutional principles like **equality (Article 14) and the right to property (Article 300A)**.
 - It also applied the **Public Trust Doctrine**, mandating responsible resource management for the public good.
- **Limits of Eminent Domain:** The Court questioned the broad application of the **Doctrine of Eminent Domain** in land acquisition. The court clarified that not all privately owned resources qualify as material resources of the community that can be appropriated for public good.

Doctrine of Eminent domain

It provides that governments can acquire private property for public use, **balancing societal welfare with property rights**. This power is exercised by all levels of government, but fair compensation must be provided to the owner.

• Elements of Doctrine of Eminent domain:

- **Public Use:** Government can acquire private property for public purposes like infrastructure, but only if there's a legitimate need and no alternatives.
- **Just Compensation:** When property is acquired, the government must provide fair compensation to the owner, based on the market value at the time of acquisition.
- **Due Process:** requires due process, meaning property owners must be notified in advance and given a chance to contest the acquisition or negotiate compensation.
- **Government Authority:** It can only be exercised by **the government or authorized public agencies** with legal authority to take property for public use. It is typically regulated by legislation in most jurisdictions worldwide.
- **Important Case laws:** In **Sudharsan Charitable Trust v. Government of Tamil Nadu (2018)**, the Supreme Court clarified that eminent domain is tied to the state's sovereignty. The state can acquire private property for public interest, provided fair compensation is given. This power does not violate a person's right to livelihood or dignity.

Public Trust Doctrine

It helps protect the environment by ensuring the responsible management of natural resources. By invoking this doctrine, we can safeguard these resources and promote the protection of the Earth. It was recognized as part of **Article 21** in the landmark cases of **Th. Majra Singh v. Indian Oil Corporation and M.I. Builders v. Radley Shyam Sahu**.

- **State as Trustee:** Under the Public Trust Doctrine, the State acts as a trustee, managing natural resources for the public's benefit. It ensures that resources are used responsibly and not depleted or damaged.
 - In **T.N. Godavarman v. Union of India**, the Supreme Court affirmed that the State, as a trustee, must ensure **natural resources** are used sustainably for the public good.
- **Citizens as Beneficiaries:** The citizens are the beneficiaries of the trust, using resources sustainably for their benefit and for future generations.

Implications of the Supreme Court's Decision

- **Legislative and Policy Impact:** The ruling may influence future property **acquisition laws, land reforms, and social welfare programs**, promoting fairness and transparency.
- **Economic Reforms:** The decision signals a shift to a **more market-oriented economy** by limiting the state's power to acquire property, supporting **private investment** while ensuring social justice.
- **Political Debates:** Political parties may adjust their stances on land reforms and property rights, while the ruling could shape social welfare programs, especially **land redistribution** for the underprivileged.
- **Constitutional Scrutiny:** The judgment reinforces the judiciary's role in **scrutinizing government actions on private property**, ensuring laws align with constitutional rights, including equality and property.

Conclusion

The Supreme Court judgement clarified on Article 39(b), stressing a case-by-case approach for classifying private property as a "**material resource**" for public use. The decision emphasizes the need for government actions to uphold **constitutional principles, including equality and property rights**, while promoting responsible resource management through the Public Trust Doctrine.

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.

What is Internal Party Democracy?

Internal party democracy is conceived as the **internal arrangement, structure, and coordination of political parties** in consonance with **democratic principles** with direct bearing on **how candidates are selected, leaders emerge, policies are made and funding is provided.**

Need for Internal Party Democracy

- **Decentralization:** It **limits the centralized discretionary control** exercised by top-level party leaders and opens decision-making processes to **input from wider circles of party stakeholders at various levels.**
- **Prevent criminalization:** Addresses the systemic issue of candidate selection based on "winnability", often driven by money and muscle power.
 - As per Association of Democratic Reforms (ADR), **46% of the newly elected Lok Sabha members have criminal cases** against them.
- **Representation:** It provides citizens equal political opportunity to participate in politics and contest elections.
- **Youth participation:** It **opens up opportunities** for new talent and reduces **the influence** of established leaders.
- **Reduce corruption:** Administrative Reforms Commission (ARC)'s 2008 Ethics and Governance report noted that corruption is caused by over-centralisation.
- **Transparency and Free flow of information:** **John Stuart Mill's "On Liberty" (1859)** argues for the "absolute" protection of the "liberty of thought and discussion."

Reasons for Lack of Internal-Party Democracy

- **No statutory backing:** The only governing provision is under **Section 29A of the Representation of the Peoples' Act (RPA), 1951** which provides for registration of political parties with the ECI.
 - Also, **ECI's Guidelines and Application Format** for the Registration of Political Parties under Section 29A only prescribe **provisions for internal accountability and not candidate selection.**
- **Lack of penal provisions:** As per the judgment under **Supreme Court in Indian National Congress (I) v Institute of Social Welfare**, the ECI currently lacks the power to deregister a party.
- **Structural Challenges:** Prevalence of dynastic politics; Centralized power structures; Anti-Defection Law (52nd Amendment to the Constitution) of 1985 mandating strict party line adherence, etc.
- **Other issues:** Lack of political will, Weak Organizational Framework, etc.

"No electoral reforms can be effective without reforms in the political party system"

-National Commission to review the working of the Constitution (NCRWC)
in its Report on Electoral Processes and Political Parties

Way Forward

- **Transparency:** Several government-constituted committees related to electoral reforms like **the Tarkunde Committee (1975), Dinesh Goswami Committee (1990), and Indrajit Gupta Committee (1998)** strongly argued for **more transparent working of the political parties** in the country.
- **Recommendations of Law Commission (255th Report) on “Electoral Reforms”:**
 - **New Chapter IVC in RPA, 1951:** To deal with internal democracy, party Constitutions, party organisation, internal elections, candidate selection, voting procedures, and the **ECI's power to de-register a party in certain cases of non-compliance.**
- **National Commission to Review the Working of the Constitution (NCRWC):**
 - **Comprehensive legislation [as the Political Parties (Registration and Regulation) Act],** regulating the registration and functioning of political parties or alliances of parties in India.

1.4. USA PRESIDENTIAL ELECTION

Why in the News?

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

US Presidential Elections vs. Indian Presidential Elections

Parameters	USA	India
Composition of electoral members	<ul style="list-style-type: none"> • The Electoral College consists of 538 electors (Senate 100 plus 3 for District of Columbia and 435 members of the House of Representatives). <ul style="list-style-type: none"> ○ The Electoral College is an intermediary body or process that chooses the U.S. President. In this system, voters of each State cast their ballots to choose members (or electors) of the electoral college who then vote to select the President. ○ States have varying numbers of electors based on their representation in Congress. • A majority of 270 electoral votes is required to elect the President of USA. 	Members of an Electoral College consisting of <ul style="list-style-type: none"> • The elected members of both the Houses of Parliament, and • The elected members of the Legislative Assemblies of the States [including National Capital Territory of Delhi and the Union Territory of Puducherry vide the Constitution (Seventieth Amendment) Act, 1992 (Article 54)]. Note: The nominated members of either House of Parliament or the Legislative Assemblies of State are not eligible to be included in the Electoral College.
Governing Act/Rules	Each state establishes its own election rules, reflecting the U.S.'s decentralized system, where individual states oversee and manage their electoral processes.	The Presidential and Vice-Presidential Elections Act, 1952.
Nomination Process	Candidates secure party nominations through primaries and caucuses.	A prospective Presidential candidate should get his/her nomination paper subscribed by at least fifty electors as proposers and at least fifty electors as seconders.
Election Methods	Most states follow a winner-take-all approach , where the candidate with the majority in a state wins all its electoral votes, except in Maine and Nebraska. <ul style="list-style-type: none"> • Candidates can win the presidency without winning the popular vote. • Like Donald Trump win in 2016. 	System of Proportional Representation by means of single transferable vote and the voting at such election shall be by secret ballot. <ul style="list-style-type: none"> • The candidate needs to secure 50% of the total votes cast + 1 to win.

Vote-Counting Process	Significantly prolonged largely due to reliance on paper ballots and the handling of mail-in votes (like our postal ballots).	Use of EVMs (Electronic Voting Machines).
Frequency of election	Every 4 years on a fixed schedule.	Every 5 years (except in exceptional cases).
Running Mate	The Presidential candidate chooses a Running Mate (Vice Presidential Candidate).	Separate election takes place for Vice President of India.

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.

Municipal Institutions in India

India's cities are home to over 400 million people, a number expected to exceed 800 million by 2050. Though cities cover just **3% of the land area**, they contribute more than **60% to the country's GDP**.

- The **74th Constitutional Amendment of 1992** formalized local governance in India, providing a constitutional basis for local governments.
- **Functions of Local Governments:** The 74th Amendment, read with 12th Schedule of the Constitution, outlines 18 functions that state governments can delegate to municipalities, including **urban planning, land-use regulation, construction** etc.
- **Revenue and Fiscal Powers:**
 - **Article 243X:** Grants State governments the authority to authorize ULBs to impose **taxes, duties, and fees** and to assign certain revenue sources to ULBs.
 - **Article 243Y:** Assigns the responsibility of reviewing and recommending the devolution of taxes and grants to **State Finance Commissions (SFCs)**.

Revenue Sources of Urban Local Bodies

Own sources	Tax Revenue -Property tax, water benefit tax etc. Non-tax Revenue -User charges, developmental charges etc. Other receipts -lease rent, sale of rubbish etc.
Assigned (Shared) Revenue	Entertainment tax (subsumed under GST, except when levied by the local bodies), professional tax etc.
Grants-in-aid	Central and State Finance Commission (SFC) devolution, Grants under programmes like SBM, AMRUT.
Borrowings	Loans from state and central governments, banks etc.

Key Findings of the RBI Report

- **Low Revenue Generation:** Indian municipalities generate **only 0.6% of GDP in 2023-24**, much lower than the central government's 9.2% and state governments' 14.6%, limiting urban development funds.
 - Tax revenues **constitute 30% of Municipal Corporations' income**, followed by **grants, contributions, and subsidies** (24.9%), and fees and user charges (20.2%).
 - Additionally, according to the CAG report, MCs in 18 states collect only 56% of their property tax demand.
- **Reliance on Transfers:** Municipalities depend heavily on delayed and insufficient government transfers. In 2022-23, grants from **the Central and State governments** to municipalities increased by 24.9% and 20.4%, respectively.
- **Municipal Borrowing:** Borrowing rose from ₹2,886 crore in 2019-20 to ₹13,364 crore in 2023-24, increasing from 1.9% to 5.2% of total receipts.

- **Municipal Bonds:** The municipal bond market is **underdeveloped**, totalling ₹4,204 crore (0.09% of corporate bonds), with most bonds privately placed, limiting investor participation.
 - Additionally, the **Green Bond market** is still in its nascent stage, and the process of issuing a green bond involves additional costs for green audits and monitoring key performance indicators.

Other Issues faced by Municipal Corporations in India

- **Financial Challenges:**
 - **Ad-hoc Implementation of SFCs:** States often delay or inadequately implement State Finance Commission (SFC) recommendations.
 - > **For ex-** Telangana's SFC was formed in 2015 but only constituted in 2018.
 - **Low Absorptive Capacity in Indian Cities:** According to a recent CAG report, Urban Local Self Governments (ULSGs) in 11 out of 18 states have utilized **only 61% of the funds** allocated to them.
- **Governance Challenges:**
 - **Limited Devolution of Powers:** Despite the 74th Constitutional Amendment, many states haven't **fully devolved** powers to ULBs, especially in urban planning and land use regulation.
 - **State Election Commissions:** The insufficient strengthening of State Election Commissions affects the timely conduct of municipal elections every five years.
 - > **For ex-** elections to the Bruhat Bengaluru Mahanagara Palike (BBMP) have been delayed since 2020, disrupting local governance.
 - **Human Resource:** High vacancy rates (30-40%) and lack of training limit MCs' ability to provide services.
 - > For instance, in 18 states, 37% of positions are vacant, as per the CAG report.
 - **Urban Planning and Service Delivery:** A significant portion of municipal expenditure (29%) is not directed toward urban development, limiting infrastructure investment, as per the CAG report.

Way Forward

- **Enhance Own-Source Revenue:**
 - **Property Tax:** Adopt valuation-based property tax formulas, **GIS mapping, and digital payment platforms** to improve compliance and reduce leakages.
 - **Non-Tax Revenue:** Adjust user charges for **water, sanitation, and waste management** to ensure cost recovery. Use technology and public campaigns to improve fee collection.
- **Timely Transfers:**
 - Ensure direct, predictable transfers from State governments based on a clear formula that accounts for inflation and city growth.
 - Form **State Finance Commissions (SFCs)** regularly to recommend and implement transfers on time.
- **Diversify Funding:**
 - Explore municipal bonds and innovative financing for capital investment. Pool resources **for large-scale infrastructure** projects to overcome fiscal constraints.
 - > Access climate finance for **sustainable urban planning**, focusing on green infrastructure and renewable energy.
- **Transparent Financial Management:**
 - Implement **National Municipal Accounting Manual (NMAM, 2004)** for standardized accounting practices.
 - State governments should **mandate compliance, support training, and link intergovernmental transfers** to accounting standards.
- **Human Resources:** States should address issues like vacancies and lack of training institutions.
 - **For ex-** Madhya Pradesh has created a Municipal Cadre to improve staffing and skill development.

1.6. NON-GOVERNMENTAL ORGANIZATIONS (NGOS)

Why in the News?

The Ministry of Home Affairs (MHA) has instructed all **non-governmental organizations (NGOs)** registered under the Foreign Contribution (Regulation) Act (FCRA), 2010 to **report any changes in their key office bearers and members.**

More on the news

- This requirement still applies even if an **NGO's previous FCRA license application is still pending.**
 - NGOs may submit a new application, which will automatically replace the previous one.
- Registrations of several NGOs have been cancelled in the past years for **violations** under the act, raising questions over their functioning.

What are NGOs and how are they regulated in India?

- A non-governmental organization (NGO) is a **non-profit organization, group or institution that operates independently from a Government** and has humanitarian or development objectives.
- **NGOs in India** are formed under-
 - **Societies:** Registered under the **Societies Registration Act 1860.**
 - **Trusts:**
 - > **Private trusts** are registered under the central government's **Indian Trusts Act, 1882.**
 - > **Public trusts** are registered under the **state legislation concerned.**
 - **Charitable companies:** Registered as non-profit companies under **Section 8 of Companies Act, 2013.**
- NGOs receiving foreign contribution/ donation need to **mandatorily obtain prior permission for an FCRA registration license** from the Ministry of Home Affairs (MHA) under **FCRA, 2010.**

Constitutional Provisions related to NGOs



Seventh Schedule

Trust and Charities/charitable institutions fall under **Concurrent list** i.e. laws on the subjects can be made by both Parliament and the State Legislature.

Article 19 (1)(c)

Guarantees the **right to form associations or unions.**

Regulation of NGOs under Foreign Contribution (Regulation) Act, 2010 (FCRA)

- It **regulates the influx of foreign contributions** or funds given to individuals, associations or companies, including NGOs.
- The Act **restricts the use of foreign funding** for purposes that may affect- nation's sovereignty and integrity; security, strategic, scientific or economic interest; public interest etc. or may lead to **incitement of an offence** or **endanger the life** of any person.
- It was **amended in 2020** under Foreign Contribution (Regulation) Amendment Act, 2020, with the following key changes to **prevent misuse of funds** by foreign funded NGOs-
 - **Mandated receiving Foreign contribution through a specified bank** in an designated "FCRA Account".
 - **Prohibited the transfer** of foreign contributions to other person.
 - **Reduced the ceiling** on foreign contributions being used for **administrative expenditure** from **50% to 20%.**
 - Empowered Central Government to-
 - > Direct persons receiving foreign funding **to not utilise it or receive any further funding after conducting a summary inquiry.**
 - > **Require Aadhaar number, etc.,** as identification document for office bearers, directors and key functionaries

Roles and Responsibilities of NGOs

- **Governance:**
 - **Strengthening democracy and governance:** E.g., Association for Democratic Reforms (ADR) works in the area of Electoral and Political Reforms.
 - > Their Public Interest Litigation (PIL) resulted in the Supreme Court of India directing candidates to **disclose their criminal records, educational qualifications, and financial assets during elections.**
 - **Supplementing Government Efforts:** E.g., Akshaya Patra Foundation implements **PM POSHAN Initiative** to solve malnutrition.
- **Social upliftment and reforms:**
 - **Protecting Human Rights:** E.g., **Bachpan Bachao Andolan**, founded by Nobel Peace Laureate Kailash Satyarthi, for protecting children from exploitation.
 - **Women empowerment:** E.g., **SEWA (Self-Employed Women's Association)** supports women workers in the informal sector through training, financial services, and legal aid.
 - **Representation of marginalized sections:** E.g., **Naz foundation** supports people living with HIV/AIDS (PLWHA) and LGBTQIA+ community.
 - > **Naz Foundation v. Govt. of NCT of Delhi** judgment eventually led to decriminalisation of homosexuality in India.
 - **Poverty alleviation:** E.g., **NGO-Goonj.**
- **Human resource development:**
 - **Education & Capacity Building:** E.g., **Pratham NGO**, works for **quality education for underprivileged children** in India.
 - **Improving Health:** E.g., **Médecins Sans Frontières (MSF)** runs programmes in India for tuberculosis (TB), HIV and other infectious diseases, etc.
- **Others:**
 - **Research & Development:** E.g., **Oxfam**
 - **Preserving Heritage:** E.g., **Indian National Trust for Art and Cultural Heritage (INTACH)**
 - **Environmental Advocacy:** E.g., **Wildlife Trust of India**

Steps taken by Government of India to promote NGOs

- **Provision of Funds:** Central Government provides funds to State Governments/UT Administrations for implementation of welfare schemes for Women and Children such as Swadhar, Ujjawala, etc., through NGO's.
- **Schemes of Ministry of Culture:** Various Schemes like **Cultural Function & Production Grant (CFPG), Financial Assistance to Cultural organizations with National Presence etc.** aim to maximize participation in the field of promotion and conservation of art and culture
- **NGO darpan:** It provides a unique ID to an NGO registered in the NGO Darpan portal.

Challenges/Issues related to NGOs

- **Functional Challenges**
 - **Potential donor-driven agendas misaligned with local contexts:**
 - > E.g., several NGOs allegedly played a central role in **introducing sex determination technologies to India.**
 - **Possible interference in economic and strategic initiatives:** E.g., Kudankulam atomic energy programme has faced severe protests due to international NGOs.
 - **Security concerns regarding misuse of funds** for terrorism, radicalization etc.
- **Regulatory and Legal Challenges:**
 - **Strict FCRA regulations impacting operational capabilities**, especially for small NGOs.
 - **Potential financial mismanagement** such as involvement in financial frauds, misutilization of funds, corrupt practices, money laundering etc
- **Operational Issues:** High Dependence on Donors; Poor Volunteer Engagement; Technological Limitations of NGOs etc.

Recommendations for Improvement

- **Recommendations of Vijay Kumar Committee (2017):**
 - **Light Regulation Approach:** Framework that **balances oversight with operational freedom** for NGOs, reducing bureaucratic hurdles and fostering a cooperative relationship with the government.
 - **Modernized Registration Procedures:** To facilitate compliance with the **Income Tax Act** and the **Foreign Contribution Regulation Act (FCRA)**.
 - **Establishment of a Nodal Body:** To oversee interactions between NGOs and government entities.
 - **Creation of comprehensive accreditation and audit** framework for NGOs.
 - **Develop Searchable Database of NGOs:** To enhance transparency.
 - **Promote volunteerism:** Through educational institutional partnerships.
- **2nd ARC recommendations:**
 - **Decentralize FCRA implementation.**
 - **Ensure balanced legislative interpretation** protecting voluntary sector operation.

1.7. GOVERNANCE AND AI

Why in the News?

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

More on the News

- The Data Bank will strengthen **national security** by enabling real-time analysis of **satellite, drone, and IoT data** for AI-driven disaster management and **cybersecurity**.
- Additionally, **India's National AI Strategy** promotes **innovation, ethical governance**, and global collaboration, with partnerships to advance AI in healthcare, agriculture, smart cities, and space exploration.
 - India has established itself as a **global leader** in technology-driven governance and **Digital Public Infrastructure (DPI)** in last few years.
 - > Digital Public Infrastructure (DPI) drives digital transformation and improves public services, helping countries meet national goals and accelerate **Sustainable Development Goals**.
- All these are crucial components for overall governance architecture and its linkage with AI in India.

Potential of AI to transform governance in India

- **Efficient Service Delivery:** AI automates public services, reducing government workload and improving service quality. For ex-
 - **Education:** AI can transform India's education system by enabling personalized learning, creating smart content, and automating grading and assessments.
 - > **For ex-** NCERT has listed a set of 31 metadata elements to be tagged to each resource available in its NROER (National Repository of Open Educational Resources) repository.
 - **Healthcare:** AI is transforming healthcare by improving delivery and accessibility, particularly through telemedicine in remote areas.
 - > **For ex-** NITI Aayog with Department of Bio- Technology (DBT) aims to build database of cancer related radiology and pathology images for effective use of AI in cancer management.
 - **Agriculture:** AI provides predictive insights for weather, pest management, and resource use, benefiting farmers.
 - > **For ex-** National Pest Surveillance System utilizes AI and Machine Learning to detect crop issues, enabling timely intervention for healthier crops.
- **Inclusivity and Accessibility:** AI-powered DPI systems bridge gaps, particularly in a multilingual country like India.
 - **For ex:** **Bhashini platform** uses AI to provide government services in regional languages.
- **Data-Driven Policymaking:** AI analyzes large datasets for evidence-based policymaking, improving transparency and policy effectiveness.
 - **For ex:** **The India Urban Data Exchange** uses AI to optimize urban services like traffic management and waste disposal.

- **Judicial Efficiency:** AI improves judicial efficiency by automating case management, prioritizing cases, predicting outcomes, and streamlining legal research.
 - **For ex-SUVAS** (Supreme Court Vidhik Anuvaad Software) is an AI-based translation tool that bridges language gaps in legal proceedings.
- **Disaster Management:** AI-driven systems like the **RAHAT (Rapid Action for Humanitarian Assistance)** app help predict natural disasters, such as **floods**, by providing early warnings and supporting evacuation, **search**, and **rescue operations** during emergencies.

Initiatives to Promote AI in India

- **National Strategy for AI (NSAI):** NITI Aayog's #AIforAll strategy focuses on AI in sectors like healthcare, agriculture, and education.
- **India AI Program:** MeitY's initiative promotes AI innovation, skill development, and ethical practices.
- **Digital Personal Data Protection Act:** Strengthens data privacy, addressing AI-related concerns.
- **Global Partnership on AI (GPAI):** India collaborates globally to align AI strategies with international standards.
- **Skill Development:** Programs like **Responsible AI for Youth and Future Skills** expand AI education, especially Tier 2 and Tier 3 cities across.
- **International Partnerships:** Collaborations like the **US-India AI Initiative** explore AI in sectors like healthcare and agriculture.

Challenges in AI Integration for Governance

- **Fragmented Data across government departments:** For ex- The **National Data Governance Framework Policy (NDGFP)**, which aims to **standardize the management of non-personal** and anonymized data for data-driven governance, has not yet been implemented.
- **Infrastructure Gaps:** Poor internet, storage, and computing in rural areas, along with a lack of robust cloud infrastructure for AI, create a digital divide.
 - **For ex-** as of 2023, **45% of India's population**, still lacks internet access, according to a study by IAMAI (Internet and Mobile Association of India).
- **Regulatory Frameworks:** India lacks AI-specific laws, unlike the EU's AI Act, raising concerns about ethics, data privacy, and accountability.
- **Skill Gaps:** A demand-supply gap of 140,000 AI professionals in India, as reported by NASSCOM, limits growth.
- **Data Privacy:** AI's reliance on sensitive data increases breach risks, as seen in the Aadhaar data leak on the dark web affecting 81.5 crore Indians.
- **Weak IP Regime:** India ranks 42nd in the 2024 IP Index, offering limited protection and incentives for AI innovation.
- **Ethical Biases:** AI systems trained on biased data can produce discriminatory outcomes, raising ethical concerns about fairness and accuracy.

Way Forward

- **Risk Management and Ethical Oversight:** AI must be dynamically assessed and monitored, with human oversight to prevent biases and manage risks.
- **Data Sovereignty and Privacy:** Ensure data privacy and compliance with the Digital Personal Data Protection Act, especially for cross-border data.
- **Bias, Fairness, and Transparency:** AI must be fair and transparent, with audits, fairness metrics, **diverse datasets**, and "**model cards**" for critical sectors.
- **Education and Skill Development:** Expand initiatives like INDIAai FutureSkills to provide AI education in underserved areas.
- **Public-Private Collaboration: IndiaAI Compute Capacity** aims to build a scalable AI ecosystem with 10,000+ GPUs to support AI startups and research.
- **Cybersecurity and Monitoring:** Use AI for real-time threat detection and continuously refine AI policies.

To know more about Global AI governance, refer to Article 1.2 Global AI Governance in September 2024 Monthly Current Affairs Magazine.

Participatory AI Development and Governance

- Participatory Approaches in AI Development and Governance Paper released by IIT-Madras.

About Participative AI (PAI)

- It refers to the **involvement of a wider range of stakeholders** than just technology developers in the creation of AI systems.
 - **Core tenets** of PAI are derived from participatory governance. (see box)
- **Need:** Progress in AI and its deployment by public and private actors, like Facial Recognition Technology in Law enforcement, etc.
- **Benefits of PAI:** Counter unilateral, top-down decision making; **Mitigate risks** like bias, discriminatory output, etc.; **Feedback loops** for flagging technical glitches and post deployment impact assessment; **Enhance trustworthiness of AI Systems** through minimal false positives and false negative.
- **Challenges with PAI:**
 - **Co-optation:** Domination by select dominant actors to serve their vested interests.
 - **Limited participation of non-experts.**
 - **Participatory washing and tokenism:** Stakeholder participation merely done for formal compliance.
 - **Transparency Paradox:** Information shared about algorithms can be misused by malicious actors.

Idea of Participatory Governance In India and Abroad



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 achievement is due to **the Digital India Land Records Modernization Programme (DILRMP)**.
- **Additionally, Digitization of cadastral maps** has reached 68.02% at the national level.
- Also, **87% of Sub-Registrar Offices (SROs)** have been integrated with land records.

About Digital India Land Records Modernization Programme (DILRMP)

- **Launched:** In **2016** by revamping the National Land Records Modernization Programme.
- **Ministry: Central Sector Scheme** under the **Department of Land Resources, Ministry of Rural Development**.
 - It has been **extended from 2021-22 to 2025-26** with the **addition of two new components** viz.
 - > **Computerization** of all **Revenue Courts** in the country & their **integration** with land records.
 - > Consent-based **linking of Aadhaar number with Records of Rights (RoR)**.
- **Aim:** To **replace the manual presumptive land-title system** with a **digital conclusive land titling system**.

Key Initiatives under DILRMP



Bhu-Aadhaar- Unique Land Parcel Identification Number (ULPIN): A 14-digit alphanumeric code for each land parcel to streamline real estate transactions, resolve property disputes, and improve disaster management efforts



National Generic Document Registration System (NGDRS): e-Registration ensuring uniform process for deed/document registration.



e-Court Integration: Linking land records with e-Courts, aiding faster resolution and reducing land disputes.



Transliteration of Land Records: Transliteration into 22 scheduled languages to overcome language barriers in accessing land records.



Bhoomi Samman: Awards (Platinum Grading) for districts achieving saturation of core components of DILRMP.

Need for Digitization of Land Records

- **Socio-economic relevance:** Access to land and its documented ownership is **vital for livelihood** of the majority of the **vulnerable sections – poor, marginal farmers, tribes, etc.**
- **Land ownership disputes:** Lack of a **conclusive titling, illegal land acquisition** through forgery and **Benami property**, have led to increased land ownership disputes.
 - More than **60% of the litigation** in India is **land-related**.
 - In conclusive land titling system, land records **designate actual ownership**. The title is granted by the government.
- **Inefficient administrative processes:** The **system of updating and correcting land records** is very **complex, elaborate and tedious**, which can lead to corruption, land grabbing, etc.
- **Outdated mapping:** Lack of updated records has resulted in **records not being representative** of the present **ground realities** relating to possession and ownership.
- **Targeted public service delivery: Exclusion errors** in rural development **schemes** linked with land ownership due to lack of effective land titling hinder the **social justice** objectives.
 - E.g., Through the **PM-Kisan scheme**, the government provides income support to all landholding farmers' families
- **Strengthening revenue administration:** Property tax and land-based financing form a major source of revenue for **local governments**.
- **Infrastructure development:** Land disputes and unclear titling lead to **cost delays and inefficiencies in infrastructure development** and encourages **black market** of land transactions.

Challenges in the digitalisation of land

- **Presumptive land titling:** The transfer of land based on **Transfer of Property Act, 1882** requires **registration of sales deeds** and not of land titles.

- Thus, **bona fide property transactions** may **not** always **guarantee ownership**, as earlier transactions could be **challenged**.
- **Centre-State coordination:** Land being a **state subject**, digitisation of land records depends on the **willingness of state** governments and **centre-state cooperation**.
 - Lack of **coordination and standardisation among states** in terms of land laws, policies and systems, also hinder digitalisation.
- **In silos approach of Departments:** Land ownership is established through **multiple documents** maintained by **different departments**, making it **cumbersome** to access them.
 - E.g. **Sale deeds** are stored in the **registration department**, **maps** are stored in the **survey department**, and **property tax receipts** are with the **revenue department**.
- **Legal provisions related to registration:** **Non-mandatory** registration for transactions such as **acquisition** of land by the **government**, **property leased for less than 1 year**, and **heirship partitions** under the **Registration Act, 1908**, leading to **increased litigation**.
- **High Cost of registration:** **High stamp duty and registration fees discourages** formal **registration** of property transactions, leading to **discrepancies** in reflection of ground realities of land records.
- **Others:** **Legacy data** issues, **stakeholders' resistance** to change, **infrastructure gaps** in certain regions, **procedural complexities, technological constraints, etc.**

Way Forward

- **Conclusive land titling:** Moving towards a system of conclusive land titling **and state-guarantee of ownership** will aid in improving the **transparency and accuracy** of land records.
 - **Model Act on Conclusive Land Titling (2020) by NITI Aayog** can aid in formulating state laws in this regard.
- **Legal reforms:** Changes in the laws related to **registration of property** such as registration of property **titles, timely updating** of existing records, etc.
- **Technological integration:** Improving **efficiency of GIS technology for geo-referencing** of cadastral maps, National Generic Document Registration System (**NGDRS**), etc.
- **Training and awareness generation:** **Training of personnel** and **improving digital literacy** and awareness of people for effective implementation of the scheme.

Land Reforms in India

Land reforms were emphasised in various **Five-year Plans** as well as by the **J. C. Kumarappa Committee (1949)**.

Land Reforms encompass mainly five components:

- **Abolition of intermediary tenures (Zamindari):** The **Zamindari Abolition Acts** were enacted in various states during **1950s-1970s**, which put an end to the **big landlord-tenant relationships**.
 - Under these reforms, the **land was redistributed** based on the idea of **'land to the tiller.'**
- **Tenancy reforms: Tenancy reform laws** were enacted to **bar illegal forceful eviction** of tenants by landlords and ensure **fair rent rates**. However, due to presence of many legal loopholes, **exploitation of tenants continued**.
 - **E.g. the "permanent tenancy" system**, whereby a tenant could stay on the land for a long period but could not lay a claim on it.
- **Ceiling of land holdings and distribution of surplus land: The Land Ceiling Acts** enacted during the **1970s** aimed at **capping** the landholding of an **individual or family** and **redistributing the surplus land** to the landless, promoting more efficient agricultural practices.
 - However, it saw **limited success** due to **legal loopholes, resistance from landed elite, corruption, and lack of political will**.
- **Consolidation of holdings:** It aimed at **combining fragmented** land into larger, more **contiguous holdings** to enable **mechanization** and **more efficient farming practices**.
 - However, **resistance from small farmers unwilling** to give up their lands led to limited success of the initiative.
- **Compilation and updating of land records.**

Scan the QR code to know more about **Digital Inclusion**

Weekly Focus #113- Digital Inclusion in India: Building a Connected and Empowered Nation



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:** The judgement is based on a report submitted by the **Centre for Disability Studies, NALSAR University of Law** and upholds the **social model of disability**.
 - The **social model of disability** focuses on social change for inclusion and equality of PwDs by removing social barriers preventing **their full participation**.
- **Legislative Gap: Declared Rule 15(1) ultra vires to the RPwD Act** and called for a single, enforceable accessibility framework aligned with the Act's legislative intent.
 - Rule 15 deals with the **accessibility to the establishment**.
- **Mandatory Accessibility Standards: Section 40 of the RPwD Act, 2016** requires mandatory accessibility standards to be framed within three months.
- **Principles of accessibility: Universal Design, comprehensive inclusion across disabilities, integration of assistive technology and continuous consultation with stakeholders** should be considered while carrying out the exercise.
- **Two-pronged approach:** Ensuring accessibility in **existing institutions/activities** and transforming new infrastructure and future initiatives.



Data Bank

Status of PwDs in India (Census 2011)

- **2.21%** of the total population are disabled.
- **56% of disabled persons** are males whereas 44% are females.
- **~69% of disabled population** resides in rural areas.
- **21% of the total disabled** are elderly (60+ years).

Constitutional provisions safeguarding interests of Persons with Disabilities

Preamble

- It seeks to secure to **all its citizens**; justice, social, economic and political; liberty of thought, expression, belief, faith and worship; equality of status and of opportunity.

Fundamental Rights

- **Article 14** upholds equal access to spaces, services, and information.
- **Article 19** guarantees the freedom to move and express oneself.
- **Article 21** ensures the right to live with dignity.

Directive Principles of State Policy

- **Article 41:** It calls for public assistance in cases of unemployment, old age, sickness and disablement etc.

Responsibilities of Panchayats and Municipalities

- **XIth Schedule:** Social welfare, including welfare of handicapped and mentally retarded (**Entry 26 of Article 243-G**)
- **XIIth Schedule:** Safeguarding interests of weaker sections, including handicapped and mentally retarded (**Entry 9 of Article 243-W**)

Challenges faced by Persons with Disability

- **Attitudinal barriers:** It includes **stereotyping, stigma, prejudice and discrimination** hindering opportunities for social integration and perpetuating a cycle of exclusion and isolation.
- **Social barriers:** E.g., PwD are far less likely to be **employed, educated or have sufficient income** which prevents them from enjoying their rights
- **Transportation barriers:** Inaccessibility within the built environment, transport systems, and communication channels severely interferes with PwD to independently function in society (**World Report on Disability**)
- **Physical barriers:** These are structural obstacles mainly related to the design and construction of indoor and outdoor facilities that block mobility.
- **Communication barriers:** It is experienced by people who having disabilities related to hearing, speaking, reading, writing etc.
- **Policy and programmatic barriers:** E.g., **inconvenient scheduling, lack of accessible equipment** limits effective delivery of public healthcare programs.

Initiatives taken for welfare of Persons with Disability

- **Rights of Persons with Disabilities (RPwD) Act, 2016:** It has been enacted to give effect to the **United Nations Convention on the Rights of Persons with Disabilities. Its features:**
 - **Defines ‘person with disability’** as a person with long term **physical, mental, intellectual or sensory impairment** which hinders his/her full and effective participation in society equally with others
 - > It also defines **“person with benchmark disability”** as a person with not less than 40% of a specified disability.
 - **Recognition of disabilities:** It recognizes 21 categories of disabilities
 - **Prohibits discrimination against persons with disabilities** in all aspects of life, including employment, education, and healthcare.
- **Establishment of Statutory Bodies**
 - **Rehabilitation Council of India (RCI):** Constituted under the RCI Act 1992, it regulates the training of professionals & promotes research.
 - **National Trust for the Welfare of Persons with Autism, Cerebral Palsy, Mental Retardation and Multiple Disabilities:** To empower the full participation of PwD to live independently with dignity, equal rights and opportunities.
- **Establishment of Central Public Sector Enterprises**
 - **National Divyangjan Finance and Development Corporation:** It promotes economic empowerment through skill training and self-employment ventures by extending loans
 - **Artificial Limbs Manufacturing Corporation of India (ALIMCO):** ALIMCO is a Mini Ratna company formed under Section 8 of the Companies Act, 2013 that manufactures artificial aids and appliances.
- **Accessible India Campaign (Sugamya Bharat Abhiyan):** It aims to accelerate accessibility, creating awareness and sensitization for creation a universal barrier-free environment.
 - It focuses on developing an **accessible physical environment, transportation system and Information & communication ecosystem.**
- **National Policy for Persons with Disabilities, 2006:** It outlines specific measures and strategies for ensuring protection of the rights of PwDs and their inclusion in society.

Steps to be taken

- **Enable access to all mainstream policies, systems and services:** All stakeholders should ensure equal participation of PwDs equally with others in any activity and service intended for the general public.
- **Invest in specific programmes and services for people with disabilities:** Greater investment is needed for rehabilitation, support services, training etc.
 - **E.g. Rehabilitation with assistive technologies** such as wheelchairs, hearing aids, and white canes improves the functioning and independence of PwDs
- **Participatory Approach:** People with disabilities should be consulted and actively involved in formulating and implementing policies, laws, and services.
 - **Nothing about us, without us’ principle** should be followed to ensure inclusivity.

- **Improve human resource capacity:** Relevant training on disability, which incorporates human rights principles, should be integrated into current curricula and accreditation programmes.
 - **E.g., Availability of specialist staff** contributes to effective and affordable health care for people with disabilities.
- **Provide adequate funding and improve affordability:** Adequate and sustainable funding of publicly provided services is needed to ensure that they reach all targeted beneficiaries.
- **Increase public awareness and understanding of disability:** Improvement in public understanding of disability to confront negative perceptions, and represent disability fairly can break the attitudinal and social barriers.
 - E.g., Educational authorities should ensure that schools are inclusive and have an ethos of valuing diversity.
- **Improve disability data collection:** Better collection of data and its segregation based on age, sex, socio-economic status can help in better understanding of 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)** based on recommendation of Parliamentary Standing Committee of Ministry of Personnel, Public Grievances and Pensions.
 - Index is based on **Four Dimensions (Efficiency, Feedback, Domain and Organizational Commitment) And 11 Indicators Assessing Grievance Redressal Mechanism** Adopted By Central Ministries And Departments.
- **Objective:** Highlight strengths and areas of improvement regarding grievance redressal mechanisms of various organizations.
- **Ranking: Department of Agriculture and Farmers Welfare** Topped The Ranking Followed By Department Of Posting Group A.

To know more about Grievance Redressal in India, refer to Article 1.3 Grievance Redressal Mechanism in September 2024 Monthly Current Affairs Magazine.

1.10.2. CIVIL REGISTRATION SYSTEM (CRS)

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

- Application, developed by the **Registrar General and Census Commissioner of India**, is expected 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.
- The Registration of **Births and Deaths Act, 1969** mandates that all births and deaths must be officially registered
- It operates under the authority of the **Registrar General** and **Census Commissioner** of India
- It is included in the **concurrent list** under Schedule Seven.

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, establishing a key **procedural safeguard under the stringent Prevention of Money Laundering Act (PMLA)** and **adding a layer of accountability to PMLA** prosecutions.

Key highlights of the Directorate of Enforcement vs. Bibhu Prasad Acharya Case

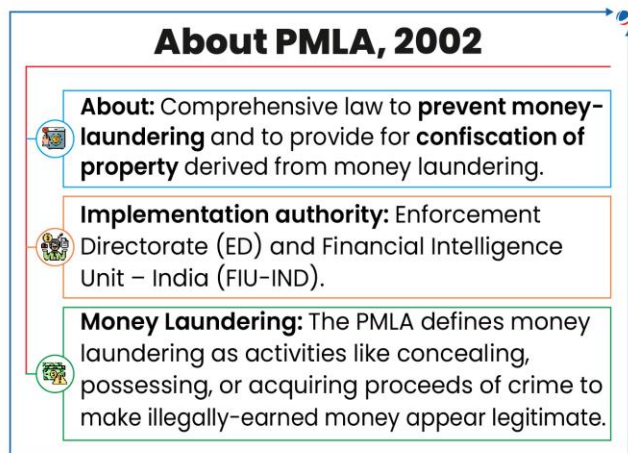
- **Supremacy of CrPC:** The court asserted that the **PMLA doesn't supersede** the requirement for prior sanction under **Section 197 of CrPC**.

- The provision corresponds to **Section 218 of the Bhartiya Nagrik Suraksha Sanhita, 2023**, which has replaced the CrPC with effect from July 1, 2024
- **Section 197 of CrPC:** To protect the public servants from prosecutions & from being prosecuted for anything they do in the **discharge of their duties**.
- **Exception:** Protection is **not unqualified** & public servants can **be prosecuted with a previous sanction** from the **appropriate government**.

Provision towards protection of Civil Servants

- **Articles 311 (1) and 311 (2):** They provide Constitutional protection to Civil Servants
- **Public Servants (Inquiries) Act, 1850:** Ensures inquiries are conducted fairly and transparently, upholding principles of natural justice within public administration.

To know more about Corruption and its ethical issues, refer to Article 9.1 Corruption in September 2024 Monthly Current Affairs Magazine.



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**’.

- Report, prepared by **Centre for Research & Planning, the research wing of Supreme Court of India**, seeks to highlight the complexities of India's prison system, with a focus on the **potential for technology-driven solutions**.

Key insights from the report

- **Stereotyping:** Prison manuals often refer to **essential sanitation and conservancy work** as "menial" or "degrading," **perpetuating a hierarchical view of labour**.
- **Bail Rejection: Rejection rate** for bail applications is **high (32.3% in Sessions Courts and 16.2% in Magisterial Courts)**.
- **Slow Trial: Over 52% of cases where accused** were in custody for more than a year were still pending at evidence stage in 2023.
- **Others: Persistence of Manual Scavenging** in prisons; **Division of prison work based on caste system** (held unconstitutional in Sukanya Shantha Case); **Underutilization of open prisons** etc.

Use of Technology for Prison Reforms

- **E-prisons:** Developed by National Informatics Centre to integrate all activities related to prison and prisoner management.
- **Model Prison and Correctional Services Act, 2023:** Introduced the use of **electronic monitoring technology** as a condition for granting prison leaves for prisoners.
- **FASTER (Fast and Secured Transmission of Electronic Records)** system of Supreme Court resolved delay in communication of bail orders from courts to prison.
- **Interoperable Criminal Justice System (ICJS):** It can create an automatic channel between courts, police and prisons and reduce unjustified delay in custody cases.

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 of office was administered by the President of India during a ceremony at the Rashtrapati Bhavan.

About appointment of CJI

- The **senior-most Supreme Court judge**, considered fit for the role, is usually appointed as CJI on the recommendation of the outgoing CJI.

- This convention was breached in **1964, 1973, and 1977.**
- The **Union Minister of Law, Justice and Company Affairs seeks this recommendation**, which is then sent to the **Prime Minister**, who **advises the President on the appointment.**
 - Under **Article 124 (2)**, every Judge of the SC be appointed by the President and shall hold office until he/she attains the age of 65 year.

Key Role of CJI

- **First amongst the equals:** SC in the **State of Rajasthan vs Prakash Chand (1997)** ruled that the CJI is the **head of the judiciary and holds a leadership position**, they do not hold any superior judicial authority over the other SC judges.
- **Master of the Roster:** It is the **exclusive power of the CJI to constitute Benches** (including Constitution benches), to hear cases.
- **Head of Collegium:** CJI heads the Collegium for judicial appointments and transfers in the higher judiciary.
- **Appointment of officers and servants of SC:** It shall be made by the CJI or such other Judge or officer of the Court as he may direct (Article 146).

About Collegium

Judicial Appointments: Judges of SC and HC are recommended by Collegium and appointed by the President under Articles 124 and 217.

For appointment in SC: Collegium consists of CJI and four other senior-most judges of the SC.

High Court appointments involve recommendations by HC Collegium (Chief Justice and two senior judges of concerned HC) and SC Collegium (CJI and two seniormost judges of SC).

1.10.6. INTER-STATE COUNCIL (ISC)

The Inter-State Council has been reconstituted.

About ISC

- It is a forum through which **Centre and the state co-ordinate and co-operate** with each other.
- **Genesis:** Established under **Article 263** of Constitution through a Presidential Order in **1990** on recommendation of **Sarkaria Commission.**
- **Composition:** It consists of:-
 - **Chairman:** Prime Minister
 - **Members:**
 - > CM of all States.
 - > CM of Union Territories having a **Legislative Assembly and Administrators of UTs** not having a Legislative Assembly.
 - > **6 Ministers** of Cabinet rank in Union Council of Ministers to be nominated by Prime Minister.

1.10.7. ALIGARH MUSLIM UNIVERSITY'S (AMU) STATUS AS MINORITY INSTITUTION

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

- The Supreme Court (by 4:3 majority), overruled its **S. Azeez Basha vs. UOI (1967) judgment** which held that AMU cannot claim minority status under Article 30 (1) as it was established by a statute.
- SC in **S. Azeez Basha vs. UOI** had held that **AMU was neither established nor administered by Muslim minority**, and it is a **central university** established through AMU Act, 1920.
- Later on, Parliament through **AMU (Amendment) Act, 1981 restored AMU's minority status.**

Fundamental Right of minorities to establish and administer educational institutions under Constitution



Article 30 (1) provides for linguistic & religious minorities a fundamental right to establish & administer educational institutions of their choice.



National Commission for Minority Educational Institutions (NCMEI) Act has been enacted to safeguard the educational rights of the minorities enshrined in Article 30(1) of the Constitution

- However, **Allahabad High Court struck down** the minority status of AMU in 2006 which has been subsequently challenged in SC in 2019.
- SC has now referred 'issue of AMU's minority status under Article 30' to a **regular bench** based on principles established in this judgment.


Key Highlights of Judgment

- **No need for minority control over administration** to prove that it is a minority educational institution.
- **Courts should trace Genesis and identify Brain behind the Institution** to determine who established the institution
- **Minority Status is not surrendered** because an institution was created by a statute or upon incorporation of the University.
- **Communities that weren't a minority before the Constitution** are also **entitled to Article 30 (1)** protection for institutions established before independence.

 <p>SMART QUIZ</p>	<p>You can scan this QR code to practice the Smart Quiz of Polity at our open test online platform for testing your understanding and recalling of the concepts.</p>	
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Performance and Progress Analysis

2. INTERNATIONAL RELATIONS

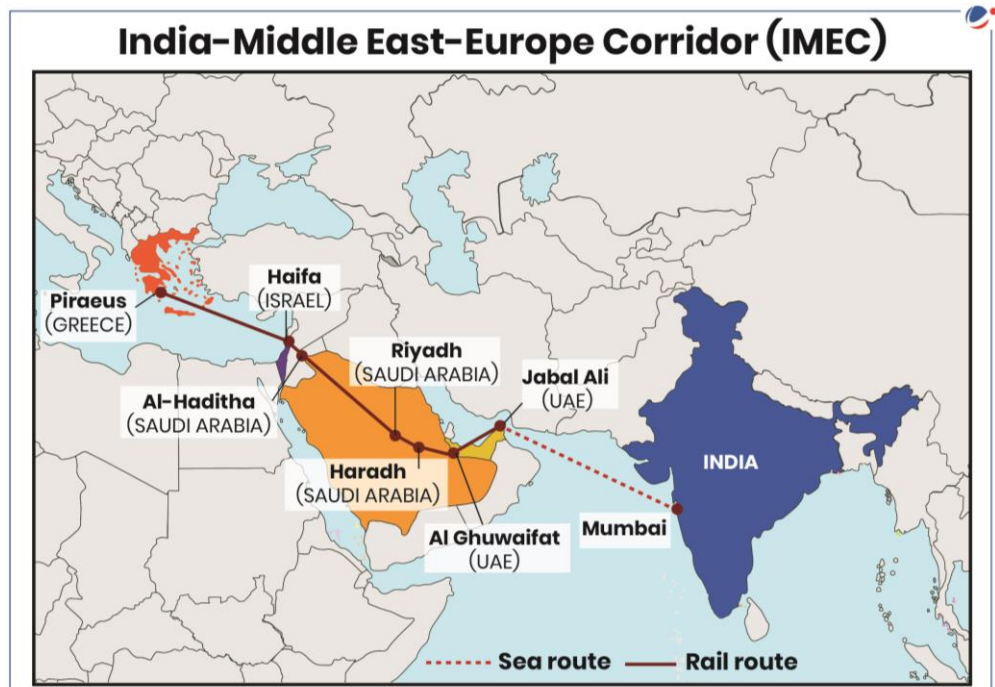
2.1. INDIA-MIDDLE EAST-EUROPE ECONOMIC CORRIDOR

Why in the news?

After **one year** of announcement of the ambitious **transnational corridor**, **India-Middle East-Europe Economic Corridor (IMEC)**, the project has seen progress as well as some roadblocks.

About India-Middle East-Europe Economic Corridor (IMEC)

- **Establishment:** Through an MoU signed by leaders from **India, European Union, France, Germany, Italy, Saudi Arabia, UAE and the US** at the **G20 Summit (2023) in New Delhi**.
- **Aim:** **Multi-modal connectivity project** aimed at developing **infrastructure of ports, railways, roads, sea lines and pipelines** to enhance trade between **India, the Arabian Peninsula, the Mediterranean region and Europe**.
- It will comprise of **two separate corridors**:
 - **Eastern corridor:** Connecting India to the Gulf.
 - **Northern corridor:** Connecting the Gulf to Europe.
- The project forms part of the **Partnership for Global Infrastructure and Investment (PGII)**.
 - It was announced in 2021 during the **G7 summit in the UK** and is seen as a counter to **China's Belt and Road Initiative (BRI)**.



Status of Implementation of IMEC

- **Infrastructure development:** Development is seen in sections like the **UAE-to-Israel railway network** and financing capacity expansion of **Haifa port in Israel**.
- **Sectoral development:** While **Connectivity sector** has **gained** some traction, other sectors like **clean energy export, undersea fibre-optic cables and pipelines, energy grid linkages**, and clean energy technology cooperation have **not seen progress** due to **instability in West Asia**.
- **Development of trade processes:** Steps are being taken towards **standardisation and facilitation of trade processes** like the '**Virtual Trade Corridor (VTC)**' launched by India and the UAE.
 - **VTC** is a part of **IMEC** aimed at the reduction of administrative processes and time, reduction of logistics and transportation costs, and **ease of doing trade**.
- **Inclusive approach:** The IMEC is **open for expansion of regional connectivity benefits** to other regional countries like **Qatar, Oman, Egypt, Türkiye and Iraq**.

Global significance of IMEC

- **Diversifying connectivity:** IMEC provides an **alternative route** for connectivity and trade diversification.
 - Apart from physical connectivity, it also promotes **digital connectivity and green energy cooperation**, strengthening the spirit of plurilateralism.
- **Enhancing prosperity:** It would increase prosperity among the countries involved through an increased flow of energy and digital communications.

- **The combined GDP** of the IMEC nations (including the EU as a bloc) is roughly \$47 trillion, representing about **40 percent of the world's total GDP**.
- **Geostrategic contributions:** It aims at reducing the global economy's **reliance on critical maritime chokepoints** like the **Suez Canal** by reducing **congestion** and improve **trade resilience**.
- **Geoeconomic implications: Economic integration and interdependence** can create the necessary **imperative towards peace** in the **conflict-ridden Middle East**.
- **Geopolitical implications:** It offers an **alternate** approach to **China's** growing economic importance in the Middle East in the form of the **Belt and Road Initiative (BRI)**.

Significance for India

- **Strengthening Indo-Gulf relations:** IMEC supplements the existing goal of developing **Indo-Gulf trade and economic relations** through improvement in **infrastructure and connectivity**.
 - E.g. Diversification of the **trade basket** between India and **UAE** with **growth of non-oil trade**.
- **Economic growth:** IMEC will promote **regional trade, attract investments** in India and develop a **diplomatic and political goodwill** for Indian market, leading to overall economic growth.
- **Faster connectivity:** The shipments from India to European mainland are expected to arrive about **40% faster with 30% cost reduction** than via the **Suez Canal Maritime route**.
- **Geopolitical aspirations:** By connecting the **European Union (EU)** and the **Gulf Cooperation Council (GCC)**, India's 2 largest trade blocs, IMEC is a step towards achieving **India's aspirations** to develop faster and become a **global power**.

Challenges

- **High costs:** The **complexities of multi-modal** nature and **lack of well-developed manufacturing capacity** in the **Gulf** countries are potential hurdles to **optimum utilization** of the capacities being developed which may make **freight transport costlier**.
- **Limited geographical coverage:** Important economies of the region like **Türkiye, Egypt, Iran, Qatar**, etc., are **not part** of the IMEC.
- **Existing Route:** The present route passing through the **Bab al-Mandab, the Red Sea and the Suez Canal** is **extensively used**.
 - The newer route is seen to be a **costlier** project with **limited impact** on the global trade.
- **Regional instability: Middle-East** has been facing various **challenges** in the form of **regional conflicts** like the **Israel-Hamas war, the disruption of Red Sea trade by Yemen's Houthi rebels**.
 - The **normalisation of Arab-Israel relations**, the basic **premise** of the development of the **IMEC**, halted with the **escalation of the conflict** between **Israel and Palestine**.
- **Financial Commitments:** There is a lack of commitment regarding the financial cost.

Other Important Regional Corridors

The International North–South Transport Corridor (INSTC):

- It is a **7,200 km-long trade corridor** originally mooted in **2000** by **India, Russia and Iran** to enhance trade and transport connectivity among countries along its route.
- Currently, it consists of **13 Members**, namely- **India, Iran, Russia, Azerbaijan, Armenia, Kazakhstan, Kyrgyzstan, Tajikistan, Turkey, Ukraine, Belarus, Oman and Syria**.
 - **Bulgaria** has joined as an **Observer State**.

China-led Belt and Road Initiative (BRI):

- Launched in **2013**, it seeks to connect Asia with Africa and Europe via land and maritime networks.
- **It comprises:**
 - **Silk Road Economic Belt:** A trans-continental passage that links China with south east Asia, south Asia, Central Asia, Russia and Europe **by land**.
 - **Maritime Silk Road:** A **sea route** connecting China's coastal regions with south east and south Asia, the South Pacific, the Middle East and Eastern Africa, all the way to Europe.

Trans-Caspian International Transport Route (TITR):

- Also called the ‘**Middle Corridor**’, it is a multi-modal corridor connecting **China with European Union through Central Asia, Caucasus, Türkiye and Eastern Europe**. It was launched in **2017**.

Conclusion

In the context of growing **tensions** and related **uncertainty impacting global trade**, new and innovative regional trade corridors can provide **alternatives** that **complement the conventional trade routes**. IMEC is one such trade corridor aimed at improving trade and connectivity in the present geopolitical situations. **India** has a vital role in development of these corridors. It showcases **India’s growing importance in trade promotion as well in the de-escalation of tensions**.

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 Rio de Janeiro

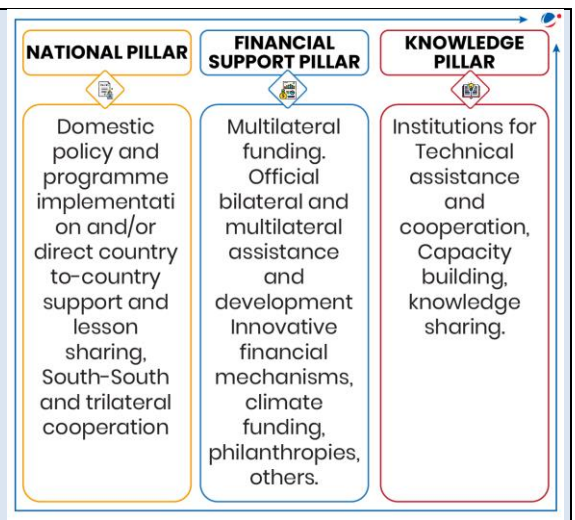
- The Rio summit marked the **first time the African Union (AU) participated as a full member**.
- Hosted by **Brazil**, the third Global South host after Indonesia (2022) and India (2023).
 - The **next G-20 is to be in South Africa**. **Brazil, India & South Africa together forms the troika of G20**. These countries representing the Global South and are also part of IBSA and BRICS grouping.

Key takeaways from the summit: The G20 Rio de Janeiro Leaders’ Declaration

- **Social inclusion and the fight against hunger and poverty**
 - **Global Alliance against Hunger and Poverty**: Launched to eradicate poverty and hunger (refer Box)
 - **Global Coalition for Local and Regional Production, Innovation and Equitable Access**: Launched to promote access to vaccines, diagnostics, and other health technologies for neglected diseases and vulnerable persons.
 - **Commitments on Basic Needs and Equality**: For the first time, G20 committed to mobilising resources for **basic sanitation, drinking water, combating racism, and promoting racial equality** to reduce inequalities.
- **Sustainable development, energy transitions and climate action**: Establishment of **Task Force on a Global Mobilization against Climate Change** to identify & address structural barriers to foster **private capital flows for climate action**, particularly for developing countries.
- **Reform of global governance institutions**: Endorsed the G20 roadmap for better, bigger and more effective **multilateral development banks (MDBs)**.
- **Tax on the super-rich**: Leaders agreed for the **first time to engage cooperatively** to ensure that ultra-high-net-worth individuals are effectively taxed.

About the Global Alliance against Hunger and Poverty

- **Need**: By 2030, an estimated 622 million people will live in extreme poverty (\$2.15/day), and 582 million will face hunger—similar to 2015 levels.
- **Aim**: Accelerate global efforts to eradicate hunger and poverty.
- **Goals**: Reach **500 million people with cash transfer programs** in low-income countries by 2030. Provide **high-quality school meals to 150 million additional children** in vulnerable countries.
- **Approach**: Operates globally through voluntary partnerships and commitments.
- **Members**: 148 (82 countries, African Union, EU, etc.), including India. **Funding**: No dedicated fund; instead, it connects countries with donors and technical support.





Members of G 20

G20

G8

G7



France



Canada



Italy



Russia



Japan



Germany

United States
of AmericaUnited
KingdomAfrican
Union

Argentina



Australia



Brazil



China

European
Union

India



Indonesia



Mexico

Saudi
ArabiaSouth
AfricaSouth
Korea

Turkey

- **Genesis:** Founded in **1999**, following the **Asian financial crisis**, as a forum **for finance ministers and Central Bank Governors** to discuss global economic and financial issues.
 - The G20 was **upgraded to the level of Heads of State/Government** in the wake of **the global economic and financial crisis of 2007**.
- **Purpose:** Plays an important role in shaping and strengthening global architecture and governance on all major international economic issues.
- **Annual summit:** **G20 Summit** held **annually**, under the **leadership of a rotating Presidency**. Presidency is supported by **the Troika previous, current and incoming Presidency**.
- **Importance:** The G20 represents **around 85% of global GDP and 75% of global trade**, as well as **two-thirds of the world's population, prior to the AU joining**.

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

- **Representational inequity:** Reluctance to rename the forum as "G21" after the African Union's inclusion demonstrates persistent barriers to genuine global representation.
- **Diplomatic Fragmentation:**
 - Key leaders' absences at the recent summit, like the Russian President and Saudi Crown Prince, highlight divisions within the G20.
 - Also, **Argentina's opposition** to sustainable development and welfare spending underscores **significant differences among members**.
 - **Major economies** like the US, Germany, and Argentina **resist wealth tax and progressive taxation proposals**, impeding efforts to reduce global disparities.
- **Unrealized Goals in Governance Overhaul:**
 - **Global institutional reforms:** Calls for reforming global institutions like the UN Security Council and World Bank remain unaddressed, limiting the G20's impact on global governance.
 - **Climate Commitments:** Despite coinciding with COP29, the summit failed to advance climate goals beyond previous declarations.
- **Structural and Operational Weaknesses:** G20 decisions are non-binding, reducing their enforceability. Also, it operates without a formal charter, limiting accountability and public scrutiny.

- **Competition from Other Institutions:** Growing influence of organizations like BRICS and the Shanghai Cooperation Organisation (SCO) poses challenges to a divided G20.

Enhancing the Effectiveness of G20 Summits

- **Permanent Secretariat:** Establish a secretariat with research and policy capabilities to ensure policy continuity and strategic insights between summits.
- **Clear Division of Labour**
 - **Focus for G20:** Global public goods like monetary stability, trade openness, poverty reduction, and pandemic control.
 - **Focus for G7:** Geopolitical issues
- **Empowering Middle-Income Members:** Enable countries like Argentina, Brazil, India, and South Africa to take active diplomatic roles.
- **Accountability Framework:** Introduce mechanisms to track commitments, monitor implementation, and provide transparent annual performance reviews.
- **Strategic Coordination with UN Agencies:** Collaborate with organizations like WHO, UNEP, and UNDP to avoid duplication of efforts and maximize public goods delivery.
- **Addressing Global South Priorities:** Advocate for equitable global governance, reducing G7 dominance (e.g., G7 represents 13% of the population but controls 59% of IMF and World Bank voting rights).

Conclusion

In a world grappling with overlapping crises—conflicts, hunger, rising inequalities, forced migration, health emergencies, debt burdens, and the climate crisis- to remain effective and legitimate, the G20 must evolve into a more inclusive, accountable, and action-oriented platform that truly represents the diverse needs and priorities of a rapidly changing world.

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):** To provide the framework for practical cooperation in priority areas like solar PV, green hydrogen, energy storage, etc.
- **Australia-India Business Exchange (AIBX) programme:** Both sides **extended AIBX programme** for another **four years** from 2024.
 - AIBX was launched in 2021, to **provide businesses with market insights and foster commercial partnerships.**
- Agreement to renew and strengthen **Joint Declaration on Defence and Security Cooperation** in 2025.

Significance of India- Australia bilateral relations

- **Strategic Partnership:** Both nations signed **Comprehensive Strategic Partnership** in 2020, and **counter China's assertiveness in Indo-pacific** through Quad grouping.
 - **E.g. Australia-India Indo-Pacific Oceans Initiative Partnership (AIPOIP)** helps to shape maritime cooperation in Indo-Pacific.
- **Economic and Trade Relations:** Bilateral trade crossed \$30 billion in 2023, with potential to grow under **Economic Cooperation and Trade Agreement (ECTA)**.
 - **India is a significant market for Australian coal** and LNG, while **Australia imports Indian textiles, pharmaceuticals, and IT services.**



- **Supply Chain Resilience Initiative (SCRI)** between India, Australia, and Japan ensure supply chain diversification, and promote fair and sustainable trade practices.
- **Critical Minerals:** Both sides have signed **Critical Minerals Investment Partnership** to support Indian investment in Australian critical minerals projects.
 - Australia produces almost **half of world's lithium**, and is **second-largest producer of cobalt and the fourth-largest producer of rare earths**.
- **Green energy Cooperation:**
 - **Australia-India Green Hydrogen Taskforce** to enhance green hydrogen production and deployment.
 - **India-Australia Solar Taskforce** will accelerate solar PV deployment and enhance their supply chains.
- **Defence Cooperation: Air-to-air Refuelling agreement, Mutual Logistics Support Agreement**, defence exercises like **AUSTRAHIND, AUSINDEX, Pitch Black** enhances interoperability, and address collective security threats effectively.
- **Regional and Multilateral Cooperation: Australia's support for India's UN Security Council candidature** underscores their shared commitment to global governance reforms.
 - Further, both nations actively collaborate on platforms like G-20, and **Indian Ocean Rim Association (IORA)** for addressing region's challenges.
- **People-to-People Ties: India is Australia's largest source of skilled migrants** and second-largest source of international students.
 - **Signing of India-Australia Migration and Mobility Partnership** agreement will facilitate movement of students, professionals, researchers, etc.
- **Science and Technology:** Implementing Arrangement on **Cooperation on establishing and operating transportable Telemetry terminals** in Cocos Island for **Human Space Flight Mission**.

Issues in India- Australia relations

- **Trade and Market Access:** Prolonged **Comprehensive Economic Cooperation Agreement (CECA)** negotiations, Non Trade Barriers such as sanitary & phytosanitary standards and technical barriers, continue to impede India's exports.
 - **Pharmaceutical pricing control in Australia**, particularly on generics, hampers market access for Indian products.
- **Rise of Extremism and Anti-India Activities:** Growing **influence of Khalistani elements in Australia** can strain community ties and have the potential to impact broader bilateral relations.
 - For example, incidents like vandalism of Hare Krishna Temple, Shri Shiva Vishnu Temple in Melbourne.
- **Stalled Nuclear energy cooperation:** Slow progress and **no commercial sale of Uranium to India** despite signing of **2014 Agreement (Cooperation in Peaceful Uses of Nuclear Energy)** limits collaboration in clean energy.
 - **India rejected uranium supply proposals from Australian companies** due to lack of commercial viability.
- **Visa Issue:** Recent hike in visa fees by Australia (125%) could **financially strain Indian students**.

Way ahead

- **Economic and Trade Partnership:** Strengthen ECTA and finalize CECA. Further, **promote bilateral investments in critical sectors** like clean energy, mining, and technology.
- **Strengthening Strategic and Security Ties:** Work together in countering traditional and non-traditional security threats, including cybersecurity, maritime security, and counterterrorism.
- **Strengthening Cooperation in the Indo-Pacific:** Collaborate under regional frameworks such as the ASEAN, and Pacific Islands Forum and supporting development initiatives in small island nations to counterbalance unilateral influences.
- **Addressing Extremism:** Strengthen bilateral mechanisms such as joint monitoring and intelligence-sharing frameworks and promote community dialogues.

Conclusion

As both countries navigate global economic challenges and geopolitical tensions in the Indo-Pacific, their partnership will benefit both economies, address maritime and strategic security, and promote cultural and people-to-people exchanges.

2.4. INDIA – GERMANY RELATIONS

Why in the news?

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

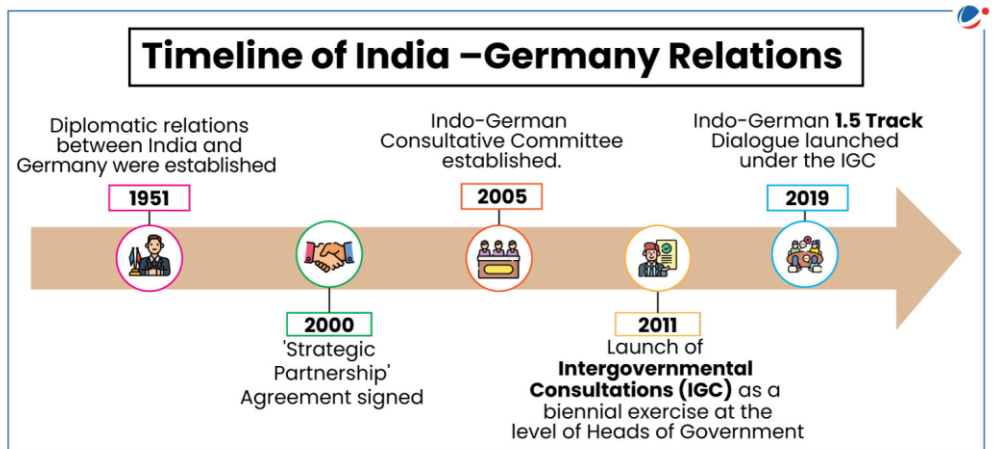
More on the news

- 2024 marks the **25th anniversary of the strategic partnership** (signed in 2000) between India and Germany.
- 2024 also marks the **50th anniversary of the signing of the Inter – Governmental Agreement on Cooperation in Scientific Research and Technological Development.**
- During the visit the **7th Inter-Governmental Consultations (IGC)** were held and also the **'India-Germany Innovation and Technology Partnership Roadmap'** for renewable energy, AI, quantum technologies, and space exploration was launched.



Significance of India-German partnership

- **Trade and Investment:**
 - Germany is **India's largest trade partner in Europe**, with bilateral trade reaching **US\$ 33.33 billion in 2023**.
 - Germany is the **9th largest foreign direct investor in India**, with a cumulative FDI of US\$ 14.5 billion (April 2000 - December 2023).
 - Germany gets **access to India's large and growing consumer market** along with availability of skilled labor and rapid adoption of digital technologies.



- **Climate and Sustainability:**
 - Under the **Green and Sustainable Development Partnership (2022)**, Germany committed €10 billion for projects like solar partnerships and agro-ecology.
 - **Germany is a member** of India-led initiatives like the **Coalition for Disaster Resilience Infrastructure (CDRI) and the International Solar Alliance (ISA)**.
- **Technology and Innovation:** The **Indo-German Science and Technology Centre (IGSTC)** supports 49 priority projects, including initiatives like **Women in Science and Engineering Research (WISER)**.
- **Defense and Security:** The **2006 Defence Cooperation Agreement** has led to **Joint Working Groups on Counter-Terrorism, Cybersecurity, and Defence**.
 - Also, recently, Germany has shown keen interest in participating in **Project- 75I programme of the Indian Navy for six conventional submarines**.
 - **Joint exercises:** Ex MILAN, PASSEX, Ex TARANG SHAKTI-1, etc.
- **Diversification of Trade Partners:** Reducing dependency on China (China+1) following the EU-China trade tensions by strengthening ties with India.
 - In June 2024, the EU imposed tariffs of up to 38.1% on Chinese electric vehicles for unfair trade practices.

Challenges in Bilateral Relations

- **Trade and Investment Barriers:** Indian companies face **non-tariff barriers** on their products in Europe such as **Carbon Border Adjustment Mechanism (CBAM)**.
 - Similarly, **bureaucratic hurdles and a complex tax system** have kept German investments in India at around 25 billion euros (\$27 billion) in 2022, about only 20% of the volume invested in China.
- **Strategic and Geopolitical Differences:** India's neutral stance on the Russia-Ukraine conflict contrasts with Germany's strong opposition to Russian aggression.
- **China's Role:** Germany's economic dependence on China limits its ability to fully support India's position against China unlike the USA and Japan in QUAD.
- **Human Rights Criticism:** German critiques of India's internal policies (e.g., Kashmir, press freedoms) create diplomatic sensitivities.

Way Forward

- **Free Trade Agreement (FTA):** Early conclusion of the negotiations **between India and the EU** to compete with China's almost 300 billion euros trade with Germany alone.
- **Indo-Pacific Engagement:** Increase Germany's presence in the region through joint naval exercises and infrastructure investments as envisaged in the 7th IGC.
- **Collaboration in clean tech and sustainable development with projects** like electric mobility, green hydrogen, renewable energy, etc. through initiatives like the **Green and Sustainable Development Partnership**.
- **Supply Chain Resilience:** To diversify the production chain of semiconductors, automobile parts, pharmaceuticals away from China, both Germany and India can become partners, also supporting '**Make in India**' initiative.

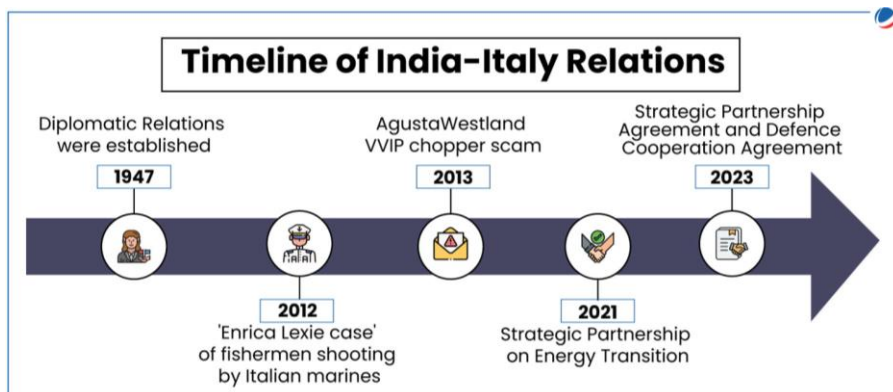
2.5. INDIA-ITALY RELATIONS

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:**
 - Fostering partnerships in **automotive, semiconductors, infrastructure, and advanced manufacturing**.



- Strengthening bilateral trade and investments through the **Joint Commission for Economic Cooperation and the Joint Working Group on Food Processing**.
- **Connectivity:** Enhance collaboration on maritime and land infrastructure within the framework of **India-Middle East-Europe Economic Corridor (IMEC)**.
- **Science and Technology:** Agreed on expanding cooperation in critical technologies like AI & digitalization, with implementation of **2025-27 Executive Programme for Scientific & Technological Cooperation**.
 - Introduced a new **Indo-Italian Innovation and Incubation Exchange Program** to foster academic & industrial collaboration.
- **Space Sector:** Expand **Italian Space Agency (ASI)** and the **Indian Space Research Organisation (ISRO)** collaboration on Earth observation, heliophysics, and space exploration, with emphasis on lunar science.
- **Energy Transition:** Both countries agreed on organizing "Tech Summits" & strengthening alliances like **Global Biofuels Alliance & International Solar Alliance**.
- **Defense cooperation:** Decided to hold annual **Joint Defense Consultative (JDC) meetings & Joint Staff Talks (JST)** to improve coordination in defense matters.
 - Discussed establishing a **Defense Industrial Roadmap** to foster cooperation in defense manufacturing.

About India – Italy Relations

- **Historical Connect:** Italian port cities were important trading posts on the ancient spice route.
 - The **Venetian merchant Marco Polo**, during his travels to the east, travelled to India in the 13th century.
- **Strategic:**
 - Both countries became **Strategic Partners in 2023** with enhanced cooperation in Indo-Pacific and Mediterranean regions with Italy joining India-led initiatives such as **Indo-Pacific Oceans Initiative (IPOI)** and **India-Middle East-Europe Economic Corridor (IMEC)**.
 - **Italy exited China's Belt and Road Initiative (BRI)** in 2023 after joining it in 2019 as the only G7 member. This aligns with India's efforts to counter China's growing dominance in Europe.
- **Economic:**
 - **Italy is India's 4th largest trading partner in the EU** after Germany, Belgium and Netherlands.
 - **Bilateral trade in 2023-24 reached US\$ 14.56 billion** with India's exports at US\$ 8.76 billion.
 - **Italy ranks 18th in terms of FDI inflows into India** during April 2000 to June 2024.
- **Defence and Security:** Signed the **Defence Cooperation Agreement (2023)** to enhance collaboration in research, industrial cooperation, and maritime domain awareness along with holding regular talks via platforms like the **Italy-India Military Cooperation Group**.
 - Collaboration on counter-terrorism through bilateral and multilateral forums like the UN, Global Counter Terrorism Forum (GCTF) and Financial Action Task force (FATF).
- **Environment and Climate:** India-led initiatives joined by Italy include **International Solar Alliance (ISA)**, **Coalition for Disaster Resilient Infrastructure (CDRI)** and **Global Biofuels Alliance (GBA)**.

- **People-to-people ties:** Italy hosts the **second largest Indian diaspora in the EU** estimated at 2 lakhs including PIOs.
 - Both side signed a **Migration and Mobility Agreement** in 2023 to facilitate temporary residence for Indian students up to 12 months after their graduation.



- **Other Emerging Areas:** The **Blue and Space Economy conference**, attended by Italian and Indian institutions and companies, was held recently where both sides discussed cooperation in Space sector and Blue Economy.

- Previously, Italy and India collaborated in the **development of the Chandrayaan-2 mission** which also carried a laser instrument developed by the Italian space agency.

Way Forward

- **Implementation of the Joint Strategic Action Plan 2025-2029**, especially in sectors like defence and space.
- Close alignment of **India's Act East Policy** with **EU's Indo-Pacific Strategy** to effectively counter China's dominance in Pacific Ocean. **Italy joining IPOI is a step in right direction.**
- **Early conclusion of EU-India Free Trade Agreement** along with removing **non-tariff barriers such as the Carbon Border Adjustment Mechanism (CBAM).**
- **Leveraging multilateral platforms** like the G20, G7, and EU to address shared challenges like terrorism, climate change, etc.
- **Deepening Cultural and People-to-People ties** to bridge the trust deficit through festivals, tourism, and academic partnerships and allowing more Indians to work in Italy **to counter 'Demographic Winter' currently faced by Italy.**

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:** Joint inauguration of the **C295 Aircraft Final Assembly Line** in Vadodara by Tata Advanced Systems in partnership with Airbus Spain.
 - 40 aircraft will be manufactured in India, while 16 will be delivered by August 2025.
 - The facility positions India as a **potential aviation hub for domestic and export markets.**
- **Investment Facilitation:** Establishment of a **Fast Track Mechanism** in India's DPIIT and Spain's Directorate General of International Trade and Investment to promote mutual investments.
- **Consular Expansion:** Announcement of a **Spanish Consulate in Bengaluru** and the operationalization of an **Indian Consulate in Barcelona.**
- **Cultural Cooperation:**
 - **Cultural Exchange Programme** launched for 2024–2028.
 - Declaration of **2026 as the India-Spain Year of Culture, Tourism, and AI.**
 - Establishment of **Indian Council for Cultural Relations (ICCR) Chairs** on Hindi and Indian Studies at the University of Valladolid.

India–Spain Bilateral Relations

- **Diplomatic relations:** Established in 1956, with strengthened cooperation under the **Association for Peace, Growth, and Innovation (APCI)** since 2017 in security, defense, and technology.



- Spain is a key EU partner in **enhancing India's strategic ties with Europe.**
- **Multilateral Cooperation:** Spain supports India's membership in international security regimes like the **Missile Technology Control Regime (MTCR)**
- **Trade and Economic Relations:**
 - Spain is India's **6th largest trade partner in Europe** with bilateral trade reaching \$9.9 billion in 2023.

- **Spain is the 16th largest investor in India**, with \$4.2 billion in FDI (April 2000 – June 2024) with over 280 Spanish companies being active in India.
 - ✓ Additionally, **Indian companies have invested over US\$ 900 million in Spain** predominantly in the IT services, pharmaceuticals, and logistics sectors.
- **Defence and Security Cooperation:** Spain and India signed an agreement in 2020 to co-develop next-generation naval ships.
 - Joint activities include **Spain's participation in the EU-India joint naval exercise (2023)** and Passage Exercises (PASSEX) with Indian Navy ships.
- **Cultural Exchange:** Approximately 75,000 Indians reside in Spain. Also, **the Indian Council for Cultural Relations (ICCR)** imparts yoga and classical dance lessons in Spain.

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.

- The **tripartite power sales** agreement between NTPC Vidyut Vyapar Nigam, Nepal Electricity Authority(NEA) and Bangladesh Power Development Board was signed earlier.

About Agreement

- To **facilitate power transaction** from Nepal to Bangladesh, through Indian grid with an export of upto 40 MW of power.
- Commitment towards **greater sub-regional cooperation, including in the energy sector**, which would lead to increased **inter-linkages between the economies** for mutual benefit of all stakeholders.

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**.
- It seeks to develop a **sea route** between the **Indian port of Chennai** and **Vladivostok** through **Northeast Asia**.
- Covers a distance of around **10,300 km**.
- Passes through the **Sea of Japan, the South China Sea, Malacca Strait, etc.**

Significance of the Corridor

- **Reduced Logistics cost:** Due to **reduction in transportation time** (by around 16 days) and **distance** (by around 40%).
 - Present trade route between **Mumbai and St. Petersburg (Russia)** via Suez Canal takes around 40 days and covers a distance of around 16,066 Km.
- **Boost India's maritime sector:** The sector handles around **95%** (by volume) and **70%** (by value) of country's trade.
 - Complement **India's Maritime Vision, 2030** that encompasses more than 150 initiatives from all areas of Maritime Sector.



- **Address China's Dominance:** Passes through the **South-China Sea**.
 - **Vladivostok** is located at a **short distance** from **Russia-China border**.
- **Boost India's Act Far East Policy:** Offer enhanced **access to Russian resources** and provide stronger foothold to India in the Pacific trade network.

Other Significant Maritime Corridors

- **India-Middle East-Europe Economic Corridor (IMEC):** Announced during **G20 Leaders' Summit** (New Delhi, 2023) for the integration of **Asia, Europe and the Middle East**.
- **International North-South Transport Corridor (INSTC):** First mooted in **2000** to build a **transport corridor** linking **Russia's Baltic Sea coast** to **India's western ports in the Arabian Sea via Iran**.

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**.

DiGi Framework

- **Objective:** It aims to further their collaboration with the Indian private sector to **support digital infrastructure in India**.
- **Partner Agencies:** U.S. International Development Finance Corporation, the Japan Bank for International Cooperation (JBIC), and the Export-Import Bank of Korea (Korea Eximbank).
- **Implementation:** It will support projects in **information and communications technology sector** such as 5G, Open RAN, submarine cables, optical fiber networks, data centres, smart city, e-commerce, AI, and quantum technology.

Digital Public Infrastructure (DPI) in India

- India became the first country to build all three foundational DPIs through **India Stack**: digital identification (**Aadhaar**), real-time rapid payment (**UPI**) and data sharing architecture (**Data Empowerment and Protection Architecture**).
- **Significance:**
 - **Inclusive Development:** DPI helped India achieve **80% financial inclusion** during 2018-2023 and enabled direct benefit transfers supporting 87% of poor households during Covid-19.
 - **Economic Growth:** India can speed up economic growth by 33% by implementing DPI in financial sector.
 - **Emission Reduction:** DPI in climate sector can accelerate emissions control by 5-10 years through implementing DPI in carbon offsets and trading, land mapping, and weather information and monitoring.

India's Efforts at Globalizing DPIs

- **US-India Global Digital Development Partnership** to deploy responsible use of emerging digital technologies in Asia and Africa.
- **G20 Framework for Systems of DPI** adopted under India's G20 leadership outlines principles for designing and deploying DPIs.
- **Virtual Global DPI Repository**, being setup by India to host DPI-focussed tools, resources and experiences from around the world.

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)**.

- Seven pillars listed by the India form the **acronym C-A-R-I-C-O-M**.
 - **Pillars include** Capacity Building, Agriculture and Food Security, Renewable Energy and Climate Change, Innovation, Technology and Trade, etc.
- The first-ever India-CARICOM Summit was held in 2019.

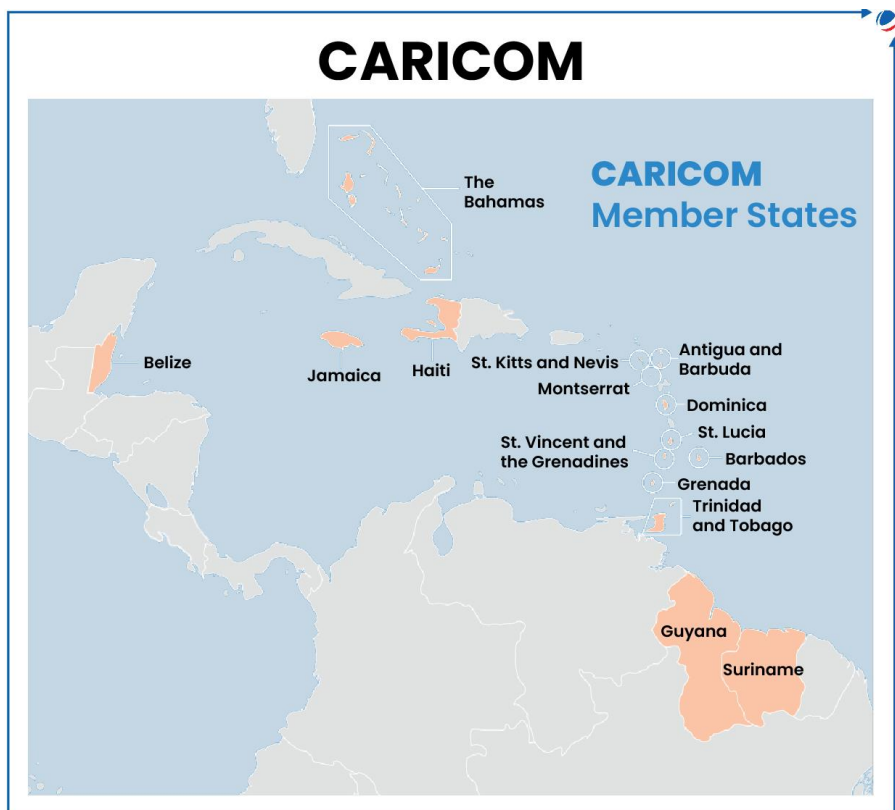
About CARICOM

- A regional organization established in **1973** to promote **economic integration** and **cooperation** in the **Caribbean**.

- Consists of 21 countries (fifteen Member States and six Associate Members) including Antigua and Barbuda, Bahamas, Barbados, Belize, etc.

Significance of CARICOM for India

- **Partnership in Multilateral Forums:** Many CARICOM countries such as Antigua and Barbuda support India's position in international forums. E.g. Support for permanent membership in the UNSC.
- **South-South Cooperation:** Countries from group participated in 3rd Voice of Global South Summit, 2024, organised by India.
- **Defence Export:** E.g. Recently, HAL delivered two Dornier 228 planes to Guyana.
- **Climate Action Collaboration/ Energy Security:** E.g. Suriname joined **International Solar Alliance (ISA)**
- **Other:** Act as a gateway to **Latin America**, Cooperation in **disaster resilience** (E.g. Coalition for Disaster Resilient Infrastructure), Home to **Indian Diaspora** (Trinidad and Tobago), etc.



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** to further dialogue and cooperation amongst ASEAN and Plus Countries.
- **Its purpose** is to **strengthen security and defence cooperation** for maintenance of peace, stability, and development in the region.
- **Focuses on seven areas of practical cooperation:** Maritime Security, Counter-terrorism, HADR, Peacekeeping Operations, Military Medicine, Humanitarian Mine Action and Cyber Security.

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 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.

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.
- **Aim:** To eliminate an entire category of weapons of mass destruction by **prohibiting the development, production, acquisition, stockpiling, retention, transfer or use of chemical weapons by States Parties.**
- **Implementation:** OPCW is the implementing body, with a mission to achieve a **world free of chemical weapons.**
 - OPCW was awarded the **Nobel Peace Prize in 2013.**
 - **Chemical Weapon** is a chemical used to cause intentional death or harm through its toxic properties.
 - > **Munitions, devices and other equipment** specifically designed to **weaponise toxic chemicals** also fall under the definition of chemical weapons.
- **Implementation in India: National Authority Chemical Weapons Convention (NACWC)** is responsible for implementing the Convention in India.
 - NACWC was established under the **Chemical Weapons Convention Act, 2000.**



Indian Chemical Council (ICC)

Mumbai, India



Genesis: Founded in 1938 to support and drive the growth of India's chemical industry.

About: Apex national body representing all branches of India's chemical industry, including organic/inorganic chemicals, plastics, and petrochemicals.

Industry Representation: Represents over 80% of India's \$220 billion chemical industry.

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

It calls for:

- Urgent action to **address the global housing crisis**, sharing **urban spaces** inclusively, and **urban planning** to deliver better local outcomes.
- Achieving **global goals through local action**, **representation of local actors** at all levels, and building **alliances to scale local impact.**
- **Unlocking finance for cities** and communities, and ensuring **equity and justice.**
- **Leveraging local and grassroots data** for decision-making.
- **Harnessing culture and heritage as an asset** for sustainability.

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"** aligns with the Indian Government's vision of **"Sahkar Se Samridhi"** (Prosperity through Cooperation).

About ICA

- **Founded: In 1895, London.**
- It is a **global organization that unites, represents, and serves cooperatives around the world.**
- **Members: 306 member organizations** across **105 countries.**
- **It serves as the apex body** for the cooperative movement, providing a global platform for collaboration, knowledge exchange, and coordinated action.

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.**
- It is effectively **controlled by China** but is also **claimed by Vietnam and Taiwan.**
- China **took control of the Paracels from South Vietnam** following a 1974 naval clash.
- Military buildup on Triton Island **represents a significant escalation in China's strategy** to establish military dominance in the South China Sea.



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3. ECONOMY

3.1. IMPORTANCE OF LARGE TRADE AGREEMENTS

Why in the news?

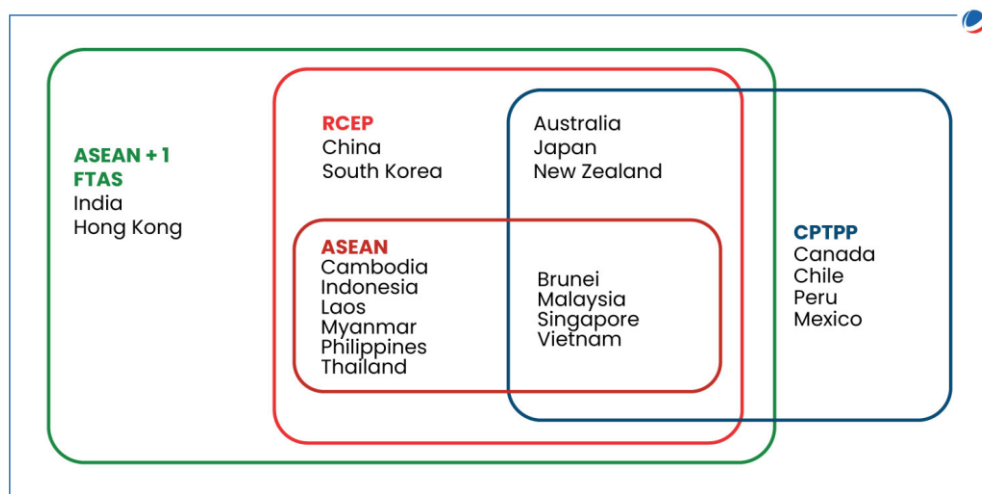
Recently, the **NITI Aayog CEO** suggested that **India** should be a part of the **large trade agreements**, the **Regional Comprehensive Economic Partnership (RCEP)** and **Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP)**.

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.
 - FTA is an **agreement between two or more countries** where they agree on certain obligations that affect trade in goods and services, and protections for investors and intellectual property rights, among other topics.
- On the contrary, the **Global Trade Research Initiative (GTRI)** negated the World Bank's suggestions for India to reconsider joining RCEP.

About Regional Comprehensive Economic Partnership (RCEP)

- It is a **comprehensive free trade agreement (FTA)** between the **10 ASEAN Member States** and ASEAN's 5 FTA partners viz. **Australia, China, Japan, South Korea and New Zealand**.
- **Objective:** To achieve a modern, comprehensive, high-quality, and mutually beneficial economic partnership agreement among the ASEAN Member States and ASEAN's FTA partners.
- RCEP negotiations begun in **2013**, it was signed in **2020**.
 - **India pulled out of negotiations in 2019.**
- It is the **world's largest free trade agreement by members' GDP**. It constitutes **about 30 % of the world's GDP** and **about a third of the world's population**.



About 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.
 - **UK will officially join CPTPP** by 15 December 2024.
- CPTPP constitutes **11.4%** of the world's **GDP** and **6.5%** of the **world population**.

Significance of involvement in large trade agreements

- **Integration into Global Value Chain:** Inclusion into large trade blocs can potentially improve **supply chain development and expansion** and economic integration for India.
 - **E.g.** It may aid in **easy imports of capital goods and inputs** required to develop the **indigenous industry**.
- **Benefit the MSME Sector:** Regional FTAs may benefit the MSMEs, which contribute nearly **40% of India's exports**.
 - The trade blocs can serve as a **vibrant export market** for realizing the manufacturing potential of Indian companies.

- **Trade Competitiveness:** With **tariffs** at par with potential **competitors** of India like the ASEAN countries, India can benefit from **attracting private investment** and **capitalizing on the 'China Plus One' strategy** used by companies to **diversify supply chains**.
 - This will attract more **Foreign Direct Investment (FDI) inflows**, increase **employment opportunities** and business prospects in India.
 - An independent study found that upon joining the RCEP, the **Indian economy could gain up to USD 60 billion by 2030**.
- **Strategic relevance:** Inclusion in the trade blocs provides opportunities to **influence institutional policies of regional trade** like trade **liberalization, free movement of people, e-commerce** etc.
 - **E.g.** RCEP is in line with the objectives of **India's Act East Policy** while CPTPP can improve India's engagement in the **Indo-Pacific region**.

Know the term

- **'China Plus One' Strategy:** In the context of **increased global supply chain dependency on China**, the 'China Plus One' strategy can be seen as a **global business strategy** encouraging **diversification of investment and manufacturing to alternative destinations** along with maintain a **presence in China**.

Challenges

- **Trade imbalance:** RCEP's gains are **disproportionately skewed toward China**, which risks **worsening** the huge **trade deficit of India with China (USD 85 billion in FY2024)**.
 - **E.g.** ASEAN's trade deficit with **China grew sharply** from USD 81.7 billion in 2020 to USD 135.6 billion in 2023.
- **Marginal benefits:** India already has **robust free trade agreements (FTAs)** with 13 out of 15 RCEP members, **excluding New Zealand and China**.
- **Divergent approaches:** The trade agreements diverge with India's approach in areas like **taxation measures, Investor-State Dispute Settlement (ISDS), binding investor protection provisions etc.**
 - **E.g.** Principle like **Most Favoured Nations (MFN)** was not included in the 2015 **Model Bilateral Investment Treaty (BIT)**.
- **Stringent Competition:** Regional FTAs will make **cheap imports easier** due to tariff reduction and pose **unfair competition** to various Indian industries. **E.g. Dairy industry.**
- **Hinder indigenous enterprise:** **Stringent provisions** of the agreements will hinder the development of **indigenous entrepreneurship and manufacturing ecosystem** due to limitations posed by the provisions.
 - **E.g.** provisions related to working conditions of **labour, environmental protection etc.**

Way forward

- **Revisiting FTAs and Deliberation:** There needs to be **thorough discussion and deliberation** inclusive of **all stakeholders** on the cost-benefit analysis of joining the large trade agreements.
- **Improving trade competitiveness:** Working on measures like **the reduction of non-tariff barriers and trade diversification will aid in** improving **India's integration** with the **Global Value Chain**.
- **Continued negotiations:** India needs to keep negotiating for **favourable terms in the trade agreements**.
- **Prioritize long-term goals:** The goals of **Atmanirbhar Bharat**, transforming into a **global manufacturing hub** and upholding the principle of **strategic autonomy** need to be prioritized in decision-making about joining the large trade agreements.

Conclusion

India's growth trajectory has been **sui generis**. While **trade** forms a major aspect of economic growth, any form of integration, including **binding terms** in the global trade agreements, needs to be analysed considering the **net benefits accrued by India** from the arrangements. **As global powers encourage India** to join these large trade agreements, India needs to decide based on **rational and pragmatic analysis**.

To know more about India's trade deficit, refer to Article 3.3 India's Trade Deficit in June 2024 Monthly Current Affairs Magazine.

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 given under various schemes, **amounting to about 3 to 11 per cent of respective state's revenue receipts.**
- The report noted the **positive aspect of these schemes as it will boost consumption and overall economic spending**, particularly of the low-income families.
- Some of the schemes mentioned in the report are as follows:
 - **'Gruha Lakshmi' of Karnataka** gives ₹ 2,000 per month to the female head of the family.
 - **'Mukhya Mantri Majhi Ladki Bahin Yojana' of Maharashtra** provides for ₹ 1,500 per month to eligible women aged 21-60 years.
 - **'Mukhyamantri Ladli Behna Yojana' of Madhya Pradesh** offers ₹ 1,250 per month to eligible women.
 - **'Subhadra Yojana' of Odisha** has a provision for ₹ 50,000 over a five-year period to eligible women aged 21-60 years.

About Direct Benefit Transfer (DBT)

- **Launched:** 2013.
- **Objective:** Reform the mechanism of transferring cash subsidies and benefits to ensure **reduction in leakages, faster delivery and elimination of delays in fund flow.**
- **Scope of Support:**
 - **Cash Transfers:** Examples include PM-KISAN (farmer income support), pensions (old-aged, widows), and scholarships.
 - **In-Kind Support:** Fertilizer subsidies, food grain distribution (PDS), and school meals (PM Poshan).
- **Mechanism** (build on **India Stack**)
 - **Public Financial Management System (PFMS):** Originally the **Central Plan Scheme Monitoring System (CPSMS)**, it now performs functions such as beneficiary list preparation, digital signing, and payment processing via the **Aadhaar Payment Bridge (APB)** of NPCI.
 - **JAM Trinity (Jan Dhan-Aadhaar-Mobile):** Integrates Aadhaar-seeded **Jan Dhan accounts** with mobile numbers to enable seamless and direct credit to beneficiaries.
 - **Banking Infrastructure:** Utilizes **Business Correspondents, Payment Banks**, and Aadhaar-enabled Payment Systems (AePS) for financial inclusion and delivery of funds.
 - **UPI Integration:** Expands interoperability, allowing both public and private sector participation in delivering subsidies and benefits.

Know the term

➤ IndiaStack

It is a set of **Application Programming Interfaces (APIs)** that allows governments, businesses, startups and developers to utilise an unique digital infrastructure.

Do you know?

- PFMS recorded 2.19 crore transactions in a single day on 30 March, 2020 during covid-19 pandemic.

How DBT ecosystem has transformed social welfare in India?

- **Effective implementation of schemes:** Since 2016, DBT has delivered over **450 schemes to 900 million people**, transferring \$450 billion directly to beneficiaries.
 - This accounts for **60% of the welfare and subsidies budget of the Union Government.**
- **During COVID-19:** DBT provided essential relief during the lockdown, transferring ₹27,442 crore to 11.42 crore beneficiaries under schemes like PM-KISAN and MGNREGS between March and April 2020.
 - States disbursed ₹9,217 crore to 4.59 crore beneficiaries under 180 welfare schemes.
- **Financial inclusion:** To enable DBT, over **53.13 crores bank accounts** have been opened under the **PM Jan Dhan Yojana (PMJDY)** with **67% of them being in the rural and semi-urban districts**, and **56% being owned by women.**
- **Transparency and accountability:** Aadhaar-seeding eliminated over 90 million fake beneficiaries, saving the government \$40 billion by reducing leakages, which previously accounted for 2% of GDP annually.

- **Socio-economic impact:**
 - Promotes **social mobility** through rehabilitation programs such as **Self-Employment for Manual Scavengers**.
 - Strengthened agricultural economies by providing **direct financial assistance for inputs like fertilizers and insurance schemes to farmers**.
 - **Enhanced women's economic independence** through cash transfers to Jan Dhan accounts under schemes like PM Garib Kalyan Yojana.
- **International recognition:** The **IMF praised India's DBT scheme as a "logistical marvel,"** benefiting women, the elderly, and farmers.
 - **World Bank President** also highlighted its success in targeting cash transfers, **reaching 85% of rural and 69% of urban households**.

Concerns and Criticisms

- **Over-reliance on efficiency:**
 - Prioritizing technology-based solutions like DBT may **overlook the need to enhance state capacity**.
 - Fails to address systemic issues in public services like **education and healthcare**.
- **Nudging the poor towards private alternatives:** Cash transfers **shift the burden of basic services onto the poor**, who are often unable to afford private options.
- **Temporary Solutions:** Cash transfers act as short-term fixes but fail to address deep-rooted structural poverty and inequality.
- **Limited Accessibility:**
 - **Geographical Barriers:** Many remote and rural areas lack adequate banking facilities and digital infrastructure, making it difficult for beneficiaries to access DBT services.
 - **Financial Literacy:** A significant portion of the population, particularly in rural areas, lacks the necessary financial literacy to navigate the enrollment and benefit collection processes.
- **Identification of Beneficiaries:** Inclusion and exclusion errors in Enrollment.
 - E.g. In 2022, about **6.65 lakh farmers lost the PM Kisan scheme benefit** due to their failure in updating e-KYC norms.
- **Other issues:**
 - **Transaction Failures, inconsistent Payment Systems** (non-standardized), **exclusion of marginalized communities** such as tenant farmers, etc. undermine the intended goals of DBT programs aimed at supporting low-income populations.
 - **Poor communication** between banks and government agencies and **lack of Grievance Redressal Mechanisms** to address complaints and issues faced by beneficiaries.

Way Forward

- **Reform Goals:**
 - With **DBT 2.0**, expand coverage and improve technological integration for real-time, citizen-friendly welfare delivery focusing on an **online eligibility verification mechanism using Aadhaar**.
 - With **DBT 3.0**, building a **national-level social registry** and a **centralized database**, incorporating **best practices from state initiatives**, such as **Karnataka's Kutumba** and **Rajasthan's Jan Aadhar**.
- **Targeted Outreach:** For marginalized groups such as **informal workers**, who often lack formal identification and registration with tailored awareness campaign.
- **Accessibility: Digital literacy among rural populations** with targeted initiatives in collaboration with local NGOs and community organizations and **easier access to DBT services** with expanding the network of **well-trained Common Service Centres (CSCs)** and **business correspondents** in rural areas.
- **Grievance Redressal Mechanisms: Single-window grievance redressal system** (accessible at local gram panchayat level), that allows beneficiaries to easily report issues related to payments or enrollment.
 - Also, systematic collection and analysis of **real-time feedback from beneficiaries** regarding their experiences with DBT to inform policy adjustments and operational improvements.
- **Global Implications: Strengthening India's leadership in both Global North and Global South** as it
 - serves as a scalable model for addressing **poverty and promoting financial inclusion worldwide**.
 - positions India as a key contributor to global discussions on **digital public infrastructure and citizen welfare**.

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.

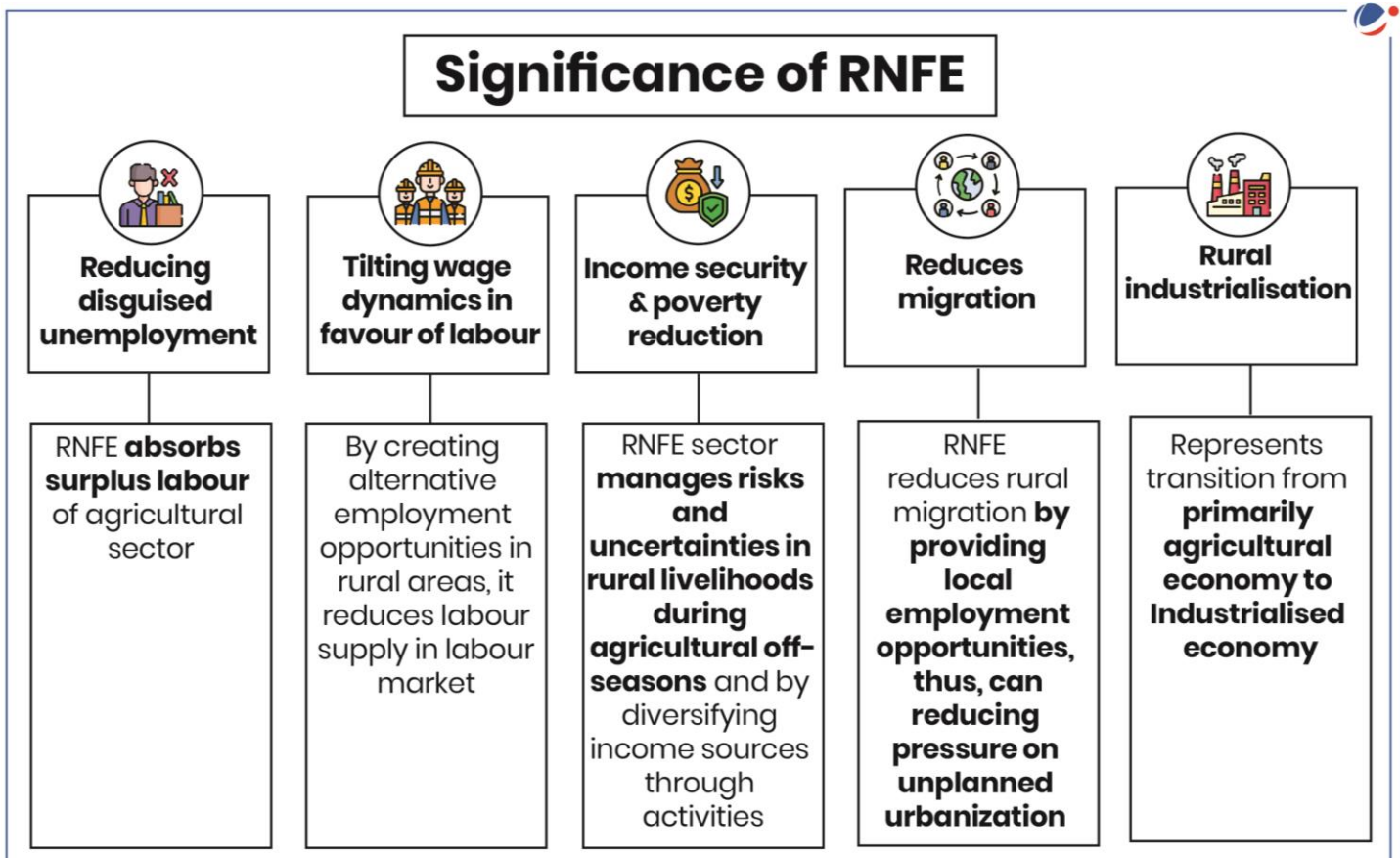
More on the news

- The report is prepared by the **Development Intelligence Unit (DUI)**, a joint initiative of Transform Rural India (TRI), Sambodhi Research, and the Global Development Incubator (GDI).
- The report highlights that **70% of rural youth cite low productivity and poor profits** as reasons for **moving away from farming**.

Do you know?
> **2/3rd population** and **70% workforce resides in rural areas** and **46%** of national income is contributed by rural economy.

About Rural Non-Farm Economy (RNFE)

- RNFE include value chain activities, such as **agro-processing, transport, distribution, marketing, and retail, as well as tourism, manufacturing, construction and mining** self-employment activities (handicrafts, bakeries, mechanics, kiosks, and so on)
 - It is defined both **spatially**, by activity that **takes place in rural areas**, and **functionally**, by a set of activities that **do not constitute primary agricultural production**.
- Although, agriculture has traditionally dominated the rural economy, but **two-thirds of rural income now comes from non-agricultural activities i.e., RNFE**.
 - Moreover, **more than half of the value added in manufacturing sector** in India is contributed by **rural areas**.



Key Determinants of RNFE in India

- **Government Policies:** **Dr. Ashok Dalwai Committee** recommended shifting surplus farm labor to non-farm jobs to double farmers' income. Key initiatives include **promoting startups in agriculture and allied sectors, Namo Drone Didi schemes, etc.**
- **Education and Skills:** Non-farm income increases with higher levels of education.
- **Family Size:** Larger families earn less from farm activities but gain more from non-farm income.
- **Impact of Climate Change:** Climate change heightens the vulnerability of agricultural jobs, emphasizing the need for RNFE.
- **Public Spending and Diversification:** Infrastructure investment, factory growth, and manufacturing expansion boosts RNFE.
- **Infrastructure Development:** Development expenditure, especially on infrastructure, promotes construction employment, benefitting both men and women.

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

- **Limited Access to Credit:** Most RNFE enterprises rely on personal savings or moneylenders for funding, unlike farm activities that benefit from institutional credit.
- **Low Worker Productivity:** Worker productivity in RNFE is significantly lower compared to urban areas. Only 13% of non-farm enterprises are modern, while the majority are traditional with minimal value addition.
- **Informal and Volatile Employment:** RNFE jobs often provide: Low and unstable incomes, Poor working conditions, Lack of social security, leading to exploitation. E.g. Construction, the largest RNFE employer, is highly dependent on economic cycles, causing income instability.
- **Declining Income Levels:** Rural non-agricultural households earn less (₹11,438 per month) than agricultural ones (₹13,661 per month).

Initiatives

- **Formal Institutional Arrangements:** Khadi and Village Industries Commission (KVIC), National Small Industries Corporation (NSIC) Limited
- **Promotion of Traditional industries:** Scheme of Fund for Regeneration of Traditional Industries (SFURTI) , Upgrading the Skills and Training in Traditional Arts/Crafts for Development (USTAD) scheme.
- **Credit needs of small enterprises:** SHG Bank linkage programme under NABARD, establishment of Small Industries Development Bank of India (SIDBI), etc.
- **Development of skills:** Deen Dayal Upadhyaya Grameen Kaushalya Yojana (DDU-GKY), Deendayal Antyodaya Yojana – National Rural Livelihoods Mission (DAY – NRLM), etc.
- **Infrastructure development:** Pradhan Mantri Gramin Digital Saksharta Abhiyan, BharatNet, Pradhan Mantri Gram Sadak Yojana, etc.
- **Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGA):** MGNREGA is a **demand driven** wage employment Scheme.

Way ahead to promote sustainable RNFE

- **Expand Credit Access:** Strengthen institutional credit, microfinance, and cooperative banks to provide affordable loans to RNFE enterprises through government schemes and financial inclusion initiatives.
- **Diversify Employment Opportunities:** Promote sectors beyond construction, such as renewable energy, tourism, and digital services, to reduce volatility in incomes.
- **Encourage Value Addition:** Promote high-value activities like agro-processing, handicrafts, and exports to boost RNFE incomes.
- **Regulate Informal Employment:** Establish frameworks to improve working conditions, ensure fair wages, and provide social security for RNFE workers.
- **Cluster-Based Development:** Promote rural industrial clusters for non-farm enterprises to encourage collaboration, innovation, and economies of scale.

Scan the QR code to know more about **Rural industrialization**

Weekly Focus #79 - Rural industrialization :Stepping stone for an Atmanirbhar Bharat



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

- FCI started its journey with an authorised capital of ₹100 crores and equity of ₹4 crores. The equity of FCI was increased from time to time.
- The current equity infusion will:
 - **Strengthens FCI's operational capacity** to fulfill its mandate effectively.
 - **Reduces reliance on short-term borrowings**, lowering interest costs and government subsidy.

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**. The equity of FCI was increased from time to time.
- **Key Responsibility:** Main agency responsible for **execution of food policies of the Gov.**
- **Functions:** It is the **nodal central government agency**, responsible for the **purchase, storage, interstate movement, distribution and sale of food grains**.

Key objectives of FCI



Effective price support operations for safeguarding the **interests of the farmers**



Distribution of foodgrains 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 (MSP) for farmers and affordable grains for weaker sections.
- **FCI undertakes two types of procurement mechanisms**
 - **Direct Procurement:** FCI or State Government Agencies (SGAs) procure food grains, with FCI handling storage and distribution.
 - **Decentralized Procurement (DCP):** States manage procurement, storage, and distribution, handing excess stocks (rice/wheat) to FCI for the Central Pool.



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, non-adoption increases handling costs as FCI



Ministries and states owe FCI more than ₹2000 crore, adding financial strain



Damaged Food Grains due to pest attacks, rain, godown leaks, poor-quality procurement, etc.

Initiatives taken to improve the functioning of FCI

Structural Reforms

- **Direct Benefit Transfer (DBT) Initiative:** Implemented 'One Nation, One MSP' for direct online payments to farmers.
- **Modernized Storage Solutions:** The traditional **Cover and Plinth storage**, which stood at 30.25 LMT in 2014, has been **progressively replaced** with 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** for seamless end-to-end supply chain management, **Vehicle Location Tracking System**, **Warehouse Inventory Network and Governing System (WINGS) App** for mill tagging and warehouse space allocation.

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)**.
- In case the **FPI intends to reclassify its FPI into FDI**, the FPI shall follow the operational framework as given below.

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**, especially from **land-bordering countries**, and need **Indian investee company's concurrence**.
 - Also, investment should be in adherence to **entry route, sectoral caps, investment limits, pricing guidelines**, and other attendant conditions for FDI under the rules.

About Foreign Direct Investment

- FDI involves a foreign investor **acquiring a stake in a company or project promoted by an investor, institution or the government in India**.
- It's usually a **long-term investment** and is **largely a non-debt creating capital flow**.
- **FDI Approval Routes:** Investments can proceed via the **Automatic Route (no government approval needed)** or the **Government Route (requires approval from the relevant ministry/department)**.
- FDI can be made in both listed and unlisted companies

- FPI reclassification will be guided by **Foreign Exchange Management (Mode of Payment and Reporting of Non-Debt Instruments) Regulations, 2019**.

Significance: Becomes easier to attract more foreign investment; Offer greater flexibility to FPI to transit to a more strategic investment, enhance clarity and transparency for foreign investors in the Indian market.

3.5.2. DOMESTIC SYSTEMICALLY IMPORTANT BANKS (D-SIBS)

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

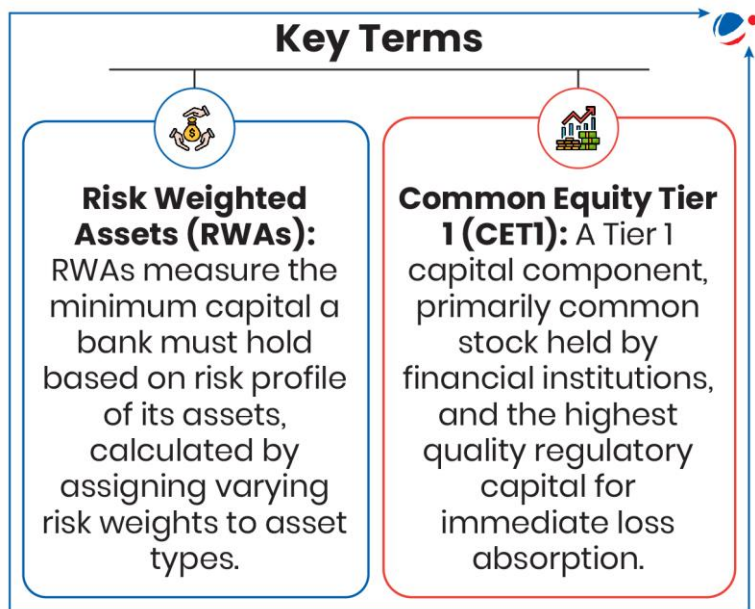
- State Bank of India, HDFC Bank and ICICI Bank** continue to be identified as D-SIBs in the RBI's 2024 list.

About D-SIBs

- D-SIBs** are systemically important due to their **size, cross-jurisdictional activities, complexity and lack of substitute and interconnection**.
 - It also means that **the bank is too big to fail**.
 - If DSBs fail, there would be significant disruption to the essential services of the banking system and the overall economy.

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 having size** as a percentage of **GDP equal to or more than 2%** are considered for **D-SIB list**.
- 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).
 - A Venture Capital (VC) Fund** is a specialized form of private equity financing that invests in early-stage startups with high growth potential.
 - 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.
 - It **authorizes and supervises various space activities** like building launch vehicles & satellites, sharing space infrastructure etc.
- About VC Fund for Space sector:**
 - The proposed fund will **support startups across the entire space supply chain-upstream, midstream, and downstream**.
 - Financial structure:** It will operate over five years, deploying ,Rs 150-250 crore annually.
 - Investment per startup:** Range from Rs 10-60 crore.
 - Target:** Support approximately 40 startups
- The Funds aims to **strategically position India as one of the leading space economies by**

- **Capital infusion:** To create a multiplier effect by attracting additional funding for later-stage development of the Start-up
- **Accelerate private space industry's growth:** To meet the goal of a five-fold expansion of the Indian space economy in next 10 years.
- **Drive advancements:** In space technology and strengthening India's leadership through private sector participation.
- **Benefits:**
 - Retention of space companies domiciled within India
 - Generating jobs in engineering, software development, data analysis, manufacturing, etc
 - Creating a vibrant innovation ecosystem and boost global competitiveness.
- **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).

To know more about Space Sector, refer to Article 3.6 of July 2024 Monthly Current Affairs Magazine.

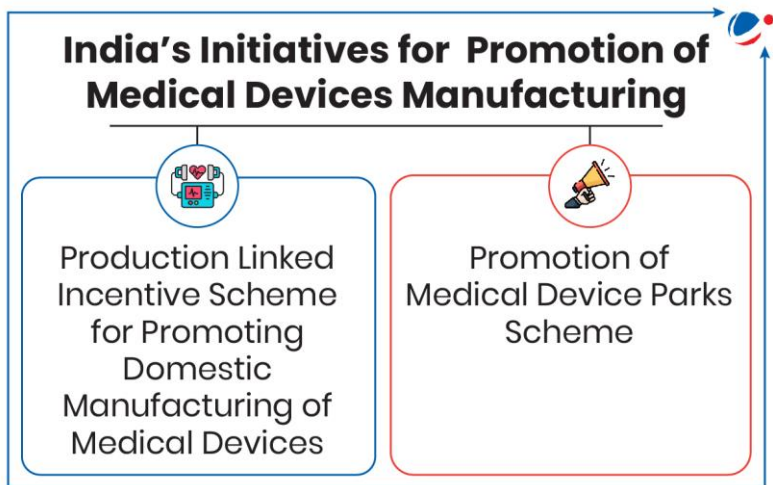
3.5.4. SCHEME FOR MEDICAL DEVICE INDUSTRY

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 and is expected to make India self-reliant in the sector
- India's medical device **market is valued at approximately \$14 billion** and is expected to **grow to \$30 billion by 2030**.

Features of the Scheme

- **Total Outlay:** 500 crore
- **Components:** It consists of **five sub-schemes** namely:
 - **Common Facilities for Medical Devices Clusters:** aims to enhance infrastructure by creating shared facilities, including R&D labs, design and testing centers, and animal labs etc.
 - **Marginal Investment Scheme for Reducing Import Dependence:** aims at localized production of key components, raw materials etc.
 - **Capacity Building and Skill Development for Medical Devices:** Offers financial support for running various courses to develop skilled technical workforce.
 - **Medical Device Clinical Studies Support Scheme:** Provide financial aid for animal studies, human trials, and clinical performance evaluations.
 - **Medical Device Promotion Scheme:** Supports industry associations and export councils for organizing conferences, conducting studies and surveys.
- **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).

- **Hidden cost** refers to **external costs** (i.e., negative externalities) or economic losses triggered by other market or policy failures.

Key findings of the report

- **Hidden Costs: Industrial and diversifying agrifood systems** contribute maximum to global quantified hidden costs (around 5.9 trillion 2020 PPP dollars), dominated by health hidden costs linked to non-communicable diseases.

- **Unhealthy dietary patterns** (like low intake of whole grains, high intake of sodium, etc.) account for **70% of all quantified hidden costs**.
- **Other contributing factors include: Social costs** (due to undernourishment and poverty); **environmental costs** (emission of greenhouse gases, etc.).
- **India-related findings:** India's total hidden costs stands around **\$1.3 trillion annually** (3rd largest after China and the USA), largely driven by **unhealthy dietary patterns**.

Major Recommendations on transforming the Agrifood value chains

- **In industrial agrifood systems (Long value-chains with high urbanization):** Upgrade food-based dietary guidelines to an agrifood systems approach, mandatory nutrient labels and certifications, and information campaigns, etc.
- **In traditional agrifood systems (Short value-chains with low urbanization):** Complement conventional productivity-enhancing interventions with environmental and dietary levers to avoid the increase in environmental footprint.



3.5.6. 21ST LIVESTOCK CENSUS

The Union Minister of Fisheries, Animal Husbandry and Dairying launched **21st Livestock Census** to have updated data on livestock population, allowing government to address key issues like disease control, breed improvement, and rural livelihoods

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 livestock and their 219 indigenous breeds** are going to be captured
 - **Covers data on pastoralists** for the **first time**.
 - Focus on **Gender Roles** in Livestock Rearing.
- 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.
- **Objective: Disseminating information on animal diseases and** improving animal health globally.
- **Members:** 183 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 slow diffusion** into the soil.
- **Benefits:**
 - **Promotes sustainable farming:** Reduces soil and water contamination.
 - **Cost Effectiveness:** Improves nutrient absorption, reduce nutrient wastage and lower application frequency, etc.

To know more about India's fertilizer sector, refer to Article 3.8 Fertilizers Sector In India in February 2024 Monthly Current Affairs Magazine.

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**.
- It identifies ships that perform better in reducing air emissions than required by the current emission standards of the International Maritime Organization (IMO).

About Mormugao Port:

- It's a **major port** of India located in **Goa**.
- **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**.

- Dry Ports provides a **logistics facility away from a seaport or airport for cargo handling**, storage, and transportation.

Significance of Bihta Dry Port

- **Exports:** It will boost exports, mainly agro-based, garments and leather products from Bihar.
- **Improved Logistics:** It will streamline cargo handling and transportation, lowering transportation costs, and securing storage and handling.
- **Benefits to adjoining states:** Catering to entire eastern India.
- It is **connected by rail to major gateway ports** of Kolkata, Haldia, Visakhapatnam, Nhava Sheva, & major national and international trade routes.

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 and country's Patent-to-GDP ratio surged to 381 from 144 (2013 to 2023).
- **Trademarks:** India's IP office hold the **second highest of active registrations globally** and now India ranks 4th globally in trademark filings.

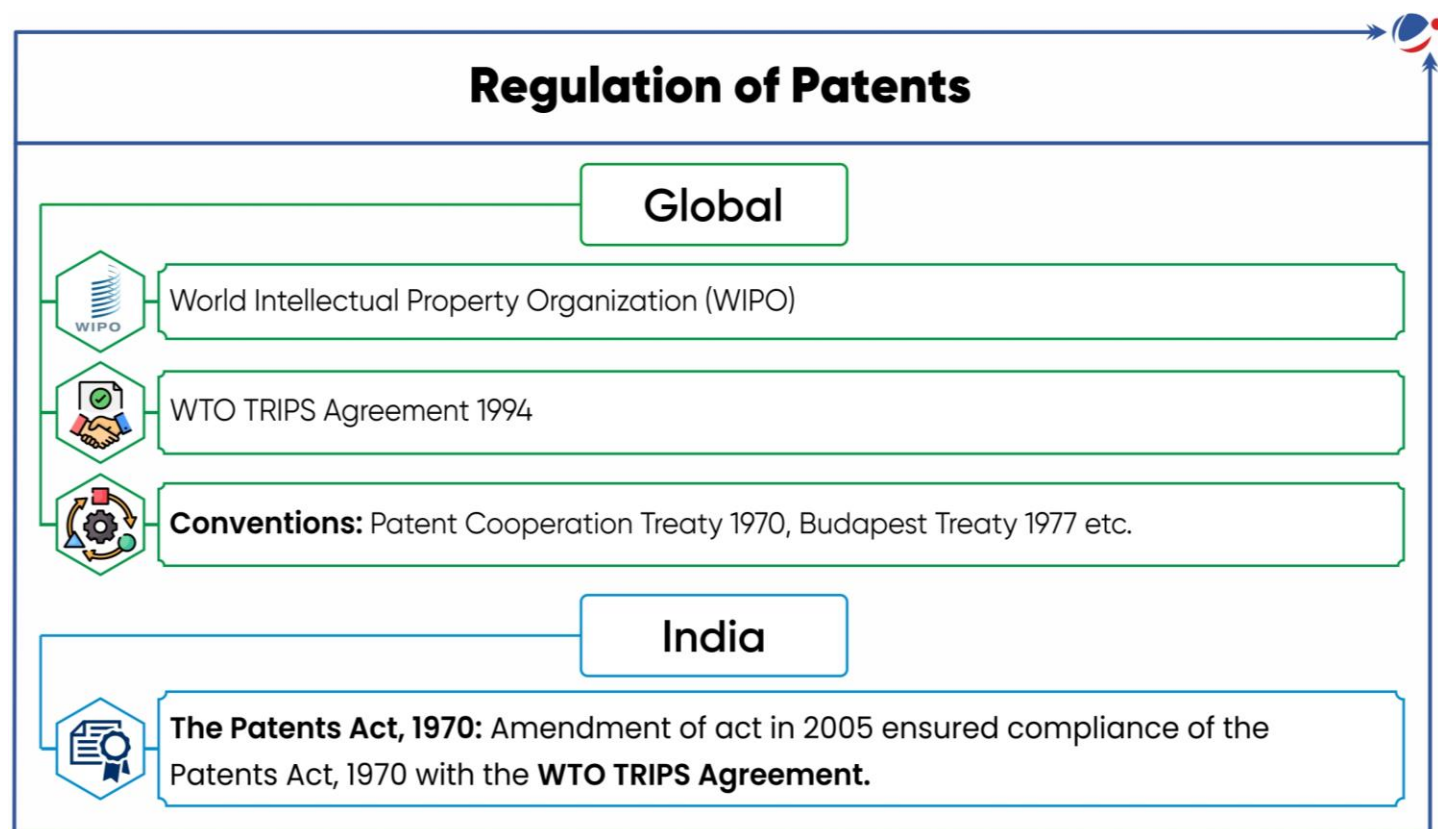
- **Industrial Design Filing:** Ranked **10th globally** with a 36% increase in 2023, showing significant growth in creative design.

Factors behind Surge in Patent filing:

- **Government Initiatives and Policy Support:** E. g. Patents (Amendment) Rules, 2024 (reduced renewal fee and filing frequency time) simplified patent process, National IPR Policy, 2016 etc.
- **Timely clearance of applications:** India granted **1.03 lakh patents** in financial year 2023-24.
- **Strengthened IP Infrastructure:** Digitization of patent filing processes, establishment of IPR facilitation centers etc.

Challenges/Issues related to Patents in India:

- **Abolition of Intellectual Property Appellate Board:** Leading to creation of a void in handling appeals in IP cases.
- **Evergreening of Patents:** To extend patent period, guaranteeing monopoly over drugs.
- **Other Issues:** Compulsory licensing, lack of fixed timelines for each step in procedure etc.



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**.
- It will be an **upgrade** of the current PAN/TAN 1.0 eco-system
 - PAN is a **ten-digit unique alphanumeric number** issued by the IT Department to identify/ link transactions (tax payments, etc.) of the holder with the department.
 - **Issuing Agencies:** Protean (formerly known as NSDL e-governance) and UTI Infrastructure Technology and Services Ltd (UTIITSL).
- **Benefits:** Serve as **common Identifier** for all digital systems of specified government agencies, **Data consistency**, **Single Source of Truth**, etc.

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.
- It will ensure proper **co-ordination of protection system** in order to **protect the equipment/system** from abnormal operating conditions, isolate the faulty equipment and avoid unintended operation of protection system.

 SMART QUIZ	<p>You can scan this QR code to practice the Smart Quiz of Economics at our open test online platform for testing your understanding and recalling of the concepts.</p>	
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Lakshya Prelims & Mains Integrated Mentoring Program 2025

(A 7.5 Months Strategic Revision, Practice, and Mentoring Program for UPSC Prelims and Mains Examination 2025)

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23 December	7.5 Months	English & Hindi	Offline & Online

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4. SECURITY

4.1. INDIAN COAST GUARD

Why in the News?

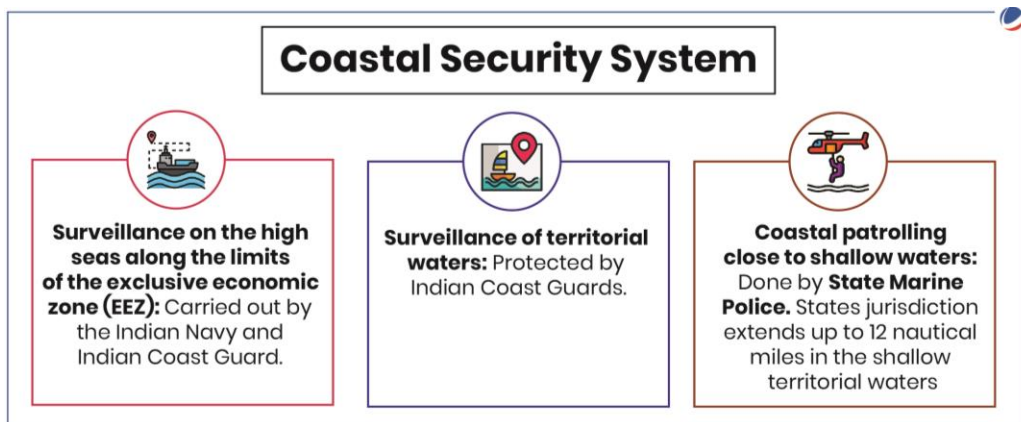
Recently, the **parliamentary standing committee on defence** reviewed the role of the Indian Coast Guard in ensuring coastal security.

About the Indian Coast Guard

- **Constituted:** In August 1978 under the **Coast Guard Act 1978**.
- **About:** It is the **National Coordinating Agency** for Maritime Law Enforcement, Maritime Search & Rescue and Marine Pollution Response.
- **Ministry:** Ministry of Defence
- It is a part of the **multi-tier arrangement** for the protection of maritime security (See infographic).

Role of Indian Coast Guard in Maritime Security

- **Enforcement of maritime laws:** It enforces maritime laws and regulations and other international treaties to which India is a signatory.
- **Safety and protection of artificial islands and offshore terminals:** It undertakes regular patrols to keep Offshore Development Areas (ODAs) on both Eastern and Western seaboard under surveillance.
- **Safety of life and property:** It assists mariners in distress, protects fishermen and safeguard life from natural or man-made disasters. It also protects our ocean and offshore wealth including oil, fish and minerals.
- **Inter-agency coordination:** It assists customs and other enforcement agencies and undertakes anti-smuggling operations to prevent ingress and egress of contraband, and other items on the banned list.
- **Other key roles:** Preservation and Protection of Marine Environment; Collection of Scientific Data regarding meteorological and oceanographic data etc.



Initiatives taken to strengthen Indian Coast Guard

- **Inter-agency Maritime Exercise:** ICG participates and conducts various maritime exercises and operations. E.g. **SAREX-2024, Sagar Kavach**.
- **Increased responsibility:** In 2009, ICG was additionally designated as the authority responsible for **coastal security in territorial waters**, including areas to be patrolled by the Coastal Police.
- **Coordination between Central and State agencies:** The Director General of ICG has been designated as **Commander Coastal Command** and is responsible for overall coordination between Central and State agencies in all matters related to coastal security.

Conclusion

Over the years, ICG has emerged as a leading maritime agency, driving India's efforts to build a **robust maritime search and rescue framework**. By consistently collaborating with various stakeholders, ICG plays a pivotal role in India's vision of **Security and Growth for All in the Region (SAGAR)** reinforcing India's reputation as a reliable and proactive maritime partner on the global stage.

4.2. NEWS IN SHORTS

4.2.1. AFSPA

Ministry of Home Affairs reimposed **Armed Forces (Special Powers) Act (AFSPA) 1958** in order in “disturbed areas” of Manipur including Jiribam.

Key highlight of AFSPA

- **Disturbed areas:** A part or whole state/UT can be declared so by **Governor** of state, **administrator** of UT or by **Centre** if **use of armed forces in aid of civil power is necessary** to restore order.
- **Grants Special power to armed forces:** They can **open fire** against any person **in contravention of law, arrest and search premises without warrant, etc.**
- **Immunity to Armed Forces personnel:** Prohibits legal proceedings against them **except with the previous sanction of the Central Government.**
- **Treatment of arrested person:** Army authority is required to **handover** the arrested person to the officer-in-charge of the **nearest police station with least possible delay.**
- **Applicability:** Parts of Assam, Manipur, Nagaland, Arunachal Pradesh.
 - **Armed Forces (Jammu & Kashmir) Special Powers Act 1990** is applicable to disturbed areas of Jammu and Kashmir.
- **Concern:** Abuse of powers, Human rights violation including rapes and sexual assaults etc.

Other Related Information about AFSPA

- **Supreme Court Judgements**
 - **Naga People’s Movement for Human Rights Case (1997):** Court held power to cause death is to be exercised under definite circumstances.
 - **Extra Judicial Execution Victim Families Association case (2016):** Court ruled that **armed forces could not be immune from investigation for excesses committed** during discharge of their duties even in **disturbed areas.**
- **Committees Recommendations**
 - **Justice B.P. Jeevan Reddy Committee (2004)** recommended scrapping AFSPA.
 - **Santosh Hegde Committee (2013)** suggested review of the Act every six-month.
 - **Justice Verma Committee (2013)** called for subjecting sexual violence against women by armed forces to regular criminal law.

To know more about AFSPA, refer to Article 4.4. Armed Forces (Special Powers) Act (AFSPA) in April 2024 Monthly Current Affairs Magazine.

4.2.2. 'ADAPTIVE DEFENSE' STRATEGY

The Raksha Mantri highlighted that traditional notions of war are being reshaped **by emerging technologies and evolving strategic partnerships**, necessitating an **'Adaptive Defense' strategy** to address the new challenges.

About 'Adaptive Defence'

- **Definition:** It's a **strategic approach** where a nation's military and defence mechanisms **continuously evolve** to counter **emerging threats** effectively.
- **Principle of 'Adaptive Defence':** It involves cultivating a **proactive mindset** to **anticipate** threats, **adapt**, **innovate** and **thrive** in the face of **unpredictable circumstances.**
- **Capabilities needed for 'Adaptive Defense':** Situational awareness, flexibility at strategic and tactical levels, resilience, agility, and integration with the futuristic technologies.
- **Significance:** Secure the future beyond just protecting borders; Designed to address both traditional (e.g., **armed aggression**) and non-traditional security challenges (e.g., **Drug trafficking**), **counter the menace of information warfare against national security, etc.**

Emerging Technologies: The Driver of Future Warfare

- **Information warfare (IW):** It relies upon networked information systems where an **operation conducted in order to gain an information advantage** over the opponent. **E.g., Cyberwarfare.**
- **Lethal Autonomous weapon systems (LAWS):** Weapons system once activated can engage targets without further human interference.
- **Lasers & Electromagnetic railguns:** For space-based attacks on satellites.
- **Synthetic biology:** Crimes like, illegal gene-editing, cyber-bio crime, bio-malware, bio-hacking, etc.

4.2.3. DIGITAL ARREST

Why in the News?

Recently, the Computer Emergency Response Team of India (CERT-In) has issued an advisory alerting citizens about **preventing online scam, including digital arrests.**

What is Digital Arrest?

- **Digital Arrest** refers to a type of **online scam** where fraudsters **impersonate law enforcement officials such as Central Bureau of Investigation (CBI), Police, Enforcement Directorate (ED) etc. via phone calls, video calls and falsely accuse victims of involvement in criminal activities** to extort money.
- According to **Indian Cyber Crime Coordination Centre (I4C)**, Indians lost Rs 120.30 crore in digital arrest from January to April this year.
- Many of those carrying out these frauds are based in three contiguous Southeast Asian countries: **Myanmar, Laos and Cambodia.**
- **Reasons for Rise in Digital Arrest in India:** Surge in digital transactions; Lack of digital security awareness; Advancement in Techniques like use of AI voices, professional logos, and simulated video calls etc.

Initiatives by Government to Tackle Digital Arrest

- **Indian Cyber Crime Coordination Centre (I4C):** It has been set up by the Ministry of Home Affairs to deal with all types of **cybercrimes in the country.**
 - **Cyber Fraud Mitigation Centre (CFMC)** has been established at I4C where representatives of major banks, Financial Intermediaries, Payment Aggregators, Telecom Service Providers work together to tackle cybercrime.
- **Development of a system to identify and block incoming international spoofed calls displaying Indian mobile numbers appear to be originating within India:** Central Government and Telecom Service Providers (TSPs) have devised mechanisms for the same to deal with fake digital arrests.
- **Samanvaya Platform (Joint Management Information System):** It provides analytics based on **interstate linkages of crimes and criminals, involved in cybercrime** complaints in various States/UTs.
- **National Cyber Crime Reporting Portal:** Launched as part of I4C to enable public to report incidents of cybercrimes.
- **Best Practices shared by CERT-In: Verify the caller's identity; Avoid sharing personal information; Never install remote access software on your device for anyone; Avoid clicking on links or attachments from unknown senders or installing apps shared by unknown individuals etc.**

4.2.4. ASSET RECOVERY INTERAGENCY NETWORK-ASIA PACIFIC (ARIN-AP)

India, represented by the Directorate of Enforcement (ED), has been included in the Steering Committee of ARIN-AP.

- This will enable India to contribute to **ARIN-AP's decision-making and administrative responsibilities**, furthering its mission to combat economic crimes.
- India will assume the **presidency** of the network and host the **Annual General Meeting in 2026.**

About ARIN-AP

- It is a prominent **multi-agency network** dedicated to **tackling the proceeds of crime in the Asia-Pacific.**
- It is also a member of the **Global CARIN Network.**
 - CARIN is an **informal network of law enforcement and judicial practitioners**, specialist in the field of asset tracing, freezing, seizure and confiscation.
- **Members: 28 member** jurisdictions (including India) and nine observer.

4.2.5. INDIA'S FOURTH NUCLEAR SUBMARINE

India's fourth **nuclear-powered ballistic missile submarine** (SSBN), referred to as S4*, was launched.

- India currently has 2 SSBNs operational i.e. **INS Arihant & INS Arighaat (S3)**.
- Third SSBN **Aridhman (S4)** is currently undergoing sea trials.

About S4*

- S4* submarine boasts nearly **75 % indigenous content** and is equipped with **K-4 ballistic missiles**, which have a range of 3,500 km.
- SSBNs are a potent and highly specialized military asset, which serve as a crucial component of nuclear deterrence.
- They are operated by only few countries namely **US, Russia, China, UK, France and India**.

4.2.6. INDIA'S FIRST LONG RANGE HYPERSONIC MISSILE

DRDO successfully test-fired India's first 'Long-range Hypersonic Missile' off Odisha coast.

- The hypersonic missile has a **range of over 1500 kms**. Only US, Russia and China had this technology earlier.

Technologies demonstrated during test

- **Aerodynamic configuration** for hypersonic manoeuvres for stability and control.
- **Use of scramjet propulsion** for ignition and sustained combustion at hypersonic flow.
 - A scramjet is a form of air-breathing jet engine that uses the vehicle's forward motion to compress incoming air for combustion and operates at hypersonic speeds.
- **Thermo-structural characterisation** to withstand extreme aerothermal environments during flights.
- **Separation mechanism** at hypersonic velocities.

Hypersonic Missiles

- These missiles can fly at speeds of **at least Mach 5** (five times the speed of sound).
 - The speed of sound is Mach 1, and speeds between Mach 1 and Mach 5 are supersonic and speeds above Mach 5 are hypersonic.
- Hypersonic weapons can manoeuvre midway which when combined with their high speeds makes their **detection and interception extremely difficult**.

Other Missile Systems of India

- **Inducted:** AKASH (Surface to Air Missile Systems), BRAHMOS (Long Range Supersonic Cruise Missile), etc.
- **Advanced stage of induction:** NAG (Anti-Tank Guided Missiles), ASTRA (Air-to-Air Missiles), Agni (Long Range Ballistic Missile) etc.

4.2.7. LONG RANGE LAND ATTACK CRUISE MISSILE (LRLACM)

Defence Research and Development Organisation (DRDO) conducted the maiden flight-test of a LRLACM.

- Designed as a **successor to the Nirbhay cruise missile**.
- **Range: 1,000 km**.
- **Launch capability:** From both **mobile ground launchers** as well as **from ships**.

About LRLACM

- It enables **long-distance strikes** against **strategic targets** from stand-off distances.
- Can perform various **manoeuvres while flying at various altitudes and speeds**.



About Defence Research & Development Organisation (DRDO)

Genesis: Formed in 1958.

About: it is the R&D wing of the **Ministry of Defence** for developing cutting-edge defence technologies and achieving self-reliance in defence.

DRDO Network: Network of 41 **laboratories** and 5 **DRDO Young Scientist Laboratories** focused on developing defense technologies across disciplines like aerodynamics, armaments, missiles etc.

4.2.8. PANTSIR AIR DEFENSE SYSTEM (PADS)

Bharat Dynamics Limited, signed a MoU with Russia’s Rosoboronexport for “**cooperation on Pantsir variants**”.

About PADS

- The Pantsir-S1 system is a **mobile, short-range air defence system** equipped with both missile and gun capabilities.
- It can provide **air defence to small military, industrial, and administrative facilities**.
- It can defend against **fixed- and rotary-winged aircraft, cruise missiles, and high-precision weapons**.

Related news

Germany will deploy **Israel's Arrow-3 missile interception system** by 2025.

4.2.9. EXERCISE ANTARIKSHA ABHYAS 2024

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

- Exercise (Conducted by **defense space agency (DSA)**) aims to help **secure national strategic objectives** in space and **integrate India’s space capability in military operations**.

About Space Defense

- It accounts for prevention of potential **threats to space assets** (Kinetic, direct energy, jamming, cyber etc.) and existing countermeasures.

Need for space defense

- It can arise due to **Military, Non- military threats etc.**
 - **Non-Military Threats (uncontrolled and natural):** Includes **Space Debris and Radiation** leading to failure of satellite systems.
 - **Military threats (controlled)**
 - > **Cyber-attacks:** hacking on-board sensors, uplink and downlink jamming, tracking operations, etc.
 - > **Anti-satellite weapons:** Direct-ascent ASAT, orbital ASAT etc.
 - > **Rendezvous and Proximity Operations:** De-orbiting satellites, directed energy attack from proximity, deterrence etc.
 - **Surveillance and Reconnaissance:** Using high-resolution cameras, synthetic aperture radars etc. for weapon deployment, border security etc.



Challenges to Space defense in India

- **Low Private investment**, Need of National Defense Space Strategy, functional silos with lack of collaboration among stakeholders, long defense procurement procedure etc.

Way forward

- Passing draft **new Remote Sensing Policy** and the new Satcom Policy.
- Fast **defence procurement procedures**, R&D strategy for technology identification frameworks etc.
- **Exploring integration of Satcom with battle plans** and enabling close collaboration in DSA, DSRO and ISRO

4.2.10. EXERCISES IN NEWS

Exercise	Details
MAHASAGAR	<ul style="list-style-type: none"> • Third edition of high-level virtual interaction MAHASAGAR (Maritime Heads for Active Security And Growth for All in Region) was conducted by the Indian Navy. Launched by Indian Navy in 2023, it is a bi-annual initiative promoting cooperation and high-level interactions among Indian Ocean Region (IOR) countries. <ul style="list-style-type: none"> ○ It brings together naval leaders and maritime officials from Bangladesh, Comoros, Kenya, Madagascar, Maldives, Mauritius, Mozambique, Seychelles, Sri Lanka, and Tanzania.
Garud Shakti	<ul style="list-style-type: none"> • Indian Army contingent departed for Cijantung, Jakarta, Indonesia to take part in the 9th edition of India-Indonesia Joint Special Forces Exercise GARUD SHAKTI 24.
VINBAX 2024	<ul style="list-style-type: none"> • 5th edition of Vietnam-India Bilateral Army Exercise (VINBAX) has started at Ambala (Haryana).

	<ul style="list-style-type: none"> This edition marks a significant increase in scope with Bi-Service level participation for first time by personnel of Army and Air Force from both countries.
SIMBEX- 2024	<ul style="list-style-type: none"> The 31st edition of Singapore India Maritime Bilateral Exercise (SIMBEX) was concluded recently at Visakhapatnam (Andhra Pradesh)
SAREX-24	<ul style="list-style-type: none"> Indian Coast Guard (ICG) is conducting 11th Edition of National Maritime Search and Rescue Exercises & Workshop (SAREX-24) under National Maritime Search and Rescue (NMSAR) Board at Kochi.
Poorvi Prahar	<ul style="list-style-type: none"> It is a high-intensity tri-services exercise being conducted by the Indian Army. Objective: Improve the combat effectiveness of the Indian Army, Navy, and Air Force in executing Integrated Joint Operations in the challenging mountainous terrain.
AUSTRAHIND	<ul style="list-style-type: none"> Recently, the 3rd edition of joint military Exercise AUSTRAHIND commenced in Pune. It is an annual military exercise conducted alternatively in India and Australia.
Sanyukt Vimochan 2024	<ul style="list-style-type: none"> Indian Army conducted Multilateral Annual Joint Humanitarian Assistance and Disaster Relief (HADR) Exercise, 'Sanyukt Vimochan 2024' in Gujarat. Nine Friendly Foreign Countries from Gulf Cooperation Council, Indian Ocean Region and South East Asia also attended the exercise.
SEA VIGIL 24	<ul style="list-style-type: none"> Recently, the fourth edition of Sea Vigil 24, a major Pan-India coastal defense exercise, was conducted by Indian Navy.

4.2.11. OPERATION SAGAR MANTHAN

The Narcotics Control Bureau (NCB) has seized 700 kg of **Methamphetamine** as part of **Operation Sagar-Manthan**.

- Methamphetamine is a powerful, highly addictive stimulant that **affects the central nervous system**.

About 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 the threat to national security
 - Realize vision of a **Nasha Mukta Bharat by 2047**.

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- Special emphasis on subjects and topics with high-scoring potential
- One-to-one dedicated sessions with mentors for preparation management
- Continuous performance assessment and improvement
- Interactive session with Toppers and Bureaucrats for preparation insights and motivation

5. ENVIRONMENT

5.1. UNFCCC COP29

Why in the News?

COP29, held in Baku, Azerbaijan, concluded with Baku Climate Unity Pact and several significant agreements.

Do you know?

> The **first** COP meeting of UNFCCC was held in **Berlin, Germany, 1995.**

About Conference of the Parties (COP)

- COP is the supreme decision-making body of the **United Nations Framework Convention on Climate Change (UNFCCC)**.
- COPs are annual conferences where UNFCCC member countries assess progress, negotiate agreements, and refine commitments to address climate change.
 - A key task for the COP is to review the national communications and emission inventories (e.g., Nationally Determined Contributions (NDCs)) submitted by Parties.
- COP 30 will be held in Belém, Brazil, in November 2025.



United Nations Framework Convention on Climate Change (UNFCCC)

HQ
Bonn, Germany

Genesis: Emerged from 1992 Earth Summit in Rio de Janeiro, adopted in 1994.

- One of the **three sister conventions (Rio Conventions)**, the two being **Convention on Biological Diversity (CBD)** and **United Nations Convention to Combat Desertification (UNCCD)**

Signatories: Near universal membership (198 Parties, including India)

Aim: Preventing dangerous human interference with the climate system.

Other information: Parent convention for **Kyoto Protocol (1997)** and **Paris Agreement (2015)**

Key Outcomes of COP29

Themes	Details
New Collective Quantified Goal on Climate Finance (NCQG) or Baku Finance Goal	<ul style="list-style-type: none"> Sets goals for financing climate action in developing countries: <ul style="list-style-type: none"> Triple finance to USD 300 billion annually by 2035 (previous goal of USD 100 billion annually). Secure efforts to mobilize \$1.3 trillion per year by 2035 from both public and private sources.
Carbon Markets and Article 6	<ul style="list-style-type: none"> Finalized the rules for Article 6 of the Paris Agreement. <ul style="list-style-type: none"> Article 6 provides mechanisms for international carbon markets, allowing countries to trade carbon credits and finance climate action.
Transparency	<ul style="list-style-type: none"> All transparency negotiating items concluded, including Enhanced Transparency Framework (ETF). <ul style="list-style-type: none"> ETF establishes a system for countries to report on their climate actions, including greenhouse gas emissions, climate mitigation efforts, and adaptation measures. 1st submissions of Biennial Transparency Reports (BTRs) by 13 countries under the Paris Agreement. <ul style="list-style-type: none"> BTRs are the regular reports submitted by countries under ETF. Baku Declaration on Global Climate Transparency and Baku Global Climate Transparency Platform were also launched for timely delivery of BTRs and to support the full implementation of the ETF.
Adaptation	<ul style="list-style-type: none"> Launched the Baku Adaptation Road Map and Baku High-Level Dialogue on Adaptation to enhance UAE Framework for Global Climate Resilience implementation. <ul style="list-style-type: none"> Roadmap will advance the implementation of adaptation action in line with Article 7 of the Paris Agreement.

	<ul style="list-style-type: none"> • Establishment of a support program for implementing National Adaptation Plans (NAPs) for Least Developed Countries (LDCs). <ul style="list-style-type: none"> ○ NAPs are comprehensive documents that outline a country's medium- and long-term strategies and priorities for adapting to the adverse effects of climate change.
Indigenous Peoples and Local Communities	<ul style="list-style-type: none"> • Adopted the Baku Workplan and renewed the mandate of the Facilitative Working Group (FWG) of the Local Communities and Indigenous Peoples Platform (LCIPP). <ul style="list-style-type: none"> ○ FWG a constituted body established at COP24 in Katowice to further operationalize the LCIPP. • Implementation of the Workplan will begin in 2025 and it has 3 Focus areas: <ul style="list-style-type: none"> ○ Promoting knowledge exchange; ○ Building capacity for engagement; ○ Incorporating diverse values and knowledge systems into climate policies and actions.
Gender and climate change	<ul style="list-style-type: none"> • Extension of the enhanced Lima Work Programme on Gender and Climate Change for another 10 years. <ul style="list-style-type: none"> ○ In 2014, COP 20 established the Lima Work Programme on Gender to advance gender balance, integrating gender considerations into climate policies under the Convention and Paris Agreement. ○ At COP 25 Parties agreed a 5-year enhanced Lima work programme on gender and its gender action plan was launched.

NOTE: Themes like Climate finance related to NCQG and Carbon Trading and Market related to Article 6 of the Paris climate agreement are discussed in detail in the subsequent articles.

Issues persisting in climate negotiations

- **Inadequate climate finance:** NCQG falls short of the Global projected investment requirement for climate action which is around **\$2.3–2.5 trillion in emerging markets and developing countries (EMDCs)** other than China. (Raising Ambition and Accelerating Delivery of Climate Finance’ Report)
 - Due to inadequate funding, developing countries including **India have rejected the climate finance deal** agreed at COP29.
- **Deadlock on Mitigation Work Programme (MWP):** Due to a **divergence in views on the role of fossil fuels in the future energy mix**.
 - The **Global Stocktake**, a comprehensive assessment of global progress towards climate goals, **was a point of contention**.
- **Limited progress on climate targets:** Progress in ambition and action since the initial NDCs plateaued and countries are still off track to deliver on the globally insufficient mitigation pledges for 2030.
 - Global greenhouse gas emissions set a **new record in 2023, with a 1.3% increase from 2022** levels (UNEP’s Emissions Gap Report 2024).
- **Other Issues:**
 - **Slow pace of operationalizing the Loss and Damage Fund (LDF)** and concerns over its **inadequate funding**.
 - Next round of Nationally Determined Contributions (NDCs) has been **postponed** ahead of COP30.
 - **Large disparities** between the current, per capita and historic emissions of major emitters and world regions.
 - > **G20 members** accounted for **77% of global emissions**.
 - **Alleged influence of Fossil fuel lobbyists** in negotiations.

Way Forward

- **Enhance Climate Diplomacy** through **regular and constructive dialogue** between countries, especially to address the concerns of developing nations regarding climate finance and mitigation targets.
- **CBDR-RC:** Decisions should take into consideration historical contribution to climate change and fulfil the principle of **Common but Differentiated Responsibilities and Respective Capabilities (CBDR-RC)**, which mandates that developed nations need to support developing countries in climate action.
- **Prompt and effective operationalization of LDF:** It can help in providing financial support to vulnerable countries.
- **Enhance NDCs:** As per Emissions Gap Report 2024, emission cuts of **42% are needed by 2030 and 57% by 2035** to get on track for 1.5°C.

- o Further, **strengthening reporting mechanisms under the ETF** can hold countries accountable for their commitments.

Scan the QR code to know more about **Climate Change Negotiations**

Weekly Focus #119- Climate Change Negotiations (CCNs): From Rio (1992) to Dubai (2023)



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)	<ul style="list-style-type: none"> • Aim: Set sectoral targets to reduce methane from organic waste and launch policies and roadmaps for these targets. <ul style="list-style-type: none"> o It supports the implementation of the 2021 Global Methane Pledge (GMP), launched at COP26. • Signatories: 35 countries (excluding India), representing 47% of global methane emissions from organic waste.
Global Energy Storage and Grids Pledge	COP29 Presidency	<ul style="list-style-type: none"> • Aim: Sets targets for 2030: <ul style="list-style-type: none"> o Deploying 1,500 GW of energy storage in the power sector globally (more than six times the level of 2022). o Global grid deployment goal of adding or refurbishing 25 million kilometres of grids.
Green Energy Pledge: Green Energy Zones and Corridors	COP29 Presidency in partnership with UNIDO, UNECE and UNESCAP	<ul style="list-style-type: none"> • Aim: Promoting green energy zones for tackling climate change, promoting economic growth and energy security, and improving the quality of life for local communities. <ul style="list-style-type: none"> o Green energy zones act as centralized hubs, which combine high-quality variable renewable energy resources, renewable energy infrastructure and storage.
Hydrogen Declaration	COP29 Presidency	<ul style="list-style-type: none"> • Aim: To accelerate the production and use of clean hydrogen to decarbonize various sectors and achieve climate goals. • It is a non-legally binding document and does not require any changes to be made to the participating countries' national law.
Baku Harmoniya Climate Initiative for Farmers	COP29 Presidency in partnership with Food and Agriculture Organization (FAO)	<ul style="list-style-type: none"> • Aim: To acknowledge the fundamental role of farmers as agents of climate action. • It will be hosted by FAO as part of the Food and Agriculture for Sustainable Transformation (FAST) Partnership. <ul style="list-style-type: none"> o FAST is a multi-stakeholder platform established at COP27 (2022) that works to strengthen the quantity and quality of climate finance in agrifood systems for the most vulnerable.
Climate Finance Action Fund (CFAF)	Azerbaijan	<ul style="list-style-type: none"> • Aim: Support climate projects in developing countries, meeting next generation of NDCs to keep 1.5 degree C within reach, and addressing the consequences of natural disasters. • It will be capitalised with contributions from fossil fuel producing countries and companies across oil, gas and coal. • To become operational at the conclusion of the initial fundraising round (\$1 billion), and when 10 contributing countries committed as shareholders. • Headquarter: Baku, Azerbaijan.

Baku Initiative for Climate Finance, Investment and Trade (BICFIT) Dialogue	COP29 Presidency, co-facilitated by UN Trade and Development (UNCTAD) and UN Development Program (UNDP)	<ul style="list-style-type: none"> • Aim: Advance national ambitions and actions through the synergistic utilization of climate finance, investment, and trade in accordance with the UNFCCC and the Paris Agreement.
Global Matchmaking Platform (GMP)	UN Industrial Development Organization (UNIDO) and the Climate Club	<ul style="list-style-type: none"> • Aim: To accelerate the decarbonization of heavy-emitting industries in emerging and developing economies by connecting them with technical and financial solutions. • Function: Connects industries with technical and financial solutions • Role: Single-point gateway for countries to raise decarbonization requests.
Declaration on Green Digital Action	COP29 Presidency with the Climate Technology Centre & Network, Technology Mechanism, and International Telecommunication	<ul style="list-style-type: none"> • Aim: Harnessing digital technologies to accelerate climate action, promote sustainable development, and bridge the digital divide.
Continuity Coalition for Climate and Health	COP 29 Presidency with the UAE, Egypt, UK, Brazil, and World Health Organisation (WHO)	<ul style="list-style-type: none"> • Aim: To advance the implementation of health commitments from previous COPs and strengthen the integration of health into climate action.
Baku Dialogue on Water for Climate Action	COP29 Presidency in partnership with UNEP, UNECE, and WMO	<ul style="list-style-type: none"> • Aim: To build collaboration between COPs on water and its interplay with climate change, biodiversity loss, pollution and desertification.
Other Initiatives		
<ul style="list-style-type: none"> • COP29 Declaration on Enhanced Climate Action in Tourism: Aims to mobilize the tourism sector to reduce its carbon footprint, enhance climate resilience, and promote sustainable practices. • Global Energy Efficiency Alliance: Launched by UAE to double global energy efficiency rates by 2030 and contribute to significant emission reductions. • Hydro4NetZero-LAC initiative: Aims to develop and modernise sustainable hydropower infrastructure increasing the energy systems' flexibility and resilience. • Global Alliance for Pumped Storage (GAPS): Launched with the support of over 30 governments and international agencies. 		

Reports released around COP29

Reports	Details
Special report on climate change and health	<ul style="list-style-type: none"> • Published by: World Health Organization (WHO) • Key Findings: <ul style="list-style-type: none"> ○ Noncommunicable diseases (NCD): Climate change and air pollution causes 85% of NCD deaths. ○ Heat stress: People faced 50 more days of health threatening heat in 2023, due to climate change. ○ Maternal & reproductive health: Preterm birth, low birth weight, maternal death, decreased fertility etc. ○ In 2023, 20.3 million people were internally displaced due to weather-related disasters.

Global Landscape of Climate Finance 2024	<ul style="list-style-type: none"> ● Published by: Climate Policy Initiative (CPI) <ul style="list-style-type: none"> ○ CPI is an independent, not-for-profit organization with deep expertise in finance and policy. ● Key Findings: <ul style="list-style-type: none"> ○ Climate flows are likely to have surpassed USD 1.5tn in 2023, with key increases in renewable energy (RE) and low-carbon transport. ○ Fossil fuel investment and consumer fossil fuel subsidies continued to increase annually since 2020.
Global Nitrous Oxide (N₂O) Assessment report	<ul style="list-style-type: none"> ● Published by: Climate and Clean Air Coalition (CCAC) and FAO <ul style="list-style-type: none"> ○ It is first international report focused solely on N₂O in more than a decade. ● Key Findings: <ul style="list-style-type: none"> ○ If N₂O emissions continue to increase at their current rate (current share 0.1° C), there is no plausible pathway to limiting global warming to 1.5° Celsius. ○ Anthropogenic emissions of N₂O have increased globally by 40% since 1980 with ~75% originating from agricultural use of synthetic fertilisers and manure.
'Raising Ambition and Accelerating Delivery of Climate Finance' Report	<ul style="list-style-type: none"> ● Published by: Independent High-Level Expert Group on Climate Finance ● Key Findings: <ul style="list-style-type: none"> ○ Global Investment Required for climate action is around \$6.3–6.7 trillion per year by 2030.

5.1.2. INDIA AT COP29

Why in the News?

India clarified its stance regarding climate negotiation at the Plenary Session of the 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.
 - Urged recognition of the pre-2020 mitigation gap by developed countries (Annex I Parties).
- **Just Transition:**
 - India asserted that **developed countries should provide financial and technological support** to developing countries for a just transition.
 - Just transitions must **respect the right to development and sustainable priorities** of developing countries.
- **Global Stocktake (GST):**
 - Opposed follow-up mechanisms for GST outcomes, citing the Paris Agreement's framework.
 - Criticized the UAE dialogue text for its lack of connection to finance, imbalance, and mitigation-centric language.
 - Proposed specific revisions to better align the text with finance and emission trends.
- **Adaptation:**
 - India called **for clear indicators to measure progress** on adaptation.
 - **Opposed the use of third-party databases** for reporting indicators, advocating for Party-submitted data only.
 - **Supported the establishment of the Baku Road Map** to advance work on the Global Goal on Adaptation (GGA).

India's participation in various Side-events during COP29

- **Integrating Disaster Resilient Infrastructure into the Adaptation Strategies:**
 - Organised by **India** and **Coalition for Disaster Resilient Infrastructure (CDRI)**.
 - > CDRI, launched by **India in 2019**, is an international coalition of countries, UN agencies, multilateral development banks, the private sector, and academic institutions, that aims to promote disaster-resilient infrastructure
 - Focused on how to build infrastructure that is resilient to the impacts of climate change.

- CDRI also announced \$8 million of funding for 12 projects across 17 Small Island Developing States (SIDS) under its Infrastructure for Resilient Island States initiative.
- **LeadIT (Leadership Group for Industry Transition) Member Meet**
 - Organised by India and Govt of Sweden.
 - LeadIT is a global initiative that brings together governments and industry leaders to accelerate the transition to a low-carbon economy.
- **Energy Transitions for the Global South**
 - Organised by India and International Solar Alliance (ISA).
 - This event focused on the role of solar energy in the energy transition of developing countries.
- **Others: India-Sweden Industry Transition Partnership (ITP), etc.**

5.2. CARBON TRADING AND MARKET

Why in the News?

Rules for carbon trading under Article 6 of the Paris Agreement were finalized after a decade of negotiations.

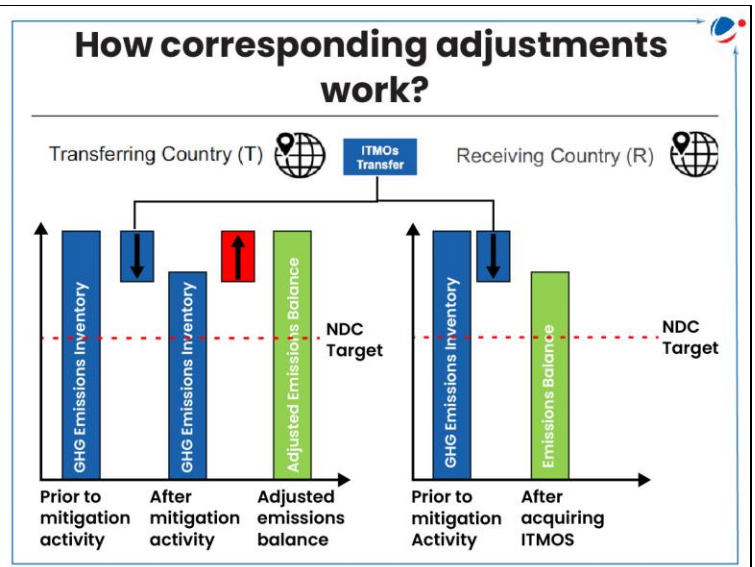
About Article 6 of the Paris Agreement

- It details a set of **tools and mechanisms of carbon market**, that allows countries to **voluntarily cooperate** to achieve their **Nationally Determined Contribution (NDC)**.
- It has **3 main mechanisms**: 2 Market-based and 1 Non-market based.

Mechanisms under Article 6		
Market based approaches		Non-Market based approach
Article 6.2	Article 6.4	Article 6.8
<ul style="list-style-type: none"> ● Decentralized approach that allows for bilateral cooperation between countries ● Involves international trading of International Transferred Mitigation outcomes (ITMOs) (emissions reductions that result from mitigation actions) ● Corresponding adjustment in NDCs are made on trade of ITMOs. 	<ul style="list-style-type: none"> ● Centralized approach under UNFCCC for transfer of ITMOs termed as Paris Agreement Crediting Mechanism (PACM). ● Establishes a global carbon market. ● Uses Baseline-and-crediting mechanism similar to Clean Development Mechanism (CDM) of Kyoto Protocol which uses cap-and-trade system. 	<ul style="list-style-type: none"> ● Introduces non-market approaches to promote mitigation and adaptation through finance, technology transfer, capacity building etc. ● No trading of emission reductions is involved. ● Involves more than one participating Party.

About Corresponding adjustment (Article 6.2)

- These are changes made in a countries' emissions levels to reflect the transfer (export) or acquisition (import) of ITMOs.
- They are made for **3 different cases** based on different types of targets and measures in NDCs:
 - **GHG metrics**: E.g., economy-wide annual levels of GHG emissions
 - **Non-GHG metrics**: E.g., installed capacity of renewable energy in MW
 - **Policies and measures within a country's NDCs**



About Carbon Market

- **Carbon markets are trading systems** where entities **buy carbon credits to offset their greenhouse gas emissions** by supporting projects that reduce or remove emissions.
 - **One tradable carbon credit generally equals one metric tonne of carbon dioxide** or the equivalent amount of a different greenhouse gas reduced, sequestered or avoided.

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	<ul style="list-style-type: none"> • Focused on project-based mechanisms like- <ul style="list-style-type: none"> ○ Clean Development Mechanism (CDM): Projects in developing countries. ○ Joint Implementation (JI): Projects in other developed countries. 	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.

Significance of Carbon trading

- **Economic Efficiency:** Carbon trading under Article 6 could cut costs for NDCs by over 50%, potentially saving \$250 billion annually by 2030 (World Bank).
- **Support developing Countries:** in climate mitigation efforts by mobilizing significant financial resources.
- **Potential for Broader Impact:** Use of non-market approaches (Article 6.8), such as capacity-building platforms, enabling diverse pathways for sustainable development.
- **Revenues for Governments:** In 2023, carbon pricing revenues reached a record \$104 billion (World Bank's State and Trends of Carbon Pricing 2024 report).

Issues related to carbon markets

- **Double Counting:** Countries under Article 6.2 are not strictly required to fix or avoid inconsistencies in their emission reduction calculations, creating potential for counting of same emissions reduction by more than one country.
- **Limited coverage and scope:** Only 24% of global emissions are covered under carbon taxes and Emission Trading Systems (ETS). (World bank)
- **Inadequate Quantification Standards:** The draft rules of Article 6 do not require countries to monitor reversals, such as CO₂ escaping from failed sequestration projects.
- **Delayed Operationalization:** E.g., Article 6.4 is unlikely to become operational until 2025-2026.
- **Carbon Colonialism:** Indigenous rights and local community impacts are not adequately addressed, raising concerns about exploitation under carbon market projects.
- **Diverging National Interests:** Tensions exist between developed and developing nations on key issues such as transparency, equitable access, and the level of flexibility allowed in carbon market rules.
- **Other issues:**
 - **Lack of clear guidelines** and implementation frameworks for Non-Market Mechanism.
 - **Greenwashing concerns**
 - **Oversaturation of carbon credit market** with impact on price.

Way Forward

- **Implement uniform and binding guidelines** for reporting emission reductions to prevent double counting and ensure reliable carbon accounting.
- **Independent third-party verification** to ensure credits are genuine and consistent across projects.

- **Develop and enforce stronger safeguards to address reversal risks**, such as forest fires or changes in land-use that could negate carbon sequestration efforts.
- **Establish safeguards** to protect the interests of indigenous and local communities.
- **Implement measures to prevent market oversaturation** by controlling the issuance of carbon credits based on verified demand and quality.

Carbon Market and Carbon Trading Mechanisms in India

- **Carbon Credits Trading Scheme (CCTS), 2023:** Introduced through amendments in the Energy Conservation (Amendment) Act, 2022, it establishes **Indian Carbon Market under two mechanisms:**
 - **Compliance mechanism:** Mandatory program for the energy-intensive industries where Government will set GHG emission intensity targets.
 - > Initially includes 9 sectors like **Fertiliser, Iron & Steel, Pulp & Paper, Petrochemicals, Petroleum refinery, etc.**
 - **Offset mechanism:** A **voluntary project-based mechanism** for entities not covered under compliance mechanism.
- **Green Credit Program:** A market-based voluntary mechanism for trading of **Green Credits** to incentivise environment positive actions by different stakeholders, established under the **Environment (Protection) Act, 1986.**
 - **Eligible Activities** include Tree plantations, Sustainable agriculture practices, etc.
- **Other Instruments:**
 - **Perform, Achieve and Trade (PAT) Scheme:** Mandates large energy-intensive industries to reduce their specific energy consumption.
 - > Industries that exceed their targets earn **energy saving certificates (ESCerts)**, which can be traded with those who fall short.
 - > It will be transitioned gradually to the compliance mechanism under CCTS.
 - **Renewable Energy Certificates (REC) Scheme:** A market-based instrument to promote renewable energy and facilitate compliance of **renewable purchase obligations (RPO).**
 - > Value of **REC is equivalent to 1MWh of electricity.**

5.3. CLIMATE FINANCE

Why in the News?

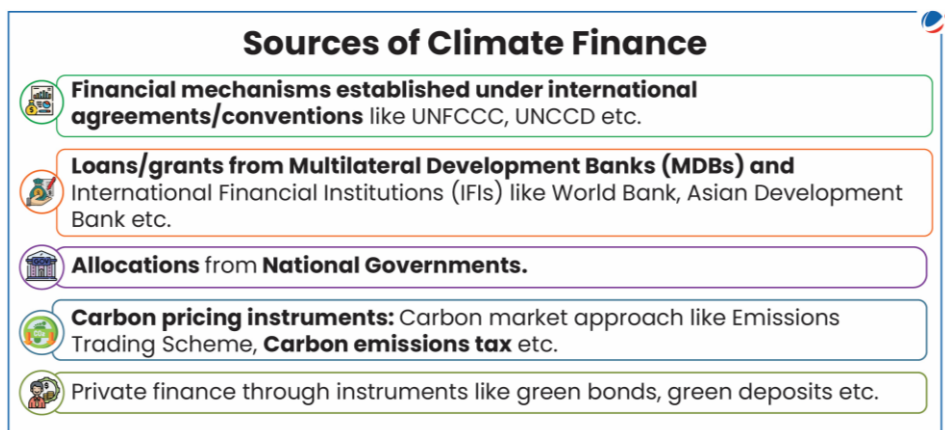
Developing countries have expressed disappointment with the enhanced **New Collective Quantified Goal (NCQG)** on climate finance.

About NCQG

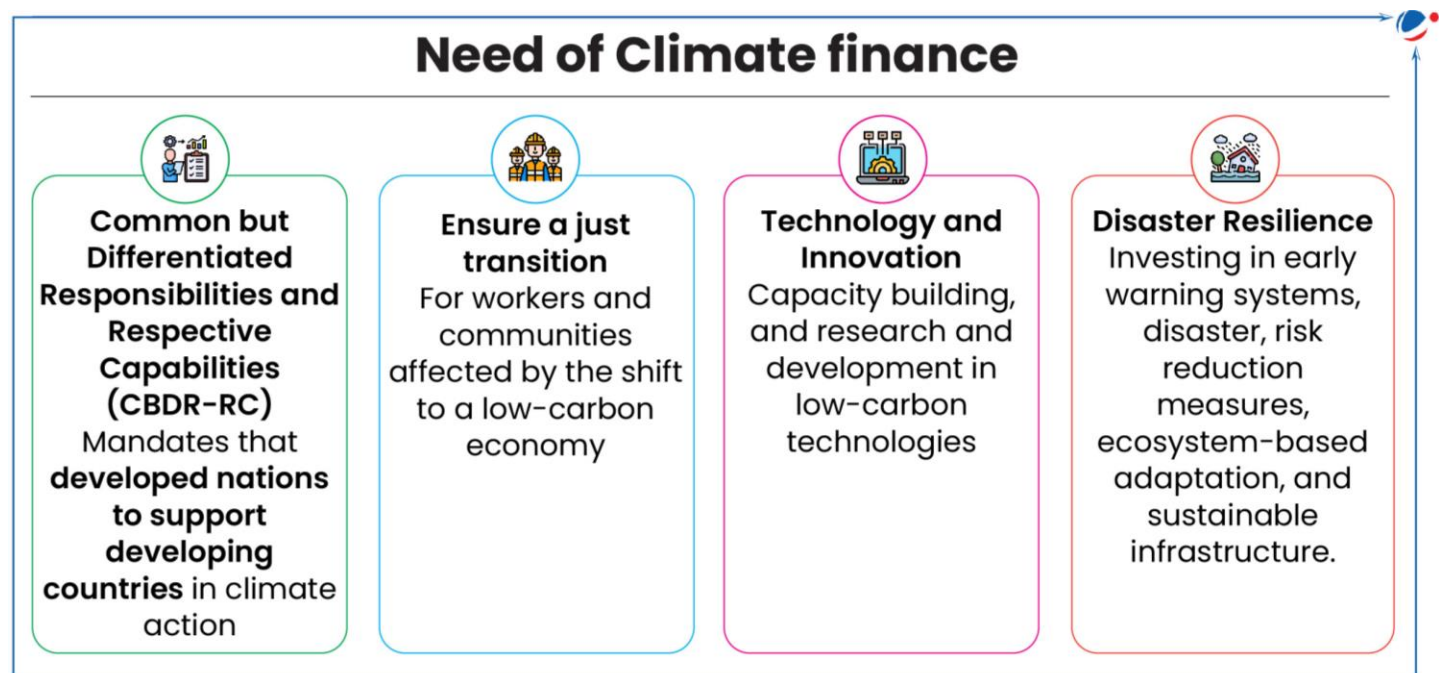
- NCQG was proposed in COP21 for setting **post-2025 climate finance goal (new goal).**
 - In 2009 parties to UNFCCC had decided to mobilise **\$100 billion annually** by 2020 which was **subsequently extended to 2025.**
 - However, this target is **yet to be achieved reflecting significant shortfalls in it.**
- **Article 9** of the Paris Agreement stipulates that **developed country Parties** shall provide **financial resources to assist developing country Parties.**

About Climate finance

According to the **UNFCCC**, **climate finance is local, national or transnational funding** from public, private and alternative sources that seeks to **support climate change mitigation and adaptation actions**, particularly in **developing countries** that are more vulnerable to the impacts of climate change.



Global Financial mechanisms under UNFCCC	
Loss and Damage Fund (LDF)	<ul style="list-style-type: none"> Established during COP27 held in Egypt and operationalized in COP28, Dubai. Aims to provide financial assistance to countries most vulnerable to climate change. <ul style="list-style-type: none"> "Loss and damage" refers to the negative effects of climate change that occur despite mitigation and adaptation efforts.
Green Climate Fund (GCF)	<ul style="list-style-type: none"> Established in COP 16, 2010, developed countries pledged to mobilise US\$ 100 billion per year by 2020 to support developing countries raise and realize their NDC ambitions.
Adaptation Fund	<ul style="list-style-type: none"> Established in 2001 to finance concrete adaptation projects and programmes in developing country Parties to the Kyoto Protocol. Receives 5% share of proceeds from new market-based UNFCCC mechanism established by Article 6.4 of the Paris Agreement.
Special Climate Change Fund (SCCF)	<ul style="list-style-type: none"> Established in 2001 (COP7) to finance projects relating to: adaptation; technology transfer and capacity building; energy, transport, etc. It is administered by Global Environment Facility (GEF).
Least Developed Countries Fund (LDCF)	<ul style="list-style-type: none"> Established in 2001 (COP7) to support a work programme to assist Least Developed Country Parties in carrying out the preparation and implementation of national adaptation programmes of action (NAPAs). It is administered by Global Environment Facility (GEF).



Issues associated with the current climate financing

- Distributional imbalance:** Advanced economies accounted for 45% of climate finance from 2018 to 2022, and least developed countries (LDCs) for only 3%. (GLCF 2024)
- Adaptation Funding Gap:** Developing countries require US\$215-387 billion annually against US\$28 billion in 2022 (Adaptation Gap Report 2024).
- 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.
 - Nearly **94%** of existing climate investment is either through **debt or equity** (return seeking) (Climate Policy Initiative).

- **Inadequate finance:** Fivefold increase needed to reach required USD 7.4tn each year through 2030 under the 1.5°C scenario (GLCF 2024).
- **Other issues:**
 - **Lack of Transparency and Accountability** in how climate finance is allocated and used, raising concerns about its effectiveness and potential for misuse.
 - **Many developing nations struggle to access climate funds** due to complex procedures, lack of technical capacity, and limited institutional frameworks.
 - **Inadequate Private Sector Involvement.**

Data Bank

Trends in Climate Finance: Global Landscape of Climate Finance 2024 (GLCF 2024)

- **>2X** growth in **Annual global climate finance:** From USD 674 billion (2018) to USD 1.46 trillion in 2021-22.
- **20%** compound annual growth rate (CAGR) in Climate mitigation finance from (2018 - 2022)
 - **54%** of total funding for mitigation activities from Private finance.
- **>2X** growth in Adaptation finance (2018 -2022)

Climate Finance and India

India's climate finance needs

- **Cumulative investments of up to 6–8 trillion USD** required during 2015–2030 to implement the actions required to transform the current energy systems in India.
- **India needs around USD 10 trillion to achieve net-zero by 2070.**

Steps taken to mobilize climate finance

- **National Adaptation Fund for Climate Change (NAFCC)** was established in August 2015.
- **Priority Sector lending to renewable energy projects.**
- **Issuance of Green Deposits and Green Bonds**, 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, ensuring resources meet immediate resilience needs.
- **Explore innovative financing mechanisms** like green bonds, carbon markets, and impact investing to mobilize private capital for adaptation projects.
- **Adopt an Integrated approach:**
 - **Public Funding:** To manage debt and fiscal space, boost domestic resource mobilization (by carbon pricing) etc.
 - **Private Investment:** To reduce cost of capital, expand options for concessional finance, Tapping the potential of carbon markets etc.
- **Provide technical assistance to developing** countries to enhance their capacity to access, manage, and effectively utilize climate finance.
- **Multilateral Development Banks** should work to triple lending capacity by 2030 as part of NCQG.
- **Advocate principles of equity and climate justice** to uphold the interests of Global south at climate negotiations.
- **Use Debt-for-Climate Swaps** to negotiate debt relief in exchange for investments in climate action.
- **Explore Insurance for Climate Resilience**, where insurers can align their climate transition plans with financing strategies, offering risk transfer tools to cover climate-related disasters and accelerating payouts for rebuilding efforts.

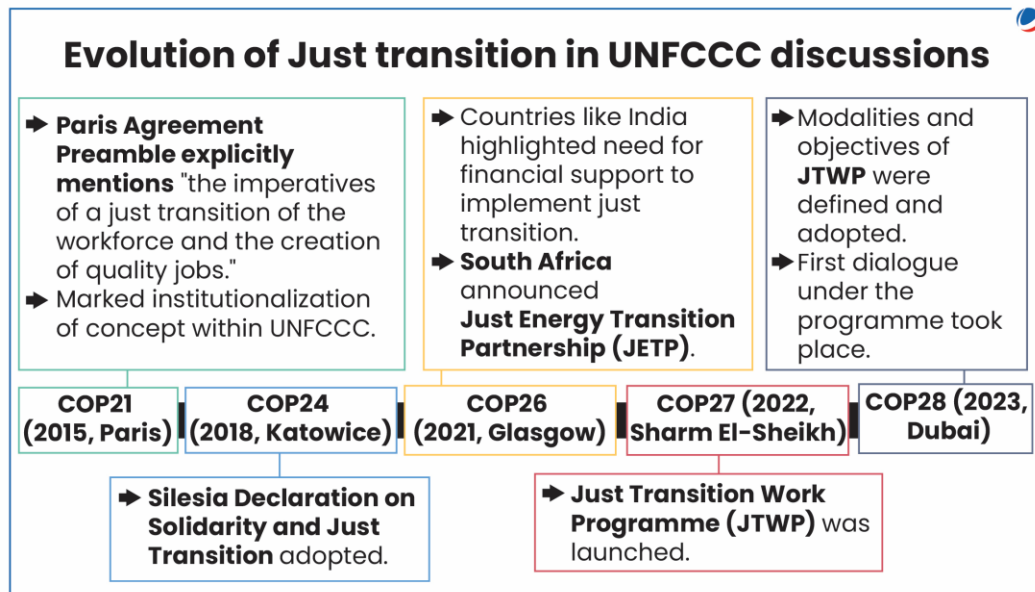
5.4. JUST TRANSITION

Why in the News?

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

About Just Transition

- According to **International Labour Organization (ILO)**, a just transition means **greening the economy in a way that is as fair and inclusive** as possible to everyone concerned, creating **decent work opportunities**, and **leaving no one behind**.
 - It is a **process of shifting from high-carbon, unsustainable systems to low-carbon, sustainable economies** in a way that is **equitable, inclusive, and fair**.
- It was recognised by the **Just Transition Declaration** agreed at the **UN Climate Change Conference in Scotland (COP26)**.
- Key elements include:**
 - Equity:** Protecting the **rights and livelihoods of workers and communities**, particularly those **dependent on fossil fuels** and other high-carbon industries.
 - Inclusion:** Ensuring that **all stakeholders—workers, governments, industries, and civil society—are involved in decision-making**.
 - Sustainability:** Aligning **economic and social systems with the goals of reducing GHG emissions** and conserving natural ecosystems.



Need of Just Transition

- Impact on Workers:** ILO estimates that while **24 million new green jobs** could be created by **2030**, **6 million jobs in carbon-intensive industries might be lost**.
- Climate Change Mitigation:** Emission reduction in energy sector plays a significant role in meeting the Paris Agreement target of limiting global warming to 1.5°C.
 - GHG emissions must peak before 2025** at the latest and decline 43% by 2030.
- Energy Security:** Adoption of diverse renewable energy sources reduces reliance on volatile fossil fuels subject to geopolitical tensions and price fluctuations.
- Avoiding Discontent:** E.g., **Yellow Vest protests in France (2018)** protested against climate measures which disproportionately affected lower-income groups.

Challenges in Just Transition

- High Costs of Transition:** For instance, India will require **more than a trillion dollars** over the next three decades to transition its coal mining and thermal power sectors (Just transition, Just Finance report).
- Regional Disparities:** Coal-reliant regions, such as **South Africa's Mpumalanga** or **India's Jharkhand**, have limited resources to diversify their economies, exacerbating inequalities in transition readiness.
- Energy security and accessibility:** Coal-based power plays a significant role in developing countries for development purposes and enhancing energy accessibility and affordability for their citizens.
 - E.g., **coal accounts for about 55%** of India's commercial energy requirements and coal-based TPPs produce more than 70% of electricity.
- Economic losses:** As per International Energy Agency (IEA) **stranded fossil fuel assets** (i.e., no longer economically viable) **could result in losses due to shift toward green transition**.
 - E.g., **Saudi Arabia derived 68%** of its 2022 budget revenue from oil.

- **Inequitable Impacts:** For instance, **women are overrepresented in informal and low-carbon jobs**, limiting their opportunities in green sectors (UN Women, 2023).
- **Other issues:** Infrastructure challenges like upgradation of grid infrastructure; lack of adequate 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:** To build an ecosystem for manufacturing of high efficiency solar PV modules in India.
- **Global Collaboration:** Collaboration with **Asian Development Bank** to develop a Just Transition Worker Support Facility for coal-mining reliant districts and states.
- **National Clean Energy Fund (NCEF):** funds clean energy ventures through a coal cess.
- **Other initiatives:** Solar cities and parks, National Green Hydrogen Mission, and the Green Energy Corridors, etc.

Global

- **Just Energy Transition Partnership (JETP):** Launched at **COP 26 of UNFCCC** where a developed country provides financial and technical support for inclusive energy transitions in a developing country.
- **ILO Guidelines for a Just Transition towards Environmentally Sustainable Economies and Societies for All** adopted by representatives of governments, employers' and workers' organizations in 2015.
- **'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** to independently monitor coal closure and repurposing and ensure fair distribution of transition benefits and costs.
- **Explore sustainable financing** through mechanisms like **Just Energy Transition Partnership (JETP), green bonds, etc.**
- **Banks and multilateral institutions should raise commitments** by providing more grants, concessional loans, etc.
- **Maintain and enhance social infrastructure**, e.g., introduce **compensation packages to formal workers engaged in low-carbon jobs**, such as severance pay, voluntary retirement scheme (VRS), etc.
- **Develop strategies to create new, sustainable jobs** and provide adequate training, and reskilling programs for workers impacted by the energy transition.
- **Foster active participation of all affected groups**, especially marginalized and vulnerable communities, in the planning and decision-making process.
- **Develop and augment green energy infrastructure** by upgrading the transmission and distribution systems.

Scan the QR code to know more about **Financing Global Energy Transition**

Weekly Focus #104– Financing Global Energy Transition



5.5. COP-16 TO THE UN CBD

Why in the News?

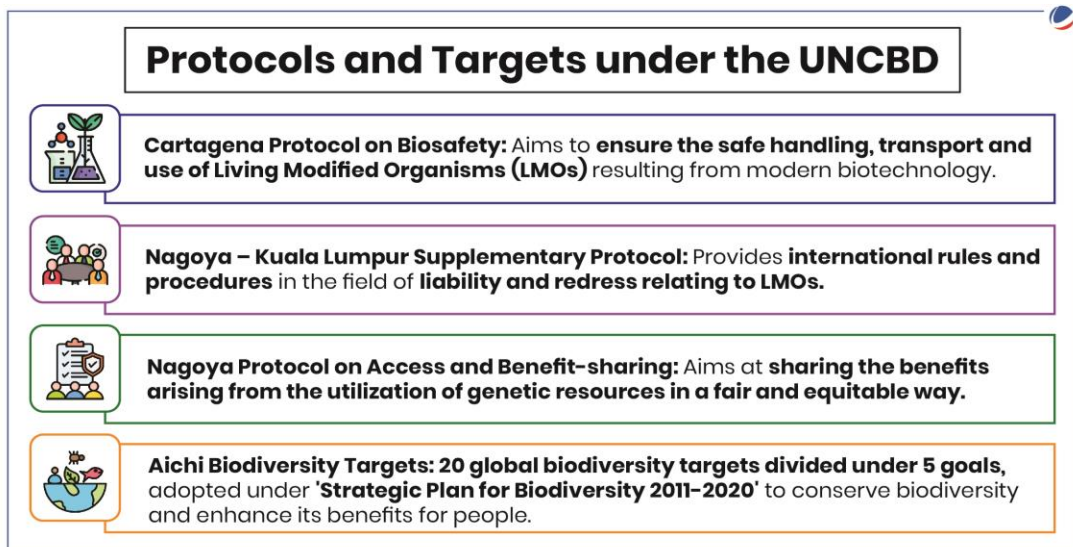
Recently, **16th Conference of Parties (CoP-16)** to the **UN Convention on Biological Diversity (UN CBD)** concluded in **Cali, Colombia**.

More on the News

- Theme of this year's conference was '**Peace with Nature**'.
- It is the **first CoP**, since adoption of **Kunming-Montreal Global Biodiversity Framework (KMGBF)** and served as a **critical platform to assess the progress and address the ongoing challenges to the KMGB framework**.

About UNCBD

- **Origin:** International **legally binding treaty adopted** at the **United Nation's Conference on Environment and Development (UNCED)**, **Earth Summit**, Rio de Janeiro, Brazil in **1992**.
 - **Entered** into force in **1993**, and **operates under the aegis of United Nations Environment Programme (UNEP)**.
- **Objectives:** **Conservation** of biological diversity; **sustainable use** of its components; and **fair and equitable sharing** of the benefits arising out of the utilization of genetic resources.
- **Secretariat:** **Montreal**, Canada.
- **Members:** Ratified by **196 members (India became a party to the convention in 1994)**.
 - **USA hasn't ratified** the convention.
- **Governing mechanism:** **CoP meets every two years** (biennial) to review progress, set priorities and commit to work plans.



About KMGBF

- It is a **non-binding framework** adopted at the **CoP-15 to CBD** at Montreal, Canada in 2022.
 - Successor to '**Strategic Plan for Biodiversity 2011-2020**' and its Aichi Targets.
- **Aim:** To **halt and reverse biodiversity loss by 2030**.
- **Goals:** Sets **4 goals to be achieved by 2050**:
 - **Protect and restore:** Ecosystem & species health including halting human-induced species extinction.
 - **Prosper with nature:** i.e., sustainable use of biodiversity.
 - **Share benefits fairly:** Equitable sharing of benefits from utilization of digital sequence information (DSI) and traditional knowledge associated with genetic resources etc.
 - **Invest and collaborate:** To closing the biodiversity finance gap of \$700 billion per year.
- **Targets:** Sets **23 targets to be met by 2030** addressing threats to biodiversity, meeting people's needs through sustainable use etc.
 - Some of the **key targets** being:
 - ✓ **30-by-30 Target** (i.e. **30% conservation** of land, sea, and inland water and **30% restoration** of various degraded ecosystems **by 2030**).
 - ✓ Reducing the **introduction of invasive alien species by 50%** by 2030.
 - ✓ Formulate mechanism for "**benefit-sharing from use of Digital Sequence Information (DSI) on genetic sources**" and **traditional knowledge**.

Major Outcomes of CoP-16

- **Financial mechanism for DSI: Operationalisation of Cali Fund** for sharing the benefits from use of DSI on genetic resources in a more fair and equitable way.

- **Companies benefiting commercially from DSI to contribute 1% of their profit** (0.1% of their revenues) to support Indigenous Peoples and local communities.
- **Recognition of rights of indigenous communities:** Through establishment of **permanent subsidiary body** under **Article 8(j) of the UNCBD** and **Cali Fund** to enhance participation of indigenous people in all convention processes.
 - At least **50% of the Cali Fund** is for self-identified needs of indigenous communities including women and youth.
- **Finance mobilization: Launch of Kunming Biodiversity Fund (KBF)** under the aegis of **Global Environment Facility (GEF)** to support the goals and targets under KMGBF.
 - Earlier at **CoP-15, Global Biodiversity Framework Fund (GBFF)** was agreed and established by **GEF**.
- **Identification of Ecologically or Biologically Significant Marine Areas (EBSAs):** Agreement on **new and evolved mechanisms** to identify EBSAs and update existing ones.
 - Crucial for **30-by-30 Target under KMGBF** and **Biodiversity Beyond National Jurisdiction (BBNJ) Agreement** (High Seas Treaty).
- **Thematic Action Plan:** To **address inequity** in capacity-building, technology transfer of developing countries and local communities **in the field of synthetic biology**.
- **Invasive alien species management: Guidelines for managing** invasive alien species **through new databases, improved cross-border trade regulations, etc. to align with the goals of KMGBF**.
- **Approved Global Action Plan on Biodiversity and Health:** The **strategy embraces ‘One Health’ approach to curb the emergence of zoonotic diseases, prevent non-communicable diseases etc.**

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.
 - **Target 19** calls for **mobilizing \$200 billion per year for biodiversity** from all sources, **including \$30 billion through international finance**.
- **Other highlights:** Advocates for global conservation through **‘Plant4Mother’ Campaign**; wildlife conservation through establishment of **International Big Cat Alliance (IBCA)**; increase in **Ramsar sites** from 26 to 85 since 2014 etc.

Shortcomings of CoP-16

- **Resource and finance mobilization: Developed countries lagged on their commitment to provide \$20 billion annually** in international biodiversity financing **by 2025**.
 - Also, **pledges to GBFF were meagre with only \$163 million** pledged during COP-16.
- **Monitoring framework for KMGBF:** Decision to **update and complete the Monitoring framework** with its indicators **to track progress in implementing the KMGBF has not been reached**.
- **Delay in Planning, Monitoring, Reporting, and Review (PMRR) mechanisms:** These mechanisms **establish the procedures for review of global and national progress on KMGBF Targets**.
- **Submission of NBSAPs: Only 44 countries out of 196 member states submitted their updated NBSAPs** aligned with KMGBF, while 119 countries reported on their National Targets (step before construction of NBSAP).
- **Cali Fund (DSI Fund):** Though operationalized, but **lacks consensus on contributions to the fund and mechanisms** for financial and technical resource allocation.
- **Disagreements over biodiversity credits and offsets:** KMGBF included these as **‘innovative scheme’ to increase financial resources** for biodiversity protection.

Conclusion

The roadmap for CoP-17 at Yerevan, Armenia, in 2026, lies in **solidifying financial mechanisms under KMGBF’s Target 19** at the **next interim meeting in Bangkok**; **strengthening Monitoring Frameworks and PMRR mechanisms** for accountability; and **enhancing NBSAPs with time-bound action plans mirroring NDCs** under Paris agreement. Additionally, **fostering global cooperation, inclusive partnerships, and technology transfers** are critical in achieving the 2030 KMGBF targets.

Digital Sequence Information (DSI)

In the recently concluded CoP-16 to CBD, **Cali Fund was operationalized to share the benefits arising from uses of DSI of genetic resources** in a more fair and equitable way (3rd objective of CBD).

About DSI

- It is a **policy term** that refers broadly to **genomic sequence data and other related digital data of organisms** used for research in agriculture, pharmaceuticals, biodiversity conservation etc.
- It includes **digital representation of genetic resources/ sequencing and biological data**, such as DNA, RNA, and protein sequences etc.
 - There is yet **no consensus as to exact interpretation** and scope of the term.
- It allows **scientists to study the genetic makeup of organisms without actually needing the physical samples** thus enhancing advancements in genetics and conservation efforts.

Significance of DSI: Genetic research (e.g. virologists used **SARSCoV-2 DSI to design diagnostic kits during COVID-19**); Agriculture and food security (e.g. **pest-resistant, climate-resilient crop varieties** etc.); Biodiversity conservation; preserving traditional knowledge; etc.

Challenges with DSI: **Lack of equitable benefit sharing**; Intellectual Property Rights (IPR) **concerns associated with ownership of traditional knowledge**; absence of efficient benefit-sharing framework, **Lack of accountability**; privacy concerns, **data security risks**, technological constraints, etc.

Key Initiatives for DSI

- **Goal-C (Share benefits fairly) and Target-13 of KMGBF:** Promotes **equitable sharing of benefits from utilization of DSI and traditional knowledge** associated with genetic resources etc.
- **‘One Day One Genome’ initiative** by Government of India
 - Launched by **Department of Biotechnology (DBT)** and **Biotechnology Research and Innovation Council (BRIC)**, Govt. of India (GoI).
 - **Aim:** Publicly release a **fully annotated bacteriological genome**, enhancing scientific knowledge, driving innovation, and making **microbial genomics data accessible to researchers and the community**.

5.5.1. NATIONAL BIODIVERSITY STRATEGY AND ACTION PLAN (NBSAP)

Why in the News?

India unveiled its **updated NBSAP for 2024-30** at CoP-16 to the UN Convention on Biological Diversity (UNCBD) reinforcing its commitment to biodiversity conservation through targeted actions.

About NBSAP

- **Article 6 of the UNCBD** requires every party to the convention to **prepare NBSAPs**.
- It is the **primary tool for mainstreaming biodiversity and implementation of the UNCBD** at the country level.
- It provides a **framework for biodiversity conservation**, enables focus on **sustainable use** of biological resources, and ensures **fair and equitable sharing of benefits** derived from them.

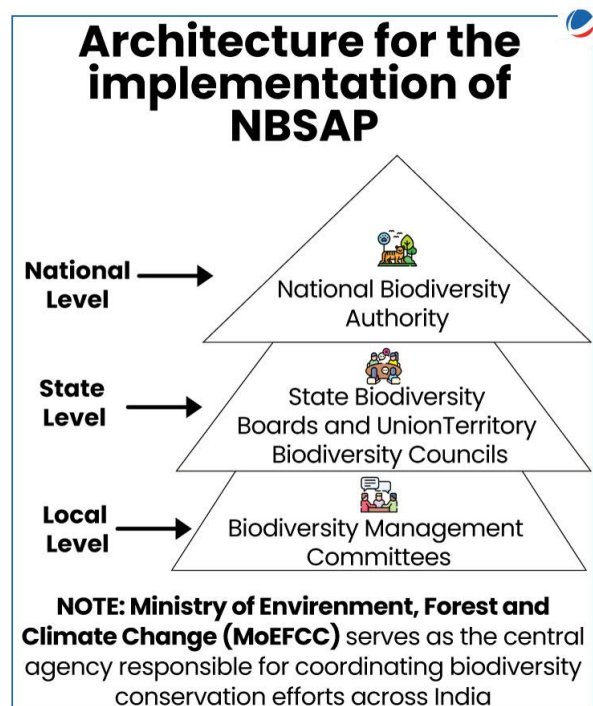
Key highlights of the updated NBSAP 2024-30

- **Approach:** Adopts a **‘Whole of Government’ and ‘Whole of Society’ approach aligning itself with KMGBF** to halt and reverse biodiversity loss by 2030, with a longer-term vision of living in harmony with nature by 2050.
- **National Biodiversity Targets (NBTs):** **23 NBTs** focused on **3 themes – reducing threats to biodiversity; ensuring sustainable use of resources; and enhancing tools for implementation**.
- **Acknowledges environmental challenges:** Outline **strategies to address them** through ecosystem restoration, species recovery programmes, community-driven conservation efforts etc.
- **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.

Do you know ?

- > **India’s first NBSAP was created in 1999**; later National Biodiversity Action Plan (**NBAP**) was **adopted in 2008**, which was **updated in 2014** to align with **Aichi Biodiversity Targets**.

- **Enactment of Biological Diversity Act, 2002 developed a multi-tier governance structure** (refer infographic).
- **Capacity building:** Through need & gap assessment; target group identification; Identification of experts/ environmentalists; and training for the acquisition of knowledge, skills etc.
- **Resource mobilization:** Recognizes India among the leading countries for **implementation of Biodiversity Finance Initiative (BIOFIN)** at national level.
 - **BIOFIN** is a global partnership launched by **UNDP and the European Commission** to support countries to enhance their financial management of biodiversity and ecosystems.
- **Other features:** Emphasized upon adoption of **transformative approach focusing on ecosystem-management based bottoms-up approach** for implementing and mainstreaming biodiversity.



Biological Diversity Act, 2002 (last amended in 2023)

- **Aim:** Highlights India's commitment in implementing the provisions of **UNCBD**.
- **Goals:** Protect and conserve the biological diversity; sustainable use of biological resources; and fair and equitable sharing of benefits arising from its utilization.
- **Key provision of the Act**
 - **Provides conditions and modalities** for seeking prior approvals for research, commercial utilization etc., so as to ensure fair and equitable sharing of benefits. These are:
 - > All **foreign nationals require approval from NBA** for obtaining Biological Resources.
 - > **Indian individuals/ entities to seek approval before transferring** knowledge/ research and material to **foreigners**.
 - > **Prior approval of NBA before applying for any kind of IPR** based on research conducted on biological material and/ or associated knowledge obtained from India.
- **2023 Amendments**
 - **Exemption has been granted to AYUSH practitioners** and Traditional Knowledge holders **from paying Access and Benefit Sharing (ABS)**.
 - > ABS, a type of compensatory amount, typically paid to tribal and other communities who traditionally gather, protect and utilize herbs and medicinal plants crucial to AYUSH industry.
 - **Removes criminal penalties for violations** and replace them with fines.
- **Institutional structure under the Act:** Three-tier implementation at **National-level** [National Biodiversity Authority (NBA), headquartered at Chennai], at **State-level** [State Biodiversity Boards (SBBs)] and at **Local-level** [Biodiversity Management Committees (BMCs)].

**SBBs are not constituted for Union Territories (UTs). NBA exercises the powers and performs the functions of a SBB for the UT.*

Conclusion

India's **updated NBSAP adopts a comprehensive approach to biodiversity conservation**, integrating traditional practices with modern governance & collaborative strategies while addressing contemporary environmental challenges. However, achieving the 23 NBTs and ensuring sustainable development will require continued efforts in capacity building, resource mobilization, effective monitoring, etc.

Related News: Biological Diversity Rules, 2024

- **Ministry of Environment, Forest and Climate Change** notified them in accordance with the **Biological Diversity Act of 2002**.
- New Rules will replace **Biological Diversity Rules, 2004**.
- Also, these rules will ensure the implementation of the **Biological Diversity (Amendment) Act, 2023**.
 - Amendment of 2023 was done to facilitate fast-tracking of processes for research, encouraging Indian system of medicine etc.
- Rules outline various provisions related with **National Biodiversity Authority (NBA)**, Penalties, etc.
- **Key Highlights of the Rules**
 - **National Biodiversity Authority (NBA):**
 - > Chairperson shall be appointed by the Central Government, will hold office for a term of **three years'** and shall be **eligible** for re-appointment.
 - > **General Functions of the NBA**
 - Administering the **National Biodiversity Fund (NBF)**, established under the Act of 2002.
 - Granting approvals for **biodiversity-related agreements**.
 - Providing **technical guidance** and support to state bodies.
 - Developing and maintaining databases related to biological resources and traditional knowledge.
 - **Intellectual Property Rights:** Approval of Authority will be required before the actual grant of the IPR.
 - **Penalties for Contraventions:** Penalties for violations range from ₹1 lakh to ₹50 lakh, with additional fines for repeated violations.
 - > All penalties collected go to the NBF or relevant state funds, supporting biodiversity initiatives.

5.5.2. WORLD COALITION FOR PEACE WITH NATURE

Why in the News?

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

More about the coalition

- **Members:** Countries from **four continents** including **Mexico, Sweden, Uganda and Chile, although none from Asia-Pacific**.
- **Nature:** The coalition is **voluntary** in nature and is **open to countries that agree to a set of principles aimed at changing humanity’s relationship with nature**.
- **Objectives:**
 - To change the **nature of relationship between humans and nature** to address environmental challenges in comprehensive manner.
 - To **reaffirm rights based approach** of the **Kunming-Montreal Global Biodiversity Framework**.
 - To mobilize **money towards conservation and sustainable development** towards preserving nature.
 - To mobilize **whole of government, whole of society** to spark collective actions by **empowering local action** for achieving **peace with nature**.

Know the term

- **Whole-of-government approach:** It combines the expertise and resources of government institutions to maximise their contribution to global **sustainable development**.
- **Whole-of-society approach:** It involves civil society as well as the **public and private sectors** in the joint pursuit of common solutions to complex problems.

5.6. FOREST ECOSYSTEM RESTORATION

Why in the News?

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

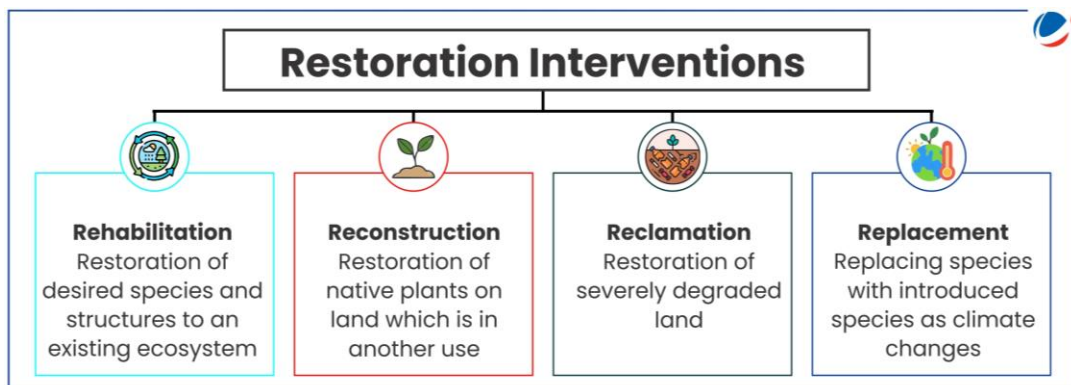
About Forest Ecosystem Restoration Initiative (FERI)

- It is a **collaborative project** developed by The **Korea Forest Service** of the Republic of Korea, in cooperation with the Executive Secretary of the **CBD in 2014**.
- **Mandate:** It directly supports developing countries in the implementation of the **Kunming-Montreal Global Biodiversity Framework (KMGBF)**

- KMGBF has a **set of 23 targets to be achieved by 2030** to halt and reverse biodiversity loss (adopted in 2022 to replace Aichi Biodiversity Targets).
- **FERI's other Initiatives:**
 - **Short-Term Action Plan on Ecosystem Restoration (STAPER)**
 - **WePlan – Forests:** A decision support platform for tropical forest ecosystem restoration.

About Forest ecosystem restoration

- It involves **returning trees to former forest land and improving the condition of degraded forests**, planting native tree species, conserving wild plants and animals and protecting the soils and water sources that are part of the forest ecosystem.



Major global Initiatives for forest restoration

- **IUCN's Forest Conservation Programme** for sustainable management of forests.
- **WWF's Forests For Life Programme** aims at conserving biological diversity.
- **'REDD+' framework of UN** for sustainable management of forests and the conservation and enhancement of forest carbon stocks.
- **The Forest and Landscape Restoration Mechanism (FLRM)** by Food and Agriculture organization(FAO).

5.7. NATURAL FARMING

Why in the News?

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

More on news

- Earlier, Zero Budget Natural Farming (ZBNF) was renamed as Bhartiya Prakritik Krishi Padhati (BPKP) and made a sub-scheme under umbrella scheme of Paramparagat Krishi Vikas Yojna (PKVY) in 2019.
 - **PKVY was** launched in 2015 to **produce agricultural products free from chemicals and pesticides** residues by adopting eco-friendly, low-cost technologies.
- **BPKP was renamed as NMNF from 2023-24** for implementation all across the country.
 - BPKP is a **Centrally Sponsored Scheme**, initiated for a period of six years (2019-25).
 - It aims to cover 12 Lakh ha in 600 major blocks of the country and provides financial assistance of Rs.12,200/ha for 3 years for Cluster formation and Capacity building.

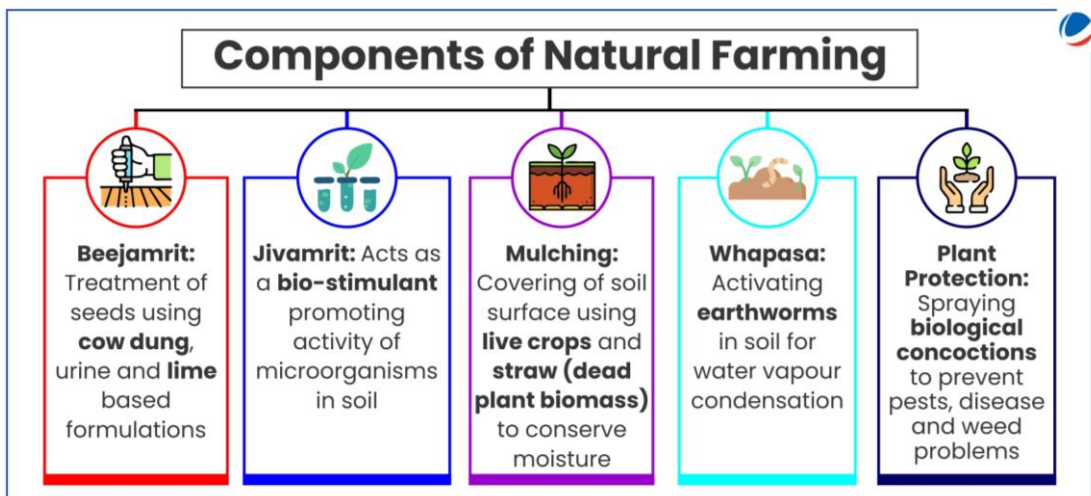


About National Mission on Natural Farming

- **Implementation:** In 15,000 clusters in willing Gram Panchayats reaching 1 crore farmers, initiating NF in 7.5 lakh hectare area over the next 2 years.
- **Other components of the mission:**
 - **Bio-input Resource Centres (BRCs)** will be established for easy availability of ready-to-use inputs.
 - **Model Demonstration Farms** will be set up to train farmers.
 - **Krishi Sakhi** for awareness generation, mobilisation and handholding of willing farmers.

About Natural Farming

- It is a **chemical free, low-input, climate-resilient farming system** based on livestock and locally available resources while eliminating synthetic agro-chemicals.
- **States practicing NF** are Andhra Pradesh, Chhattisgarh, Kerala, Gujarat, Himachal Pradesh, Jharkhand, etc.



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.
- **Differences:**

Parameter	Organic Farming	Natural Farming
Input	Involves off-farm purchased organic and biological inputs.	No external inputs and use on-farm inputs based on Desi Cow.
Soil Correction	Need based soil correction through natural mined minerals.	Use of compost/ vermi compost and minerals are not allowed.
Agro Practices	Requires practices like plowing, tilting, mixing of manures, weeding, etc. to be performed.	Decomposition of organic matter by microbes and earthworms is encouraged on the soil surface.
Cost	More expensive due to need for organic manures.	Low cost due to reliance on local biodiversity.

Significance of Natural Farming

- **Improved Yield:** By **maximizing production factors** like labour, soil, equipment and by avoiding use of non-natural inputs like fertilizers, herbicides and pesticides.
- **Enhanced income:** Encouraging local resources like Jivamrit and Beejamrit **reduces reliance on costly fertilizers and chemicals, boosting farmers' incomes** and making farming sustainable and aspirational.
- **Ensure better health:** As NF avoids synthetic chemicals, it eliminates health risks and hazards while offering higher nutrient density and better health benefits.
- **Employment generation:** By creating job opportunities across the agricultural value chain, from production and distribution to market linkages for natural produce.
- **Environment Conservation:** NF ensures **better soil biology, improved agro-biodiversity** and a more judicious usage of water with much smaller carbon and nitrogen footprints.
- **Rejuvenates Soil Health:** NF revitalizes soil microbiota, improving soil health by using bio-inoculums and natural pesticides, which **enhance nutrient content in plants and increase bioavailability** for humans.

Other Initiatives to promote Natural Farming

- **National Centre for Management of Agriculture Extension (MANAGE):** MANAGE is a knowledge partner for documentation of best practices, digitalization of success stories on Natural Farming.
- **National Centre for Organic and Natural Farming (NCONF):** For promotion of chemical-free agricultural systems and development of certification programme for Natural Farming.
- **State initiatives:**
 - **Prakritik Kheti Khushhal Kissan (PK3) Yojana, Himachal Pradesh:** It engages in NF and attempts to lower cultivation costs and increase farmers' revenue.
 - **Gujarat Atma Nirbhar package:** Under it, **special financial assistance was announced** for promoting Natural Farming practices in Budget 2020–21.

Issues associated with Natural Farming

- **Yield Uncertainty:** NF often produces **lower yields compared to conventional farming**, and requires higher investments in initial phase, creating **income risks for farmers**.
- **Input Supply Issues:** Availability of cow dung and urine for bio-fertilizers is often inconsistent.
- **Knowledge and Skill Gap:** Lack of extension services, training, **labour intensive nature due to reliance on manual intervention** to prepare and apply bio-inputs like Jeevamrit and Beejamrit hinder widespread adoption.
- **Market Challenges:** Natural produce often **lacks a dedicated supply chain, consumer awareness; marketing support, certification mechanisms** etc. making it difficult for farmers to secure fair and remunerative prices.
- **Policy Gaps:** Lack of clear guidelines on quality regulations and standards of natural inputs, limited government funding in natural farming practices slows innovation and adoption.
- **Climate Change and Pest Attacks:** NF practices are more **prone to climate change-induced weather extremes and pest outbreaks** (For eg. Locust attacks in Rajasthan), increasing risks of crop failure.

Way Forward

- **Farmer Producer Organizations (FPOs):** FPOs by collectivizing produce for **streamlined procurement, implementing robust supply chain, building consumer trust etc.** can enhance adoption of natural farming.
- **Farmer Training:** Farmers must be extensively trained in preparing inputs such as desi cow dung-urine formulations, bio-inputs, and botanical extracts.
- **Awareness generation:** Creating awareness and providing comprehensive training on practices like soil health management, pest control, and crop rotation, with support from ground partners, is essential for adoption.
- **Marketing Support:** Strengthen marketing by establishing **dedicated retail outlets in urban centres and introducing self-assessed certification systems to authenticate natural produce.**
- **Adoption of best practices:** For example, **Andhra Pradesh Community Managed Natural Farming (APCNF) programme** promoting natural farming practices has helped 6 million farmers.

5.8. GLACIAL LAKE OUTBURST FLOODS (GLOFS)

Why in the News?


According to a recent report by **Central Water Commission (CWC)**, glacial lakes and other water bodies in the Himalayas have expanded their surface area.

Key Findings of the report


- **Increase in area of glacial lakes in India:** Increase of **33.7%**. (2011-2024)
- **Transboundary risks:** 10.81% increase in area from 2011 to 2024 of Glacial lakes and other water bodies in the Himalayan region, including neighbouring countries like Bhutan, Nepal and China, due to climate change.
- **Lakes in High-risk category for GLOFs:** 67 lakes identified in India experienced over a **40% increase** in surface area.
 - The regions with the most notable expansions include **Ladakh, Himachal Pradesh, Uttarakhand, Sikkim, and Arunachal Pradesh.**

About Glacial Lake and Glacial lake outburst flood (GLOFs)

- **Glacial lakes:** It is a **body of water** formed by the **melting of glacial ice**, typically created in depressions or basins carved out by glaciers during their movement.
 - There are **4 categories of glacial lakes** (based on their formation process) i.e. Moraine-dammed, Ice-dammed, Erosion, and others.
- **GLOFs:** It is a **release of meltwater** from a moraine or ice dam glacial due to dam failure.
- **GLOFs have three main features**
 - Involve **sudden** (and sometimes cyclic) releases of water.
 - Tend to be **rapid events**, lasting hours to days.
 - Result in **large downstream river discharges**.
- **Examples of GLOFs**
 - **2023:** GLOF at South Lhonak, destroyed the Teesta III Dam at Chungthang in Sikkim.
 - **2013:** GLOF in Chorabari glacial lake and floods in Mandakini river in Uttarakhand.



Central Water Commission



Ministry: Ministry of Jal Shakti



Aim: To promote integrated and sustainable development and management of India's water resources.

CWC deals with only surface water while **Central Groundwater Board (CGWB)** deals with **groundwater**.

Major Causes of GLOFs

- **Glacial Surging:** Sudden movement of ice over a relatively short period of time resulting in severe rapid glacier advance. E.g., Gilkey Glacier, Alaska.
- **Moraine dam instability:** Loose, unconsolidated moraines, which are inherently unstable, can collapse due to structural weakness. E.g., South Lhonak GLOFs, Sikkim
- **Ice dam failure:** Due to thermal stress, water pressure and internal melting weakening their structure.
- **Seismic activity:** Tectonic movements in mountainous regions can create sudden structural change.
- **Human Activity:** Activities such as unregulated urbanization, irrational mining, deforestation, hydropower projects, GHG emissions etc. can alter drainage patterns and stability of slope.

Impacts of GLOFs

 <p>Impact on humans</p> <ul style="list-style-type: none"> ▶ Loss of lives and property ▶ Impact on infrastructure like hydropower plants, roads, and buildings ▶ Agricultural land rendered unproductive due to silt deposition. 	 <p>Environmental damage</p> <ul style="list-style-type: none"> ▶ Destabilization of river ecosystems ▶ Destruction of natural habitats ▶ Erosion, deforestation, and land degradation
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Initiatives taken in India for GLOFs management

- **National Disaster Management Authority Guidelines** for Management of Glacial Lake Outburst Floods (GLOFs)
- **NDMA has identified high-risk glacial lakes** in six Himalayan region and plans to conduct targeted expeditions to assess risks and develop comprehensive mitigation strategies.
- **Review of the design flood of all the existing and under construction dams** vulnerable to GLOFs by CWC.
 - **GLOF Studies made mandatory** for all new dams planned having Glacial Lakes in their catchments.
- **GLOF risk mitigation project** approved by **High-Level Committee** Chaired by the Union Home Minister for the States of Himachal Pradesh, Uttarakhand, Sikkim and Arunachal Pradesh.
- **National Mission on Himalayan Studies (NMHS)** status of glacial lakes in Sikkim Himalayas prepared by National Institute of Hydrology, Roorkee.

Global initiatives for GLOFs management

- **HKH cryosphere initiative** by **International Centre for Integrated Mountain Development (ICIMOD)** to monitor glacial lakes.
- **Global Climate Observing System:** Encourages governments to invest in **early warning systems** and **remote sensing technologies** to track glacial lake growth and stability.
- **UNESCO Climate Change and Mountain Ecosystem Programme:** Promotes sustainable tourism and conservation to minimize human interference in vulnerable zones.
- **Sendai Framework for Disaster risk reduction:** Encourages international cooperation to manage cross-border GLOF risks.

Challenges in managing GLOFs

- **Difficult and highly inaccessible Himalayan terrain** makes it difficult to conduct regular surveys.
- **Lack of early warning systems (EWS)** which require robust planning and **heavy infrastructure**.
- **Vulnerability of Himalayan region:** Due to its presence in Seismic zone – IV & V, Himalayan region is prone to earthquakes and landslides.
- **Climate change:** Rising temperature is leading to shrinkage of glaciers.
 - As per International Centre for Integrated Mountain Development (ICIMOD,) 70-80% of current **glacier** volume in Hindu Kush Himalaya (HKH) will disappear by 2100 under a high emission scenario.

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** and case studies from the Himalayas and other mountain ranges such as the Alps, Tian Shan Range and the Andes.
- **Enhance Technical Expertise and Build Capacity:** Develop greater understanding to **enhance technical expertise** at the National and State level.
- **Foster Collaboration and Strategy Development:** Facilitate collaboration among **experts, policymakers, and stakeholders** to develop and implement comprehensive strategies for monitoring and mitigating GLOF risks.
- **Exploring Mitigation Strategies:** Examine structural and non-structural mitigation measures, including controlled breaching, siphoning, and the construction of outlet control structures, as well as community-based approaches.
- **Advancing Monitoring and Early Warning Systems:** Discuss the **integration of satellite-based monitoring, Geographic Information Systems (GIS), and remote sensing technologies** in predicting GLOFs.
 - Explore the development and implementation of early warning systems **tailored to the unique challenges** of the Himalayan region.

5.9. NEWS IN SHORTS

5.9.1. GLOBAL CARBON BUDGET REPORT

Global Carbon Budget report was published by **Global Carbon Project** during UNFCCC's COP29 summit.

- At the current rate of emissions, it is **estimated a 50% chance that global average temperatures will exceed 1.5 degrees consistently in about six years.**
- This year, possibly, will be the **first time the threshold of 1.5 degrees is crossed.**

The carbon budget: It's the amount of CO₂ emissions that **will result in limiting global warming to a given level**, in this case, **the Paris accord's target of 1.5 degrees C over pre-industrial levels.**

Global Carbon Project (GCP)

 **Genesis:** It was established in 2001.

 **About:** It is a Global Research Project of Future Earth and a research partner of World Climate Research Programme.

 **Aim:** to track the **trends in global carbon emissions and sinks** and is act as a **key measure of progress towards the goals of the Paris Agreement.**

 **Publications:** Global budgets for **three dominant greenhouse gases – carbon dioxide, methane, and nitrous oxide.**

Key Findings:

- **Globally**, fossil-based CO₂ emissions are set to touch a record high of 37.4 billion tonnes this year.
- **The largest contributions to global fossil CO₂ emissions** were **China (31%), the USA (13%), India (8%), and the European Union (7%),** in 2023.
 - These **four regions account for 59%** of global fossil CO₂ emissions, while the **rest of the world** contributed **41%**.
- Global emissions from **land-use changes** like deforestation have **dropped 20% over ten years**.
 - **Reforestation and new forests** offset about half of permanent deforestation emissions globally.
- The land and ocean CO₂ sinks combined took **around half of the total CO₂ emissions**, despite being negatively impacted by climate change.

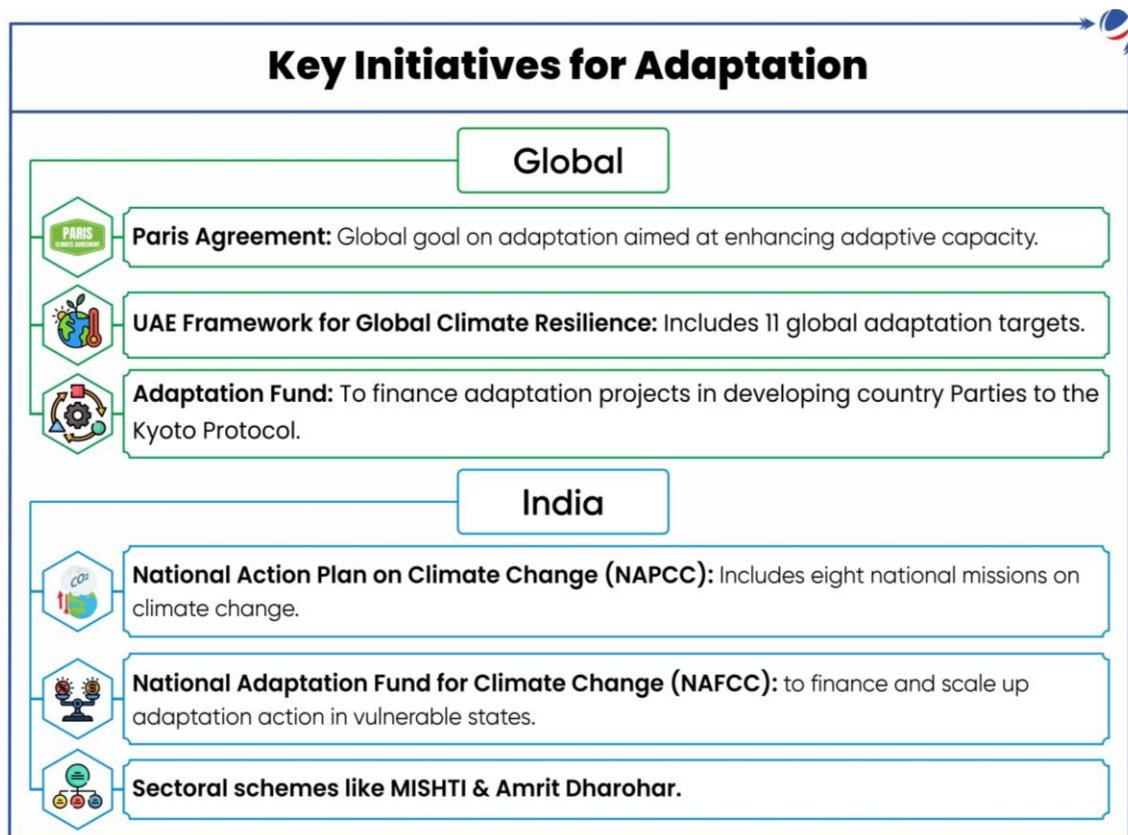
5.9.2. ADAPTATION GAP REPORT 2024

United Nations Environment Programme (UNEP) released Adaptation Gap Report 2024 that provides annual assessment on progress in adaptation planning, implementation and finance.

- **Adaptation Gap** is the **difference between actually implemented adaptation** (adjustment measures to actual or expected climate) and **a societally set goal**, reflecting resource limitations and competing priorities.

Key Findings of Report:

- **Adaptation Gap:** Adaptation gap is estimated at **US\$187-359 billion** per year.
- **Adaptation Progress:** International public adaptation finance flows to developing countries **increased to US\$27.5 billion in 2022**.
 - This reflects progress towards **Glasgow Climate Pact**, which urged developed nations to **at least double adaptation finance to developing countries** from US\$19 billion (2019) by 2025.



- **Significance of Adaptation:** Global climate risk can be halved through ambitious adaptation.
 - For instance, **US\$16 billion invested in agriculture** per year would prevent about **78 million people from climate change related starving or chronic hunger**.

Recommendations for bridging adaptation gap

- Adopt an ambitious **New Collective Quantified Goal** for climate finance at COP29.
- **Strengthening enabling factors**, adapting **new financial instruments, capacity building and technology transfer** are central.
- Adaptation financing needs to shift from reactive, incremental, project-based financing to more **anticipatory, strategic and transformational adaptation**.

5.9.3. UN ENVIRONMENT PROGRAMME RELEASES EMISSIONS GAP REPORT 2024

Report focuses on **global emission trends, future projections** and what is required from **next NDCs** to achieve long-term **temperature goals of Paris Agreement**.

Key Observations:

- **Greenhouse-gas (GHG) emissions rose to a new high** of 57 gigatons(Gt) of CO₂ equivalent in 2023 (1.3 % increase from 2022).
 - India **ranks 3rd in total GHG emissions** with 4,140 MtCO₂e compared to China (1st) & US (2nd).
- **Large disparities in Current and historic GHG emissions:** Six largest GHG emitters accounted for 63 % of global GHG emissions while least developed countries accounted for only 3 %
 - Similarly, **India's historical CO₂ emissions (1850–2022)** are much lower i.e 83 GtCO₂ than China (300 GtCO₂) & US (527 GtCO₂).
- **Missing NDC targets:** Adoption of more stringent policies is required across countries to achieve NDC targets for 2030.

About Nationally Determined Contributions (NDCs):

These are **national climate action plans** by each country to reduce GHG emissions.

Paris Agreement requires that NDCs are updated every five years with increasingly higher ambition, taking into consideration each country's capacity.

After original NDCs in 2015, and second round in 2020/2021, next round of NDCs – **"NDCs 3.0" are due in early 2025**

Recommendations for limiting global warming to 1.5°C:

- Nations must collectively commit to **cut 42 % off annual greenhouse gas emissions by 2030** and 57 % by 2035 in next NDCs.
- NDCs must include **all gases listed in Kyoto Protocol**, cover all sectors, and set specific targets.
- **Increased deployment of solar photovoltaic technologies** and wind energy could deliver 38 % of total emission reduction potential in 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

- It is first report to **assess global status of Protected and Conserved Areas (PCA)** in context of **Target 3 of Kunming-Montreal Global Biodiversity Framework (GBF)**.
 - **Protected Area** is geographically defined area which is regulated and managed to achieve specific conservation objectives.
 - **Conserved Areas** are **areas outside Protected Areas** that are managed to conserve biodiversity, ecosystem services, and local values.
- **Target 3** aims to **expand global network of PCA to 30% coverage** in a way that is equitable and respects rights of Indigenous Peoples and Local communities (IPLC).

Key findings

- **Global coverage of PCAs** has reached 17.6% of terrestrial and inland waters and 8.4% of marine and coastal areas.
- Over **two-thirds of Key Biodiversity Areas** are now **partially or fully covered by PCAs**, but 32% remain unprotected.

Initiatives Promoting Protected and Conserved Areas

Five types of protected areas under Wildlife (Protection) Act, 1972: Sanctuaries, National Parks, Conservation Reserves, Community Reserves, and Tiger Reserves.

Biodiversity Beyond National Jurisdiction (BBNJ) Agreement: Signed by India to protect ocean life.

Climate Adaptation and Protected Areas (CAPA) Initiative: Aims to use nature-based solutions to strengthen climate resilience and protect biodiversity in and around protected areas.

- Only **8.5% of land is both protected and connected**.
- Data on effectiveness of management is limited with **only 4% of protected areas are governed by IPLC**.

Way ahead

- **Recognition and support to Indigenous and Traditional Territories:** These territories cover 13.6% of global land and should be included in conservation efforts.
- **Provide international financing to developing countries** to fund expansion of PCAs: Under GBF, countries committed to increase investment in biodiversity from all sources to at least USD 200 billion per year by 2030.

5.9.5. 'AN EYE ON METHANE: INVISIBLE BUT NOT UNSEEN' REPORT

Fourth edition of 'An Eye on Methane: Invisible but not unseen' Report launched by United Nations Environment Programme's (UNEP) **International Methane Emissions Observatory (IMEO)**.

About IMEO

- IMEO, a **core implementing partner of Global Methane Pledge**, provide **open, reliable, and actionable data on methane emissions**.
- IMEO collects and publishes data through rigorous industry reporting via the **Oil and Gas Methane Partnership 2.0 (OGMP 2.0)**, from satellites via the **Methane Alert and Response System (MARS)**, from global methane science studies, and from national emissions inventories.

Key Findings of Report

- **Global Warming:** Human-caused methane emissions are responsible for **roughly one-third of the planet's current warming**.
- **Emissions from Oil and Gas Sector:** UNEP's OGMP 2.0, which require its members to report their emissions, covers only 42% of global production.
- **Emissions in Steel Supply Chain:** Production of metallurgical coal for steel production accounts for **one-tenth of energy sector methane emissions** and can be mitigated at a minimal cost.
- **Poor Response to Emissions:** Through MARS, IMEO alerts countries of major emissions but only 1% of such alerts received any substantive response.

Initiatives taken to reduce Methane Emissions

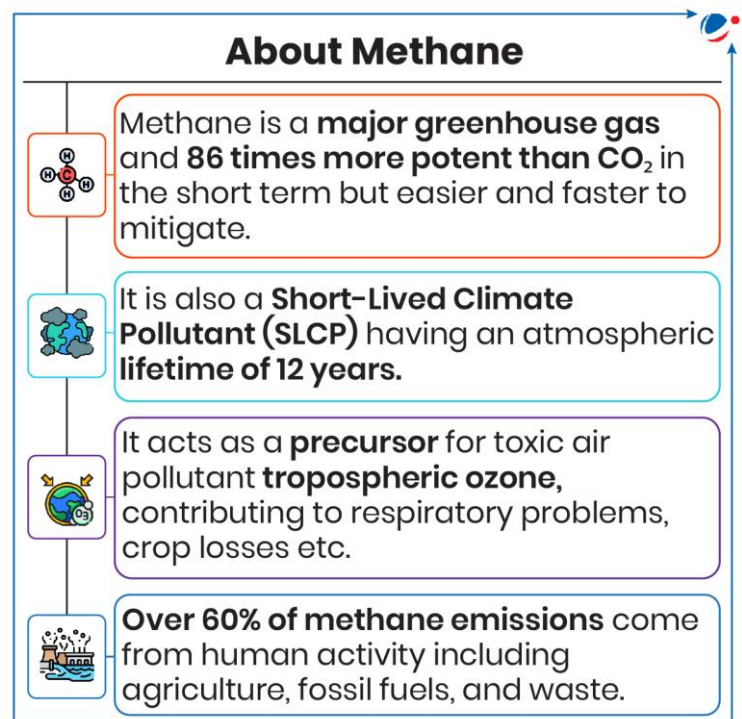
- **Global:** Global Methane Pledge, Climate and Clean Air Coalition, Global Methane Alliance etc.
- **India:** National Innovations in Climate Resilient Agriculture (NICRA) project, National Livestock Mission, Gobar-Dhan Scheme, New National Biogas and Organic Manure Programme etc.

5.9.6. WORLD ENERGY EMPLOYMENT REPORT, 2024

The World Energy Employment 2024 report has been released by the **International Energy Agency**.

Key findings

- **Global energy employment** outperformed broader labor market trends in 2023.
- **Clean energy** remains the primary engine of job growth.



India-Specific Findings

- **India's energy jobs account for over 8.5 million** i.e., 1.5 % of total employment (566 million) in 2023.
- India's energy sector, like many others, relies heavily on **informal labor**.
- The energy workforce, particularly in clean energy, is poised to see further growth with government initiatives fueling job creation.

5.9.7. CO₂ TO METHANOL PLANT

World's First CO₂ to Methanol Plant launched by NTPC at Vindhyachal

- NTPC announced successful **synthesis of CO₂ captured from flue gas with hydrogen** produced from a Proton Exchange Membrane (PEM) electrolyzer, which was then converted into methanol.
 - NTPC has also developed its **first indigenous methanol synthesis catalyst**.
 - It is considered to be a historic step in **carbon management and sustainable fuel production**.

About Methanol (CH₃OH)

- Also known as **methyl/wood alcohol**, it is the **simplest alcohol and mixes completely with water**.
- It's a **clear, colorless, flammable liquid with a distinctive odour similar to ethanol** (drinking alcohol).

5.9.8. EV-AS-A-SERVICE PROGRAMME

Recently, the Union Minister of Power, Housing & Urban Affairs unveiled '**EV as a Service**' Programme of **Convergence Energy Services Limited (CESL)**, a subsidiary of **Energy Efficiency Services Limited**.

- It follows the launch of the **PM E-DRIVE Scheme** to fast-tracking India's shift to electric mobility.
- **EV-as-a-Service model** offers **subscription-based access to electric vehicles**, eliminating the high upfront costs of purchasing an EV.

About EV-as-a-Service Programme

- Aims to **deploy 5,000 E-Cars in government departments** over the **next two years**.
- Aligns with India's ambitious goal of **achieving net zero emissions by 2070**.

5.9.9. GURU GHASIDAS-TAMOR PINGLA TIGER RESERVE

Guru Ghasidas-Tamor Pingla Tiger Reserve (TR) notified as **56th TR of India**.

- On the advice of National Tiger Conservation Authority (NTCA), **Chhattisgarh government** notified the areas comprising the **Guru Ghasidas National Park** and **Tamor Pingla Wildlife Sanctuary** as the 56th TR of India.

Key details

- **After Guru Ghasidas – Tamor Pingla TR** being notified Chhattisgarh now has **4 TRs: Indravati TR, Udanti-Sitanadi TR & Achanakmar**.
 - **TR is notified by State Governments** under the **Wildlife (Protection) Act, 1972 on advice of NTCA**.
- It's the **3rd largest TR** after Nagarjunasagar-Srisailem TR (A.P) and Manas TR (Assam).
- **A TR comprises:**
 - **Core/critical area:** Required to be kept as inviolate, **without affecting the rights** of the Scheduled Tribes or such other forest dwellers as per the **Forest Rights Act, 2006**.
 - **Buffer/peripheral area:** It promotes human-wildlife coexistence, with lesser protection. It **recognizes local rights**, determined through **Gram Sabha**.

Location & Landscape of Guru Ghasidas-Tamor Pingla TR:

- **Geography:** Chota Nagpur plateau and partly in Baghelkhand plateau.
- **Fauna:** leopards, hyenas, jackals, wolves, sloth bears, etc.
- **Rivers:** Hasdeo Gopad, Baranga etc.
- **Adopts Landscape approach to conservation:** As envisaged in the National Wildlife Action Plan (2017-31), the TR is contiguous with the Sanjay Dubri TR (MP), and connected with Bandhavgarh TR (MP) and Palamau TR (Jharkhand)

About Landscape approach to tiger conservation:

- It involves **viewing protected areas as a network of populations interconnected to each other through corridors** to support viable tiger populations.
 - **Interconnected populations** are referred to as **meta-populations**.
- **Significance:** Habitat connectivity, gene flow, reducing inbreeding depression, avoiding translocations etc.

5.9.10. CORAL TRIANGLE

The report '**Coral Triangle at Risk: Fossil Fuel Threats and Impact**' released at the 16th Conference of Parties (COP16) to the **Convention on Biological Diversity (CBD)**.

About the Report

- The report released by Earth Insight and SkyTruth highlights the **potential threats posed by fossil fuels to the Coral Triangle**.
- **According to the report coral triangle spans seven countries in Southeast Asia and Melanesia:** Indonesia, Malaysia, Papua New Guinea, Philippines, Singapore, Timor-Leste and Solomon Islands.
 - It is one of the world's most **bio-diverse marine regions**.

Significance of Coral Triangle:

- It hosts **76% of world's coral species, over 2,000 coral fish species**, and six of seven marine turtle species.
- It **supports 120 million people** who rely on it for food, and income, with its habitats critical for marine diversity, earning it nickname "**the Amazon of the seas.**"

Threats being faced by Coral Triangle:

- **Oil and Gas Exploration:** **Over 100 offshore oil and gas blocks are currently operating** in Triangle.
 - It threatens **Triangle's delicate ecosystems**, including coral reefs, mangroves, and seagrasses
- **Noise pollution:** From shipping and exploration activities **harms marine life**. Eg: Man-made noises can alter animal behaviors by damaging hearing or masking animal sounds.

Recommendations by report:

- Enact a **moratorium on oil and gas development in Coral Triangle**, while phasing out existing fossil fuel operations.
- Experts recommend Coral Triangle be **classified as a Particularly Sensitive Sea Area** to provide it with special protection from harmful maritime activities.

5.9.11. 'TSUNAMI READY' VILLAGESS

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

- The 24 coastal villages in Odisha were recognized as Tsunami Ready during **the 2nd Global Tsunami Symposium** in Indonesia, based on verification by the **National Tsunami Ready Recognition Board (NTRB)**.
- **NTRB**, comprising scientists from **Indian National Centre for Ocean Information Services (INCOIS)** and officers of **National Disaster Management Authority (NDMA)**, implements **Tsunami Ready Recognition Programme**.

UNESCO-IOC Tsunami Ready Recognition Programme (TRRP)

- TRRP is a **voluntary, international community-based** effort to bolster risk **prevention** and **mitigation** across **global coastal zones**.



- **Aim:** To build tsunami resilience through awareness and preparedness strategies that will protect life, livelihoods and property from tsunamis.
- **Methodology:** It has **12 preparedness indicators** for a consistent evaluation, and recognition is renewable every four years.

About Tsunami

- **Definition:** Tsunamis are a series of enormous waves created by underwater disturbances, often associated with earthquakes, volcanic eruptions, landslides, or coastal rock falls.
- **Origin:** The word “**tsunami**” comprises the **Japanese words “tsu” (meaning harbour) and “nami” (meaning wave).**
- **Characteristics:**
 - **Speed:** Over **500 miles per hour (mph)** and as a **tsunami enters shallow water**, it slows off to **20 to 30 mph**. The **wavelength decreases, the height increases.**
 - Tsunami wave speed depends on ocean depth, not distance from the wave’s source.

Steps taken by India

- **Indian Tsunami Early Warning Centre (ITEWC)**, which provides Tsunami advisories to 25 Indian Ocean countries for last- mile connectivity.
 - It has a network of **tsunami buoy systems** that **transmit real time data.**
 - INCOIS has established a **real time network of tide gauge stations** along **the Indian coast.**
- **NDMA Guidelines** on Management of Tsunamis in India.
- **Modeling and Mapping of Tsunami:** Along Indian coast as a part of the early tsunami and storm surge warning system

5.9.12. DEPRESIÓN AISLADA EN NIVELES ALTOS (DANA)

Recent catastrophic flash floods in Spain are attributed to **DANA**.

About DANA:

- DANA is a phenomenon in which a **mass of very cold polar air becomes isolated** from **polar jet stream** and begins to circulate at very high altitudes (5-9 km).
 - It forms **independently of polar or subtropical jet streams** unlike common storms.
- When it collides with **warmer, more humid air in Mediterranean Sea**, it **generates strong storms**, especially at end of northern summer and beginning of autumn.
- **Unlike a common storm**, which moves eastwards, a **DANA can remain stranded** in same place or even move westwards.

5.9.13. BOMB CYCLONE

Recently, a bomb cyclone struck **North-western US and western Canada**.

About Bomb Cyclone

- Also referred to as **bombogenesis**, it describes a **mid-latitude cyclone** (low pressure region) that rapidly intensifies over a **24-hour period**.
 - Witness a drop in their central air pressure to **at least 24 millibars in 24 hours.**
- Majority of these **occur over the ocean** and can be **tropical or non-tropical** in nature.
- Usually coupled with weather events, ranging from **blizzards to severe thunderstorms** to **heavy precipitation.**



5.9.14. LAKE KARIBA

A drought has drained **Lake Kariba** close to record lows, causing power shortage in the region.

About Lake Kariba

- It is the world’s **largest artificial lake** and **reservoir** by volume.
- Kariba lake is located in **Central Africa** in the **Zambezi River basin** between **Zambia and Zimbabwe.**

- Its construction was started during 1950s when British ruled Northern and Southern Rhodesia (now Zambia and Zimbabwe).
- Kariba Dam provides **electric power to both Zambia and Zimbabwe** and supports a thriving commercial fishing industry in Africa.

 <p>SMART QUIZ</p>	<p>You can scan this QR code to practice the Smart Quiz of Environment at our open test online platform for testing your understanding and recalling of the concepts.</p>	
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**One Year
CURRENT AFFAIRS
FOR PRELIMS 2025 IN 60 HOURS**

ENGLISH MEDIUM
9 JAN, 5 PM

हिन्दी माध्यम
17 JAN, 5 PM

-  Specific targeted content: oriented towards Prelims exam
-  Doubt Clearing sessions and mentoring
-  Complete coverage of The Hindu, Indian Express, PIB, Economic Times, Yojana, Economic Survey, Budget, India Year Book, RSTV, etc from April, 2024 to May, 2025
-  **Live** and **online** recorded classes that will help distance learning students and who prefers flexibility in class timing





6. SOCIAL ISSUES

6.1. WORK FROM HOME

Why in the news?

Recently, CII and Faculty of Management Studies (FMS), University of Delhi published a first-of-its-kind study titled “Work-from-Home: Benefits and Costs; An Exploratory Study in the Indian Context”.

Key Findings of the Report

- **Sustenance of WFH:** 68 per cent of the companies reported **continued use of WFH/remote working practices post the COVID-19 pandemic.**
- **Hybrid model of work:** Almost **half companies** studied promoted the hybrid work practices i.e. employees are expected to come to the **office for a limited period in the week.**
- **Short-term gains and long-term losses:** WFH confers **tangible benefits** for both employers and employees in the **short term** but may lead to some **intangible losses** relating to the **formation and sustenance of social, emotional, and human capital** in the **long term.**
- **Effectiveness of remote working:** It may be **less effective** for creating and sustaining **collaborative work cultures** by fostering **communication** and **teamwork** compared to traditional office-based work practices.

Evolving nature of Work: Advent of WFH

- **COVID-19 Pandemic:** Restrictions to movement forced due to the pandemic necessitated a **shift to remote work.**
- **Technological development:** Advancements in **personal technology** and **digital connectivity** have aided in realizing the potential of remote working.
- **Work from Anywhere:** Due to rise of **digital connectivity** and related infrastructure development, many employees are considering working from their **villages, travel destinations** etc.
 - E.g. advent of concepts like **digital nomads (location independent lifestyles).**
- **Rolling back of WFH:** However, many employers globally are rolling back the WFH arrangements post-pandemic.
 - E.g., Companies such as **Starbucks, Google and Amazon** have rolled back WFH with **return-to-office schedules.**



Benefits connected to WFH

Particulars	Benefits connected to WFH
Employees	<ul style="list-style-type: none"> • Reduced costs: For commutation and rental residence near workplace. • Increased Work productivity: WFH eliminates the hassle of commutation, allows flexible scheduling of work and rest.
Employers/Corporates	<ul style="list-style-type: none"> • Reduced costs: Office rentals, employee compensation packages etc. • Flexibility in hiring: Employers have access to the best talents across the world with elimination of geographical constraints. • Increased retention of employees: According to a Stanford study, resignations fell by 33% for workers who shifted to a hybrid schedule.
Macro Environment	<ul style="list-style-type: none"> • Sustainable work practices: Reduced transportation and electricity usage reduces carbon footprint and aiding organizations achieve their Environmental, Social and Governance (ESG) goals. • Work satisfaction among workers: Due to Work-life balance. • Equitable development: Remote work negates concentration of industrial development in few metropolitan cities. It may aid decentralized development and mitigate migration-related issues.

Family Relationships	<ul style="list-style-type: none"> • Work-life balance: The flexibility of time and location of WFH helps balancing work with family and personal commitments. <ul style="list-style-type: none"> ○ E.g., WFH is attractive for parents of newborn children. • Dissipating work stress: Spending more time with family can be positive for managing work-related stress. • Gender equality: Men with WFH can contribute better to household chores against the traditional gender roles and positively impact work productivity of married women.
Women	<ul style="list-style-type: none"> • Juggling duties: Flexibility of WFH aids women to better manage personal duties like childcare or caring for parents. • Labour force participation: WFH may improve women's job opportunities and performance, narrow the motherhood pay gap, and increase labour force participation of married women.

Challenges arising from WFH

For Employees

- **Separating work and home:** WFH results in **blurring of the boundaries** between home and office, **temporally and spatially**, potentially leading to **stress, and low productivity**.
 - A recent study has shown that working from home during COVID-19 pandemic adversely affected several lifestyle aspects such as **33% reduction in daily physical activity**.
- **Workspace constraints:** Lack of **segregated space** for **focused work** at home may impact work and increase costs related to **working at co-working spaces**.
- **Lack of rest and leisure:** Virtual work can create an **unhealthy cycle of working all the time**, or creating **pressure** to be available 24/7, or feeling like you **constantly need to catch up**.

For Employers

- **Intra-organisational communication:** **Coworker bonding** is vital for **teamwork** and **collective problem-solving**. **Virtual interactions** may impact **team bonding, work culture** and **organizational success**.
- **Management methodologies:** Employee **training and mentoring, and innovation** suffer when workers are not working on-site. E.g. **Traditional supervision methods** like **attendance monitoring** becomes less effective.
- **Professional isolation:** It is challenging for organizations to ensure that employees are not **alienated or isolated** from **the work environment**, which may impact the **quality of work** by the employee.
- **Privacy issues:** **Protection of organizational and client data** is challenging due to WFH.
 - E.g. India lacks a dedicated **law on cybersecurity**.
- **Questioning morality:** **Elon Musk** questioned the morality of **allowing a section of employees** to WFH while others, such as **factory workers** must continue **working on-site**.



For Family Relationships

- **Familial stress:** **Strained work prospects** and **strained familial ties** mutually reinforce each other. **Extended indoor confinement** can create strains in familial ties. E.g. **Domestic violence** cases rose during **pandemic**.
- **Family commitments:** **Duties like childcare or elderly care related issues** while working increases burden.
- **Mental health:** **Lack of social interactions and tensions** of work and home increases **stress and anxiety**, impacting **treatment of family members**. E.g. Being **impulsive** and **angry** with **child** due to a bad day at work.

For Women

- **Roadblock to professional success:** Women who work remotely can end up **earning less** and enjoying **less visibility within the company** than male counterparts who spend most of their time at the office.
- **Double burden:** Women face double burden of **work** and **traditional gender roles, amplified** due to WFH. E.g. **Cooking** is seen as a **women's job** irrespective of formal employment.

- **Reinforcing patriarchal ideas:** Women who opt for **flexible arrangements** may be **stigmatized** more than men for what is seen as **prioritizing family over work**.

Way forward

- **Reformed work arrangements:** Changing nature of work requires **change in management practices, systems, and philosophy**. E.g. performance monitoring mechanisms
- **Hybrid ecosystem:** It provides a **balanced approach**, adopting best practices of traditional and remote work.
- **Policy Considerations:** Governments and Organizations need to **develop clear policies** in line with the evolving nature of work with considerations like **accountability, privacy** etc.
- **Infrastructure development:** Remote work needs **reliable connectivity** available at all locations. **Internet infrastructure** in remote areas needs to be strengthened. E.g. 'Smart Villages', Bharatnet.

Scan the QR code to know more about **Future of Work**

Weekly Focus #99 Future of Work



6.2. ONE NATION ONE SUBSCRIPTION SCHEME

Why in the news?

The Union Cabinet approved the '**One Nation, One Subscription**' (ONOS) scheme to provide **equitable access** to scholarly journals in all public institutions.

About One Nation One Subscription Scheme

- **Objective:** To obtain national licenses for e-journal and database subscriptions across STEM and social sciences fields.
- **Key Features**
 - **Digital Access:** Access to ONOS will be managed by INFLIBNET (**Information and Library Network**), a UGC center, offering a fully digital process for all institutions.
 - **Monitoring:** The **Anusandhan National Research Foundation (ANRF)** will review the usage and publications of Indian authors periodically.
 - **International Journals:** It will host 13,000 journals from 30 leading publishers, including Oxford University Press, Cambridge University Press, Elsevier Science Direct (including Lancet) etc.
 - **Financial Allocation:** The government has allocated ₹6,000 crore for ONOS from 2025-2027 under a new Central Sector Scheme.
 - **Implementation Strategy:** The Department of Higher Education (DHE) will provide a unified portal and conduct Information, Education, and Communication (IEC) campaigns to raise awareness.

What is the need of One Nation One Subscription Scheme?

- **Profits from Public Funds:** Academic publishing is a highly profitable industry, generating USD 19 billion in revenue with profit margins **up to 40%**.
 - However, these profits are largely derived from public funds, yet concentrated in **a few private companies**.
- **Countering Predatory Publishing:** Numerous low-quality journals exploit Indian researchers for publication fees without proper peer review, undermining research quality.
- **Removing Access Barriers:** Subscription-based models restrict access to research due to high costs, limiting the ability of researchers from smaller institutions to collaborate globally.
 - **For ex-** Nature Communications charges \$6,790 per paper.
- **Favourable Agreement Clauses:** Indian institutions often sign publisher agreements that favor publishers' interests, like restrictive copyright transfers. This limits Indian researchers' control over their work.
- **Reducing Financial Burden:** In 2021, Indian authors paid ₹380 crore in Article Processing Charges (APCs) for Gold Open Access journals, highlighting the financial strain on researchers.

Issues with one nation one subscription

- **Shift to Open Access (OA):** With over 50% of research freely available, ONOS may become outdated.
 - For ex- the U.S. will require all publicly funded research to be freely accessible by 2026, raising doubts about ONOS's future beyond 2025.
- **Limitations of Nationwide Subscription:** ONOS

may prioritize popular journals, neglecting niche fields. This limits access for smaller communities and reduces research diversity.

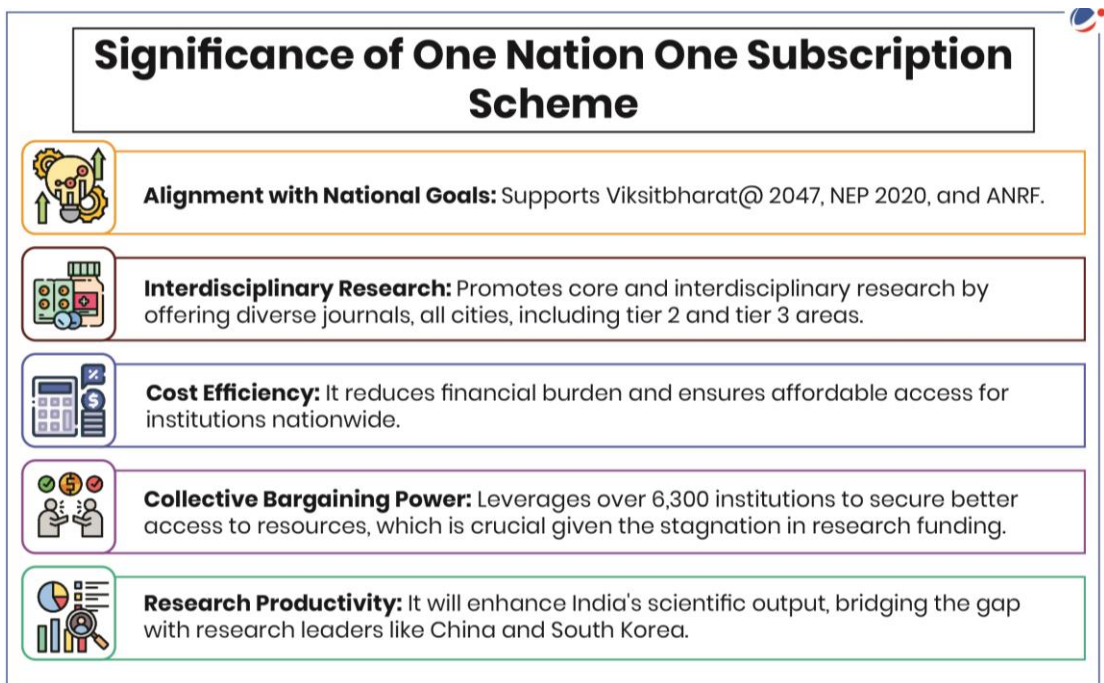
- **Commercial Publisher Dominance:** ONOS risks supporting Western publishers with high profit margins (up to 40%), undermining public-funded research.
- **Copyright Issues:** Researchers often give up copyrights when publishing, letting publishers use their work without permission.
 - **For ex-** Taylor & Francis allowed Microsoft to use its journals for AI training, but since authors lost copyright, Microsoft didn't need approval.
- **Digital Content Preservation:** Relying on publishers for content preservation is risky, as seen in the 2023 discontinuation of Heterocycles, a journal published by the Japan Institute of Heterocyclic Chemistry. This left 17,000 articles inaccessible.
- **Other Issues:** Lack of Support for Indian Journals; Transparency issues regarding selection, monitoring etc. under ONOS; Unreliable internet availability in tier 2 and tier 3 cities etc.

Way ahead

- **Negotiating National Licenses:** Aim for a 90-95% reduction in subscription costs, with favorable terms, including waivers on Article Processing Charges (APCs) for Indian researchers.
- **Agreement Clauses:** Develop a common model license agreement to protect institutional interests and ensure fair terms on IP, pricing, and renewals.
- **Innovative Services:** Build infrastructure to promote resource usage, ensure access, monitor trends, and provide training and support for sustainability.
- **Promote Open Access (OA):** Encourage OA and fair use of copyrighted materials, support OA journals, and provide funding for Article Processing Charges (APCs) for young researchers.

Anusandhan National Research Foundation (ANRF)

- **Genesis:** Established under the **ANRF 2023 Act**, which has also subsumed the **Science and Engineering Research Board (SERB)**.
- **Ministry:** Science and Technology.
- **Objective:** To seed, grow, and promote research and development (R&D) while fostering a culture of research and innovation across India's universities, colleges, research institutions, and R&D laboratories.



Functions:

- Acting as an apex body, ANRF will provide high-level strategic direction for scientific research in India, in alignment with the recommendations of the **National Education Policy (NEP)**.
- The foundation will foster collaboration between industry, academia, government departments, and research institutions, creating a platform for industry and State governments to work with scientific ministries.

Key Initiatives: PAIR Programme

‘Partnerships For Accelerated Innovation And Research’ (Pair) Programme is designed to **transform research and innovation in Indian Universities through hub and spoke model**.

- **Hubs:** For the 1st phase, hub will include institutions with high NIRF ranking that will guide emerging institutions (spokes) in research activities, provide access to harness their resources and expertise.
- **Spoke:** Central and State Public Universities and select NITs and IIITs (to be extended subsequently).

Organizational Structure:

- **Governing Board: Prime Minister serving as its President.**
- The Board’s President will also establish an **Executive Council**, led by the **Principal Scientific Advisor**, to implement the Foundation’s goals.

To know more about India’s R&D ecosystem, refer to Article 7.5 India’s R&D Ecosystem in September 2024 Monthly Current Affairs Magazine.

6.3. NEWS IN SHORTS

6.3.1. UNION CABINET APPROVED PM-VIDYALAXMI SCHEME

It is a new **Central Sector scheme** that seeks to provide **financial support to meritorious students** for higher studies.

- It is in line with the **National Education Policy, 2020**, which had **recommended financial assistance to meritorious students** in both public and private Higher education institutions.

Salient features of the scheme

- **Objective:** Provide financial support through **collateral free, guarantor free loans from banks and financial institutions** to cover full amount of tuition fees and other expenses related to the course in higher education.
- **Eligibility:** Any student who gets admission in **Quality Higher Education Institution (QHEIs)**.
- **Coverage: 860 qualifying QHEIs (Based on NIRF ranking)**, covering more than 22 lakh students.
- **Benefits:** Loan amounts up to Rs.7.5 lakhs will be provided a **75% credit guarantee by the Government of India**.
 - **3% interest subvention** for loan up to Rs.10 lakhs during moratorium period for eligible students.
- **Entirely digital system: Unified portal “PM-Vidyalaxmi”** for application of education loan as well as submit request for disbursement of interest subvention.
 - Payment of interest subvention will be made through **E-voucher and Central Bank Digital Currency (CBDC) wallets**.
- It will supplement **Pradhan Mantri Uchchar Shiksha Protsahan (PM-USP) Scheme**.

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

- **Objective:** To provide financial assistance to meritorious students from poor families to meet a part of their day-to-day expenses while pursuing higher studies.
- **Eligibility:** Based on the results of the Higher Secondary/ Class 12th Board Examination.
 - A maximum of **82,000 fresh scholarships per annum**.
- **Components:** Central Sector Interest Subsidy (CSIS) and Credit Guarantee Fund Scheme for Education Loans (CGFSEL).

6.3.2. PROTECTION OF CHILDREN FROM SEXUAL OFFENCES (POCSO) ACT, 2012

Supreme Court (SC) held that Sexual assault under POCSO cannot be quashed on the basis of the compromise between parties.

- The judgement was delivered in n **Ramji Lal Bairwa & Anr vs State of Rajasthan & Ors Case**.
- SC held this while reviewing Rajasthan High Court's decision of quashing a 'sexual assault' case under the Act.
- Case has been heard under **Special Leave Petition**.
 - **Article 136** of the Constitution vests the SC with a special power to grant **special leave** to appeal against any **judgment/order/decre** in any matter or cause passed or made by any Court/tribunal.

Key Observations

- **Rejection of Compromise Precedent:** Court made reference of the **State of M.P. v. Laxmi Narayan (2019) case** which held that an **offense against the society** cannot be compromised.
 - Also, endorsed the Delhi High Court judgment (Sunil Raikwar v. State) which held that a **POCSO offense cannot be settled**.
- **Non Private nature of offense:** Court observed that such crimes **cannot be treated as private matters** eligible for compromise-based quashing.
 - Also, held that cases which have **serious societal implications** should not be dismissed solely based on a settlement.

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

-  **Aim: Gender-neutral legislation** ensures child safety, punishes offenders based on the severity of offenses, and **comprehensively addresses child sexual abuse**.
-  **Definition of Child:** Any individual **below 18 years of age**.
-  **Three broad categories of sexual offences punishable:** Sexual assault, sexual harassment and using a child for pornography.
-  **2019 Amendment** introduced more stringent punishment including the death penalty for committing sexual crimes on children.

Scan the QR code to know more about **Child Rights**

Weekly Focus #70- Protection of Child Rights An unfinished agenda



6.3.3. 10 YEARS OF POLIO ERADICATION IN INDIA





In **2014**, the **World Health Organization** declared India polio-free based on criteria including three years of no wild poliovirus transmission, robust surveillance systems, and the destruction of any remaining stocks of the virus.

- It involved culmination of decades of dedicated efforts, starting with India's participation in the **Global Polio Eradication Initiative** and national immunization efforts under **Universal Immunization Programme (UIP)**.

About Universal Immunization Programme

- It is one of the world's largest public health programs providing **free vaccines for 12 vaccine-preventable diseases**.
- In **1985**, **Expanded Programme on Immunization** was renamed as **UIP**, broadening its reach to rural areas beyond urban centers.

About Poliomyelitis (Polio)

-  **Viral disease:** A highly infectious viral disease affecting children under 5 years old.
-  **Transmission:** Occurs primarily through the **faecal-oral route or contaminated food/water** and can lead to **paralysis by invading the nervous system**.
-  **Wild Poliovirus Strain Status:** **Type 1: Endemic in Pakistan and Afghanistan (as of 2022)** Type 2 and Type 3 are eradicated in 1999 and 2020 respectively.
-  **Vaccine-derived Polio:** Occurs when weakened strain in oral polio vaccine mutates and causes paralysis in under-vaccinated populations.

Preventive measures to maintain Polio-free status in India

- **Annual Polio Campaigns:** National Immunization Days (NID) and Sub-National Immunization Days (SNID) conducted annually to keep immunity levels high and ensure that no child is missed.
- **Surveillance and Border Vaccination:** Vaccination at international borders continues to mitigate the risk of polio re-importation from endemic regions.
- **Inactivated Polio Vaccine (IPV):** Introduced in 2015, provides additional protection against polio, especially against type 2 poliovirus.
- **Mission Indradhanush:** Launched in 2014, it aims to increase immunization coverage to 90%. Special attention is given to hard-to-reach areas with low immunization rates.

6.3.4. Children Lacking Minimum Dietary Diversity

A study revealed that 77% children in India aged 6-23 months lacking minimum dietary diversity.

About Minimum dietary diversity (MDD)

- According to WHO, **Minimum dietary diversity (MDD)** is present when a diet **contains five or more of following 8 food groups** i.e. breast milk; grains; legumes; dairy products; flesh foods ; eggs; fruits & Vegetables.
- Food intake from less than five food groups is considered **minimum dietary diversity failure (MDDF)**.

Key finding of Study Related to MDD in India (For Year 2019-21):

- **Regional Disparities:** Central region of India, particularly Uttar Pradesh, Rajasthan, Gujarat, Maharashtra, and Madhya Pradesh, has over 80% of **children with MDDF**.
- **Age Impact on MDDF:** children in younger age group, i.e. 6–11 months (87%) have highest prevalence of MDDF relative to higher age groups.
- **Vulnerable Sections:** Children from Other Backward Classes (OBC) have highest MDDF (79%), followed by Scheduled Castes (77%) and Scheduled Tribes (76%).
- **Other findings:** Children of **illiterate, young and rural-residing mothers** with no exposure to mass media were more likely to be diet deficient.

Issues in ensuring dietary diversity:

- **Nutritional Composition:** Fruits, vegetables & animal products are consumed minimally.
- **Lack of Education:** illiterate mothers have an MDDF of 81%, versus 75% for educated mothers.

Recommendations:

- **Targeted Outreach** (Prioritize efforts aimed at pregnant women, especially those with high-risk pregnancies),
- **Engaging communities** using local governance for nutrition activities.

6.3.5. UNESCO RELEASED ‘GLOBAL EDUCATION MONITORING REPORT 2024’

Report was released at the Global Education Meeting, **organized by United Nations Educational, Scientific and Cultural Organization (UNESCO)** and hosted at **Fortaleza by the Government of Brazil (Current G20 President)**.

Key Observations of the Report

- **Leaders as agents of change:** In education, leadership is a process of social influence aimed at maximizing joint efforts towards a common goal. **Function of an education leader:**
 - **Define their purpose** and plan how they will influence change.
 - **Balance targeted learning outcomes** with equity, quality, and inclusive education goals.



- **Lack of funding:** 4 in 10 countries spend less than 4% of GDP on education.
- **Out of School children:** 251 million children and youth globally and there has been a reduction of just 1% since 2015.
- **Access to education:** Central and Southern Asia has continued making rapid progress in access to education.
 - However, **Afghanistan, Bangladesh, India and Pakistan** have the largest out-of-school populations in the world

Key Recommendations

- **Leadership development:** Principals should be given the freedom to manage their schools effectively.
- **System leader:** Develop education officials' capacity to serve as system leaders
- **Climate change education** needs to be taught more in the earlier grades and across more subjects than just science.



India's Initiatives to develop School Leadership



National Education Policy 2020: Requires school principals to engage in workshops to enhance their leadership and management competencies.




National Initiative for School Heads' and Teachers' Holistic Advancement (NISHTHA): Providing training on learning outcomes, school-based assessment and learner-centred pedagogy.

 <p style="font-weight: bold; font-size: 1.2em;">SMART QUIZ</p>	<p>You can scan this QR code to practice the Smart Quiz of Social Issues & Social Schemes at our open test online platform for testing your understanding and recalling of the concepts.</p>	
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FAST TRACK COURSE 2025

GENERAL STUDIES PRELIMS


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



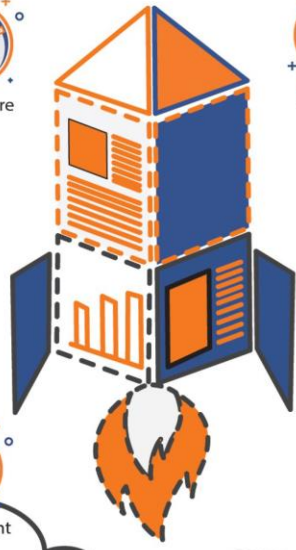
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ADMISSION OPEN

7. 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 on 1st foundation day of BRIC.

About Biotechnology Research and Innovation Council (BRIC)

- It is an **apex autonomous society, established by the Department of Biotechnology (DBT), Ministry of Science and Technology, by subsuming 14 Autonomous Institutions (Ais).**
- **Objectives:**
 - **Promoting cutting-edge research** in biotechnology aligned with national priorities,
 - **Fostering innovation** and translation across institutional boundaries,
 - **Developing indigenous technologies** and capabilities.
- BRIC aims to **establish a centralized and unified governance mechanism for its research institutions** through **intra-mural core grants.**
- BRIC plays a crucial role in **bringing together scientists and researchers from various institutions.**

About one day one genome

- **Aim:** An **annotated microbial genome will be publicly released every day** to make microbial genomics data more accessible to researchers.
- It will highlight the **unique bacterial species** found in our country and emphasize their critical roles in **environment, agriculture and the human health.**
- **Significance of the initiative:** Create employment and fuel **startup economy in biotech sector**; Help in **implementing India's Biotechnology for Economy, Environment, and Employment (BioE3) policy**; Unlock microbial potential of India by discovering such unknown microbes; spur innovation in microbial genomics etc.

*To know more about **Genome and Genome Sequencing**, kindly refer to **Article 7.4. Human Genome Sequencing in March 2024 edition of VisionIAS Current Affairs Magazine.***

About Microbial genomics

- It is the scientific field that studies the complete genetic material of microorganisms to understand their **structure, function, evolution**, and interactions with other organisms.
- Microbes, also known as microorganisms, are **microscopic living organisms that are too small to see with the naked eye.** E.g., bacteria, archaea, algae, protozoa, and microscopic animals such as the dust mite.

Significance of studying microbes

- **For human health:**
 - Understanding relationship between **disease causing bacteria and their genetic makeup** researcher can enable surveillance of emerging pathogens.
- **Advancing biotech application:** Identifying **microbial strains** with beneficial properties can help in **biofuel production, bio-manufacturing, development of bio-pharmaceuticals etc.**
- **Understanding microbial diversity:** Helps researchers **understand genetic basis** of diversity **within and between** microbial species.
- **For Environmental sustainability:**
 - **Bioremediation:** Microbes play an important role in all biogeochemical cycles, soil formation, mineral purification, **degradation of organic wastes** and toxic pollutants.
 - > **E.g., Ideonella sakaiensis** identified through genomics produce enzyme that degrade **PET plastic into reusable monomers.**
- **Human health and disease management:** Study of genomics helps in identifying the **role of a microbe in human health. Examples-**

- **Manipulation of the gut microbiota** is a **potential therapeutic option** to treat **chronic gastrointestinal diseases**.
- Genome sequencing of Mycobacterium tuberculosis helps detect **drug resistant strains**.
- **Agriculture:** Nutrient cycling, nitrogen fixation, maintaining soil fertility, controlling pest and weeds and stress responses.
 - **E.g., Rhizobium bacteria** forms symbiotic relationship with legumes to **fix nitrogen thus reducing the need for fertilizer**.

Scan the QR code to know more about **India's Bioeconomy**

Weekly Focus #127 India's Bioeconomy: Pioneering Growth through Innovation and Sustainability



7.1.1. HERITABLE HUMAN GENOME EDITING (HHGE)

Why is the news?

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

More of the news

- Country's new guidelines **on Ethics in Health Research** appear to **position South Africa as first to explicitly permit use of genome editing** to create genetically modified children.
- South African guidelines are **less stringent than frameworks proposed by organizations like WHO**, which emphasize societal consensus.

About HHGE:

- Unlike somatic cell editing, which affects only individuals, HHGE introduces **changes in germline cells (sperm, eggs, or embryos)**, enabling these alterations to be inherited by offspring.
 - **It can be achieved through tools like** Zinc-finger nucleases (ZFNs), Transcription Activator-Like Effector Nucleases (TALENs), CRISPR/Cas9 and Meganucleases.

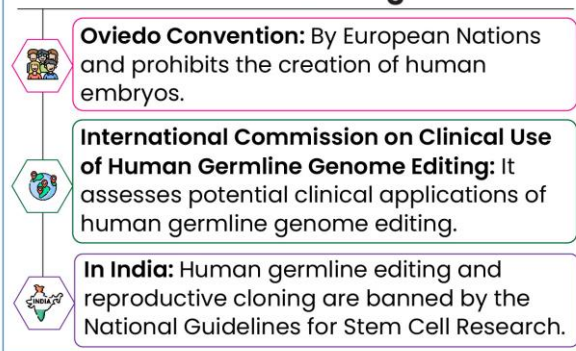
Potential Applications of Heritable Genome Editing:

- **Disease Prevention:** Such as Heritable diseases, cystic fibrosis, Huntington's disease, and sickle cell anemia.
- **Advancement of Genetic Research:** Potential to expand our understanding of human biology, genetics, and disease mechanisms.
- **Assisted reproductive technology:** can improve technologies, such as in vitro fertilization (IVF) etc.

Concerns of Heritable Genome Editing:

- **Unforeseen consequences:** Germline genome edits would be heritable, however, their effects could be multigenerational.
- **Ethical issues:** Against Dignity of humans and respect for their variety, challenging fundamental religious and moral beliefs etc.
- **Societal Impact:** Creation of "designer babies," where traits like intelligence, appearance, and athleticism might be engineered, can exacerbate social inequality.

Steps taken for Regulating Human Genome editing:



7.2. SATYENDRA NATH BOSE (S. N. BOSE)

Why in the News?

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

More about News

- **S. N. Bose National Centre for Basic Sciences** (under Department of Science and Technology) is celebrating the centenary of Bose's colossal work in theoretical physics to honour the great scientist.
- In 1924, Satyendra Nath Bose proposed a new approach to **understand the behaviour of particles or photons, based on quantum theory.**
 - His collaboration with the **Albert Einstein eventually led to postulation of B-E statistics.**

About Satyendra Nath Bose (1894-1974)

- Satyendra Nath Bose was an **Indian physicist** renowned for developing the theory of **Bose–Einstein statistics** and the concept of the **Bose–Einstein condensate.**
- He hailed from the **Nadia district in West Bengal.**
- Bose pursued his education at **Presidency College, Kolkata**, where he studied under prominent teachers like **Prafulla Chandra Ray and Jagadish Chandra Bose.**
- He served in the Physics Departments of both the **University of Calcutta and Dacca University.**

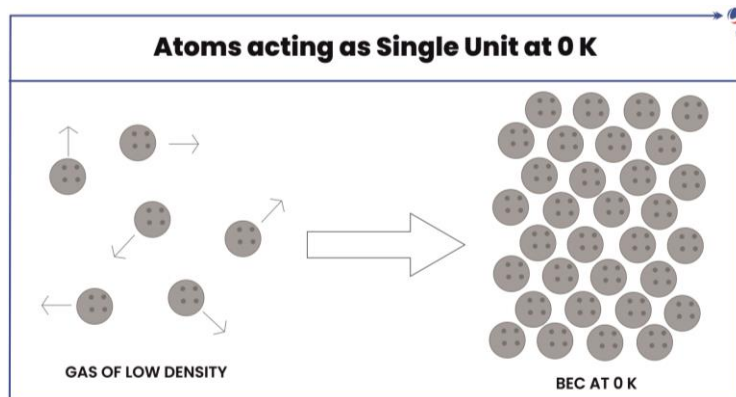
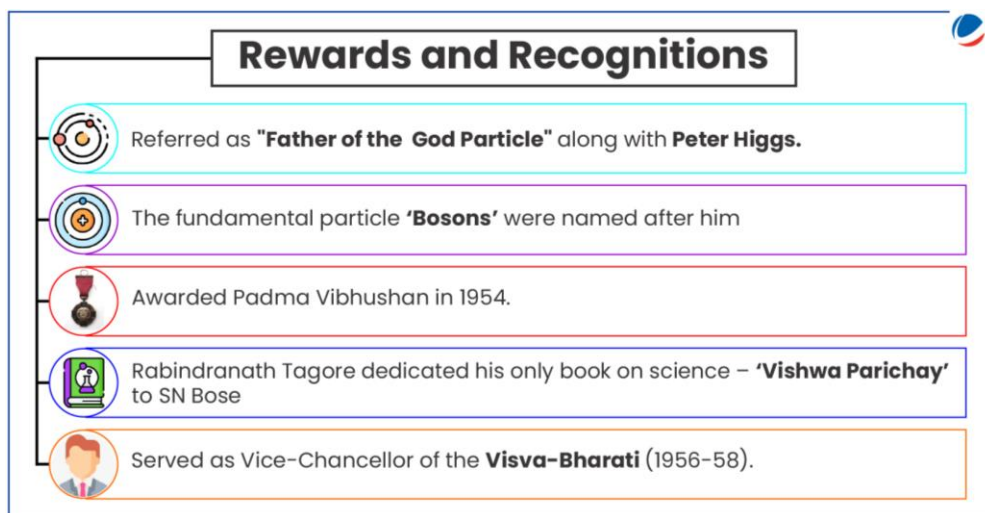
Scientific Contributions of S. N. Bose

- **Bose-Einstein Statistics:** It describe how a **collection of non-interacting and indistinguishable particles distribute themselves** among a set of available discrete energy states at thermodynamic equilibrium.

- Basically, it provides a **framework for understanding how these particles distribute themselves** among

available quantum states at different energy levels, particularly at low temperatures.

- The statistics was **extended to gas molecules** by Einstein and Particles which obey **B–E statistics** principle are referred as **“Bosons”**, named after S. N Bose.
 - > Bosons are **fundamental articles** that have integer values of spin(0, 1, 2, etc.). E.g. Photon, Gluon, etc.
- **Bose-Einstein statistics predict phenomena such as:**
 - > **Bose-Einstein Condensates (BEC):** At extremely low temperatures, a large fraction of bosons can occupy the same lowest-energy quantum state, forming a unique state of matter (e.g., superfluid helium or ultracold atomic gases).
 - > **Enabled first Quantum revolution** in 20th century which helped in development of technologies such as lasers, the transistor, Magnetic Resonance Imaging, and semiconductors.
 - ✓ **Second revolution** is defined by developments in technologies like quantum computing and quantum sensing, etc.
 - > **Photon Behavior:** The statistical rules explain blackbody radiation and the Planck distribution of energy, leading to the development of quantum mechanics.



- **Bose-Einstein Condensates (BEC):** It is a quantum phenomenon predicted by **Bose and Einstein (1925).**
 - It is a **state of matter created when particles are cooled** to near absolute zero (-273.15 degrees Celsius/0 Kelvin).

- All the atoms become a single entity at this point, and possess quantum properties, wherein each particle together functions as a wave of matter.
- Referred to as the **‘fifth state of matter’**
- **Properties of BEC include:**
 - > **Super fluidity:** BEC has zero viscosity and can flow without resistance.
 - > **Super conductivity:** The zero resistance leads to optimal conductivity.
 - > **Coherence:** All particles in the BEC are in the same quantum state behaving as a single entity.
 - > **Macroscopic Occupation:** In a BEC, a number of particles occupy a same quantum state, leading to a macroscopic wave function.
 - > **Super solid:** Scientists have observed that BECs form high density ‘droplets’ that repel each other. When placed under certain conditions, including a trap, these droplets arrange themselves in an ordered lattice.
 - > A Bose–Einstein condensate (**BEC**) **exists at higher temperatures** also in materials hosting bosonic quasiparticles such as magnons, excitons and polaritons.
- **Organic chemistry: X-ray diffraction methods** and the **differential thermal analysis** were employed in order to understand the atomic structure of common clay minerals.
- **Thermoluminescence:** He designed a **rapid scanning spectrophotometer of comparatively high sensitivity** to meet the requirements of the experimental workers in this field.
- **Discovery of GOD Particle:** The **Higgs Boson**, also known as the **God Particle**, was discovered using scientific principles rooted in Bose-Einstein statistics and the concept of BEC.
 - The **God Particle originates from an invisible field (Higgs Field)** that permeates all space, imparting mass to particles. Even when the universe appears empty, this field exists.

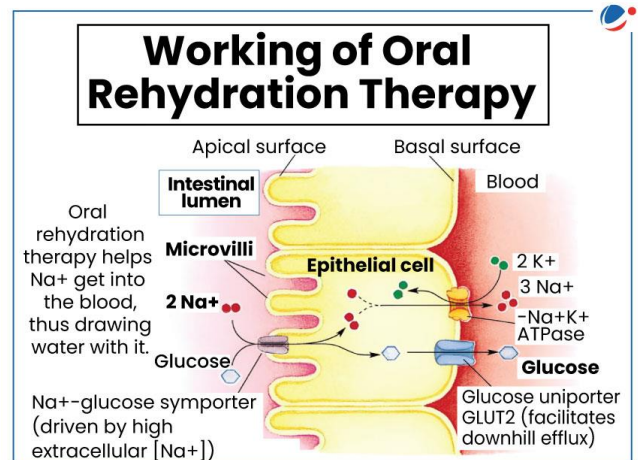
7.3. ORAL REHYDRATION THERAPY (ORT)

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

- **Oral rehydration therapy (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)
- Richard conducted the **first clinical trials of Oral Rehydration Therapy (ORT)** in cholera patients in Bangladesh in the late 1960s.
 - It demonstrated that this **low-cost intervention could effectively and safely reduce intravenous fluid needs.**
- **Dilip Mahalanabis** was an Indian pediatrician, scientist, and public health specialist who pioneered the use of **oral rehydration solution (ORS)** to treat diarrheal diseases.
- **Potent in Treatment of Diarrhea and Cholera:**
 - **Diarrhea:**
 - > **Reduction in Child Mortality:** ORT has significantly reduced deaths from diarrheal diseases, with child mortality declining by two-thirds since 1990.
 - > **Nutritional Impact:** ORT mitigates the nutritional effects of diarrhea in children, helping preserve their growth and development.
 - **Cholera:** ORT is highly effective in managing cholera patients, reducing mortality from over 50% to less than 0.2%.



- **Efficacy in Adults:** The patients receiving the oral solution required **80% less intravenous fluids** for cure in comparison to other techniques.

How ORT works?

- ORT works because of the **molecular mechanisms that govern sugar and sodium absorption inside the gut.**
- The cells that make up the lining of the gut have **special receptors on their surfaces that allow them to actively absorb sugar molecules.**
- The increase in sugar and sodium inside the cells leads to **increased absorption of water and chloride ions.**

Indian Initiatives:

- **National Oral Rehydration Therapy Programme (1985):**
 - Launched to promote the use of ORT to combat child mortality due to diarrhea.
 - Focused on awareness campaigns and training healthcare workers to administer ORT effectively.
- **National Health Mission (NHM):** ORT is a critical component of NHM programs targeting childhood illnesses like diarrhea and dehydration.
- **STOP Diarrhoea Campaign**

Global Initiatives:

- **Oral rehydration solution (ORS) and zinc are recommended by the WHO and UNICEF** to be used collectively to ensure the effective treatment of diarrhea
- **Global Task Force on Cholera Control (GTFCC):** Roadmap 2030
- **GAVI, the Vaccine Alliance:** GAVI supports initiatives to prevent and treat diarrheal diseases, including the promotion of ORT.

7.4. RNA EDITING

Why in the news?

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

More on the news

- Wave Life Sciences (US based biotechnology company) has successfully performed **RNA editing to treat alpha-1 antitrypsin deficiency (AATD, an inherited disorder).**
- In AATD, levels of **protein α -1 antitrypsin build up** and **affect liver and lungs.**

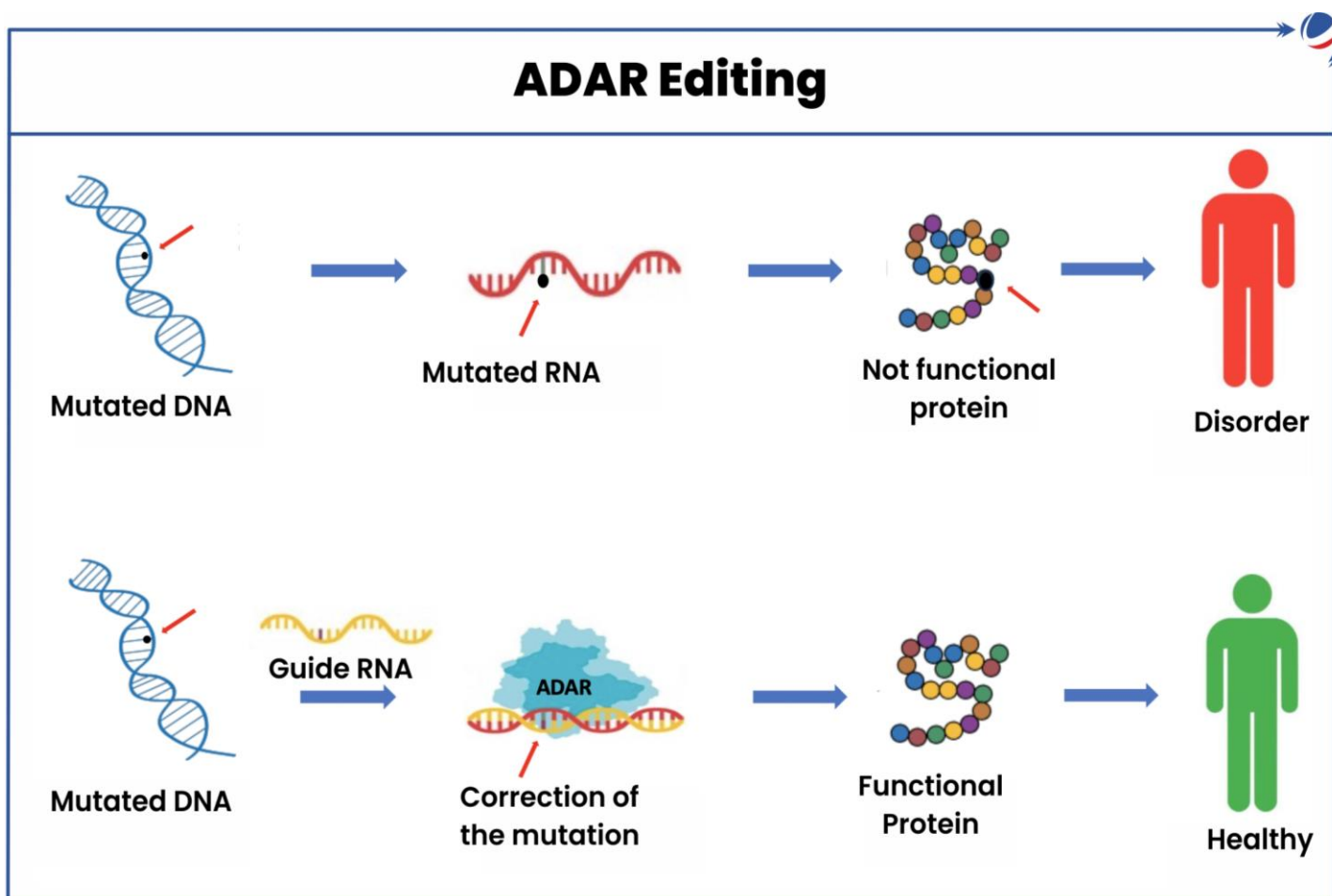
About RNA (Ribonucleic acid) Editing

- It is a process that **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). (refer image)
 - **gRNA** are **small RNA molecules** that **direct editing machinery by base-pairing with mRNA** in specific regions for modification.
- **Process**
 - RNA has **four building blocks:** A (Adenine), G (Guanine), U (Uracil), and C (Cytosine).
 - **ADAR converts adenosine in mRNA to inosine**, which mimics function of guanosine. (adenosine and guanosine are nucleosides combining A and G with ribose respectively).
 - Cell detects Inosine in Adenosine's position, triggering cellular response to correct the mismatch.
 - The process thus **restores mRNA's original function**, and **cell starts making normal proteins.**
- **Challenges in RNA Editing:** Lack of Specificity and Transient nature and nascent stage of development

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.**
 - Thus, RNA editing is **safer and flexible** compared to DNA editing which may result in **irreversible errors.**

- **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**.



To know more about RNA, refer to 7.2. Nobel Prize in Medicine 2024 in October 2024 Monthly Current Affairs Magazine.

7.5. NEWS IN SHORTS

7.5.1. SPACE BIOTECHNOLOGY

ISRO and Department of Biotechnology (DBT) join forced 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** such as cancers, cataracts, bone muscle loss, etc.
- In this regard, **Space biotechnology** would study how living organisms **adapt, function, and evolve in microgravity** conditions so as to advance **space exploration and human survival**.

Space biotechnology applications and their Significance:

- **Microgravity Research:** Space's microgravity enables better-quality **protein crystal growth**, enhancing understanding of structures for precise drug development.
- **Radiation Research:** E.g., BioSentinel (a NASA programme) will predict how human cells will **repair double-strand breaks** in response to **ionising radiation** in space.
 - **BioSentinel** was launched in 2022 on Artemis I.
- **Environmental Monitoring:** Study of microbes can be used for bioremediation to convert Mars and Moon regolith into soil capable of plant growth.

- **Disease Modelling:** Space biotechnology research can help model diseases to address the challenges astronauts face during long-duration space missions.
- **Bioregenerative Life Support Systems:** It enables self-sustaining missions through waste recycling, advancing Earth's sustainability and resource management solutions.

Initiatives

- **India:** Axiom-4 mission and Gaganyaan mission.
- **Global Initiatives: Space Biology Program** (NASA); **Biolab** (European Space Agency); **Space breeding programs** (China National Space Administration (CNSA)).

Scan the QR code to know more about **SpaceTech Industry**

Weekly Focus #112 SpaceTech Industry: From Curiosity to Reality



7.5.2. ANALOG SPACE MISSION

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

- It has been 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 locations that have physical similarities to that of the extreme space environments.
- **It may include testing of new technologies, robotic equipment, vehicles, study of behavioral effects (isolation and confinement).**
- **Reasons for choosing Leh (Ladakh)**
 - geographical features dry and cold climate, barren land, high-altitude terrain and extreme isolation closely resemble Martian and lunar landscapes.
- **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)

- It is a communication satellite of NewSpace India Limited (NSIL).
 - **NSIL** is commercial arm of the **Indian Space Research Organisation (ISRO).**
- **Features: Geosynchronous transfer orbit; Life span – 14 years; Mass around 4,700 kg.**
 - India's primary **launch vehicle, LVM-3, can carry payloads up to 4,000 kg,** thus rendering it incapable of carrying the GSAT payload (**SpaceX's Falcon-9**)
- **Significance: It** will enhance broadband services and in-flight connectivity across the Indian region. It offers pan-India coverage, including Andaman and Nicobar and Lakshadweep islands.

7.5.4. LIGNOSAT

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

- The satellite will study how wood withstands space's extreme conditions.

About LignoSat

- It is a small, palm-sized satellite made from **honoki wood,** a type of magnolia tree native to Japan.
- It also incorporates traditional aluminium structures and electronic components.
- **Significance:**
 - Wooden satellite is part of a plan to use **renewable materials** for space structures.

- Wood can **better withstand space conditions** than metal, as there's no water or oxygen to cause decay.
- When decommissioned, wooden satellites burn up **without releasing harmful pollutants, unlike metal ones.**

7.5.5. OPERATION DRONAGIRI

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

- These initiatives have been launched in efforts to **liberalise geospatial data, and developing geospatial infrastructure, geospatial skill and knowledge.**
- **Geospatial data** is information that describes objects, events or other features **with a location on or near the Earth's surface.**
 - **Examples:** Satellite imagery, census data, social media data etc.
 - Geospatial data is widely **accepted as a critical national infrastructure** and information resource.

About Operation Dronagiri

- It is a pilot project under **National Geospatial Policy 2022**, and will be implemented by **Geospatial Innovation Cell**, Department of Science and Technology.
- **Purpose:** To demonstrate the **potential applications of geospatial technologies** and innovations in improving the quality of life of citizens and ease of doing business.
- **First Phase Implementation:** In the states of UP, Haryana, Assam, Andhra Pradesh & Maharashtra.
 - Pilot projects and use cases will be demonstrated to showcase **potential applications** of integration of geospatial data and technology in 3 sectors: **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

- It marks a major event in extending satellite communications to everyday consumers which were earlier limited to emergency and military use.
- Global initiatives such as **AST SpaceMobile, Lynk Global, Constellation Global, SpaceX- Starlink** are also uses D2D technology.

Working of Direct-to-Device Satellite Technology

- **Principle:** Satellites act as cell towers in space, bypassing the need for terrestrial cell towers as used in traditional mobile connectivity.
 - It uses satellites in orbit to transmit signals directly to devices on the ground.
- **Non-Terrestrial Network (NTN) technology :** It allows for seamless two-way communication between devices and satellites.

- BSNL uses **Viasat's Geostationary L-band satellites** positioned 36,000 kilometers above which bypasses ground-based cell towers, making it ideal for remote coverage.

Significance

- **Reliable connectivity:** Uninterrupted internet connectivity, regardless of weather conditions.
- **High-speed internet and wider coverage** even in the **remotest areas** where cellular or Wi-Fi networks are unavailable.
- **Support UPI payments:** Empower people in rural or underserved regions to make digital transactions
- **Emergency calls and SOS messaging:** Communication in emergency situations where cellular or Wi-Fi networks are unavailable (useful for **adventurers, travellers etc**)

Challenges

- **Latency:** Ensuring minimal delay for real-time applications like voice calls and video streaming.
- **Regulatory Challenges:** As D2D service may cross geographical borders
- **Spectrum allocation:** Obtaining sufficient bandwidth for seamless satellite-to-ground communication.
- **Device compatibility:** Ensuring technology works across various smartphones and operating systems.
- **Propagation challenges:** Overcoming signal loss and interference in diverse environments

7.5.7. GRAVITY ENERGY STORAGE (GES)

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

About GES:

- It is a type of mechanical energy storage system that **uses gravitational potential energy to store and generate electricity.**
 - It involves **lifting a heavy mass during excess energy** generation and **releasing it to produce electricity** when demand rises or solar energy is unavailable.
 - > Types of weights used are often **water, concrete blocks or compressed earth blocks.**
- **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
- **Aims:**
 - Promote cutting-edge research in **genetic manipulation, metabolic pathways**, etc.
 - Address India's **biomanufacturing gap** by creating large-scale production facilities and nurturing startups.

7.5.9. FIRST INDIGENOUS ANTIBIOTIC

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

About Antibiotics

- They are **chemical substances** (produced both synthetically and by some microbes) used as **drugs** to kill or stop the growth of **disease-causing microorganisms.**
- They have **low toxicity for humans and animals** and can be mixed with livestock feed to check microbial infections in animals.
- They 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.

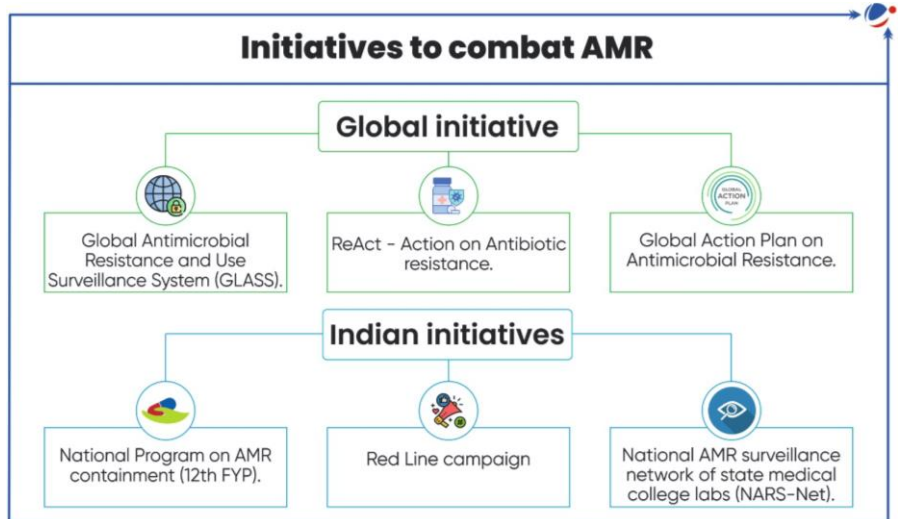
7.5.10. ADOPTION OF JEDDAH COMMITMENTS

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.
- Commitments aim to **translate the Political Declarations of the UNGA’s High-Level Meeting on AMR into practical commitments** for urgent actions.
 - **AMR** occurs when germs like bacteria, viruses, etc. **develop the ability to defeat the drugs designed to kill them.**

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 on AMR.
 - **One Health Approach** is an integrated, unified approach aimed to **sustainably balance and optimize health of people, animals and ecosystems.**
- **Independent Panel for Evidence on Action Against AMR by 2025:** To avoid duplication of ongoing efforts.
- **National AMR coordinating mechanism:** To implement and ensure sustainable financing and monitoring of National Action Plans (NAPs).
- **Promotes global data sharing** through platforms such as GLASS AMR/AMC, ANIMUSE, and INFARM.
- **Adherence to Codex Alimentarius Commission guidelines:** To ensure the prudent and responsible use of antimicrobials.
- **Supports Quadripartite organizations (FAO, WHO, WOA, UNEP):** To achieve 2030 goals of UNGA Political Declaration on AMR.



7.5.11. PANDEMIC FUND PROJECT LAUNCHED

- It focuses on “Animal Health Security Strengthening in India for Pandemic Preparedness and Response”.
- The minister also released documents on Standard Veterinary Treatment Guidelines (SVTG) and Crisis **Management Plan (CMP)** for animal diseases.

About Pandemic Fund Project

- It is a **\$25 Million initiative funded by the G20 Pandemic Fund** and was established under **Indonesia’s G20 Presidency (2022)**.
- **Aim:** enhance **low- and middle-income country’s** capacity to respond to animal health threats and pandemic through **financing investments**
- **Implementing Entities:** **Asian Development Bank (ADB), World Bank, Food and Agriculture Organization (FAO).**
- **Need to focus on animal disease outbreaks**
 - **Prevent Zoonotic Diseases:** **5 of 6 public health emergencies** declared by WHO had animal origin
 - **Minimize socio-economic impacts:** E.g. SARS and Avian flu are estimated to have caused global economic loss of \$50 B, and \$30 B, respectively.



- **Major Interventions under the Project includes:-**



- **Upgradation and expansion of animal health laboratories and vaccine manufacturing facilities.**
- **Enhancing early warning and surveillance mechanisms** to detect outbreaks and facilitate timely interventions.
- **Upgrading Data Management and Analytical systems** to enable better risk assessment.
- **Addressing Cross-Cutting Institutional Capacity Gaps at National and Regional Levels** through a disaster management framework for the livestock sector.


7.5.12. GLOBAL HEALTH EMERGENCY CORPS (GHEC)

WHO and 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** revealed the need to **ensure better-coordinated support to countries.**
- **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.


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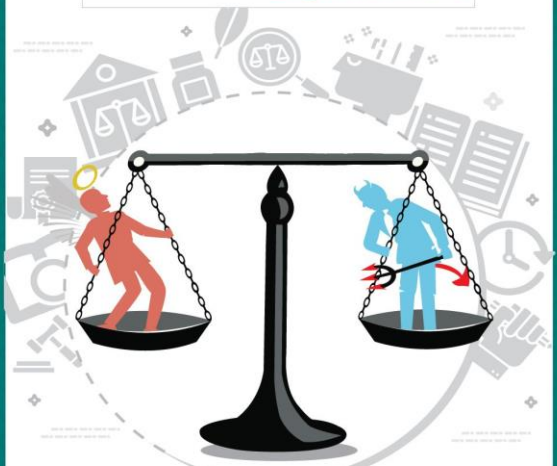


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8. CULTURE

8.1. BIRSA MUNDA

Why in News?

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

More about the News

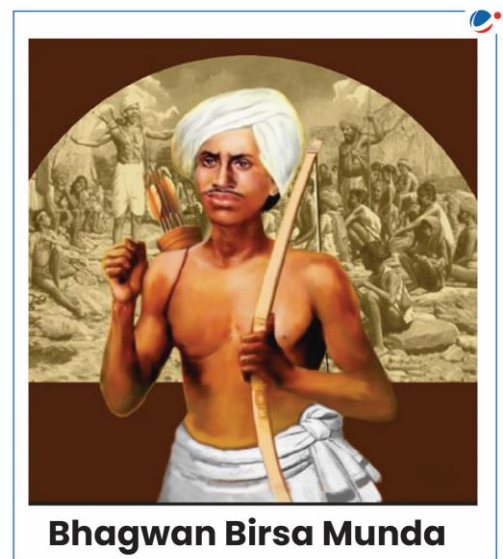
- Indian government declared **15th November** as Janjatiya Gaurav Divas during the Azadi Ka Amrit Mahotsav in 2021.
- It marks the birth anniversary of **Bhagwan Birsa Munda** and **honors the contributions of tribal communities, especially in India's freedom struggle**.
- **Key developments during the celebrations:**
 - Organized special events, celebrations etc. in Chhattisgarh named **"Maati Ke Veer Padyatra"** alongside **"My Bharat Youth Volunteers"**.
 - **Commemorative coin and postal stamp** in honor of **Bhagwan Birsa Munda**.
 - Inaugurated and laid the **foundation stone for development projects** worth over **6640 crores**, aimed at uplifting life of tribal communities under schemes like **Pradhan Mantri Janjati Adivasi Nyaya Maha Abhiyan (PM-JANMAN)**, Van Dhan Vikas Kendras (VDVKs) etc.

About Pradhan Mantri Janjati Adivasi Nyaya Maha Abhiyan (PM-JANMAN)

- Launched to provide Particularly Vulnerable Tribal Groups (**PVTGs**) households and habitations with **basic facilities** such as safe housing, clean drinking water etc. in 3 years (**2023-24 to 2025-26**).
- Aims to cover **75 PVTG communities** residing in 18 States and 1 UT.
- **Total budgetary outlay: Rs.24,104 Cr**
- It focuses on **11 critical interventions** being implemented by 9 Ministries such as Pucca houses and connecting roads by the Ministry of Rural Development.

About Birsa Munda

- **Early life**
 - Born in **Ulihatu Khunti district**, Jharkhand in **1875** with birth name **Daud Munda**.
 - Belonged to the **Munda tribe** of the **Chhotanagpur plateau area**, present day Jharkhand.
 - He spent some time in the company of a **prominent Vaishnav preacher Anand Panre**.
- **His Contributions:**
 - **Founded a new sect** known as the **Birsait**.
 - > It believed in **one God**, and aimed for **reforming tribal society** by observing a **code of conduct**.
 - **Took up a campaign** against **alcoholism, witchcraft and sorcery** and promoted among people **awareness about cleanliness**.
 - **Educated the tribal's** about British atrocities and made them aware of their **culture and heritage regarding community ownership of land**.
 - **Provided leadership to Munda rebellion** also known as the **"Ulgulan (Great Tumult) movement**.
- Because of his contributions to the Munda tribe, he is remembered as **Bhagwan (God)** and was given the title of **Dharti Aaba (Father of Earth)**.



About Munda Rebellion

- Under the movement, Birsa Munda mobilized tribes belonging to **Chhotanagpur, Bengal and Odisha** against the **Dikus** (outsiders) and Europeans (referred to as **Ravanas**) from **1895 onwards** to establish an **independent Munda Raj**.
- **Major Reasons for the revolt:**
 - **Introduction of Zamindari system:** Traditional systems like the **Mundari Khuntkatti (community land ownership)** were replaced, reducing **tribals from landowners to landless labourers**.
 - > Change in policies led to **Veth begari (forced labour) and Bandhua Majdooori (bonded labour)** conditions for tribals.
 - **Exploitation by the Dikus:** Colonial land revenue system introduced **intermediaries (thikadars)** from outside, leading to **exploitation through taxation, forced cash payments, excise controls**, and other levies.
 - **Missionaries criticising their traditional culture.**
- **Methodology:**
 - **Guerrilla warfare technique:** Used to attack symbols of power like the police station, government buildings and other structures administered by the **Dikus and the British authority**.
 - **Use of symbols:** Traditional symbols and indigenous language used to inspire and unite the tribal communities. It included-
 - > **Slogan by Birsa Munda:** “Abua Raj Setarjana, Maharani Raj Tundujana”. (Let the kingdom of the queen be ended and our kingdom be established.)
 - > **White Flag** conceptualized as a symbol of independence.
- **Key events of the movement:**
 - **1895:** Birsa Munda was arrested on charge for rioting and jailed for 2 years.
 - **1897:** After his release, he continued his activities of moving from village to village gathering support to **establish a kingdom under his leadership**.
 - **1900:** Birsa Munda arrested again in Chakradharpur forest and died of cholera in captivity.
- **Outcomes of the revolution**
 - **1908 Chhotanagpur Tenancy Act:** It prohibited tribal land transfer to non-tribals.
 - Government abolished forced labor called “**Veth Bigari**” system.

Do you know?

People said **Birsa Munda had miraculous powers** and could cure all diseases and multiply grain. He himself declared that God had appointed him to save his people from trouble, free them from the slavery of dikus (outsiders).

Role of Tribal communities in Indian National Movement



Safeguarding ancestral lands, traditions, and cultural identities for future generations from colonial influences



Mobilizing people and contributing to anti-colonial struggle at National level



Exposing exploitative British Policies and challenging British oppression

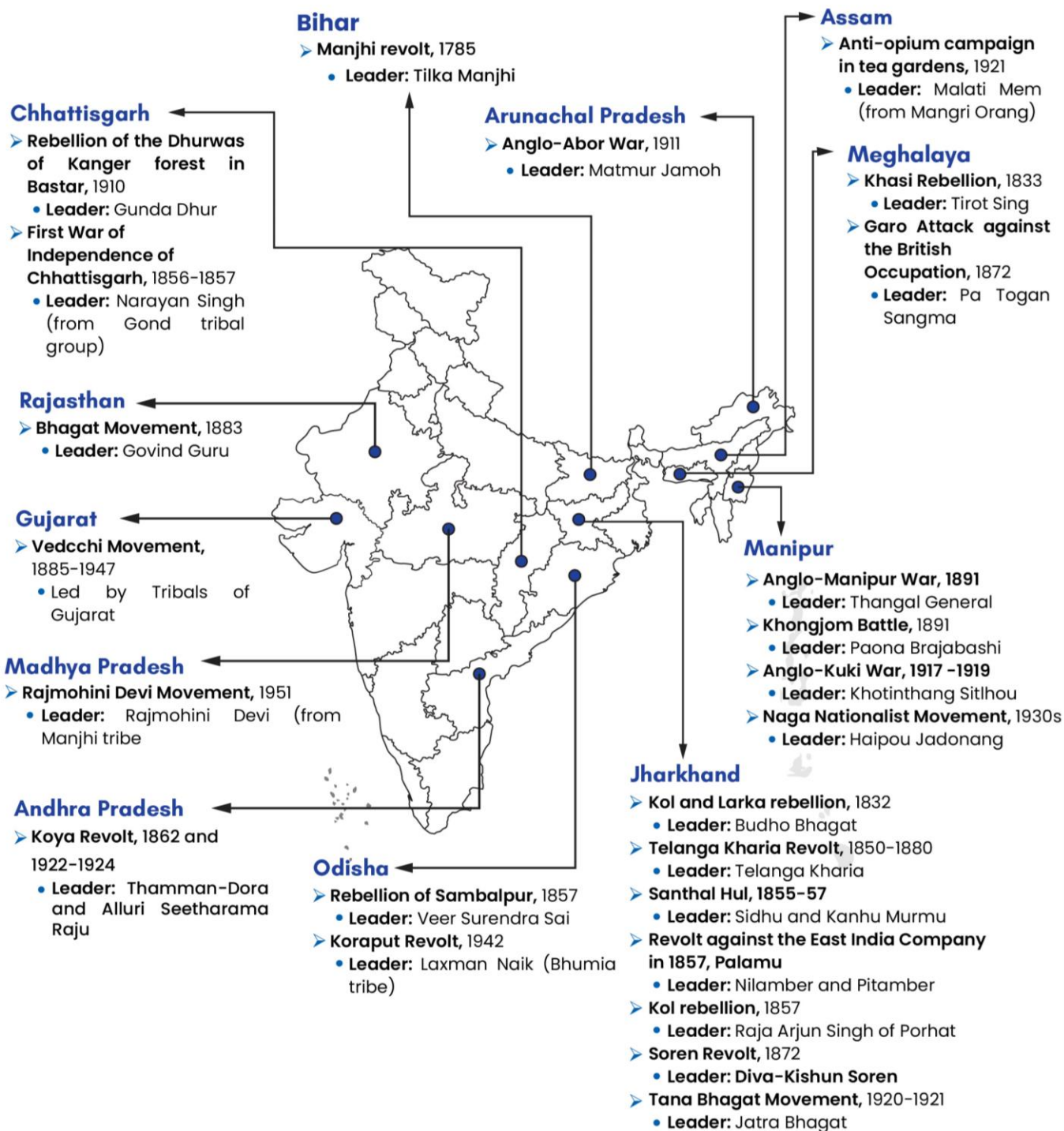


Development works like construction of roads, building bridges and establishing schools



Leading Social campaigns against superstitions and drinking.

Movements lead by Tribal leaders



Scan the QR code to know more about **Tribals in India**

Weekly Focus #77 Tribals in India- Charting a Development Path



8.2. NEWS IN SHORTS

8.2.1. SOHRAI PAINTING

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

About Sohrai painting

- Practiced mainly in mural art form in **Hazaribagh district, Jharkhand**.
- During Sohrai, a local festival, local tribal women make these paintings on **walls of their mud houses**.
- **Features:**
 - Known for their **use of natural pigments and simple tools**.
 - Artists often **use brushes made from twigs, rice straw, or even fingers** to create intricate designs.
 - **Depiction of animals, birds, and nature** is a reflection of the agrarian lifestyle and the reverence for wildlife in tribal culture.
- Sohrai-Khoovar Paintings have also been awarded **GI tag**.



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9. ETHICS

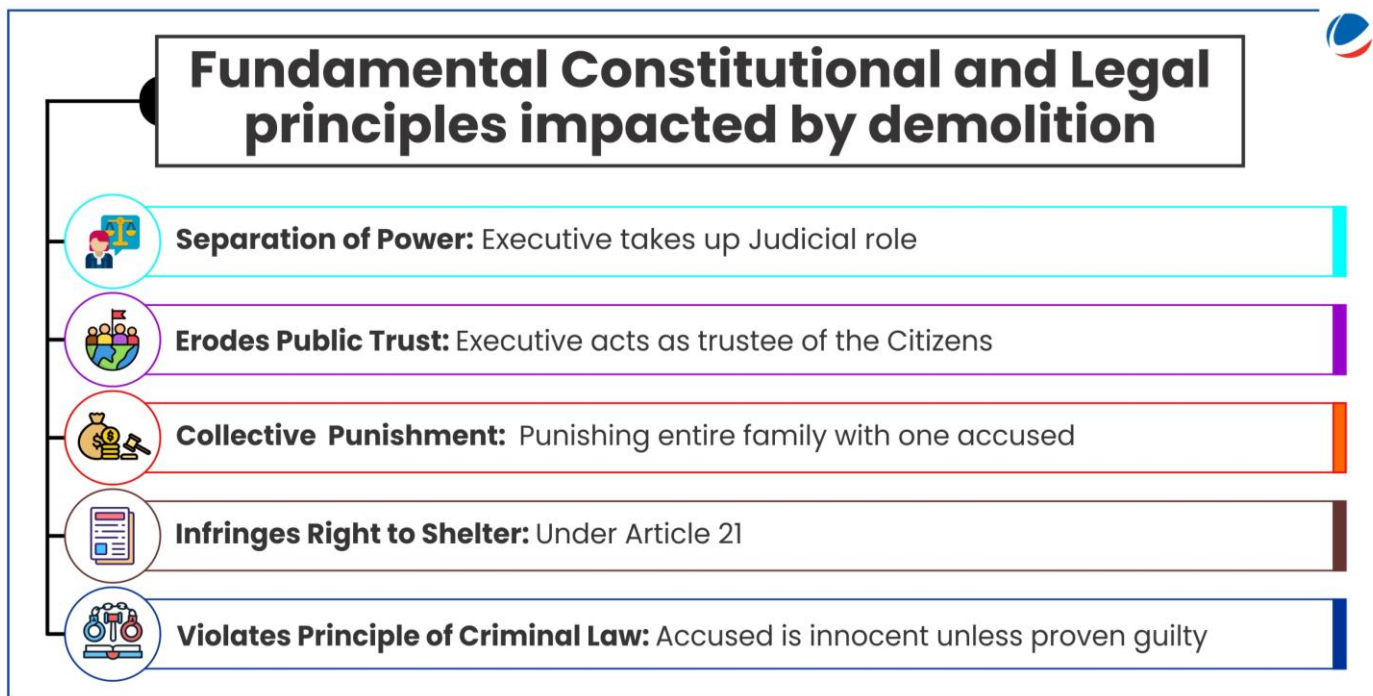
9.1. INSTANT JUSTICE

Introduction

Recently, Supreme Court (SC) issued pan-India guidelines on the **demolition of private properties**. The Court held that demolition of buildings without adhering to the **principles of Natural Justice**, and **due process of law** corresponds to a state of lawlessness **where ‘might is right’**. The Court also pointed out that instances of instant justice are misadventures **depicting the arbitrary executive action** and stand against the **constitutional ethos and values**.

Key Guidelines issued by the Court

- **Prior Notice:** No demolition is to be carried out without a prior show cause notice served to the owner of the property.
- **The opportunity of being heard:** The concerned person should be given an opportunity of a personal hearing by the designated authority.
- **Process of Demolition:** The proceedings should be **video-graphed, and recording** should be duly preserved.
- **Safeguard against violation:** The court held that violation of its directions would attract **contempt proceedings** along with **prosecution of the concerned authorities**.
- **Not applicability:** Guidelines are not applicable **in cases of unauthorized construction or court-ordered demolitions**.



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

Concept of Justice

Justice is the ethical, philosophical idea that **everyone should be treated fairly and equally by the law. Justice is not a static concept**, but rather one that is constantly evolving.

Major Theories on Justice

- **Utilitarian theory:** Given by **Jeremy Bentham**, it entails justice to a social order where the largest number of people has the highest satisfaction.
- **Rawl’s Theory of Justice:** He proposed **two principles of justice**: the principle of equal basic liberties and the difference principle.
 - The former ensures **equal rights and freedoms for all**, while the latter allows for **inequalities as long as they benefit the least advantaged** members of society.
- **Amartya Sen’s Theory of Justice (Capability Approach):** As per this theory, a **just and fair society** provides people with the **freedom to develop** abilities like access to a healthier lifestyle or education to enhance their functioning.

Type of justice

Types of Justice	Concept	Ethical Issues Involved
Distributive justice	<ul style="list-style-type: none"> • Also referred to as Economic Justice, it is concerned with giving all members of the society a “a fair share” of the benefits and resources available. 	<ul style="list-style-type: none"> • Whether the criteria for distribution has followed the principles of Equality, Equity, and Need?
Procedural justice	<ul style="list-style-type: none"> • Rules must be impartially followed and consistently applied in order to generate an unbiased decision. 	<ul style="list-style-type: none"> • How transparent should decision-making processes be, especially when dealing with sensitive or confidential information?
Retributive justice	<ul style="list-style-type: none"> • Idea that people deserve to be treated in the same way they treat others. • It is a retroactive approach that justifies punishment as a response to past injustice or wrongdoing. 	<ul style="list-style-type: none"> • How can we ensure that the punishment fits the crime, and who decides what is proportionate? Should focus of justice be on punishing offender or rehabilitating them?
Restorative Justice	<ul style="list-style-type: none"> • It seeks to repair and prevent similar harms from happening in the future by bringing both the accuser and accused together to address and communicate their needs. 	<ul style="list-style-type: none"> • Is restorative justice an appropriate response for serious or violent crimes, such as murder, sexual assault, or domestic violence?
Rehabilitative Justice	<ul style="list-style-type: none"> • Punishment can prevent future crime by reforming individual offender's behavior. • It involves education and vocational programmes, counseling, or skills training. 	<ul style="list-style-type: none"> • Perception of Leniency, Maintaining Balance between Rehabilitation and Public Safety, Excusing Criminal Behavior etc.

Reasons behind growing cases of instant justice:

- **Diminishing Faith in Justice Delivery System: Law Commission** (239th report) highlighted that inordinate delays in justice has eroded fear and faith in law, reinforcing the belief that **"justice delayed is justice denied"**.
 - This growing distrust **pushes individuals toward seeking immediate, extrajudicial resolutions.**
- **Individual morality and legal ignorance:** Many are unaware of the legal processes and jurisprudence or believe that instant mob punishment is the only way of doing justice.
- **Lack of emotional intelligence:** In cases involving rape, murder, or child abuse, emotions run high, often triggering impulsive acts of revenge from the community.
- **Misinformation:** Misinformation or viral content on social media can mobilize crowds quickly, often without a clear understanding of the facts, leading to **vigilante justice.**
- **Compromised ethical journalism:** The media's role in sensationalizing crime stories often stokes public outrage, leading to impulsive mob actions.

- **Sensationalism undermines ethical journalism**, which should promote fairness and objectivity rather than fuel mob mentality.
- **Public Perception:** Instances of encounters by Police, especially in cases of sexual assault are often welcomed by public and regarded as **strong deterrent** for the future.

Ethical Issues involved in instant Justice:

- **Rule of Law vs. Rule by Law:** Rule of law ensures equality before the law, while rule by law implies the powerful using laws for control. Instant justice **erodes idea of rule of law, replacing it with arbitrary or biased judgment**.
- **Due Process of Law vs. Swift Justice:** Instant justice skips legal safeguards, denying the accused their right to a **fair trial (Article 21)**. Thus, it **compromises** with the principle of **‘deemed to be innocent until proven guilty’**.
 - The principle of due process ensures no one loses life, liberty, or property without a fair procedure.
- **Retributive vs. Reformatory Justice:** Instant justice often embodies **worst aspects of retributive justice**, where punishment is handed out swiftly without considering whether it is proportional or justified.
- **Principle of natural justice vs. arbitrary justice:** No person can be punished without a **fair opportunity** to be heard, forms basis of requirements of natural justice (Audi alteram partem).
 - Instant justice is driven by emotions like anger or revenge, clouding judgment and leading to **unfair outcomes**.
- **Means vs. Ends debate:** Whether achieving a desirable or just result (like **Perceived deterrence** in cases of criminality) can justify using methods that might violate fundamental ethical principles or legal procedures.
 - **Instant justice may undermine the institutions of justice and violates moral duties**, and may leading to chaos and a breakdown of societal order.

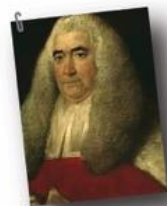
Way Forward

- **Balancing retributive justice with restorative justice:** It allows for the repair of harm, rather than solely focusing on punitive measures.
 - It can facilitate ensuring **‘Justice should not only be done it must be seen to be done. i.e., “nothing is to be done which creates even a suspicion that there has been an improper interference with the course of justice.”**
- **Sensitization:** Conducting widespread awareness campaigns to educate citizens about the legal process, their rights, and the consequences of vigilante actions.
- **Judicial reforms:** To combat growing instances of instant justice, it is essential to focus on judicial reforms that enhance **transparency, efficiency, and accountability** within the legal system, thereby restoring public confidence.
 - Additionally, Supreme Court rulings offering crucial guidelines for addressing instant justice given in **D.K. Basu vs. State of West Bengal (1996)**, PUCL vs. State of Maharashtra (2014) etc. can be implemented.
- **Fostering Accountability of Institutions:** The mandate of the Police should ensure that constitutionally protected right of the accused to prove their innocence in a court is protected.



"Let a hundred guilty be acquitted, but one innocent should not be convicted"

English Jurist Sir
— William Blackstone



Conclusion

The desire for quick, fair and affordable justice is universal. Protection of life and liberty have been given a pre-eminent position in our Constitution by enacting **Article 21** as a fundamental right and imposing a duty on the State to **protect life and personal liberty** of every citizen. **Any deprivation or breach of this valuable right is not permissible** unless the procedure prescribed by law for that purpose is just, fair and reasonable. The entire existence of the orderly society depends upon sound and efficient functioning of the Criminal Justice System.

Check your ethical aptitude

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:

- Identify the key stakeholders involved in this situation and discuss the ethical dilemmas they face.
- What steps should you take to address the extrajudicial actions occurring within your department and promote adherence to ethical standards?



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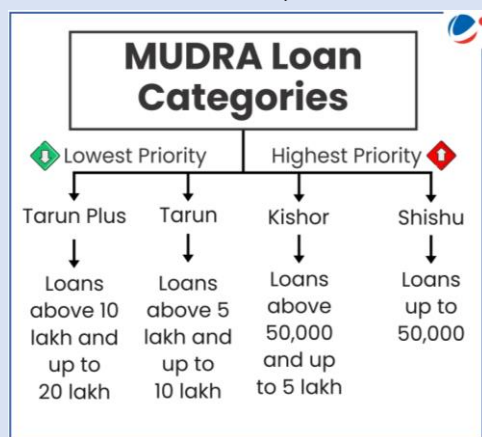
10. SCHEMES IN NEWS

10.1. PRADHAN MANTRI MUDRA YOJANA (PMMY)

Why in the News?

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

Objective	Features
<ul style="list-style-type: none"> PMMY scheme aims to provide collateral free access to credit in a seamless manner to micro enterprises in the country. To fund the unfunded by bringing MSMEs to the formal financial system and extending affordable credit to them. PMMY aims to provide financial inclusiveness and support to the marginalized and hitherto socio-economically neglected classes 	<ul style="list-style-type: none"> Ministry: Ministry of finance Launch year: 2015 Purpose: PMMY is set up for providing MUDRA loans to the non-corporate, non-farming small & micro enterprises. MUDRA: Micro Units Development and Refinance Agency Ltd (MUDRA) is a refinance agency and not a direct lending institution. <ul style="list-style-type: none"> It provides refinance support to its intermediaries viz. Banks, Micro Finance Institutions (MFIs) and NBFCs. Sectors eligible for loan: <ul style="list-style-type: none"> manufacturing trading and services sectors activities allied to agriculture Means for availing Mudra loans: Bank, NBFC, MFIs etc or through Udyamimitra portal Nature of Assistance <ul style="list-style-type: none"> Term Loan Overdraft Limit Working Capital Composite Loan for Acquiring Capital No Need for Collaterals: Credit Guarantee Fund for Micro Units (CGFMU) provide guarantee coverage for these collateral free micro loans. Interest rate is deregulated: However, Interest Subvention of 2% on prompt repayment of Shishu loans extended under PMMY for a period of 12 months to all eligible borrowers. <ul style="list-style-type: none"> Also, MUDRA extends a reduction of 25bps in its interest rates to MFIs / NBFCs, who are providing loans to women entrepreneurs. Mudra Card: It provides a facility of working capital arrangement in the form of an overdraft facility to the borrower. Mudra Mitra: It is a mobile phone application. It guides a loan seeker to approach a Banker in availing MUDRA loan under PMMY.



10.2. ATAL INNOVATION MISSION 2.0

Why in the News?

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

Objective	Salient features
<ul style="list-style-type: none"> To create and promote a culture of innovation and entrepreneurship 	<ul style="list-style-type: none"> Implementing agency: NITI Aayog Implementation period: Till March 31, 2028. AIM 2.0 is expected to further enhance India's global competitiveness. <ul style="list-style-type: none"> AIM 1.0 involved implementing programs that built new innovation infrastructure to strengthen India's then nascent ecosystem <ul style="list-style-type: none"> > It was launched in 2016

<ul style="list-style-type: none"> • To develop new programmes and policies for fostering innovation in different sectors of the economy • Provide platforms and collaboration opportunities for different stakeholders • Create an umbrella structure to oversee the innovation & entrepreneurship ecosystem of the country. • Enhancing India's global competitiveness. 	<ul style="list-style-type: none"> > AIM has created four programs to support these functions Atal Tinkering Labs, Atal Incubation Centres, Atal New India Challenges and Atal Grand Challenges and Mentor India ○ 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. <p>Ways to improve entrepreneurship ecosystem under the scheme</p> <ul style="list-style-type: none"> • Increasing input (i.e., ushering more innovators and entrepreneurs) through <ul style="list-style-type: none"> ○ The Language Inclusive Program of Innovation (LIPI): Building innovation and entrepreneurship ecosystems in India's 22 scheduled languages for lowering entry barrier confronting innovators, entrepreneurs and investors who don't speak English. <ul style="list-style-type: none"> > 30 Vernacular Innovation Centers will be established in existing incubators. ○ The Frontier Program: Creating customized templates for the innovation and entrepreneurship ecosystems of Jammu and Kashmir (J&K), Ladakh, the Northeastern states (NE), Aspirational Districts and Blocks. <ul style="list-style-type: none"> > 2500 new ATLs will be created for template development. • Improving the success rate or 'throughput' (i.e., helping more startups succeed) through <ul style="list-style-type: none"> ○ The Human Capital Development Program: Develops professionals (managers, teachers, trainers) to sustain India's innovation ecosystem. ○ The Deep tech Reactor: Creating a research sandbox for testing ways of commercializing research-based deep tech startups that require significantly longer time and deeper investment to get to market. ○ The State Innovation Mission (SIM): To assist states/UTs with building a strong innovation and entrepreneurship ecosystem that focuses on their areas of strength. <ul style="list-style-type: none"> > SIM will be a component of the NITI Aayog's State Support Mission. ○ The International Innovation Collaborations program: To take India's innovation and entrepreneurship ecosystem international. Four areas of intervention are identified <ul style="list-style-type: none"> > An Annual Global Tinkering Olympiad > Creation of 10 Bi-lateral, multilateral engagements with advanced nations > As a knowledge partner, helping the United Nation's World Intellectual Property Organization (WIPO) spread the models of AIM and its programs (ATL, AIC) to the countries of the global south, and > Anchoring the Startup20 Engagement Group of the G20 for India. • Improving the quality of 'output' (i.e., producing better jobs, products and services) through <ul style="list-style-type: none"> ○ The Industrial Accelerator program: To increase industry involvement in scaling-up advanced startups. <ul style="list-style-type: none"> > Minimum 10 Industry Accelerators in critical sectors will be created in Public Private Partnership (PPP) mode. ○ The Atal Sectoral Innovation Launch pads (ASIL) program: To build iDEX-like platforms in central ministries for integrating and procuring from startups in key industry sectors. <ul style="list-style-type: none"> > Minimum 10 launchpads will be built across key ministries.
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10.3. PRADHAN MANTRI VANBANDHU KALYAN YOJANA

Why in the News?

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

Objective	Salient features
<ul style="list-style-type: none"> • Improving the quality of life in 	<ul style="list-style-type: none"> • Ministry: Ministry of Tribal Affairs • Launched: 2014

<p>tribal areas</p> <ul style="list-style-type: none"> Improving the quality of education Qualitative and sustainable employment for tribal families Bridging infrastructure gaps with focus on quality Protection of tribal culture and heritage 	<ul style="list-style-type: none"> The Government approved the continuity of the Scheme till 2025-26 with a total cost Rs.26135.46 crores. It covers all tribal people and all areas with tribal population across the country. <p>PMVKY is an umbrella scheme, has several components</p> <ul style="list-style-type: none"> Pradhan Mantri Adi Adarsh Gram Yojana: Focuses on integrated village development in 36,428 villages with significant tribal populations. <ul style="list-style-type: none"> This initiative targets critical sectors such as road and telecom connectivity, education, health services, and sanitation, all of which aim to raise the living standards of tribal communities. Development of Particularly Vulnerable Tribes (PVTGs): It is designed to ensure the socio-economic upliftment of the most marginalized tribal communities while preserving their cultural heritage. <ul style="list-style-type: none"> The initiative provides financial support to state governments for tailored developmental activities in housing, health, and education sectors. Support to Tribal Research Institute (TRI): Financial assistance is allocated to state governments and UTs based on their proposals to strengthen the knowledge base concerning tribal cultures and challenges. Pre-Matric Scholarships: The centrally sponsored schemes provide scholarships for students in grades IX and X. <ul style="list-style-type: none"> Parental annual income should be up to Rs. 2.50 lakhs. Post Matric Scholarship: Post-Matric Scholarship caters to Scheduled Tribe students studying beyond class 10. Administrative Assistance for Project Management Units: PMVKY also allocates funds to establish project management units within state governments, ensuring that schemes related to the welfare of Scheduled Tribes are effectively monitored and implemented.
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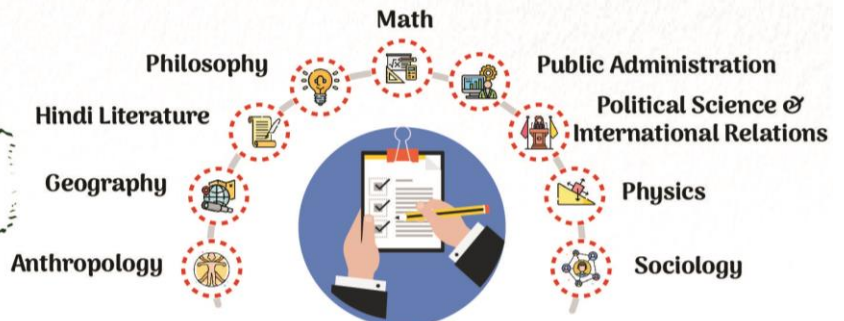
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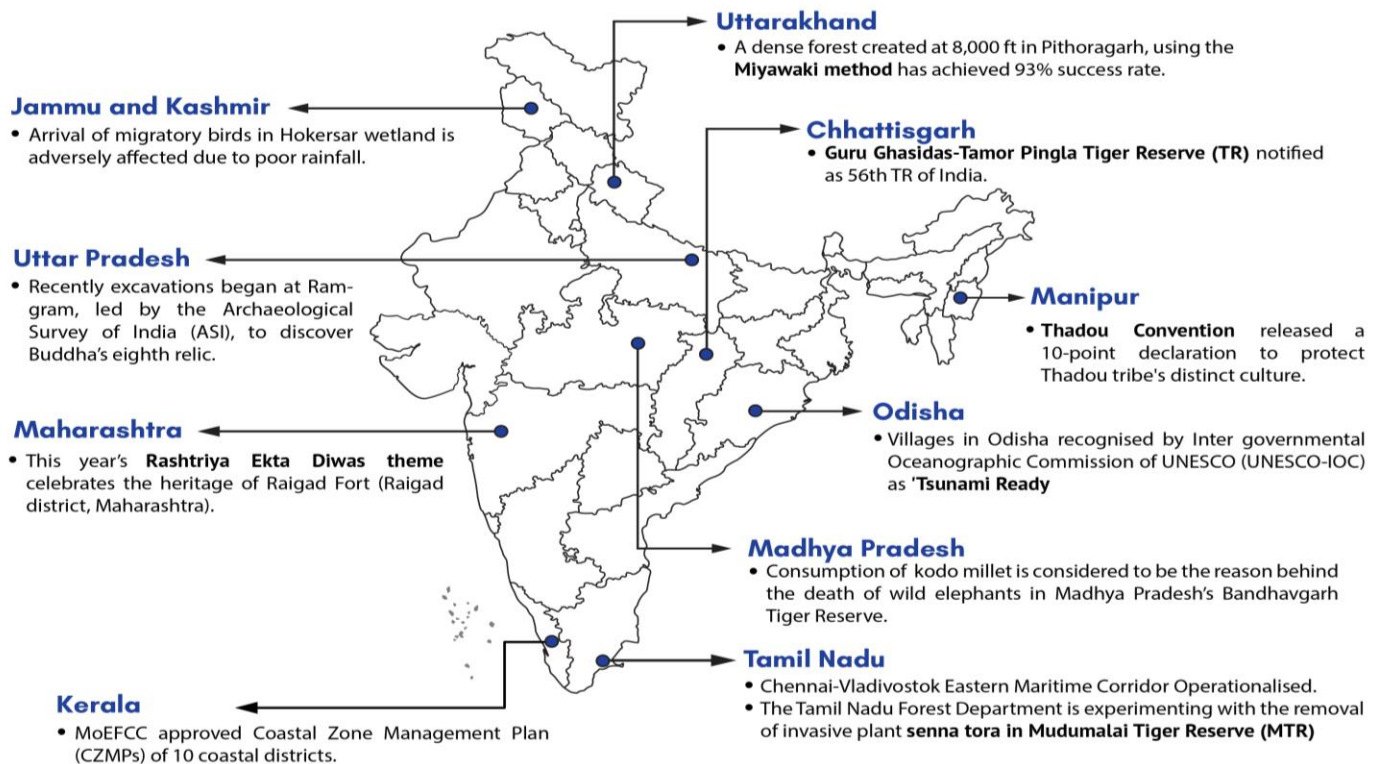
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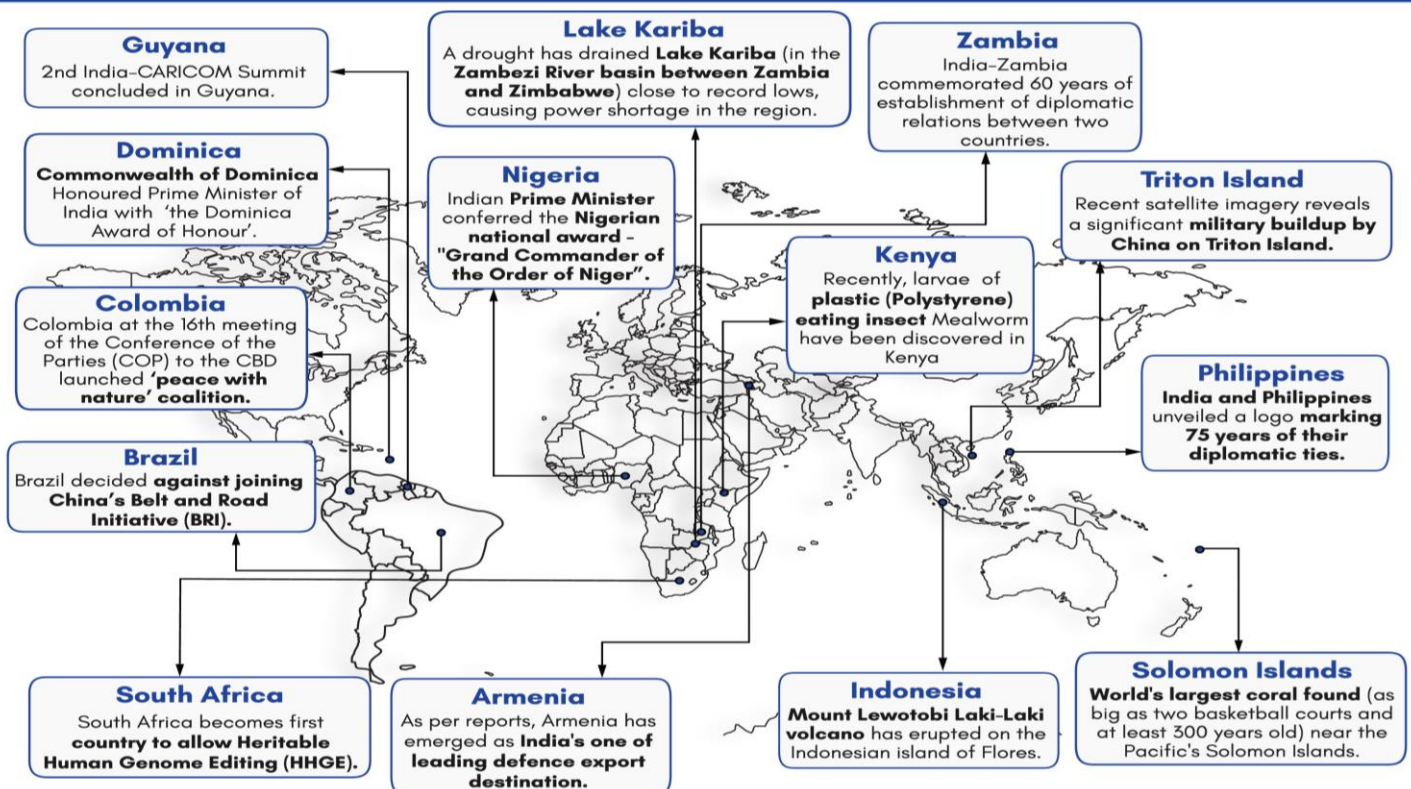


11. PLACES IN NEWS



India




Places in News: World



12. PERSONALITIES IN NEWS

Personality	About	Ethical Values exhibited by the Personality
 <p>Guru Nanak Dev (1469–1539)</p>	<p>Country observed Guru Nanak Jayanti marking birth of 1st Sikh Guru, Guru Nanak Dev Ji who laid foundation of Sikhism.</p> <p>His life</p> <ul style="list-style-type: none"> • He was born at Talwandi (Nankana Sahib in Pakistan), • He established a center at Kartarpur (Dera Baba Nanak on the river Ravi) • His Idea of liberation was not a state of inert bliss but rather the pursuit of active life with a strong sense of social commitment. • Before his death, Guru Nanak appointed one of his followers 'Lehna' as his successor. • Lehna came to be known as Guru Angad who compiled compositions of Guru Nanak <p>Major teachings of Guru Nanak Dev Ji</p> <ul style="list-style-type: none"> • 'Ik Onkar':It means 'One God' who dwells in every one of his creations and constitutes the eternal truth. • Truthfulness: Emphasized on truthful living and declared truth as the highest value in life. • Social inequality: Led sustained attack on social inequality and criticized the caste system. • Religion as a means of wealth: He cautioned people to not use religion for earning material benefits. 	<p>Universal Brotherhood and Compassion</p> <ul style="list-style-type: none"> • Advocated for the oneness of humanity and emphasized that all are equal in the eyes of God, transcending caste, creed, and religion. • Lived a life of service and kindness, addressing the suffering of others and promoting love and understanding in society.
 <p>Bipin Chandra Pal (1858–1932)</p>	<p>Recently, birth anniversary of Bipin Chandra Pal was celebrated</p> <p>Bipin Chandra Pal (1858–1932)</p> <p>Key Contributions:</p> <ul style="list-style-type: none"> • Participated in Swadeshi Movement(1905) after partition of Bengal. • He was an exponent of extremist form of Nationalism • He opposed Gandhi during the Non-cooperation movement(1920) over the fact that it did not address self-government. • He was imprisoned for his refusal to give evidence against Aurobindo Ghosh in Bande Mataram sedition case. 	<p>Patriotism and Courage</p> <ul style="list-style-type: none"> • Displayed unwavering commitment to India's freedom struggle. • Opposed oppressive practices and stood firm even under adverse conditions, including imprisonment.

	<ul style="list-style-type: none"> • He Initially joined Brahmo Samaj, turned to Vedanta and ended up as upholder of Vaishnava Philosophy (of Sri Chaitanya) • Literary Works: <ul style="list-style-type: none"> ▸ New India (weekly Journal), Hindu Review (Monthly Journal) The New Economic Menace of India (Book). • Values: Patriotism, Courage, Sacrifice 	
 <p>Lala Lajpat Rai (28th January 1865 – 17th November 1928)</p>	<p>Nation remembered Shri Lala Lajpat Rai, popularly known as Punjab Kesari, on his 96th death anniversary, today.</p> <p>Early life:</p> <ul style="list-style-type: none"> • Born in Dhudike, Punjab, he became a lawyer and co-founded the Hisar Bar Council. <p>Contribution</p> <ul style="list-style-type: none"> • He was one of the three members of the Lal Bal Pal trio (Lala Lajpat Rai, Bal Gangadhar Tilak, and Bipin Chandra Pal). • Established 'The People' journal and contributed to 'The Tribune' newspaper. <ul style="list-style-type: none"> ▸ Authored several books, including biographies of Mazzini, Garibaldi, Shivaji, and Swami Dayanand. • Helped Mahatma Hansraj establish nationalistic Dayananda Anglo-Vedic School, Lahore. • He founded 'Servants of the People Society (1921) and Indian Home Rule League of America. • He was elected President of the Indian National Congress in the Calcutta Special Session of 1920. • When the Simon Commission visited Lahore on 30 October, 1928, he led a non-violent march in protest against it. • He died of severe head injuries he sustained due to police lathi charge • Values Honesty, spirit of independence, virtues of charity and devotion, etc. 	<p>Sacrifice and Charity</p> <ul style="list-style-type: none"> • Demonstrated through his ultimate dedication to the nation, even at the cost of his life during the protest against the Simon Commission. • Founded welfare institutions, such as the Servants of the People Society, to support societal development



Deshbandhu Chittaranjan Das (1870–1925)

Parliamentarians paid tribute to C. R. Das on his **birth anniversary**.

- Born in **Calcutta**, he studied at the **Presidency College, Calcutta** and studied law in London.

Key Contributions:

- Successfully defended **Aurobindo Ghosh** in the Alipore bomb case in 1909.
- Participated in the **Non-Cooperation Movement in 1920**.
- Served as Congress President in Gaya Session (1922)
- Founded the **Swaraj Party** within the Congress with **Motilal Nehru in 1923**.
- Also, he was the **1st elected mayor of the Calcutta Municipal Corporation (1924)**.
- Established National University at Dacca (1921).

Literary Work:

- **Newspaper-** 'Forward', later named 'Liberty'. (**Subhash Chandra Bose** was the editor),
- **Books-** India for Indians, Freedom through Disobedience.
- **Values:** Leadership, courage, etc.

Leadership and Selflessness

- Played a pivotal role in guiding the Swaraj Party and the independence movement.
- Dedicated his resources and efforts to defending freedom fighters and advocating for national causes.



Birsa Munda (1875 - 1900)

The Department of Posts releases a special postage stamp on the 150th birth anniversary of Birsa Munda on **Janjatiya Gaurav Divas**.

About Birsa Munda (1875 - 1900)

- He was born in 1875, in a remote village named Ulihatu of the Kunti district of Jharkhand
- He is also known as '**Dharti Aaba**' (**Father of the Earth**)

Contributions

- Revived **Traditional Tribal Culture**
- He founded a new sect known as the **Birsait** and was called Bhagwan by his followers.
 - **He stressed the importance of prayer, staying away from alcohol, and having faith in God.**
- He led '**Ulgulan (The Great Tumult/Great Rebellion)**' in a sharp response to the land encroachment and forced labour policy of the British Raj
- **Values:** Passion, Sacrifice, Courage, Justice, Leadership, etc.

Fortitude and Vision

- He was a visionary who played a crucial role in the liberation of his community.
- He was an Indian tribal freedom fighter who showed extraordinary courage by leading the revolts of his tribesman against the Britishers and powerful landlords.



Maulana Abul Kalam Azad (1888 – 1958)

National Education Day honoring the **birth anniversary of Maulana Abul Kalam Azad** is celebrated on November 11 (since 2008).

About Maulana Abul Kalam Azad

- Born in **Mecca, Saudi Arabia**, he was a noted educationist, polyglot.
- He served as **first education minister of independent India from 1947–1958**.

Key Contributions

- Served as the **President of the Indian National Congress in 1923 (Delhi special session) and 1940 (Ramgarh)**.
- Served as the **President of All-India Khilafat Committee** during the **Khilafat Movement (1920–24)**.
- Participated in the **Dandi March (1930)** and the **Quit India Movement (1942)**.
- **Was a member of Constituent Assembly** from the United Provinces.
- Played role in establishing institutions like **Indian Council for Cultural Relation; University Grants Commission; etc.**
- **Rewards and Recognition:** Awarded **Bharat Ratna (1992)**, posthumously.
- **Values:** Patriotism, Integrity, Tolerance, etc.

Tolerance and Integrity

- Promoted harmony and understanding among diverse communities.
- Maintained unwavering principles while shaping India's educational and cultural policies.



Chandrasekhara Venkata (C.V) Raman (1888–1970)

Recently the birth anniversary of CV Raman was celebrated.

About CV Raman

- Born at **Tiruchirappalli, Tamil Nadu**, he founded
 - **Indian Journal of Physics.**
 - **Indian Academy of Sciences**, registered as Society under Societies Registration Act in 1934.
- **Awards:** Won **Nobel Prize in Physics in 1930** and Awarded **Bharat Ratna in 1954**.
- **National Science Day** is celebrated every year to commemorate his discovery of the Raman Effect in 1928.
 - Raman Effect is a phenomenon when a **stream of light passes through a liquid**, a fraction of light scattered by liquid is of a different colour.
- **Values:** Scientific rigour, Fortitude, Excellence, Curiosity, etc.

Scientific aptitude and Knowledge

- As an eminent scientist, he showed exemplary interest in understanding the physical laws of nature.
- His pioneering work on the nature of light is considered as scientific milestone.



Dr. Harekrushna Mahtab(1899- 1987)

The 125th Birth Anniversary of Dr. Harekrushna Mahtab (Known as Utkal Keshari) has been celebrated.

- He was a freedom fighter, politician, historian, writer, social reformer, and journalist.

Contribution

- Participating actively in **Non-Cooperation Movement, Salt Satyagraha** etc.
- Played key role in the **integration of Odisha** into the Union of India.
- Influenced by figures like **Swami Vivekananda, Ramkrishna Paramhansa and Mahatma Gandhi.**
- Served as the **Chief Minister of Orissa** from 1946 to 1950.
- **Values:** Determination, leadership etc.

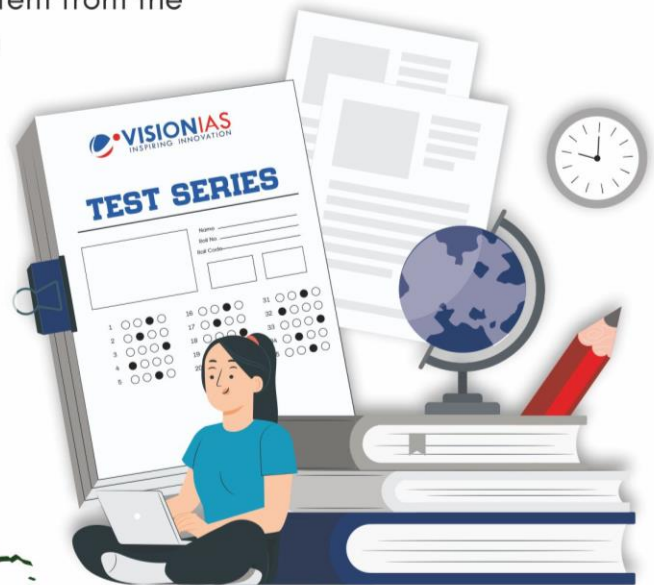
Determination and Social Responsibility

- Demonstrated resilience in the face of challenges during India's freedom struggle.
- Worked for the betterment of society through reforms and the integration of Odisha into the Indian Union.

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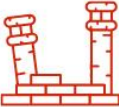









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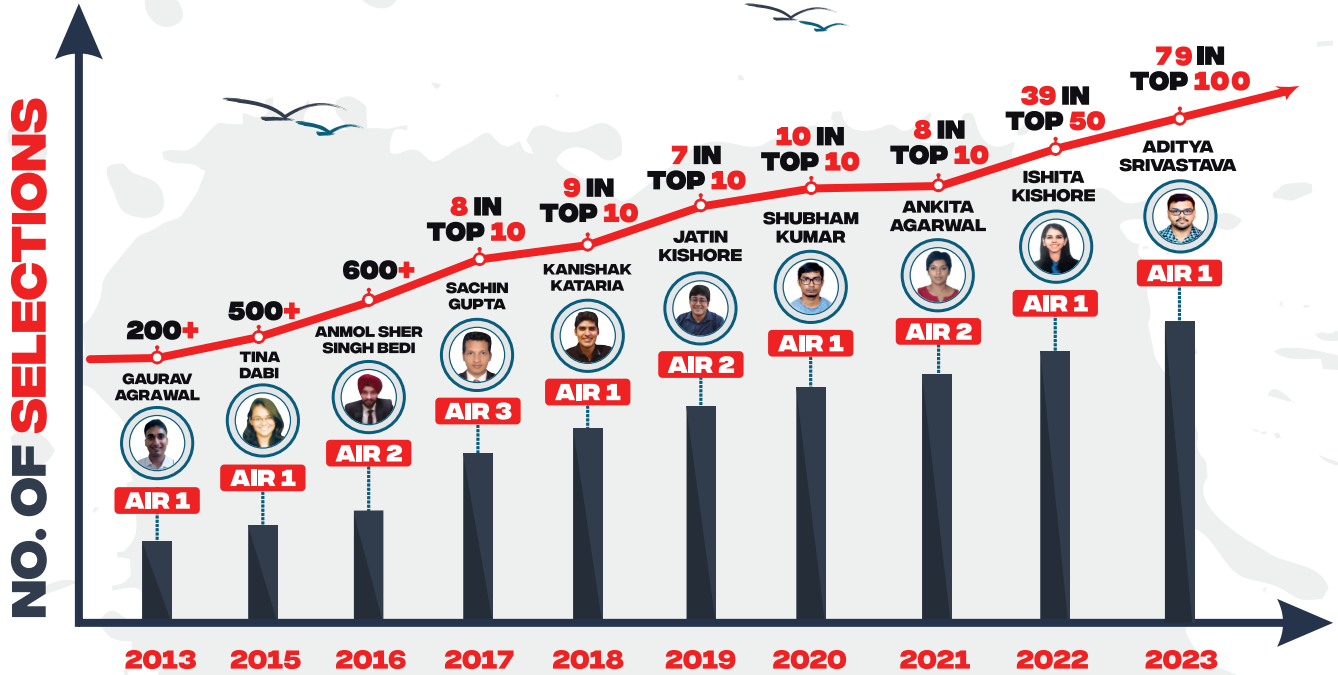
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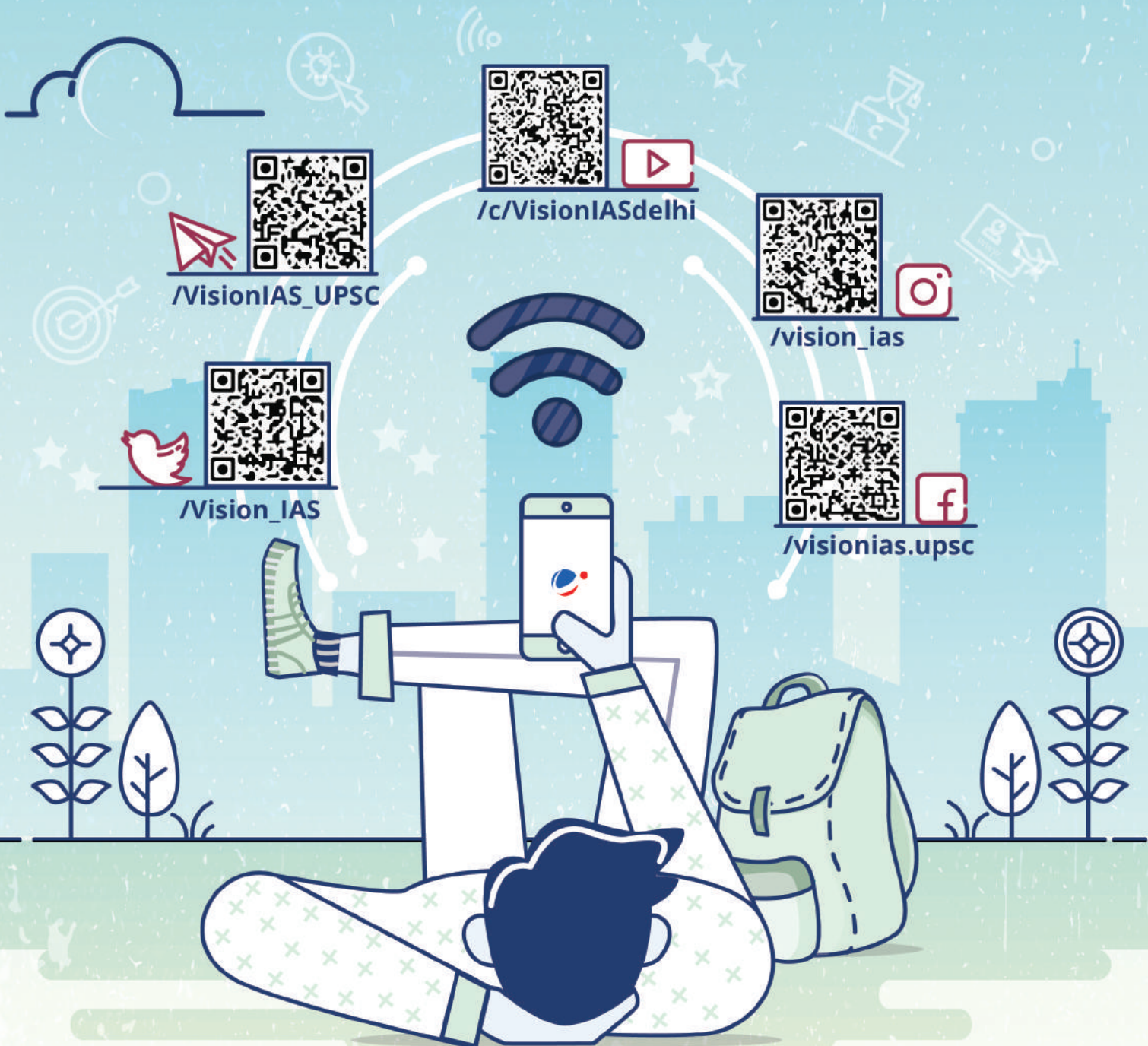


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